### Document status

<table>
<thead>
<tr>
<th>Ref</th>
<th>Approving Director</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2366v1</td>
<td>D Bonifant</td>
<td>June 2018</td>
</tr>
<tr>
<td>2366v2</td>
<td>D Bonifant</td>
<td>July 2018</td>
</tr>
<tr>
<td>2366v3</td>
<td>D Bonifant</td>
<td>July 2018</td>
</tr>
</tbody>
</table>

© Morrison Low

Except for all client data and factual information contained herein, this document is the copyright of Morrison Low. All or any part of it may only be used, copied or reproduced for the purpose for which it was originally intended, except where the prior permission to do otherwise has been sought from and granted by Morrison Low. Prospective users are invited to make enquiries of Morrison Low concerning using all or part of this copyright document for purposes other than that for which it was intended.
Contents

Executive Summary 1
Background and Introduction 7
Council Revenue 8
  Types of Revenue 8
  Rates 11
Councils’ Costs 20
  Renewal costs and depreciation 23
  Costs of Delivering Key Services 37
Debt 48
Other Issues Creating Cost Pressures 53
  Population and demographic changes 53
  Tourism pressures 57
  Climate change 58
  Seismic strengthening 59
  Innovative funding mechanisms 59
  Compliance costs 60
Appendix A Methodology 62
  Our process 62
  Analysis of all councils’ summarised 2015 LTP data 62
  Interaction and interpretation of ratios 63
  Differences in data sets 63
  Council selection 65
  Analysis of selected councils 2015 LTP data 66
  Key ratios used within the report 67

Tables

Table 1 Total actual capital expenditure and variances against budget for capital expenditure by asset type and expenditure classification 33

Figures

Figure 1 The effect of cost pressures on rates. 3
Figure 2 Annual change in rates for all councils – comparison of 2015 and draft 2018 long term plans 4
Figure 3 Breakdown of revenue sources – average over LTP period, sorted by rates revenue 9
Figure 4 Breakdown of revenue by source over time 10
Figure 5 Forecast year on year percentage increases in total rates revenue – all councils 2015 LTP 13
Figure 6 Annual increases in total rates revenue – all councils 2015 LTP data 14
Figure 7 Forecast rates as a percentage of average household living costs 15
Figure 8 Historical household living costs vs salary and wage growth vs rates growth 16
Figure 9  Real (uninflated) average rates forecast using 2015 long term plan data and LGCI projections
Figure 10  Annual change in rates for all councils – comparison of 2015 and draft 2018 long term plans
Figure 11  Real expenditure per ratepayer – capital versus operating
Figure 12  Historical rates and operating expenditure adjusted for population and local government costs
Figure 13  Real expenditure per ratepayer actuals versus LTP 2015 to 2017
Figure 14  Depreciation funding ratio – selected councils 2015 LTP data
Figure 15  Depreciation as a percentage of total expenditure over time
Figure 16  Renewals ratio – all councils 2015 LTP data
Figure 17  Renewals ratio by growth rate
Figure 18  Renewals ratio by activity type
Figure 19  Renewals capacity based on 2015 long term plan data
Figure 20  Local authorities categorised by actual capital expenditure as a percentage of budgeted capital expenditure 2012/13 to 2016/17
Figure 21  Proportion of expenditure spent on each council service 2015 (inside) vs 2025 (outside) – Rural councils
Figure 22  Proportion of expenditure spent on each council service 2015 (inside) vs 2025 (outside) – Urban councils
Figure 23  Real expenditure on roads per ratepayer by type and location
Figure 24  Real expenditure on water per ratepayer by type and location
Figure 25  Real expenditure on wastewater per ratepayer by type and location
Figure 26  Real expenditure on stormwater per ratepayer by type and location
Figure 27  Real expenditure on other activities per ratepayer by type and location
Figure 28  Debt to revenue ratio – all councils 2015 LTP data
Figure 29  Debt to revenue ratio – all councils 2015 LTP data by growth
Figure 30  Total projected debt for growth councils – comparison of 2012, 2015 and draft 2018 long term plans
Figure 31  Forecast percentage of growth capital expenditure funded by development contributions
Figure 32  Annual increases in rates revenue for growth councils – comparison of 2015 and draft 2018 long term plans
Figure 33  Annual change in rates for all councils – comparison of 2015 and draft 2018 long term plans
Figure 34  Total projected debt for all councils – comparison of 2015 and draft 2018 long term plans
Figure 35  Comparison of assets
Executive Summary

1 Local government is responsible for the provision of a wide range of public services to community throughout New Zealand. These range from regulatory services such as enforcement of the Building Act, through to the provision of roads, water and community facilities. Funding for these activities comes from users of the services, and includes:
   • rates on property owners, including targeted rates and water fees
   • government grants, and particularly grants from the New Zealand Transport Agency for transport assets
   • fees and charges for services such as building and resource consents, licensing, dog registrations, and use of community facilities
   • development and financial contributions
   • investment income.

2 Over time the Government, various groups or organisations and the general public have all voiced varying concerns about the level of rates in New Zealand and the affordability of rates. The actual quantum of rates that an individual ratepayer pays and whether that is affordable depends on a variety of factors relating to both the individual and the council. Underlying this from the council perspective are two key drivers. The total amount of money that needs to be collected (which, as noted above, is driven by a council’s overall expenditure requirements) and the manner in which costs are allocated between ratepayers and users.

3 The report makes a number of observations about rates and rates affordability. In summary it finds that rates are becoming less affordable for all groups of ratepayers over time, with rates increasing faster than average household incomes, Consumer Price Index (CPI), average household living costs or the Local Government Cost Index (LGCI). Both historical and forecast rates increases exceed wage growth, CPI growth and LGCI growth. Rate rises at that level are not sustainable.

4 There is an increasing reliance on rates as a source of funding. Rates comprise around 60% of a local authority’s income. It is by far and away the most dominant revenue stream and the one that councils have the most control and certainty over. Overall:
   • councils are projecting to become more and more reliant on rates as a source of revenue over time. The compounding effect is to place further upward pressure on rates as an increasing share of increasing costs are funded by rates
   • revenue from fees and charges, grants and other types of income is not projected to increase at the rate of inflation (LGCI): this is creating upward pressure on rates
   • councils in areas with low levels of household income appear to be increasing rates less than their counterparts. This may demonstrate an acknowledgement of the different environments in which these councils operate
   • growth councils are able to increase total revenue more easily than declining population councils as rates rises are spread over a larger population base that is increasing
   • the allocation of rates across different groups and sectors within a council varies significantly. We have observed some councils shifting the rating burden between groups of ratepayers, but there is no clear trend.
Local government in New Zealand follows a cost driven model, whereby the level of rates required to be collected from a community is determined by the funding requirements of the council. Working within an agreed funding envelope, councils first determine their required level of expenditure to deliver an agreed level of service, before determining the amount of revenue that they need to collect in rates. Services and service levels are set through a democratic process involving the community, elected members and council staff, and trade-offs are made between desires and affordability.

It is therefore necessary to examine the key costs that local government faces and the cost pressures facing local government in the near future in order to assess affordability of rates.

We observed a number of broad issues that impact (either directly or indirectly) on a council’s costs and therefore their funding requirements. The observations made in this report were developed through:

- analysis of a sample of published 2015 Long Term Plan data using a financial model
- desktop review of a sample of draft infrastructure strategies, 2018 Long Term Plans and other relevant strategic documents
- onsite visits with a selection of councils.

Our observation is that there are a number of key drivers of council costs that are increasing. Those relate to both operational expenditure and capital expenditure.

- Operational and maintenance costs are increasing. Contractor costs, staff and materials costs and increased compliance costs mean it is costing councils more to deliver the same services.
- Depreciation is a significant factor and often has a direct impact on rates as a result of the statutory requirement for a balanced budget.
- Meeting community challenges such as growth, a community’s desire for increased levels of service and an increasing requirement for major infrastructure upgrades to satisfy new standards are driving capital expenditure programs. Some councils are dealing with all three of these challenges at the same time.
- While new and growth assets are generally funded by debt, development contributions or a combination of these the longer-term impact of is to introduce additional operational costs (e.g. operations, maintenance and depreciation) which places further pressure to increase rates. Growth creates costs that must be borne by both the existing and the new ratepayers.
- The application of Goods and Services tax to rates also results affordability issues. A 2% increase in costs (translating to a 2% rise in rates) equates to a 2.3% increase in rates paid by people who are not registered for Goods and Services Tax.
Figure 1  The effect of cost pressures on rates.

There is evidence that costs are increasing for the delivery of some core services. The delivery of water and wastewater services for the selected councils is forecast to become more expensive in real terms between 2015 and 2025. It is likely that actual costs will be higher than this.

- A larger portion of rates funding is being applied to the roads and the three waters over the life of Long Term Plans. In urban councils these activities are increasing their share of funding over time.
- Operating and capital expenditure of “other” council activities, which includes community facilities and services, is forecast to decrease per capita in real terms over the ten year term of the LTP. In a number of councils, investment in community facilities and services has slowed leading to a decrease in levels of service. However, again observation of the gap between forecast expenditure and actual expenditure means in real terms it is unlikely to decrease.
- There are a number of issues in draft 2018 LTPs and on the horizon that are likely to further increase costs of supplying water, stormwater and wastewater services particularly for rural councils which will put further upwards pressure on rates in small communities.
- Climate change and increasing freshwater standards are putting additional pressures on stormwater and wastewater assets and are likely to result in further cost increases.

The inflationary measure used by councils as the basis on which to project future cost increases is the LGCI. Importantly, for the purposes of considering rates and rates affordability, LGCI has historically been, and is projected to be, consistently greater than CPI. That means, regardless of whether a council increases its services or service levels, ratepayer can expect the cost of their council (and as a result their rates) to increase more than other costs that they are exposed to.
Long Term Plans have not been successful (on the whole) at reflecting actual operating costs for local government as both revenue and cost forecasts in Long Term Plans do not appear to come to fruition in actual published results beyond the first year or two.

- While councils typically forecast to deliver their services at a reducing cost over time, evidence suggests that the costs of delivering services are actually increasing in real (uninflated) terms. This could be because levels of service increase over time, councils are doing more, or because assumptions regarding inflation are wrong.

- Analysis over a series of LTPs shows a clear trend for debt to increase in each successive LTP. The forecast reduction in debt in the later years of an LTP does not occur in reality.

- The same analysis shows that future rate increases in the later years of an LTP are usually higher than forecast. The forecast reduced rate increases in those years of an LTP don’t occur in reality. The impact of this is shown Figure 2 below.

**Figure 2** Annual change in rates for all councils – comparison of 2015 and draft 2018 long term plans

While some of the changes in successive LTPs may be due to increased services and service levels that were not anticipated, arguably this means that the decisions about services, service levels and costs in the first year and first three years of an LTP are made on the basis of a ‘short term snapshot’ without a full appreciation of the likely actual future costs of the council and actual rating requirements.

Depreciation is 25% of a typical council’s expenditure. The importance of getting this estimate right cannot be overstated as it can have a direct and significant impact on the total cost of the council and therefore the funding required.
Our analysis shows that councils are collecting sufficient revenue to fund depreciation. Our analysis also shows that councils are not spending a similar amount on renewals as they are collecting for depreciation. Over the ten years of 2015 LTP period, the average renewal ratio\(^1\) for all New Zealand councils was 78%. There is significant variation depending on whether councils are high growth or low growth and overall roads are being renewed faster than the other core council assets but this is still much lower than the depreciation of those assets.

If we assume that overtime depreciation and renewal expenditure should be aligned for mature councils then consistently spending less than depreciation on the renewal of assets means that either:

- depreciation is overstated and renewal expenditure is realistic
  - if this is true then councils are reducing debt, reducing the amount of debt they need to take on or using some of the revenue collected as depreciation to fund other activities or services. This situation would raise issues for intergenerational equity

- depreciation is accurate and renewal expenditure has been and is projected to be too low
  - if this is true then councils are shifting some of the current cost of renewals to future ratepayers by not funding it now and using the revenue collected as depreciation for other activities or services. This situation has direct implications for future costs

- depreciation is accurate, councils are not correctly allocating capital expenditure and in fact renewal expenditure is higher than reported
  - if this is true then there is little impact on current and future ratepayers or on intergenerational equity. There is however, little incentive in our view for councils to be incorrectly allocating capital expenditure and in most cases renewal expenditure significantly outweighs new and growth expenditure.

In our view, there is evidence that suggests that depreciation may be too high. There is a consistent trend for councils to spend less on renewal of their assets than the depreciation of those assets. Three quarters of councils in New Zealand project to have an average renewal ratio of less than 87% over the ten years of the 2015 LTP period. In NSW, Victoria and WA benchmarks for the renewals ratio are 100%, 90-110% and 90% respectively.

The asset management industry in New Zealand is a mature industry. Councils have dedicated asset managers and asset management plans are prepared for each asset class. Planned renewal expenditure suggests that councils are making deliberate, informed decisions about their investment in the replacement of assets. Renewal waves being deferred in successive infrastructure strategies and long-term plans are said to be on the basis of best available information. Depreciation however remains consistently much higher than renewal expenditure. In addition, anecdotal evidence about the relatively good condition of New Zealand roads despite a low renewals ratio suggests that, at least for roads, renewals are typically occurring close to the rate that they should be.

\(^1\) Refer to Appendix A for description of the ratios referred to in this report
There is and has been for some time concerns around the future renewals peaks forecast by councils. Future renewals peaks as shown in draft infrastructure strategies, while large, do not appear unaffordable if councils are prudent in provisioning funds to cover these costs. However, much has changed and is changing for local government since the 2015 LTPs including a particular focus on the infrastructure and services for water, wastewater and stormwater. We note that the full impact of this has yet to be seen. While this study considered the 2015-2025 LTPs, there is significant local government investment in infrastructure currently underway and proposed in 2018-2028 LTPs.

