

# District Profile | Rohe Whakaritenga

The Hauraki District contains a diversity of land, communities and economies. Our location puts us in the 'golden triangle' between Auckland, Tauranga and Hamilton, and provides for a number of potential business opportunities to within our district. Due to the flow on effects of the growth pressures facing Auckland, Hamilton and Tauranga, in the past five years we have seen more people moving into our district than previous years, and added demand for new houses. With our active support of economic development initiatives, we are expecting our local economy to continue to perform well and our local population to keep growing.

## Our Home

### Our land

Our district sits at the south of Te Tara o te Ika o Maui – the barb of the fish of Maui. It is geographically diverse and stretches from the shelly beaches of the Wharekawa Coast (Kaiaua and Pūkoro-koro-Miranda) along the Firth of Thames in Tikapa Moana (the Hauraki Gulf) to the white sandy beaches of the Pacific Ocean at Whiritoa. Between lies the rich reclaimed dairy lands of the Hauraki Plains, the rugged beauty of the Karangahake Gorge and Kaimai/Coromandel ranges, and the rolling farmlands of the Golden Valley. We sit within the rohe of the iwi of Hauraki which stretches from Matakana in the north to Matakana Island in the south.

The Hauraki District Council was formed in 1989 when the Hauraki Plains County, Ohinemuri County, Paeroa Borough and Waihi Borough Councils were combined as part of a major restructuring of local government within New Zealand. The Wharekawa Coast became part of the Hauraki District in 2010 when the Auckland Council was formed.

We are part of the Waikato region and are located within New Zealand's economic 'golden triangle' being only an hour drive from the cities of Auckland, Hamilton and Tauranga. Our total area is 1,269 square kilometres, and our estimated population at June 2020 was 21,400<sup>1</sup>. We may have less than 1% of New Zealand's population, but we have a lot of natural, cultural and historic taonga to look after. The Kōpuatai Peat Dome and the Pūkoro-koro-Miranda area on the Firth of Thames are recognised by the Ramsar Convention as wetlands of international importance. Another area of natural beauty, the Karangahake Gorge, is visited by over 130,000 people a year who wish to experience the significant natural, cultural and historic features of the area and ride the historic Goldfields Railway. The iconic Hauraki Rail Trail traverses our district from Kaiaua through the Karangahake Gorge to Waihi, and connects us to our neighbours and the towns of Thames and Te Aroha.

The clear waters of the rugged Ohinemuri River flow through the Karangahake Gorge until Paeroa where it joins with the Waihou River. The Waihou River originates from the Mamaku Ranges (close to Rotorua) and flows past the towns of Putaruru, Te Aroha and Paeroa before draining into the Firth of Thames. The Piako River originates in the ranges west of Matamata and flows through the Hauraki Plains, also draining into the Firth of Thames.



**Our total area is**

**1,269**

*square kilometres*



**Estimated population**

**21,400**

*At June 2020*



**The Karangahake Gorge,  
is visited by over**

**130,000**

*people a year*

<sup>1</sup> Statistics New Zealand, Hauraki District Council estimated usually resident population as at 30 June 2020.

## Wards

Our district is divided into three wards; Waihi, Paeroa, and the Plains. Each ward has a main town and surrounding rural land and smaller rural settlements<sup>2</sup>. These ward areas are shown on the map below. Our three most populated towns are Paeroa, Ngatea and Waihi.



**Waihi** the 'town with a heart of gold' features a large open cast gold mine and adjacent walking track right in the middle of town. The historic Cornish Pump House overlooks the main street where the annual Beach Hop warm-up party is held. The beach village of Whiritoa sits on the eastern coast of the Coromandel Peninsula.



**Paeroa** is 'world famous in New Zealand' as the home of the L&P soft drink and is also renowned as a great place to seek out antiques with many antique and op-shops lining the main street. Annual events such as the Highland Games and Tattoo attract thousands of visitors each year. The Ohinemuri river flows through the Paeroa ward and joins to the Waihou river north of the town.



The **Hauraki Plains** also have a unique recent history as the area was drained and cleared of swamp lands through a huge land drainage programme which started in the early 1900's. Ngatea is the centre of hockey in the Thames Valley and is packed with people once a year for the Ngatea garage sale. The Wharekawa Coast is on the western side of Tikapa Moana and is home to 'famous' tiny arctic tern, which makes the longest migration of any animal in the world.

## A map of the Hauraki District



<sup>2</sup> Statistics New Zealand use when grouping data.