Local government debt sits mainly in the right councils in our opinion. That is high growth and high population councils carrying comparatively more debt than declining or small population councils.

- Growth councils are carrying higher levels of debt and this is projected to increase further. This may constrain their ability to borrow more or may impact their ability to deal with financial shocks.
- The reduced ability for small or declining population communities to service debt repayments and operating expenditure on new major infrastructure may be constraining their ability to invest in expensive but much needed infrastructure.
Background and Introduction

Over time the Government, various groups or organisations and the general public have all voiced varying concerns about the level of rates in New Zealand, and the affordability of rates. In preparation for the upcoming Local Government Funding Inquiry by the Productivity Commission, the Department of Internal Affairs sought to commission a study into the current and future funding pressures facing local government.

Local government in New Zealand follows a cost driven model, whereby the level of rates required to be collected from a community is determined by the funding requirements of the council. Working within an agreed funding envelope, councils first determine their required level of expenditure to deliver an agreed level of service, before determining the amount of revenue that they need to collect in rates. Services and service levels are set through a democratic process involving the community, elected members and Council staff and trade-offs are made between desires and affordability.

Funding for a council’s services and activities comes from a variety of sources and includes:
- rates on property owners, including targeted rates and water fees
- government grants, and particularly grants from the New Zealand Transport Agency for transport assets
- fees and charges for services such as building and resource consents, licensing, dog registrations, and use of community facilities
- development and financial contributions
- investment income.

Rates comprise about 60% of a local authority’s income but the actual quantum of rates an individual ratepayer pays and whether that is affordable depends on a variety of factors relating to both the individual and the council. Underlying this from the council perspective are two key drivers. The total amount of money that needs to be collected (which as noted above is driven by a council’s overall expenditure requirements) and the manner in which those costs are allocated between ratepayers and users.

This report provides an assessment on the current position of local government finances drawing on a selection of representative councils, uses published 2015 Long Term Plan data, actual results for 2015 – 2017, draft 2018 Long Term Plan data as well as a number of other sources which are referred to throughout the report. It also considers the impacts of proposed rates rises and cost increases on the matters of ratepayer affordability and equity. The methodology is set out in Appendix A.

The primary objectives of this report include:
- identification of the primary cost pressures within local government and their intended responses
- analysis on the affordability and equity of any rate increases or borrowing

We note that much has changed and is changing for local government since the 2015 LTPs including a particular focus on the infrastructure and services of the three waters. We note that the full impact of this has yet to be seen. While this study considered the 2015-2025 LTPs, there is significant local government investment in infrastructure currently underway and proposed in 2018-2028 LTPs.
Council Revenue

Types of Revenue

28 Councils are limited in the ways in which they receive funding. At its most basic, councils, like most public-sector organisations, are only able to receive their funding from:

- taxes – which in this case is rates
- fees and charges – such as charges for services such as library fees and building consent fees, and water
- grants or subsidies – From NZTA, MBIE, or other government agencies. All usually ultimately funded from taxes collected by someone else, and often closely matched to expenditure (i.e. an increase in grants received is likely to be accompanied with an increase in costs)
- Investment revenue – e.g. from money invested in the bank, Council controlled organisations, or property.

29 The level of income a council receives from each of the above will vary depending on a number of factors, including whether the council is experiencing high levels of growth and the extent to which a council considers that the services it provides should be ‘user pays’ or are ‘public good’. While no approach is specifically right or wrong, changing the level to which services are paid for by rates can influence how affordable rates are considered to be, particularly for those people that do not use many of the services provided by a council.

30 That means when considering rates affordability and the affordability of services provided by local government as a whole, it is important to look not just at rates but also the way in which councils receive their funding.

31 In Figure 33 below, we show a breakdown of revenue by source for the fifteen councils included in our study. For the purposes of this analysis, revenue from development contributions, financial contributions and vested assets has been excluded as this revenue cannot be applied towards the day to day operations of council (and is closely linked to the capital expenditure which it funds).

32 The data suggests that councils typically collect around 60% of their revenue from rates, with an additional 15 – 30% coming from ‘other income’. However, there is a large range, with councils receiving as little as 49% of their revenue from rates through to as much as 74%. Interestingly, there appears to be no strong trend within local government to switch to a more or less equitable method of rating.

33 Within the 2018 draft Long Term Plans, we have observed councils both increasing and decreasing rates differentials and universal annual general charges for a variety of reasons. This has varying impacts on affordability for different groups, with high UAGCs meaning ratepayers with lower capital value properties paying proportionally more rates, and vice versa. Typically, rural councils appear to be more likely to set UAGCs at the maximum level of 30%, this may reflect the demographics of their rating base.
In communities with high levels of deprivation, where affordability of rates is a particularly pressing issue, challenges also exist in the manner in which fees and charges are increased. While some fees and charges (particularly in the regulatory and compliance areas of councils) are more likely to fall on those with the capacity to pay (e.g. businesses, house builders, and developers), increasing fees in other areas (e.g. library, community halls and swimming pools) may limit access to those facilities for those on fixed or lower incomes.

Analysis of the 2015 LTP data shows councils typically maintaining, or increasing, the share of revenue that they receive from rates over time while decreasing their reliance on “other income” and grants and subsidies, as demonstrated in Figure 4 below. The compounding effect of this is to place further upward pressure on rates as an increasing share of increasing costs are funded by rates.
Similarly, councils appear to be predicting a slight decrease in their reliance on grants and subsidies, with an average reduction of 3.9% per annum in real terms across the group of councils (and only three councils reporting an increase in per ratepayer grants and subsidies). Again, decreases in the amount received in the form of grants and subsidies will put upward pressure on rates, although because grants are often accompanied with increased expenditure, the impact of this is likely to be softened.

Section summary

Councils are limited in the ways in which they are able to fund their operations. Funding options available to councils are typically limited to:

- taxes – specifically rates (including general and targeted rates)
- fees and charges – which typically relate to the provision of a specific service (e.g. building consent processing fees); these often have some level of matching cost
- grants and subsidies – which are often closely associated with an increase in costs as they are for specific purposes
- investment income – from subsidiaries’ operations or interest; this is usually very small.

Rates are the most significant of these revenue sources for councils, and are the revenue source that councils are most able to control and have the most guarantee of receiving.

---

Note that “other revenue” is substantially fees and charges but also includes some other revenue sources.
Typically, rates comprise about 60% of a council’s income, but this varies significantly across different councils. This means changes in cost structures are likely to impact rates the most. Further, councils are projecting to become more and more reliant on rates as a source of revenue over time.

While revenue from rates is projected to increase faster than inflation, this is not the case for revenue from fees and charges, grants, and other types of income. This is creating further upward pressure on rates.

When considering the extent to which they intend to rely on rates as a founding source, councils must be mindful of equity issues. By increasing reliance on rates, councils are adopting an approach that a large portion of their activities are carried out for the public good. Where councils rely more heavily on fees and charges to fund operations, they have adopted an approach that suggests that users of services are the primary beneficiaries, and accordingly they should pay for the services they receive.

In some cases, fees and charges may also be altered in order to influence or alter behaviour. This may have an impact on the composition of a council’s income source. Examples where this may occur include:

- increasing fees for rubbish disposal to encourage recycling and diversion of waste
- increasing late payment fees for dog registration or offering discounted fees for responsible owners, to encourage good behaviour
- increasing parking fees or more rigorous enforcement behaviour to encourage turnover of parks in high traffic areas and to encourage payment of parking fees.

The majority of the changes to fees and charges that we have observed as being accepted by politicians and the community relate to these types of behaviour influencing decisions. While these non-financial decisions alter the composition of revenue received by a council, they are not often the result of a conscious effort to broaden a revenue base.

We consider that the increased reliance on rates that we observed in our analysis of the sample councils is one of the factors that are contributing to the decreasing affordability of rates.

Rates

Rates are the primary source of funding for all councils in New Zealand and are effectively set by reference to a council’s “funding gap”. That is, once a council has determined the costs that it will incur to deliver services to its community, and the amount of revenue it will receive from other sources, the total rates revenue required is then determined.

While there is no legislative limit on the amount of rates a council may collect, or the annual percentage by which rates may be increased, rates rises must be accepted by the community and its elected representatives. The rates rises proposed for any year are set out in a council’s draft Long Term Plan or annual plan, and put forward for consultation with the community. It is only after this consultation has occurred that councils agree final budgets and rates rises.

In this sense, the rates rises that are implemented by councils are a product of the democratic system involving the community, elected members, and officials.
A key underlying focus of this report is the issue of rates affordability and whether the current local government funding system is affordable and sustainable for communities throughout New Zealand. While the report discusses a number of issues including pressures on infrastructure costs from growth, tourism and climate change, these issues are considered in the context of the impact that those costs may have on rates.

Measuring and assessing the affordability of rates in New Zealand is a complex challenge, and while we present a number of measures of affordability and discuss potential approaches, we do not attempt to make an assessment about whether rates as a whole are affordable or not.

**Annual rate increases**

One of the simplest ways of considering whether rates are affordable or not is to examine the annual increases in rates that are proposed by councils. Although a percentage rates rise alone is not sufficient to determine whether rates are becoming unaffordable (as a reference comparator is required), sustained increases in rates at levels that are likely to be above inflation will eventually be unaffordable.

Figure 5 below shows the distribution of year on year percentage increases in total rates revenue across the New Zealand local government sector.

It is important to note that while this chart may be indicative of the level of rates rises proposed in the 2015 Long Term Plans, the data in this chart focuses specifically on total rates revenue and thus ignores the impact that growth and decline have on the amount an individual household pays. It is also important to note that there is a compounding effect of year on year rate increases.

The chart also does not account for rises outside of rates, such as water fees and charges or charges for services delivered by the private sector (e.g. waste collection).
The chart shows a relatively tight distribution of increase in rates revenue, with an average annual increase of 3.7%. 90% of council’s average annual increase in total rates is between 2.38% and 5.04% over the life of the 2015 LTP. The selected councils are shown in green and show a range for those councils of an average annual rise in total rates from 2.6% through to 6.8%. The relatively tight distribution of increases in total rates revenue across the sector is somewhat predictable as most councils apply the same price index assumptions when preparing budgets. Additionally, the low levels of variability in the data suggest that councils were typically:

- seeking to keep rates within band of between 2% and 5% per annum
- refraining from making any major changes to revenue and financing policies (e.g. changes from land value to capital value rating, or increasing the extent to which depreciation is funded), which would show up as a ‘spike’ in the data. Where changes have been made, the data suggests that these have typically been phased in
- delivering similar levels of service to their communities throughout the life of the LTP.

**Impact of growth**

Where population growth has been incorporated into the budgeting process, and rates income has been adjusted to reflect growth in the number of rateable properties, it is expected that increases in total rates revenue would typically be higher than the national average. Similarly, where total rates revenue has been adjusted for population decline then increases in total revenue would be expected to be lower than the national average.

---

3 The dip in rates revenue collected in 2021 (shown in Figure 5) represents a temporary targeted rate ending.
Indeed, as shown in the Figure 6 below, it appears that high growth councils demonstrate an increased capacity to raise rates revenue compared to declining population or low growth councils. The average annual increase in total rates revenue for growth councils is 4.6%, whilst the average for declining population councils is only 3.2%.

Again, there is a compounding effect of the difference in revenue. Declining population councils will get less and less money to invest into services and assets than the high growth councils over time.

Figure 6  Annual increases in total rates revenue – all councils 2015 LTP data

Impact of population size and household income

We have also considered whether population size or household income has any bearing on the level of total rates set by councils.

A review of 2015 Long Term Plan data suggests that councils with populations in excess of 100,000 typically increase their total rates take by 4.5%, as compared to councils with populations of less than 10,000 which have average annual increases of only 3.3%. This could be the result of a number of factors:

- Higher level of service expectations for communities with large populations.
- Conflation of population size and levels of growth (larger councils are typically also high growth and smaller population councils often have declining populations).
- Comparative wealth between ratepayers in metropolitan councils and those in rural councils (which are typical small) meaning a higher capacity to pay.
Additionally, analysis of the 2015 LTP data shows that communities with lower average household income have lower average annual increases in total rates (3.5% versus 4.3%). This may suggest that:

- political and society pressures, including the socioeconomic factors, of a community are relevant when considering a council’s ability to levy rates revenue
- strong correlations between household income levels and rates of growth may be distorting results.

**Broader affordability measures**

Annual percentage increases in rates is quite a coarse view of the affordability equation. This report also considers affordability by comparing average rates bills to household income and to household expenditure.

When average rates are compared to average household income, the majority of the councils that we modelled showed rates as being between 3.5% and 4.5% of average annual household income. The review of rates as a percentage of household living costs shows rates typically comprising between 3% and 5% of a household’s living expenses.

However, over the ten year period of the 2015 LTPs, Figure 7 below shows affordability, as measured by both measures declines by an average of 0.35%. That is, rates are projected to use up a greater proportion of household income and household living costs.

Under both measures of affordability this means that there is a clear trend towards rates becoming less affordable overtime.

**Figure 7**  Forecast rates as a percentage of average household living costs

---

[Diagram showing forecast rates as a percentage of average household living costs from 2018 to 2025.]

**Rates affordability % household living expenses**

**Rates affordability % of household income**
Property rates are also included within the household living costs price index that is monitored by Statistics New Zealand. Analysis of the Statistics New Zealand data from 2008 to 2018 shows that this projected trend for rates to increase as a proportion of household expenditure and household income has been occurring.

- Property rates comprised 3.5% of household living costs in 2008 and this increased to 4.7% by 2018.
- Statistics New Zealand data shows the household living cost price index increased by 15.1%. Rates themselves increased by 43.5% over that same period. This demonstrates how much faster than other household costs rates have risen.
- For the lowest expenditure quintile, the Statistics New Zealand data shows that property rates increased from 5.8% of household expenditure to 7% of household expenditure. This group will be particularly impacted by rates increasing faster than wage growth and CPI.

Consideration of the Statistics New Zealand data also shows rates increasing faster than household living costs, wages, and LGCI. This means that the rates are costing households more, proportionally, than they did in the past and Figure 8 demonstrates the compounding effect as the gap grows over time.

Figure 8  Historical household living costs vs salary and wage growth vs rates growth

Analysis of the 2015 Long Term Plan in Figure 9 below then shows that rates are forecast to continue to increase at faster rate than inflation.

---

4 The increase in weighting of rates within this price index is over and above increases in the index itself.
As seen in the chart, there is a consistent upward trend, showing rates becoming more expensive over most of the Long Term Plan. The greatest part of the increases occurs in the first three or four years (and a slight reduction before inflation by year 10). The chart shows a 12.5% increase in rates before the compounding effect of inflation is added between 2015 and 2020 (inflation would add another 13.4%).

This upward trend of rates also needs to be considered in the light of the effects of successive long-term plans (including draft 2018 Long Term Plan data). Figure 10 below shows there is a consistent pattern for rate increases in the first three years to be projected to be higher than the remainder of the long-term plan. Subsequent long-term plans repeat the cycle so that the lower rate rises of the outer years in the Long Term Plan do not eventuate.
This increase in rates in real terms may indicate that councils are either increasing or improving the services that they provide, or that they are projecting costs to increase faster than the local government cost index predictions. Indeed, it is rare for a council to signal rates rises equal to, or less than, forecast local government cost index increments.

While in many cases proposed rates rises were supported by large capital programs in draft long-term plans, these projects were often not substantially different, in terms of cost, from similar projects proposed in earlier long-term plans.

**Section summary**

Reviewing the projected rates across the selected councils against various measures of affordability, and reviewing of data held by Statistics New Zealand, makes it clear that rates have, and are continuing to, become less affordable over time.

Our modelling of 2015 Long Term Plan data (which considers future changes in rates) and Statistics New Zealand’s data (which considers historic changes in rates) demonstrates:

- a large gap between rates increases and increases in consumer goods or household living costs
- a large gap between rates increases and increases in household earnings
- consequential increases in rates as a percentage of both household income and living costs.

Further, review of the 2018 draft Long Term Plans issues by councils indicates that future rate rises may be higher than were projected in the 2015 Long Term Plans. While the average rate rise for the selected councils between 2019 and 2021 in the 2015 Long Term Plans was 3.4%, this increased to 4.9% in draft 2018 Long Term Plans (with a range from 1.2% - 9.5%).

**Source: Department of Internal Affairs**
This is a common trend across local government, with Long Term Plans typically exhibiting less accuracy beyond year four. The shift in projected rates rises from the 2015 Long Term Plans and the 2018 Long Term Plans is demonstrated in Figure 10, in data provided by the Department of Internal Affairs.

The gap between potential wage growth and rates rise appears to be growing, and the compounding effect of the difference between wage growth and rates rises means that affordability of rates is deteriorating.

It is important to note that in preparing Long Term Plans and setting budgets, councils rely on the Local Government Cost Index (set by Business and Economic Research Limited for SOLGM) to determine the levels of inflation that may apply in future years. This is almost always a higher rate than the level of inflation experienced by consumers and households. Assuming that the Local Government Cost Index is an accurate portrayal of the cost increases faced by local government, all else being equal, it would be expected that local government costs, and consequently rates, will increase faster than other costs faced by households.

The increasing gap between wage growth and increases in rates is unlikely to simply be reflective of current economic conditions or a period of low wage inflation. In 23 years' worth of data held by Statistics New Zealand, year on year wage growth has only exceeded 3% in four years (2006, 2007, 2008, and 2009). In contrast, average rates increase across our sample of councils from 2018 to 2025 average 3.3%, and range between -3% and 7%, meaning it is unlikely that wage growth will ever exceed increases in rates.

The cause of this increase in rates is likely due to one of two broad issues:

- Councils increasing their reliance on rates as a revenue source.
- Costs (capital or operating) increasing.
COUNCILS’ COSTS

In this section of the report, we consider costs and cost pressures faced by local government. Costs can be categorized as either capital (e.g. constructing assets) or operating (e.g. employee costs, maintenance, financing costs). Increases in either operating costs or capital expenditure will have an impact on the amount of revenue required to be generated from a community.

In preparing Long Term Plans and setting budgets, councils rely on the LGCI (set by Business and Economic Research Limited for SOLGM) to determine the levels of inflation that may apply in future years. This is often higher than the consumer price index which is used to measure inflation on a typical basket of consumer goods. While different, both measures have relevance for this report as we have to consider the council (where LGCI is expected to reflect future cost increases) and the community (where CPI is expected to reflect future cost increases).

FUTURE COST PROJECTIONS

It is expected that local government costs, like any costs, will increase over time with inflation and as the population served by a council gets larger. In order to distinguish this ‘natural’ increase in costs from the other causes of cost increases (increasing levels of service, new costs for doing the same things, addition of new services), we have examined local government costs using un-inflated (or “Real”) figures on a per ratepayer basis.

We found that over time, between 2017 and 2025, real expenditure per ratepayer is projected to decrease by 15% on average across our sample councils. However, real operating expenditure actually increased by an average of 8.8% between 2015 and 2017. This is the years in which our analysis was of actual results.

Figure 11  Real expenditure per ratepayer – capital versus operating

© Morrison Low
Similarly, our review of real capital expenditure over the same period suggested councils are decreasing their total capital expenditure per ratepayer by 19% in real terms, although this is less consistent across the sample. Again, however, this decrease occurs following an increase in capital expenditure that extends from 2015 through to 2018 (beyond the period of actual results being used).

Arguably this indicates that the local government sector, as a whole, forecasts becoming more efficient in delivering services. Increases in the years of actual results analysed in this report however suggest that this may not be the case.

**Historic perspective of council costs**

Notwithstanding the analysis of 2015 Long Term Plan data shown above, the Local Government Business Forum\(^5\) has also considered real operating costs and real rates rises per capita. A reducing real operating cost arguably indicates an increasing efficiency over time. Their analysis show in Figure 12 below, while using a different cost index (the producers’ price index for local government rather than the local government cost index), shows the costs, and revenues of local government increasing in real terms since 1994.

![Figure 12: Historical rates and operating expenditure adjusted for population and local government costs](image)

**Source: Local Government Business Forum**

This suggests that while councils set budgets on the basis of reducing costs over time or becoming more efficient over time, the reality is that operating costs are increasing for most councils in real terms. This could be the result of:

- increasing levels of service being provided
- more services being provided, or new costs (including compliance costs) introduced
- services being delivered less efficiently
- growth introducing proportionally higher additional costs
- local government inflation rates exceeding the rates used to remove the impact of inflation in the analysis.

While it is likely that a number of the above points as well as other factors may combine to explain the increasing costs faced by local government, what is clear is that Long Term Plans have not been successful (on the whole) at reflecting the actual operating costs for local government, projected rate rises or future debt levels.

This ‘flip’ from a projected decrease in costs in real terms to an actual increase in costs in real terms occurs relatively quickly, suggesting that a number of the factors that may be increasing costs are unplanned or unbudgeted.

Figure 13 below shows the average real operating cost per ratepayer across our sample councils as forecast in their 2015 Long Term Plans (2015 values are actuals) versus the actual average real operating cost per ratepayer. It shows actual expenditure exceeding projected expenditure in Long Term Plans by 3.3% in 2016, and the impact of this accumulating to create a gap of 7% by 2017. This is a significant difference for a period of just two years.

**Figure 13** Real expenditure per ratepayer actuals versus LTP 2015 to 2017
Section Summary

Because rates, and the total amount of revenue required by a council, are set using a cost based model, increases in either operating costs or capital expenditure will have an impact on the amount of rates required from a community. When considering why rates are becoming more unaffordable over time, it is therefore necessary to examine what is happening to costs.

In order to distinguish between the inflationary increase in costs from the other causes of cost increases (such as increasing levels of service, new costs for doing the same things, addition of new services), we have examined local government costs using uninflated (or “Real”) figures on a per ratepayer basis.

We found that over time, between 2017 and 2025, real expenditure per ratepayer is planned to decrease by 15% on average across our sample councils. However, real operating expenditure increased by an average of 8.8% between 2015 and 2017, or the years in which our model was populated with actual results. Further analysis of historical expenditure and comparison of actual results with budgeted performance shows that Long Term Plans have not been successful (on the whole) at reflecting actual operating costs for local government, as reductions in costs forecast in Long Term Plans do not appear to come to fruition.

This suggests that while councils set budgets on the basis of costs reducing over time, the reality is that operating costs are increasing for most councils in real terms. This could be the result of:

- increasing levels of service being provided
- more services being provided, or new costs (including compliance costs) introduced
- services being delivered less efficiently
- growth introducing proportionally higher additional costs than the costs to service existing properties, or
- actual inflation experienced by local government exceeding the rates that have been projected.

The ‘flip’ from Long Term Plans projecting a decrease in costs in real terms to an actual increase in costs in real terms, occurs relatively quickly suggesting that a number of the factors that may be increasing costs are unplanned or unbudgeted.

Renewal costs and depreciation

One of the primary functions of a local authority in New Zealand is to develop and maintain infrastructure for the delivery of public services. Consequently, local authorities in New Zealand have significant investments in infrastructural assets.

According to 2015 Long Term Plan data, the net book value of all fixed assets held by New Zealand councils totalled $121 billion of fixed assets in 2016. The full replacement cost of those assets is likely substantiably higher than that, however this is difficult to quantify as disclosure of this value is not consistent across councils. This compares to a total national rates take of $5.3 billion in the same year.
While not all of these assets are likely to need replacing at once, as they vary in age and condition, the potential costs associated with renewing assets are typically the largest single type of expenditure facing most councils.

**Depreciation expenditure**

Councils, like most businesses, provide for future renewals of assets by charging depreciation on the assets that they own. When a council has a balanced budget, it will typically collect sufficient revenue to cover all of its day to day outgoings plus the depreciation charge on its assets. Typically, the revenue collected for depreciation charges is used to fund the renewal of assets, or is set aside to be able to fund the renewal of assets at a future date.

Depreciation charges accounted for a total of $2.3 billion of expenditure in New Zealand councils in 2017 (per annual report data collected by the Department of Internal Affairs). That is equivalent to 43% of total rates and typically accounts for 25% of total expenditure of a council.

In this section we look at depreciation and renewals expenditure specifically. While capital expenditure may also include upgrades or growth-related capital expenditure, this type of expenditure typically relies on debt in the short to medium term (which is addressed elsewhere), with the repayment of that debt being funded by rates or development contributions over time.

The first thing we have examined is whether councils are collecting enough revenue to be able to fund depreciation and therefore the renewal of their assets. We have used the depreciation funding ratio for this purpose. The ratio measures cash flows from operating activities (i.e. cash flows before borrowing, investment and capital expenditure) against the depreciation on existing assets.

The analysis for the selected councils shows that they are typically collecting enough revenue to cover their day to day expenses and to fund the renewal (depreciation) of their assets. Figure 14 below shows the depreciation funding ratio (adjusted to remove capital grants and grant funded depreciation) for the selected councils. Most councils, as expected, sit near or above 100%.

---

6 The Office of the Auditor General notes, in their document “Local Government: Results of the 2016/17 audits” that depreciation is “the best estimate of what portion of the asset was used during the financial year”.

© Morrison Low
Where councils are not achieving a depreciation funding ratio of 100% or higher, this could be due to a number of reasons:

- In years showing actual performance, other operating expenses may have exceeded budgets (hence the larger proportion of councils with a depreciation funding ratio below 100% between 2015 and 2017 in Figure 14).
- Council has adopted a strategy of reinvesting depreciation such that interest savings or investment returns are “topping up” the depreciation funding deficit.
- The council does not intend to fund the replacement of all of its assets.
- The community cannot afford to fully fund depreciation, or the rates impact of switching to a “fully funded” model may be too large.

It is important to note that the ratio does not measure whether that cash flow is actually used for the replacement of existing assets, and some of this cash may be used by councils to invest in level of service or growth assets.

**Depreciation Expense**

Depreciation is simply an estimate however, based on the estimated replacement cost of an asset (using today’s technology, and at today’s prices) spread over the estimated useful life of the asset. Where assets deteriorate faster than anticipated, depreciation collected will be insufficient to replace the asset. Similarly, where an asset lasts longer than its estimated life a council may collect depreciation too quickly. Changes in technology may also impact whether depreciation is sufficient to fund the future replacement of the asset.
Our analysis of the sample councils’ 2015 LTP data shows depreciation typically comprising 25% of a council’s annual expenditure. The size of depreciation expense means that it typically has a major impact on the amount of rates that need to be collected.

**Figure 15  Depreciation as a percentage of total expenditure over time**

Unlike total expenditure, depreciation is forecast to increase slightly (0.7% per annum) in real terms per ratepayer over the life of the 2015 Long Term Plans. This is indicative of the increased costs associated with servicing and maintaining new assets, and increases in the cost of replacing assets (the capital component of the local government cost index is typically higher than the operating component).

When looking at 2015 – 2017 alone, depreciation costs increased even faster than projected, showing an increase of 3% over the two year period (or an annual increase of around 1.5%).

**Future renewal costs**

For some time, there has been discussion around local government that the sector is facing a large number of assets beginning to reach the end of the estimated useful lives. This is often referred to as the renewals hump or wave. Discussion about a potential renewals hump or wave has been raised by the Office of the Auditor General for a number of years, and most recently in their publication “Local Government: Results of the 2016/17 Audits”.

Understanding how much money a council is actually spending on renewals is important, because a portion of rates are collected for the ultimate purpose of developing the financial capacity to renew assets. Where this funding is not ultimately applied towards that purpose, future generations will be required to contribute more at a later date. Additionally, failure to renew assets when required may lead to additional reactive maintenance costs, or deterioration in the condition of, and service provided by, the asset.

Over time renewals expenditure should be expected to equal depreciation because depreciation is a charge representing the use or deterioration of an asset. In a number of jurisdictions councils must report on variations of benchmarks or ratios built around this assumption. The renewals ratio used in this report measures the amount of money a council is planning to spend on asset replacement or renewal as compared to their annual depreciation expense.

In practice, it would be unusual for renewals expenditure to be exactly 100% of depreciation expenditure as depreciation is typically allocated evenly over the life of an asset while renewals expenditure usually occurs when an asset reaches the end of its useful life or otherwise fails. However, in mature organisations where assets have been built up over time, one would expect to see a long-term trend of renewals expenditure sitting near 100% of depreciation. In our view, performance in the renewals ratio between 90% and 110% would indicate that a council has a mature asset base and is renewing its assets at a predictable rate.

Figure 16 shows the distribution of all New Zealand councils budgeted performance against the renewals ratio. Over the life of the 2015 LTPs, average performance across all New Zealand councils for the renewals ratio is 78%, with 75% of councils having average performance below 87%. The councils selected for analysis in this study (shown in green) are representative of the national distribution against this ratio.

---

7 In New South Wales the benchmark is 100%, in Victoria between 90-110% and in Western Australia 90%
8 The Office of the Auditor General, in their report “Local Government: Results of the 2016/17 audits” notes that a reasonable achievement range for the renewals ratio is between 60 – 100%.
The result above is consistent with analysis of annual report data collected by the Department of Internal Affairs which shows that nationally all New Zealand councils only spent 79% of their deprecation on renewals on average between 2015 and 2017. As councils appear to be collecting enough revenue to be able to fund the renewal of their assets but not reporting similar levels of expenditure, this would suggest that either:

- councils are deferring renewals of assets beyond their useful lives and councils are ‘sweating their assets’
- infrastructure assets have not generally reached the end of their useful lives
- depreciation funding is being applied elsewhere or used to reduce debt, or
- depreciation is too high.

Indeed some councils noted that depreciation estimates and asset renewal planning has previously been conservative, allowing councils opportunities to defer renewals expenditure. In some councils examination of failure data or asset condition data (for example from CCTV monitoring) has shown assets to be in a better condition than their estimated useful lives would otherwise suggest. This may indicate that in some instances depreciation may be too high or that councils are responsibly delaying investment in the replacement of their assets.

**Impact of growth**

Councils that have experienced sustained levels of high growth in recent times may be expected to have a higher proportion of young assets in their total asset base, and accordingly may have a lower renewals ratio than those that have experienced low levels of growth or decline. This would be due to a higher level of expenditure on new assets.
Figure 17 shows the renewal ratio of high, medium, low growth and declining population councils within the selected group separately. High growth councils have an average renewals ratio of 68.4%, with most high growth councils showing a renewals ratio much lower than that average. Meanwhile, declining population councils demonstrate an average renewals ratio of 83.7%, which is higher than the national average.

Impact of population size and household income

We also considered whether local population size or average household incomes had any bearing on the amount councils invested in renewals.

There is no clear rationale as to why these factors would influence a council’s approach to investment in the renewal of its assets. However, our analysis found that low income and low population regions appeared to have higher renewals ratios than their respective high income and high population counterparts.

In our view any correlation between population size and renewals ratio performance is likely to be due to the strong nexus between levels of growth and population. However, additional explanations may include:

- larger population councils may have higher level of service expectations which may redirect some spending from renewals infrastructure towards level of service expenditure if the capital works budget is constrained
- councils serving low income communities may prioritise investment on core infrastructure and renewal of assets as they face funding constraints.
Renewal expenditure on specific council asset groups

While consideration of the renewals ratio at a whole of council level gives some useful insight into council’s investment decisions it does not effectively demonstrate the rate at which core network assets are being renewed and may for example be distorted by depreciation on assets that will not be renewed. We therefore analysed the renewals ratio for four key activities carried out by councils; roads, water, wastewater, and stormwater. The results are presented in Figure 18 below.

Unsurprisingly, councils are renewing roads faster than the other three activities, with an average renewals ratio of 78% (compared to an average renewals ratio across all assets of 69% for our sample councils). We believe that this is reflective of the role that NZTA plays in co-funding renewals expenditure on roads and potentially the increased visibility and ease at which the condition of roads can be assessed.

Similarly, councils were typically planning on replacing water assets at 75% of the rate that they are depreciating. Water reticulation assets typically represent some of the oldest infrastructure in a community. Given the importance of safe water assets on health and the consequences associated with pipe failure it is unsurprising that this activity has the highest renewals ratio of the three waters.

The analysis shows that councils, on average, are investing only 58% of their depreciation on wastewater assets on the renewal of those assets. However, it is worth noting that 23% of wastewater assets relate to wastewater treatment plants which may be renewed, but upgrades to these plants may often be classified as level of service expenditure rather than renewal.
When wastewater treatment plants are required to be upgraded the costs can be large. Treatment plant upgrades signalled in the draft Long Term Plans that we reviewed comprise between 20 – 30% of the relevant councils’ annual rates take. Wastewater is the only asset group that shows any peak of renewals over the ten year period of the LTP.

Planned renewals in the stormwater system in 2015 Long Term Plans are low in comparison with other asset classes. Most councils forecast investment of less than 40% of stormwater depreciation in the renewal of stormwater assets (the average across our sample was 38.3%). This suggests underinvestment in stormwater assets.

Our review of draft 2018 Long Term Plans and infrastructure strategies and our conversations with various councils has indicated that councils are typically still yet to face major renewals costs. In many cases, infrastructure strategies are suggesting a large increase in renewals expenditure as being required around 2040 – 2045, although some councils are dealing with the renewal of specific network infrastructure in the later years of the 2018 Long Term Plan.

The renewals waves or peaks that are typically seen in infrastructure strategies that we reviewed were significant, however often equate to less than a single years’ depreciation (across all activities). The challenge is that these renewals peaks (for a single asset class) often represent expenditure over and above the ‘normal’ capital works programme of a council. Additionally, many of these peaks relate to a significant portion of the network and are likely to be disruptive and impact on levels of service delivered to the community.

These renewals peaks, or waves, do not typically appear unaffordable if councils are prudent in provisioning funds to cover these costs.

Developing capacity to renew assets in the future

The renewals ratio only measures the investment in the renewal of assets at a point in time. It does not identify whether councils are able to fund the future replacement of their assets, or what impact this may otherwise have on rates. In order to consider this, we compared the sum of renewals expenditure, increases (or decreases) in cash or investments and decreases (or increases) in external borrowings to depreciation. The purpose of this measure was to identify whether councils are typically building the capacity to address future renewals requirements over time (assuming depreciation is correct).

Analysis of the sample councils using this measure is shown in Figure 19. Any council that achieves less than 100% is not increasing investments, reducing debt, or applying depreciation toward the renewal of their assets at the same level as the depreciation on their assets. The average of the selected councils is shown in green and only meets 100% in one of the ten years of the LTP period.
Having confirmed that councils are collecting sufficient revenue to fund depreciation then this result against the depreciation funding ratio shows councils investing depreciation reserves into assets required to support growth or increasing levels of service. Importantly, these assets would likely otherwise be paid for with debt and will be depreciable themselves once commissioned.

**Capital works delivery**

While the renewals ratios presented earlier typically look at planned renewals expenditure, it is also useful to consider how much of that plan is actually delivered. This is because under-delivery of capital works programmes can have the effects of:

- reducing the amount of borrowing required to be drawn down in a given year (and therefore a consequential impact on future costs of servicing that debt)
- creating surpluses through the deferral of costs to future years, while rates income is already set based on the planned programme, and prior to the underspend being apparent
- increasing potential capital works that need to be delivered in future years – which in turns impacts on the ability to deliver future programmes.

Most of the analysis regarding capital expenditure relates to budgeted expenditure (with the exception of 2015 – 2017 which show actual capital expenditure) however the actual amount of expenditure may differ markedly from the budget.

The Office of the Auditor General, in their document “Local Government: Results from the 2016/17 Audits”, analysed actual capital expenditure compared to budgeted capital expenditure and found that capital expenditure generally remained below budget across the sector.
Table 1  Total actual capital expenditure and variances against budget for capital expenditure by asset type and expenditure classification

<table>
<thead>
<tr>
<th></th>
<th>Additional demand</th>
<th>Level of service</th>
<th>Renewals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water supply</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual capital expenditure</td>
<td>$117.9m</td>
<td>$117.1m</td>
<td>$149.0m</td>
</tr>
<tr>
<td>% of budget spent</td>
<td>86%</td>
<td>74%</td>
<td>65%</td>
</tr>
<tr>
<td>Sewage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual capital expenditure</td>
<td>$178.2m</td>
<td>$111.5m</td>
<td>$393.6m</td>
</tr>
<tr>
<td>% of budget spent</td>
<td>69%</td>
<td>88%</td>
<td>131%</td>
</tr>
<tr>
<td>Stormwater</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual capital expenditure</td>
<td>$85.1m</td>
<td>$63.5m</td>
<td>$132.4m</td>
</tr>
<tr>
<td>% of budget spent</td>
<td>139%</td>
<td>108%</td>
<td>146%</td>
</tr>
<tr>
<td>Flood protection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual capital expenditure</td>
<td>$6.8m</td>
<td>$40.3m</td>
<td>$15.5m</td>
</tr>
<tr>
<td>% of budget spent</td>
<td>58%</td>
<td>98%</td>
<td>30%</td>
</tr>
<tr>
<td>Roads</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual capital expenditure</td>
<td>$106.4m</td>
<td>$313.2m</td>
<td>$825.3m</td>
</tr>
<tr>
<td>% of budget spent</td>
<td>66%</td>
<td>92%</td>
<td>111%</td>
</tr>
</tbody>
</table>

Source: Office of the Auditor General

138 This is a consistent trend in local government, with most councils having delivered less than 80% of their capital works programmes since 2012/13.

Figure 20  Local authorities categorised by actual capital expenditure as a percentage of budgeted capital expenditure 2012/13 to 2016/17

Source: Department of Internal Affairs
This is consistent with our discussions with various councils during the study. In many cases councils cited:
- a shortage in experienced project managers and engineers
- a constrained contractor market
- a lack of available aggregate
- inefficiencies in the procurement process
- a lack of internal resource
- inclement weather
as being key reasons why capital works programmes were not being delivered to budget.

Smaller, rural councils were particularly constrained in terms of their ability to attract skilled workers. In one example, the local grader driver passed away, meaning works that required grading had to be deferred.

With a significant increase in capital works programmes being signalled by most councils over the next ten years, actual delivery of those programmes is becoming increasingly important. Most councils recognised the need to improve their ability to deliver capital works, and indicated that this may be achieved through:
- more streamlined procurement processes, including the use of alliances and panels
- increasing internal resources
- sending stronger market signals
- utilising existing contractors on major local projects
- a shift towards managing capital works budgets on a three year cycle.

Underspending on capital works programmes can have a number of consequences. Perhaps of most concern, the Office of the Auditor General observes “If budgets accurately reflect the required spending, the investment that local authorities are making may not be enough to maintain the quality of their assets and the service levels”. Additionally, underspend in the capital works project has an escalating effect where deferrals in capital expenditure must now be delivered alongside the otherwise budgeted works.

**Section summary**

One of the key functions of local government is to deliver the core services or roads, water, wastewater and stormwater. The delivery of all of these services is highly reliant on councils developing and maintaining significant infrastructure. Indeed, according to 2015 Long Term Plan data, the net book value of all fixed assets held by New Zealand councils totalled $121 billion of fixed assets in 2016.

While not all of these assets are likely to need replacing at once, as they vary in age and condition, the potential costs associated with renewing assets are typically the largest single type of expenditure facing most councils. In fact, depreciation charges accounted for a total of $2.3 billion of expenditure in New Zealand councils in 2017 (per annual report data collected by the Department of Internal Affairs). That is equivalent to 43% of total rates and typically accounts for 25% of total expenditure of councils.
It is clear that accurately estimating depreciation and ensuring that the future renewals cost of assets are adequately provided for is critical in ensuring that ratepayers are not faced with significant costs or ‘shocks’ in the future. We examined depreciation and renewals expenditure in a number of ways, including:

- depreciation funding ratio – to determine whether councils are generating enough cash after paying for their day to day expenses to cover the future renewals cost of their assets
- renewals ratio – to determine whether councils have been investing depreciation funding into the renewal of their assets, at the rate in which the assets are being depreciated
- renewals capacity ratio – to determine whether, if councils are not currently depreciating their assets at the rate in which they are depreciating, they are setting the funding aside to renew assets later, and
- capital works delivery – to determine whether councils are keeping up with their intended capital works programmes.

Our analysis concluded that:

- most councils plan to have enough cash (after funding all operating costs) to cover depreciation (i.e. to replace ageing assets)
- councils do not appear to be planning to renew assets at the rate at which they are depreciating nor setting aside the funds for future renewals
- councils consistently struggle to complete their capital works programmes.

Where councils are collecting enough money to replace assets at the rate that they are depreciating but are not using that money to replace assets at that rate, or indeed to provide for the future renewal of those assets, this suggests that either:

- depreciation is too high, and that some of this is being used to invest in assets to support growth or increased levels of service
  - this situation would raise issues for intergenerational equity
- depreciation is accurate and councils are not addressing the current or future renewals requirements for their assets, but are instead investing some of their depreciation reserves in assets to support growth or increased levels of service
  - if this is true then councils are shifting some of the current cost of renewals to future ratepayers by not funding it now and using the revenue collected as depreciation for other activities or services. This situation has direct implications for future costs and intergenerational equity
- councils are incorrectly and inconsistently classifying expenditure as level of service or growth when it is in fact renewal
  - if this is true then there is little impact on current and future ratepayers or on intergenerational equity. There is however, little incentive in our view for councils to be incorrectly allocating capital expenditure and in most cases renewal expenditure significantly outweighs new and growth expenditure.
Indeed some councils noted that depreciation estimates and asset renewal planning has previously been conservative, allowing councils opportunities to defer renewals expenditure. In some councils examination of failure data or asset condition data (for example from CCTV monitoring) has shown assets to be in a better condition than their estimated useful lives would otherwise suggest. This may indicate that in some instances depreciation may be too high or that councils are responsibly delaying investment in the replacement of their assets.

In our view, there is evidence that suggests that depreciation may be too high. There is a consistent trend for councils to spend less on renewal of their assets than the depreciation of those assets. Three quarters of councils in New Zealand project to have an average renewal ratio of less than 87% over the ten years of the 2015 LTP period.

The asset management industry in New Zealand is a mature industry. Councils have dedicated asset managers and asset management plans are prepared for each asset class. Planned renewal expenditure suggests that councils are making deliberate, informed decisions about their investment in the replacement of assets. Renewal waves being deferred in successive infrastructure strategies and long-term plans are said to be on the basis of best available information. Depreciation however remains consistently much higher than renewal expenditure. In addition, anecdotal evidence about the relatively good condition of New Zealand roads despite a low renewals ratio suggests that, at least for roads, renewals are typically occurring close to the rate that they should be.

Our review of draft 2018 Long Term Plans and infrastructure strategies and our conversations with various councils has indicated that councils are typically yet to face major renewals costs. In many cases, infrastructure strategies are suggesting a large increase in renewals expenditure as being required around 2040 – 2045, although some councils are dealing with the renewal of specific network infrastructure in the later years of the 2018 Long Term Plan.

The renewals waves or peaks that are typically seen in infrastructure strategies that we reviewed were significant, however often equate to less than a single years’ depreciation (across all activities). The challenge is that these renewals peaks (for a single asset class) often represent expenditure over and above the ‘normal’ capital works programme of a council. Additionally, many of these peaks relate to a significant portion of the network and are likely to be disruptive and impact on levels of service delivered to the community.

These renewals peaks or waves do not typically appear unaffordable if councils are prudent in provisioning funds to cover these costs.

Capital works programmes are also set to increase significantly for most councils following adoption of 2018 Long Term Plans. With councils historically struggling to complete their capital works programmes, along with competition from central government projects and private development, it is likely that it will become increasingly difficult for councils to deliver their entire capital works budget without major changes in the way in which these programmes are managed and delivered.
Costs of Delivering Key Services

Local government is responsible for the provision of a wide range of public services to community throughout New Zealand. These range from regulatory services such as enforcement of the Building Act, through to the provision of roads, water and community facilities. Where costs for the provision of any of these services are increasing faster than council’s costs as a whole, that service is likely to be a driver of cost in local government, and may be a reason why local government costs are increasing at the rate that they are.

This section considers four core services provided by council, along with ‘other services’ which broadly covers activities from democracy through to regulatory activities and the provision of community facilities.

Due to the different nature in the services provided by councils in urban and rural areas, our analysis in this section compares performance of these two types of councils. This differs to other sections of this report which instead focus on growth levels. The differences in the spending profile of rural and urban councils are demonstrated in Figure 21 and Figure 22 respectively.

The analysis shows that while the costs of providing some services may be increasing faster than others during the 2015 LTP period the general proportion of expenditure allocated to each activity does not change materially. This suggests that a number of the drivers for cost increases are likely to be the “common costs” that occur across all activities of council.

Figure 21  Proportion of expenditure spent on each council service 2015 (inside) vs 2025 (outside) – Rural councils
Councils in New Zealand are responsible for the delivery of the local road network in their regions, while the New Zealand Transport Agency is fully responsible for the delivery of roads designated as state highways.

In addition to the funding of state highways, the New Zealand Transport Agency provides funding to local authorities for the improvement and maintenance of local roads, the amount of which is determined by the Funding Assistance Rate, which typically sits at or above 51%, but varies across councils.

Because roads are more visible infrastructure, and due to the co-funding arrangements with NZTA, and the oversight that is associated with that, roads are typically regarded as being in a potentially better condition than water assets, and renewals peaks are uncommon.

While the nature of the costs incurred by both urban and rural councils are very similar, there are a number of differences that may mean rural and urban councils experience different financial impacts from the provision of roads and transport infrastructure, in particular:

- rural councils typically have more kilometres of local roads per ratepayer than urban councils
- rural councils are likely to have more heavy vehicles travelling on local roads than urban councils, where most heavy traffic is likely to travel on the state highway network
- similarly, rural councils may have lower total traffic volumes on local roads, although this will be made of a higher proportion of heavy traffic
- rural councils are likely to apply different pavement treatments to their roads, in particular rural councils are less likely to use asphaltic concrete surfacing than urban councils.
These factors suggest that rural councils are likely to spend proportionally more per ratepayer on the provision of roads than their urban counterparts. Indeed, our analysis shows rural councils per ratepayer operating costs being on average 47% higher than urban councils in real terms.

The analysis also shows that real operating costs are largely projected to be unchanged for both groups of councils between 2018 and 2025. As with whole of council costs however, the reality is a slight increase in real operating expenditure per ratepayer within the first three years of our analysis for the roads activity. This is particularly prominent for rural councils, for whom roads represent a larger proportion of cost.

These three years rely on annual report data and indicate that operating costs for roads are increasing faster than budgeted. Given that councils do not generally build new roads, increasing real operating expenditure is evidence that costs are increasing to deliver effectively the same service. This was also reported to us by councils during the study.

**Figure 23  Real expenditure on roads per ratepayer by type and location**

![Graph showing real expenditure on roads per ratepayer by type and location]

Similarly for capital expenditure, analysis shows that real capital expenditure, per ratepayer is on average 26% higher for rural councils than urban councils. Both rural and urban councils show only slight increases in costs over time. Interestingly, the first three years of analysis shows a downward trend in real capital expenditure on roads per ratepayer, however this may also reflect challenges faced by councils in delivering their capital works programme (as this is based on actual expenditure).

**Water**

The provision of drinking water is one of the fundamental responsibilities of local government (either directly or through council controlled organisations). The delivery of drinking water to communities typically involves two key components, treatment and reticulation. Councils must also ensure that they have security of the water supply.
Councils face costs in the delivery of water services due to a number of factors, including:

- maintenance and renewal of pipes and reticulation assets
- capital investment in water treatment technology including UV treatment, chlorination and fluoridation (where applicable)
- operating costs for treatment plants
- securing resilient water supplies.

The impact that these costs have on councils across New Zealand appears to be typically split between the larger metropolitan councils and smaller (in population terms) rural councils. Specifically, metropolitan councils typically:

- have highly connected water systems that rely on a small number of water treatment plants and sources. There is often only one water supply scheme
- already have high water treatment standards, with chlorination and UV treatment being particularly common in large metropolitans
- may face some resilience and supply issues and may need to implement demand management strategies.

In contrast, we found that rural councils:

- often have multiple small schemes that are not connected to each other, and may service very small populations. The cost of operating these small schemes will often be charged back to the community that they serve (as opposed to being spread across the entire district)
- have varying levels of water treatment between councils and between different schemes within a council
- may have less concerns about the security of their water supply or supplies, although irrigation demands may alter this
- will often have communities that are not connected to a council water supply at all or may have informal/non-consented schemes serving small populations.

This would indicate that urban councils are likely to have a higher real per ratepayers’ costs to service water infrastructure than rural councils, but that rural councils may potentially face higher capital costs per ratepayer. Analysis of the sample councils confirms that water services cost an average of 7.7% more to operate in urban councils than rural councils.

Operating costs for all councils are forecast to increase slightly (1.2% per annum) in real terms over the life of the 2015 Long Term Plans, indicating that the cost of providing water services may be a contributing factor in rising costs of local government service provision.
Interestingly, analysis of the real capital expenditure per ratepayer on water services also shows urban councils spending more (114% more on average) on water infrastructure than rural councils. This is likely to be due to the issues of coverage. Rural councils often see the costs of major water infrastructure being spread over relatively small groups of ratepayers, or councils simply not spending due to the cost.

The analysis of real capital expenditure per ratepayer on water services also shows the cost of providing water infrastructure increasing in real terms in urban councils (on average 12% per year). This compares to the cost of providing water infrastructure in rural councils which is increasing at a much slower rate (1.9% per year). For urban councils, this is likely a significant driver of increases in debt, and local government costs.

When considered on a per connection basis, it is likely that the costs of delivering water services in rural areas are likely to be much higher than those in urban areas. Similarly, on a per connection basis, the capital costs associated with the delivery of water services is likely to be similar for both rural and urban councils.

We note that through review of draft 2018 Long Term Plans and discussions with councils it is clear that:

- smaller or rural councils are most likely to be impacted by the outcomes of changing or increasing drinking water standards and regulations, with many rural or small councils highlighting the need to upgrade water treatment plants in their regions. That has cost impacts that will change the findings above.
- the impact of operating costs for water treatment plants on communities served by small reticulation schemes can be very large. In one example provided, a community is served by a treatment plant that was externally funded; however the rates impact for operating that treatment plant is unaffordable.
• climate change and increasing consent conditions are creating the need for many councils (large and small) to examine the security of their current water supplies and investigate alternative supplies. The costs of adding additional supplies (and the treatment associated with this) are significant, ranging between 30% and 50% of forecast annual rates revenue.

• councils are concerned about the extent to which they may be liable for poor water quality in unofficial or private schemes in their region even though some of these schemes may not be consented or otherwise approved by the council. If councils are required to take over the management of these schemes it is likely that there will be significant costs involved.

• many councils are proposing the installation of water meters to manage demand, which come at a capital cost that is approximately equal to 25% of current rates income, although this cost will be spread gradually over a number of years.

177 We note that the above issues are not all fully costed in 2018 Long Term Plans let alone the 2015 Long Term Plan data that were analysed for this report. Were these costs to be included, it is likely that the costs of provided water services in rural areas would be demonstrably higher than metropolitan councils.

Wastewater

178 In most town centres, councils provide some form of reticulated wastewater and subsequent treatment and disposal. Infrastructure associated with the provision of wastewater services typically includes a reticulation network (including pipes and pumps) and wastewater treatment plants which may dispose of treated wastewater to land or to waterways.

179 The treatment of wastewater is subject to numerous standards and regulations, and requires resource consent to be obtained from regional councils. These consents relate to the level of contaminants and bio solids that are able to be discharged into the environment. Resource consents have fixed durations which are often around 20 – 25 years, after which point new consent conditions are likely to be imposed by the regional council. Changes in consent conditions and environmental standards may mean that, when consents are renewed, wastewater treatment plants often need to be upgraded.

180 Specific pressures facing councils in the delivery of wastewater include:

• infiltration of stormwater into the wastewater network, causing overflows or increasing volumes beyond what the wastewater treatment plant can manage. This is becoming more prevalent as infrastructure ages and major storm events increase

• changing technology and increasing consent conditions requiring significant upgrading of wastewater treatment plants

• changing cultural expectation regarding the discharge of wastewater, in particular an increased desire from communities and Iwi that wastewater should not be discharged into waterways.

181 Draft 2018 Long Term Plans indicate a significant increase in expenditure on wastewater assets to respond to these demands. This appears to be creating further upward pressure on rates for most councils that are needing to incur this expenditure.
As with water, the impact on rural communities, which are more likely to have multiple schemes serving small populations, may be proportionately greater than it is for large metropolitans due to inefficiencies associated with having multiple disconnected networks. Smaller rural councils may also have more opportunities to investigate land-based disposal options than larger councils, as the amount of land required to service large populations makes such schemes untenable.

On a per ratepayer basis, analysis of 2015 Long Term Plans shows urban councils typically having 41% higher operating costs for wastewater than rural councils. Because our analysis spreads the costs across the entire rating base, the actual per ratepayer costs for wastewater services, for those that receive them, in rural councils is likely to be much higher (and likely higher than in urban councils).

In one example, the impact on rates bills for a small wastewater scheme was as high as $900 if the costs are met only by the community that uses it. When spread across connected properties across the entire district this would reduce to $90.

While operating costs are decreasing in real terms for urban councils, rural councils are on average expecting annual increases operating costs of 5.8% per ratepayer for the provision of wastewater services. This is likely a key driver for increased costs for these councils.

Figure 25  Real expenditure on wastewater per ratepayer by type and location

As with operating expenditure, capital expenditure on the provision of wastewater infrastructure in urban councils is 29% higher in urban councils than rural councils, although again the method of calculation does not consider ratepayers in rural councils that do not receive wastewater services.
Capital expenditure is forecast to increase in urban councils by 4.6% per year in real terms, in contrast to a decrease in capital expenditure of 0.3% in real terms for rural councils, noting that this is particularly lumpy. This may reflect that urban councils are investing in additional capacity to service growth, while rural councils are focussing on renewal and compliance related upgrades.

Stormwater

Stormwater assets have historically seen much lower levels of investment than the other water assets. Although there are likely several reasons for this, this is in part because failure of stormwater assets is often less noticeable than failure of wastewater or water infrastructure.

The extent to which stormwater infrastructure is needed and the size and design of that infrastructure also differs from water and wastewater as it is determined by the proportion of permeable surfaces in a specific area and the geographical/topographical features of the land. In this way, large metropolitan councils or councils with dense population centres are likely to have greater level of investment in stormwater infrastructure than rural communities.

Both rural and urban councils spend a similar amount of operating expenditure per capita on stormwater services, given the typically higher levels of permeable surfaces in rural areas (and consequently reduced need for hard stormwater infrastructure) this is surprising. Equally, both groups of councils experience relatively static levels of costs in real terms, with rural councils anticipating a slight increase in the cost of providing stormwater services, per ratepayer, in real terms.

Again, most councils saw an increase that appears higher than the increases projected in later years in the cost of providing stormwater services in real terms in the years 2015 – 2017, indicating that these costs increased faster than originally predicted.

Figure 26  Real expenditure on stormwater per ratepayer by type and location
Analysis of real capital expenditure per ratepayer shows a more predictable result, with urban councils spending on average 150% more than rural councils on stormwater infrastructure. Both groups of councils show a slight increase in the real cost of constructing stormwater assets over the 2015 Long Term Plan, perhaps reflecting increasing standards or increased incidence of flooding events.

We’ve seen a renewed focus on stormwater infrastructure in the Long Term Plans and infrastructure strategies that we reviewed, and mounting concern about potential future stormwater infrastructure costs from most councils that we talked to. This change in focus is driven by two external factors; climate change and increasing freshwater standards and regulation.

Climate change impacts are being demonstrated as affecting stormwater systems in two ways.

- The first being that rising water tables in low lying areas make stormwater systems less effective as they are unable to rely on gravity to drain water away. Engineering solutions to this are challenging and require stormwater to be pumped away from low lying areas.
- The second challenge for stormwater infrastructure from climate change comes from increased frequency of high intensity storm events. Stormwater systems are designed based on predicted rainfall in the region, and may be designed to be able to effectively drain rain from a 1 in 20 year event (for example). As climate change increases the regularity of these high intensity events however, the design specifications for stormwater systems will no longer be able to deliver the same level of service. A symptom of this is increased levels of stormwater infiltration.

Investment in stormwater infrastructure in the draft LTPs that we reviewed is typically more modest than that of water or wastewater assets, with investment in stormwater upgrades and renewals over the life of the ten year plans being about 16% of those councils’ annual rates income.

The impact of increasing freshwater standards and regional council regulations is largely un-costed by territorial authorities at this stage. However, our conversations with councils consistently reiterated that freshwater standards, which are likely to set limits on the amount of contaminant/particulate in stormwater discharge, will impose major costs on the sector. Most stormwater systems have multiple discharge points into streams, rivers and the sea, and any form of treatment of that discharge is likely to be technically challenging.

Some councils are encouraging developers to focus on land based discharge of stormwater, such as through the installation of swales, although this imposes large costs on the developer. Ultimately these costs are then passed on to ratepayer or house buyers.

Community facilities

Our conversations with local authorities that were carried out as a part of this study found that a number of councils reduced expenditure on community facilities and services in the 2015 and 2012 Long Term Plans. As a result of these budgets those councils reported levels of service delivered from community facilities to have diminished or remained static. We note that some of the corresponding 2018 draft Long Term Plans saw a restoration of the levels of service to pre 2012 or 2015 levels.

Councils also report that while capital investment opportunities are plentiful, there is little appetite for external funding of operating costs. This results in the level of service provided in new assets not always being commensurate with the quality of the facility.
The data used for this work does not separate operating costs, or capital expenditure beyond the broad activities of water, wastewater, stormwater, roads, and other. The financial analysis shown here focuses on the “other” category, however it should be noted that this incorporates community facility, democracy, regulatory, and flood protection (where relevant) costs.

Analysis of the 2015 Long Term Plans partly supports these assertions, showing a 2.9% per year decrease in real operating expenditure per ratepayer on “other” activities in urban councils and a 1.3% per year increase for rural councils. This data contains a number of distorting factors however, and is only indicative. Operating expenses per ratepayer are 65% higher for urban authorities than their rural counterparts.

Figure 27  Real expenditure on other activities per ratepayer by type and location

Capital expenditure shows a more consistent downward trend across the groups, with reductions in real capital expenditure per ratepayer of 4.1% and 7.6% per year for urban and rural councils respectively. Again, urban councils are typically spending 30% more per ratepayer on “other” activities than rural councils.

Section summary

Local government in New Zealand operates using a cost based model, and consequently increases in costs have a direct impact on rates requirements for councils. Our earlier analysis showed councils planning to reduce costs, in real terms, over the life of their 2015 Long Term Plans, although review of actual results demonstrated that this is not always being achieved.
In order to examine how councils were planning to achieve these savings, or whether certain activities in councils are driving costs upwards, we looked at the four core activities carried out by councils in more detail, being roads, water, wastewater and stormwater. We also looked at the remaining activities together.

We found that:

- Rural councils spend a much higher proportion, per ratepayer, on the provision of roads than urban councils. Consequently, they spend less on the provision of the other activities that haven’t been analysed individually. Around one third of expenditure is applied towards the three waters in both rural and urban councils.
- Councils are not planning to substantially change the proportion of expenditure applied to each activity over time.
- The costs of providing water services, including the construction of water assets, are planned to increase at a faster rate than the other services examined. This is likely to continue into 2018 Long Term Plans and beyond, as changes to drinking water standards and the way in which they are applied are developed.
- The maintenance of roads in rural, in particular, appears to be much more expensive than councils have provided for in their 2015 budgets, while Long Term Plans forecast a reduction in such costs, the actual results show a significant increase.
- Similarly, investment in stormwater assets appears to have increased at a much faster rate between 2015 and 2017, across both groups of councils, than is otherwise projected.
- While the delivery of wastewater and stormwater services are not projected to have large increases in costs over the 2015 Long Term Plan periods, analysis of the 2018 Long Term Plans, and draft infrastructure strategies, coupled with requirements of the National Policy Statement on Freshwater suggest that these costs may increase substantially.
- Meanwhile, operating and capital expenditure of ‘other’ council activities (which includes community facilities and community services) are forecast to decrease per capita in real terms. This may give rise to a reduction in levels of service (although it depends how councils intend to achieve these savings).
Debt

206 Debt enables a council to spread the full cost of constructing an asset (or any other expenditure) over a number of years, thereby minimising the potential rates impact that may have otherwise occurred. Typically, councils use debt to fund the construction of growth and improved level of service assets, although the specific funding and financing policies for councils differ across the country.

207 The use of debt therefore impacts rates in two ways:
- The use of debt instead of cash reserves/rates means rates rises can be deferred, and infrastructure can be constructed immediately without the need to accumulate reserves that otherwise may not exist.
- The use of debt introduces servicing costs which must be met by ratepayers.

208 The debt to revenue ratio measures a council’s total level of debt against its total revenue collected. The ratio is useful for assessing the comparative level of debt a council has and is indicative of its ability to borrow further.

209 The debt to revenue ratio is one of the four criteria that are assessed as part of the financial covenants to borrow from the Local Government Funding Agency (LGFA). Additionally, section 18 of the Local Government (Financial Reporting and Prudence) Regulations 2014 requires councils to ensure that their debt remains at a level that is below their “quantified limit on borrowing”. In order to borrow from the LGFA, a council must have a debt to revenue ratio of less than 175%, or less than 250% if it has a long term credit rating of “A” or higher.

210 Figure 28 charts all councils debt to revenue ratio with the selected councils shown in green. The average debt to revenue ratio across all New Zealand councils sits at 72.3%, with 90% of councils having a ratio of less than 135%, and half of all councils having a ratio less than 73%.
The analysis indicates that a large number of councils are potentially able to borrow more money within their prudential borrowing limits. However it is worth noting that:

- where councils have a declining population, the ability to make repayments on debt in the future is diminished so it may not be prudent to borrow up to the 175% of revenue
- debt is typically reserved for funding capital expenditure (and more specifically growth or level of service infrastructure). In addition to debt repayments and financing costs, investment in these assets typically has additional operating expenditure associated with it. Small councils, or those that are unable to raise rates easily due to community affordability concerns, may not invest in such infrastructure
- growth councils are likely to have higher levels of debt as this is typically used when forward financing investment in growth related infrastructure. This can theoretically be repaid through the application of development contributions, although this is not entirely the case in practice
- a council’s current debt levels may be deliberately low to enable future borrowing for asset renewals or level of service upgrades (particularly for large infrastructure projects such as wastewater treatment plants), which may be outside of the ten year LTP horizon.

When reviewing the debt to revenue ratio it is therefore important to consider the specific circumstances of a council before concluding on whether debt levels are too high (or whether additional borrowing is possible).
**Impact of growth**

As highlighted above, growth councils are likely to carry comparatively higher levels of debt than declining population councils for two main reasons:

- Debt is typically used to forward fund investment in growth related infrastructure which will be repaid over time from development contributions.
- Growth councils have an increasing revenue base so may consider themselves more able to carry high levels of debt, in contrast declining population councils may not be able to meet future debt repayment obligations easily as their rating base diminishes.

Our analysis (Figure 29 below) shows the contrast between the comparative levels of debt in high growth and declining population councils that would be expected. High growth councils have an average debt to revenue ratio of 118%, and although there is significant variation across the group, typically exhibit higher levels of debt than declining population councils. Additionally, a number of councils sit substantially higher than the average, with four of the high growth councils predicting debt to revenue ratios in excess of 150%. In comparison, declining population councils have an average debt to revenue ratio of 49%, indicating a lack of desire, or need, to draw down debt.

Overall this demonstrates a level of maturity of understanding the long term position that the respective councils are in.

**Figure 29** Debt to revenue ratio – all councils 2015 LTP data by growth

The impact of growth on a council’s debt levels and projected rates rises is further illustrated well in the following analysis completed by the Department of Internal Affairs. It shows substantial increases in projected levels of debt for high growth councils and similar increases in annual rates revenue.
Impact of population size and household income

We also considered whether average household income or population size had any bearing on the level of debt carried by councils.

Our analysis found that large populations typically have a much higher debt to revenue ratio than those with small populations. The average debt to revenue ratio across high population councils is 144%, while the average debt to revenue ratio for low population councils was only 35.6%.

Councils with a large number of ratepayers could be expected to carry comparatively higher levels of debt for a number of reasons:

- They are more likely to hold a high credit rating, and are therefore able to access cheaper debt financing.
- They have potentially higher level of service expectations from their communities, meaning capital investment in assets that are traditionally debt funded is likely to be higher.

While the analysis also showed a difference in debt levels between high income (average 89.9%) and low income (average 59.7%) communities, this difference is likely to be due to the nexus between household income, growth and population (that is, councils with lower income communities typically have smaller populations and experience lower levels of growth).
**Section summary**

221 Debt is used by councils to spread the full cost of investing in infrastructure over a long period of time, thereby minimising the immediate impact to rates, and attributing costs of new infrastructure to the ratepayers that will benefit from it (i.e. future ratepayers). Typically debt is used to fund investment in assets required to service growth or provide increased levels of service, though councils’ approaches vary.

222 Debt can be a legitimate way of paying for asset investment for a council, however limits are placed on how much a council can borrow. These limits are typically in place to ensure that a council has the capability to meet future debt servicing costs, and that it is able to maintain a high credit rating to access ‘cheap’ debt.

223 Our analysis of the debt to revenue ratios of New Zealand councils found that:

- local government debt sits mainly in the right councils. That is high growth and high population councils carrying comparatively more debt than declining or small population councils
- growth councils are carrying high levels of debt and this is projected to increase further. This may constrain their ability to borrow more or may impact their ability to deal with financial shocks
- the reduced ability for small or declining population communities to service debt repayments and operating expenditure on new major infrastructure may be constraining their ability to invest in expensive but much needed infrastructure.
Other Issues Creating Cost Pressures

Population and demographic changes

Addressing changing populations and demographics presents a major challenge for many New Zealand councils. The challenges faced by high growth councils are well known and heavily publicised nationally, however aging and declining populations (which often go hand in hand) are equally challenging for councils to deal with.

Because the issues facing each group of councils are different, we discuss the matters of growth, decline and an aging population separately below. We note that some councils are facing all three of these challenges over the long term, and planning for that is difficult.

Population growth

The issues facing high growth councils primarily relate to the need to increase land supply and install the necessary infrastructure to service that land. In particular, high growth councils must deal with:

- a reduction in the available land for greenfield development within their area, and where that land is available, significant cost to connect it to existing roading and three waters networks
- requirements imposed by the National Policy Statement – Urban Development Capacity
- the inability to collect development contributions for the full cost of infrastructure which is required because of growth
- increased level of service expectations from communities
- the need to finance the cost of installing growth infrastructure in advance of the growth occurring, and development contributions being received.

These issues mean that most high growth councils carry high levels of debt which will only be repaid from development contributions over a number of years.

The development contributions regime, and surrounding case law, means that councils are rarely, if ever, able to collect development contributions for the full cost of investing in infrastructure required for growth.

One potential cause of rates increases, particularly for growth councils, could be an increasing differential between the costs of investing in growth infrastructure and the amounts received from development contributions. This is because any costs that are not funded from development contributions will have to be funded from rates (over time).

What is important when considering whether this is a relevant factor when considering the quantum of rates rises above inflation is not the size of the gap but whether the gap is increasing.

Analysis of 2015 Long Term Plan data suggests that the gap is effectively unchanged over the life of the Long Term Plans, with only a very small decrease in the average percentage of growth capital expenditure funded by development contributions.
Further analysis, considering only high and medium growth councils yields similar results, showing a slight increase in the average percentage of growth capital expenditure funded by development contributions.

This would indicate that the ability to recover growth costs from developers does not appear to have a direct impact on year on year rates increases or pre-inflation rates rises. It is worth noting however that this analysis does not consider the impact of the National Policy Statement on Urban Development Capacity, which will have decreased the percentage of growth costs recovered from development contributions for high growth councils. This is likely to be a contributing factor for rates rises in the first year or two of the 2018 Long Term Plans for high growth councils.

Increases in the levels of debt limit the ability for a council to borrow further for level of service assets or for the investment in community facilities which are not funded from development contributions. While the Housing Infrastructure Fund (HIF) provided some relief from the financing costs associated with this debt, it has had a limited impact as the debt remains on a council’s balance sheet. Further, interest savings from the HIF fund are effectively passed on to developers who would otherwise have paid a finance cost component when the development contributions were calculated. This may or may not flow through to purchasers.

The “average” shown in this chart excludes those councils that do not anticipate receiving any development contributions.
High growth councils are looking to alleviate this burden by:

- reviewing development contributions policies to attempt to collect a higher proportion of growth costs from developers
- seeking alternative funding mechanisms, such as the Crown Infrastructure Partners model, which may shift costs ‘off balance sheet’
- looking forward to proposed changes to the development contributions regime to allow councils to resume collecting development contributions for the construction of community assets
- looking into partnerships with other organisations or councils to deliver shared infrastructure.

Due to the need to carry debt to fund growth infrastructure, high growth councils also carry a substantial amount of risk that is tied to external factors such as immigration, internal migration and the local and global economy. Changes in interest rates or downturns in the level of growth can have major impacts on a council’s financial sustainability.

As growth councils look to reduce debt and service increasing interest costs they are likely to require larger rates rises than they may have previously anticipated as demonstrated in the following analysis provided by the Department of Internal Affairs.

Figure 32  Annual increases in rates revenue for growth councils – comparison of 2015 and draft 2018 long term plans

Source: Department of Internal Affairs
Population decline

238 The issues relating to population decline present different challenges to those faced by growth councils, and are typically more difficult to understand through the review of infrastructure strategies and Long Term Plans or through discussions with councils.

239 Where the population of a region is in decline, councils can face very real challenges regarding their long term sustainability. In particular:

- councils face significant difficulties when trying to cease provision of existing three waters and roads to their communities and will therefore always have a minimum cost of operating and those costs represent the substantial costs of the council. Many councils have limited capacity to scale back operations and trim costs
- it is difficult for councils to simply cease to provide services or significantly cut levels of service and doing so may contribute to the rate of decline in some areas
- population decline does not occur in neat blocks. That is, a population that declines by ten ratepayers in a year will not experience those ratepayers all leaving from a single street. It is therefore impossible to reduce the size of the network that receives council services
- a reduction in the number of ratepayers will result in higher rates for the remaining ratepayers.

240 It has been difficult to determine what strategies are employed by declining population councils, or indeed what the financial implications of a declining population are likely to be as the Long Term Plans that we reviewed did not address decline specifically.

241 In our conversations with councils that are projected to have a declining population we heard that these councils were necessarily optimistic about the growth of their regions. Faced with projections of declining populations, these councils are putting forward proposals or investment initiatives that are intended to buck that trend. Where such proposals are being put forward, councils genuinely believe that these present them with the best chance to prevent or reverse population decline. Accordingly, financial strategies and Long Term Plan documents reflect this optimism.

Aging population

242 Many councils facing population decline also have an aging population, which can again create its own issues, including:

- a larger proportion of the population living on fixed incomes may limit the ability for councils to raise rates and may create affordability issues
- reduced population density can create the outcome of a static number of dwellings with a decrease in the number of people to share the rates liability
- increased demand for certain services and reducing demand for other services. For example, demand for library services and social housing is likely to increase, while some sports facilities and playgrounds face reducing demand
- while uptake is currently low, a change in approach to rates postponement schemes (such as a removal or capping of interest charges or increased promotion of the scheme) could see constraints in councils’ cash flows.
In centres that are seen as ideal retirement locations, an aging population can also be accompanied by growth. In these areas a key challenge relates to the need to attract a younger demographic to move to the area to fulfil the needs of the workforce. These challenges mean that some councils with ageing populations need to balance the demands of the residents that it is seeking to attract as well as its current demographic.

Tourism pressures

Areas with high levels of tourism face significant infrastructure costs and costs of providing services to the community. The areas with the highest levels of tourism in our sample councils face tourist numbers that are many times higher than the normally resident population of the region.

This creates particular challenges for communities with low populations as councils need to scale infrastructure to cater for peak (i.e. resident plus tourist) population levels rather than the usual resident demand. As there are often only limited mechanisms for councils to obtain revenue from tourists directly, the costs of servicing and replacing this infrastructure inevitably falls on ratepayers.

In addition to the simple need to increase the size and scale of facilities, tourists often have higher level of service expectations than local ratepayers. While councils will not always meet these service level expectations, this can create additional issues. For example, when tourists expect waste transfer stations to have longer opening hours than provided, there may be increases in illegal dumping.

The extent to which a community benefits from tourism in its region also varies widely. In some areas with high levels of tourism, much of the tourism occurs on Department of Conservation Land, with tourists either camping or staying in tramping huts or simply visiting for the day. While the Department of Conservation does pay for services that council provides to it, its land is not rateable. These councils do not have the costs of operating tourism related infrastructure offset by additional tourism revenue. In other areas, regional tourism impacts on the council but activities (and the associated revenue) fall outside of the area.

Councils with high levels of tourism have generally been quick to utilise government grant funding, including from the Tourism Infrastructure Fund, to assist with the construction of tourism related infrastructure in their regions. However, this funding does not come with any operational funding commitment, meaning ratepayers must cover the additional costs of servicing that infrastructure (which is often otherwise incapable of generating its own revenue). In round one, the government approved 34 applications for funding from the Tourism Infrastructure Fund, with $14.2 million being awarded. A high proportion of this funding related to public toilet facilities.

While in many cases the infrastructure needed is indeed car parks or toilets (which are the predominant recipients of tourism infrastructure funding), in some cases tourism pressures have required additional investment in road safety enhancements or road improvements which often comes at a great cost. For example, one council is undertaking a road safety enhancement project that is likely to cost over $40 million to respond to an increasing numbers of accidents. While this project receives an NZTA subsidy, the council must still contribute almost 50% of the total cost of the infrastructure.
In order to cover some of the costs associated with servicing tourists, some councils are proposing, or investigating, the use of targeted rates or rates differentials to extract more rates from accommodation providers and holiday home owners. While useful, these tools are a blunt instrument and are not able to easily adapt to levels of tourism or volumes of overnight visitation. For example, a targeted rate on holiday home owners will apply to all holiday homes at the same amount (or on the same basis) and cannot be adjusted to reflect the actual level of use that the holiday home receives. Holiday homes that are rented only once a year will be subject to the same targeted rate as those rented every night, despite the demand on infrastructure and services varying.

Climate change

Climate change is an issue in draft 2018 Long Term Plans, and is increasingly becoming a major focus area for most councils (including those that are not located on the coast). The vast majority of Long Term Plans and infrastructure strategies that we reviewed included some reference to climate change and how the council was looking to deal with it.

However, in most cases while climate change was a major focus, the potential future costs had not yet been determined. This is primarily because climate change science is constantly evolving and there is little consensus on how, or when climate change will impact individual communities.

In the councils that are likely to be hardest hit we are seeing some level of investment to understand and begin to try to alleviate the symptoms of climate change. In particular, major stormwater infrastructure investment and schemes to divert stormwater and wastewater runoff into low lying areas have been proposed by some councils. Upgrades to wastewater and stormwater pipes to reduce infiltration into the wastewater system are also being carried out in low lying and flood prone communities to minimise the impact of high intensity storms.

These investments have been described to us as being necessary in the short term while councils investigate what options are available for the long term.

While managed retreat is not being specifically considered by any councils at this stage, most councils are reluctant to be the first to make these types of decisions, and are looking to central government to take the lead on climate science or provide legislative protection to councils that make climate change based decisions.

While the costs of long term protection against climate change are largely unknown in councils, the issues caused by climate change are not. Some of the issues experienced by councils as a result of a changing climate include:

- security of water supplies and the ability to get water to isolated communities. Many councils rely on one or two water sources for their town supply, and changes in the climate may mean that these sources can no longer provide for the demand, or may require extra treatment
- forestry roads constructed on poor sub-bases are deteriorating quickly following wet weather events
- roads being closed due to slip and flooding events, which can isolate communities or entire regions
- the continued investment in coastal roads etc which are facing increasing erosion
in areas with high water tables, the ability to carry out capital works is limited to a few months. As water tables continue to rise the window of opportunity to efficiently carry out capital works is decreasing.

cemeteries in low lying areas are unable to inter bodies at certain times of the year.

impacts of increased storm events may increase stormwater infiltration into wastewater networks, and stormwater discharge into rivers and waterways.

some impacts on community infrastructure, in particular parks located on peaty soils, also exist which may require significant investment to maintain levels of service (drainage may be needed to make parks serviceable in periods of high rainfall, and irrigation required for periods of drought).

reductions in a council’s ability to deliver business as usual services when meeting civil defence responsibilities to assist during local emergencies.

Many of the challenges presented by climate change are unlikely to be avoidable or preventable and they may require significant changes in the way that councils deliver services. The costs associated with these challenges are likely to be major, and it is unlikely that councils will be able to afford these costs alone.

Seismic strengthening

Seismic strengthening is emerging as another major cost area for local government across the country, although again this is largely un-costed in 2018 Long Term Plans.

As councils are continuing to carry out assessments of their own buildings, it is becoming apparent that a number of buildings will need strengthening at great cost to their communities. Additionally, increasing engineering standards are imposing additional costs on councils when constructing new assets. One example cited to us was a 10% increase in construction costs for a bridge.

Rural councils are concerned not only with the costs of strengthening their own buildings but also those of the businesses operating within their communities. Many rural businesses simply cannot afford to carry out the work as there is no, or little, financial return on the investment. In small communities, this may eventually lead to these buildings being demolished or the businesses closing.

Innovative funding mechanisms

In order to minimise the impact of rising costs and increasing capital works programmes on ratepayers, many councils have explored alternative funding mechanisms. In some cases these have been effective in enabling councils to deliver services or facilities that they would have been unable to do otherwise. Examples of some innovative funding mechanisms that we have observed include:

- partnerships with central government and educational institutes to provide shared facilities for the community (for example by making a school gym available for public use). Where these relate to growth projects, councils face some constraints in providing funding as they are unable to collect development contributions to fund infrastructure that they do not own.
- partnering with sporting codes to develop or improve facilities. However, while capital funding is easily obtained, it is often difficult to obtain operating funding from these codes.
- engaging full time resources to seek external funding opportunities.
• corporate sponsorship  
• co-funding arrangements with local industry to repair or upgrade roads that the industry relies on  
• exploration of funding and governance arrangements with Iwi, particularly in the wastewater and affordable housing areas  
• lobbying for fuel taxes, increased road user charge shares or local congestion/toll roads  
• shared funding with neighbouring councils.

Compliance costs

One area that is likely to explain some of the increase in costs that council incur (in real terms) is the increasing burden of compliance costs and regulatory functions.

Councillors reported that the costs of complying with new government regulations can often be large and difficult to fund. Examples of recent government policies that imposed regulatory costs include:
  • The National Policy Statement on Urban Development Capacity  
  • Drinking water standards  
  • The National Policy Statement on Freshwater Management  
  • The establishment of district licensing committees  
  • Changes to the Civil Defence Emergency Management Act.

Proposals to develop additional National Policy Statements on biodiversity and climate change are also expected to impose additional regulatory costs on councils. While larger councils may have sufficient resources to be able to absorb some of these regulatory activities within current staff levels, small councils may need to employ additional resource to manage some of this compliance burden.

Section summary

Councils do not operate in isolation from the external environment, and as such must manage a number of challenges and risks from the wider external environment. These costs naturally create cost pressures for councils.

One of the most significant, and topical, external issues that must be managed by councils is that of changing population and demographics. Councils experiencing high levels of growth, while able to spread the rates burden over an ever growing number of people, face challenges associated with the need to invest in and maintain infrastructure to support that growth. These costs are only partly funded by the development community, with a share of those costs having to be borne by existing ratepayers.

Consequently, growth councils carry high levels of debt, with some councils approaching the top of their debt to revenue ratio limits. This constrains the ability for those councils to invest further in growth or improved level of service assets.
On the other hand, councils facing declining populations may face issues relating to affordability, as the rating base decreases the ability for councils to increase total rates revenue while maintaining affordability is diminished. These councils cannot simply cease to deliver services, or turn services off for certain communities.

Other external risks and issues councils are having to manage include:

- Climate change, which presents a major risk for many councils in New Zealand. While the cost implications of this and the timing of those costs is largely unknown, many councils are anticipating that the costs will be significant and are unlikely to be affordable for their communities. Uncertainty about how or when changes in the climate will come about makes this risk difficult to manage.

- Tourism, which creates additional demand on infrastructure without creating additional revenue for councils. Tourism is typically creating more pressure for small, or rural, councils than it is for larger councils.

- Seismic strengthening, which is generating new costs to ensure the safety of publicly owned buildings and infrastructure. New seismic standards are increasing the costs of constructing new bridges and other major infrastructure. The requirement for privately owned buildings to meet earthquake standards is also placing pressure on small communities.

- Compliance costs. The introduction of new standards and regulations is creating additional costs on councils. In some cases this has a direct impact on the amount and cost of infrastructure that councils must invest in, while in other cases this creates additional operating costs.

In order to respond to some of these external risks, and to maintain lower rates rises, councils have investigated alternative funding options, including partnerships with government departments and local Iwi to deliver services more efficiently.
Appendix A  Methodology

Our process

Local government in New Zealand follows a cost driven model, whereby the level of rates required to be collected from a community is determined by the funding requirements of the council. Working within an agreed funding envelope, councils first determine their required level of expenditure to deliver an agreed level of service, before determining the amount of revenue that they need to collect in rates.

In order to assess appropriateness of current funding mechanisms, affordability of rates, and the potential pressures that may impact long term affordability, it is therefore necessary to examine the key costs that local government faces.

Our approach involved:
  • assessment of all New Zealand local authorities against an agreed set of financial performance measures to inform council selection
  • development of a financial model to measure key affordability and financial performance metrics for a selection of fifteen councils using published 2015 Long Term Plan data
  • review of 2015 Long Term Plans, draft 2018 Long Term Plans, and draft infrastructure strategies for the selected councils
  • site visits with five of the fifteen councils, and informal discussions with other councils across New Zealand to further inform the cost pressures for local government.

Issues identified throughout this process were grouped into themes for presentation within this report.

Analysis of all councils' summarised 2015 LTP data

As part of the process used to select the councils to be included in this study, high level analysis was carried out using the Department of Internal Affairs’ 2015 Long Term Plan data for all of the councils in New Zealand.

The analysis was kept at a high level, reflecting the source of data and the use of the analysis within the study. Additionally, the analysis relies solely on 2015 LTP data, and is unlikely to reflect either actual performance as at the date of this report or up to date financial strategies (as set out in draft 2018 Long Term Plans).

Notwithstanding the limitations set out above, the analysis of LTP data across all New Zealand councils provides some useful insight into some of the key infrastructure and financial issues addressed in this report across the entire sector.
Interaction and interpretation of ratios

This report discusses the performance of councils against a number of different ratios that relate to affordability of the current rating system and the sustainability of current financial and asset management practices in local government. The ratios selected for inclusion within this report focus on specific financial and infrastructure measures that can be obtained from data contained within Long Term Plans and annual reports.

It is important to recognise that:

- these ratios do not directly compare the condition, quality, or level of service provided by councils
- these ratios should not be considered in isolation. A number of the ratios or performance measures included within this report interact with each other, meaning ‘good’ performance in one ratio may result in ‘poor’ performance in a different ratio
- performance against measures presented within the report should be viewed within the context of a community’s needs or wants. The specific circumstances facing individual councils may mean that the approach taken by one council may not be appropriate for a different council.

The interaction of different ratios is an important consideration when reviewing this report and is likely to aid in the understanding of how councils’ performance may differ, and why. Appendix A discusses how some of the key ratios referred to in the report are calculated and how they interact.

Differences in data sets

At the time of the study 2018 Long Term Plan data was only available in draft form for some New Zealand councils, with the remainder of the councils yet to release draft Long Term Plans.

Our report uses 2015 Long Term Plan data to illustrate trends and measure performance of councils in a number of different areas. At the time of writing this report, all of the fifteen councils included in this study had released draft 2018 Long Term Plans and associated consultation material. While this material was reviewed as part of the study, draft Long Term Plan data was not modelled as it is highly likely to change.

It is important that graphs and figures presented in this report are viewed within that context. Many councils signalled significant changes in their 2018 Long Term Plans. This section highlights where some of these changes exist and what those changes may be signalling in terms of the sector as a whole.

High level comparison of draft 2018 Long Term Plans with published 2015 Long Term Plans was provided by the Department of Internal Affairs.

The data shows a significant change in the annual percentage of rates revenue collected and the levels of projected debt across all New Zealand councils. This follows a fundamental shift in financial planning observed in many of the fifteen councils we reviewed. The features of this include increased capital expenditure and services being driven up by the level of service and community expectations.
Figure 33  Annual change in rates for all councils – comparison of 2015 and draft 2018 long term plans

Source: Department of Internal Affairs

Figure 34  Total projected debt for all councils – comparison of 2015 and draft 2018 long term plans

Source: Department of Internal Affairs
The difference between projected years four to ten of the 2015 Long Term Plans, and the revised rates rises as shown in the draft 2018 Long Term Plans is typical of the changes from previous cycles. In effect that means rates and debt rise much faster over the ten year period than is originally indicated.

In addition to the differences in rates rises and levels of debt seen nationally, a number of other key themes arose from our review of the sample councils:

- Capital works programmes increasing significantly compared to 2015 Long Term Plans, with an average increase in capital works programmes across the sample councils of 143%, and some councils increasing their proposed capital works programme by as much as 230%.

- Rates rises during first three years increasing when compared to their projected levels in the 2015 Long Term Plans. Across the sample, councils’ average rates rises in years one two and three are 5.2%, 5.2%, and 4.17% respectively. In 2015 proposed rates rises for the same years averaged 3.6%, 3.6%, and 3%.

- Most councils are proposing an increase in their borrowing (in absolute dollars at least), with councils that currently have relatively low levels of debt seeking to increase the level of debt that they carry in proportion to their revenue.

- A particularly strong focus on climate change issues is apparent in many of the draft Long Term Plans and consultation documents reviewed. Councils that are in areas that we considered would have a low risk from climate change also included discussion on the impacts of climate change in their region.

- The cost of servicing peak populations caused by tourism and the cost of investing in tourism related infrastructure has appeared to be a more significant issue in the draft 2018 Long Term Plans.

- Related to the climate change issue, most draft Long Term Plans reviewed had a focus on renewing or investing in stormwater infrastructure to address infiltration issues, discharge into waterways or climate change related events.

Any of the changes signalled in the draft Long Term Plans relate to issues that are specifically addressed throughout the report. Unless otherwise stated in the report, the data, graphs and accompanying analysis presented within those sections is derived from 2015 Long Term Plans, however our commentary and discussions about issues facing local government is based on draft 2018 Long Term Plan data, and conversations that we had with council staff between April and June 2018.

Increases in projected rates rises and debt levels from year four of the 2015 Long Term Plans are not illustrated in this analysis, however such increases are typical when new Long Term Plans are developed and this will have an impact on rates affordability.

Council selection

This study examines a sample of fifteen councils across New Zealand in order to make observations about the cost pressures and currently available funding mechanisms that impact on local authorities’ ability to respond to and manage the needs of their communities.

The study relies on a sample of councils in New Zealand facing a range of diverse and contrasting challenges, meaning sample selection is critical.
Councils were selected through a two-stage process. The first stage was to divide councils into a number of groups based on key issues that the Department was interested in, or that influence the way in which the Council operates. Those categories were:

- **Growth** – Based on categorisation of councils according to the National Policy Statement on Urban Development Capacity (for High and Medium Growth), and Statistics New Zealand subnational population projections (for Low Growth and Declining population councils).
- **Population** – Using Statistics New Zealand, subnational population projections (2013 census figure), and grouped into: less than 10,000, between 10,000 and 25,000, between 25,000 and 100,000, and greater than 100,000.
- **Unitary versus territorial authorities** – inclusion of unitary authorities allows the study to consider some of the issues faced by regional councils without compromising the sample size.
- **Average household income** - Relying on 2013 census data, average (median) household income quartiles for all local authority areas. Councils were grouped into either bottom, second, third or upper household median income quartile.

As climate change was an issue that was also of interest to the Department the selection of councils also considered the potential impact of climate change events. No definitive risk assessment for climate change by territorial authority was found, so this consideration was based on various government reports and news articles regarding the impacts of climate change in New Zealand.

Finally, council selection also considered the levels to which each local authority was impacted by tourism. The impact of tourism was determined by reference to The Ministry of Business, Innovation and Employment’s annual tourism spend data.

Once councils were grouped according to the above criteria, the selection of councils from within each group was based on performance against a number of key financial measures. This ensured that councils selected covered a broad spectrum of different external factors (i.e. the groupings above) and ‘financial health’. The measures chosen to be used for the council selection phase were based on the data available from the Department’s LTP database, and core infrastructure ratios used in New Zealand and overseas (noting that infrastructure investment represents a large portion of annual outgoings for councils, and has long term impacts).

The ratios used included:

- Renewals ratio
- Depreciation funding ratio (gross)
- Percentage increase in total rates revenue
- Debt to revenue ratio

Charts of sector performance against the above mentioned ratios, and commentary on what this demonstrates, are included in the analysis section of this report.

**Analysis of selected councils 2015 LTP data**

Following selection of the fifteen councils that were chosen for further analysis, their published 2015 Long Term Plan data and 2015, 2016 and 2017 actual results were loaded into our financial model for further analysis.
The financial model takes core Long Term Plan data and applies more detailed analysis to measure performance against 45 different performance measures.

The analysis presented throughout this report considers both actual performance and projected performance against these benchmarks. Analysis of the 2015 LTP data from our model is presented both here and, in the section, entitled “Key issues” as appropriate (i.e. where analysis is useful but does not relate specifically to the key issues discussed in that section it is presented here).

**Key ratios used within the report**

**Infrastructure ratios**

Expenditure on assets (in particular roads and three waters) represents a significant portion of a typical council’s outgoings. As such, the age, condition and investment in infrastructure is a key indicator of a councils financial health and potential future costs (and therefore necessary rates take).

We measure a council’s investment in its infrastructure assets by a number of different ratios within this report. Three of these ratios are highlighted in the chart below, with descriptions of each ratio to follow.

**Figure 35  Comparison of assets**

The chart shows three asset ratios:

- **The depreciation funding ratio** compares the amount of operating cash flows (adjusted for capital grants and NZTA funding) compared to the depreciation on assets across all or councils assets. A ratio above one indicates that a council is collecting enough cash from its operations to be able to invest in the renewal of its assets (using depreciation as the best proxy for renewals...
requirements over the long term). The ratio does not show where funding is actually applied.
• **The renewals capacity ratio** measures the investment in the renewal of assets, plus the net movement in debt, cash and investments, as compared to depreciation. This ratio measures whether a council is either:
  – replacing assets at the rate that they deteriorate; or
  – setting aside the future capacity to be able to replace assets when they are due for replacement.

The difference between this ratio and the depreciation funding ratio indicates a proportion of depreciation funding (or excess cash flows where the depreciation ratio is above 100%) that has been applied toward level of service or growth assets. This ratio may be higher or lower than the renewals ratio. There is no benchmark for this ratio, however a ratio of one indicates that a council has or is building the financial capacity to be able to address future renewals requirements. A ratio of less than 0.8 may indicate that the council is likely to require an increase in rates revenue, or may need to increase lending, to address future renewals requirements.

• **The renewals ratio** measures the investment in the renewal of assets compared to depreciation on the same set of assets. This chart shows the renewals ratio across all asset types, although analysis of separate asset types (water, wastewater, stormwater and roads) should be considered as there are industry trends. As an annual measure it is unlikely that this ratio would ever be 100% as depreciation is typically spread evenly over the life of an asset while renewals only occur at the end of an assets life. A low renewals ratio may indicate that a council’s asset base is young, or may indicate under-investment in renewals infrastructure.

• **The essential services ratio** was not analysed as it considers total capital expenditure and was therefore not useful for considering investment in the replacement of assets.

**Expenditure ratios**

304 We measure expenditure between councils on a per ratepayer basis to enable better comparison between councils of different sizes.

305 Expenditure per ratepayer is measured in real terms. Measurement of expenditure in real terms allows us to remove the impacts of inflation and examine whether a council is operating more efficiently in the future.

306 In our calculations of real expenditure throughout this report, we have stripped inflation from future costs using the Local Government Cost Index. This means that where costs may appear to be staying static in real terms, when compared to the consumer price index (which is used for our household living cost projections) those costs are actually increasing.

**Averages**

307 Where this report refers to averages this is the mean value across the full analysis period for all the sample councils unless otherwise stated in the report.

**Goods and Services Tax**

308 Amounts referred to in this report are exclusive of Goods and Services Tax. Where average rates figures are shown, the amounts paid by ratepayers who are not registered for Goods and Services Tax will be 15% higher.
How do we measure affordability

The question of affordability is challenging, as assessing what is or isn’t affordable by a broad group of people is a complex question requiring consideration of a wide range of factors. At a micro-economic level (i.e. looking at a small group of individuals) it may be possible to determine whether a cost is affordable. That is, whether that group is able to pay the cost. However, when looking broadly at a community the question becomes more complex, as the definition of affordability comes into question.

In order to determine whether rates are affordable for a community, there are a number of matters that should be considered. For example some of the considerations regarding affordability may include:

- what proportion of the community must be able to pay the cost
- where the cost ranks in terms of the importance of normal household outgoings, and what an appropriate allowance is for those outgoings
- whether any allowances for discretionary spend, savings, or emergency costs must also be considered when determine ability to pay
- what is included in the ‘cost’.

A number of these issues are matters that are best considered by policy makers, politicians or the wider community, and we do not consider those matters in this report, as the purpose of this report is to consider the current structure. The answers to these questions will however determine what the appropriate measure of affordability is.

For the purposes of measuring affordability in this report, we have determined three possible measures:

- Average rates (including fees and charges for roads, and three waters) as a percentage of average household income. This measure shows how much of a household’s income is being applied to the payment of rates in a particular region. Arguably, the higher this percentage, the less affordable rates are.
- Average rates (including fee and charges for roads and three waters) as a percentage of average household living expenses. This measures the proportion of living costs that relate to rates. In some cases areas with similar average household incomes may have different levels of rates affordability because living costs are cheaper in one area than the other.
- Annual increases in average rates (including fees and charges on roads and three waters). Even though rates may be affordable in absolute terms, or as a percentage of income, when rates rises in any single year are very large, this will impact on affordability, as ratepayers may not have adequately budgeted for that level of increase. Additionally, where rates rises are higher than wage growth, arguably rates become less affordable over time.

---

10 Affordability measures such as percentage of disposable income and total home ownership costs were considered but not used due to limitations in available data.
What are the limitations in our approach?

The affordability measures that we present in this report provide a good high level snapshot of rates affordability across New Zealand. However, there are a number of limitations in the measures that we use that make comparison between councils challenging. Specifically:

- Variation in the services provided by a council that are included in rates income means ratepayers get more or less ‘bang for their buck’. For example, waste services may be provided free of additional charge (i.e. fully rates funded), subsidised, 100% user pays or 100% privately. Similarly, the level of user fees and charges for community facilities such as swimming pools, indoor sports centres and public transport varies from region to region.

- The use of average values for income and living costs means that 50% of a community’s ratepayers will earn (or spend) less than that amount so rates will be much less affordable for them. It may be more appropriate to use a figure representing the 25th percentile (or other such acceptable measure).

- While ‘average’ rates are also used, due to the use of fixed charges and universal annual general charges (UAGCs), the variation in the amount of rates payable between properties of high and low capital value may or may not be significant. Therefore, the use of averages for both parts of the measure does not offset.

In order to develop a rates affordability measure that can be easily compared across councils, it would be necessary to address some of the above issues.