## Our people

At the 2018 Census people were able to note all ethnicities they identified with. 18 out of 20 people in our population identified as European and around 23% of people said they identified as Māori, compared with 17% for New Zealand. Te Reo Māori was spoken by nearly 5% of our population which is slightly higher than the national average of 4%. Our district has a higher than national average percentage of European and Māori population with less Pacific, Asian and 'other' ethnicities, however we are becoming more diverse as our population grows.

The traditional Hauraki region is from Matakana in the North to Ngā Kuri ā Whārei (located near Bowentown), the Iwi of Hauraki within this area are: Ngāti Hako, Ngāi Tai ki Tāmaki, Ngāti Hei, Ngāti Maru, Ngāti Paoa, Ngāti Porou ki Hauraki, Ngāti Pūkenga, Ngāti Rāhiri Tumutumu, Ngāti Tamaterā, Ngāti Tara Tokanui, Ngāti Whanaunga and Te Patukirikiri. They are collectively and individually in the process of negotiating treaty settlements with the Crown. When the settlement has been agreed and proposed as law, we will know more about the greater role our iwi will have in governance and conservation in their rohe (area). We'll continue to work with Hauraki Iwi into the future for the benefit of our district.

In 2018 our residents' median annual household income was \$63,100, which is lower than the national average of \$89,100. 69% of households in our district own their home or hold it in a family trust. This is higher than the national average of 65%. In 2018, 7% of our population lived in overcrowded homes, compared with 11% of the New Zealand population. While our average residential house price is still lower than our neighbouring districts and cities, our house values have increased on average 13% each year since 2015 to reach an average value of \$457,000 in 2019. Weekly rent has increased on average 7.7% each year since 2015 to reach an average of \$347 per week in 2019.<sup>3</sup> The cost of housing is a large component of household spending. When we take into consideration our household earnings and house prices, we are no longer considered such an affordable place to live as we were five years ago.

We have a focus on improving the economic and social wellbeing of the community where we're able to so our residents have jobs, liveable income levels, and the resources needed to achieve a better standard of living. This is important to us because parts of our district are more deprived<sup>4</sup> compared to other parts of New Zealand. The towns of Waihi, Paeroa and the area of Hauraki Plains South (including Kerepehi) have a deprivation value of 9 on a scale of 1-10, which means they are in the most 20 per cent of socio-economically deprived areas in New Zealand. This is an improvement since 2013 when both Paeroa and Waihi had a rating of 10, meaning they were in the top 10 per cent of areas with the most deprived scores. 25% of our school population attend low decile schools (1 and 2).<sup>5</sup>

**18** out of **20**  
people in our population  
identified as *European*

**23%** of people  
in Hauraki said they  
identified as *Māori* and  
nearly **5%**  
of our population  
speak *Te Reo Maori*



Almost a *quarter* of our  
population is over 65 years

**\$63,100**  
the median annual household  
income (2018)

**↑ 8%**  
*Average annual increase  
since 2015*

**\$457,000**  
the average house value (2019)

**↑ 13%**  
*Average annual increase  
since 2015*

<sup>3</sup> <http://webrear.mbie.govt.nz/summary/new-zealand?accessedvia=waikato&areatype=ta>

<sup>4</sup> NZDep2006 NZDep2013 and NZDep2018 Index of socio-economic deprivation, University of Otago.

<sup>5</sup> [www.educationcounts.govt.nz](http://www.educationcounts.govt.nz)



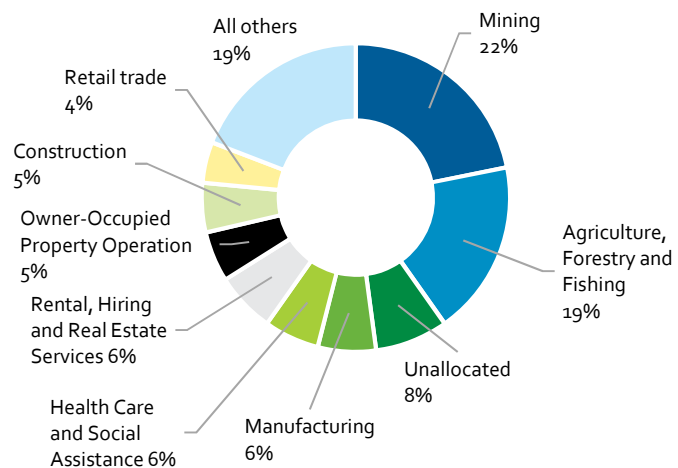
## Our industry

Gross domestic product<sup>6</sup> (GDP) in our district measured \$1,055 million in 2019, a 2.2% growth on 2018 figures. New Zealand's GDP was \$297,894 million, a 3.0% growth on 2018 figures. We have advantages against the national economy in gold ore mining, dairy cattle farming, beef cattle farming, meat and meat product manufacturing and agricultural support services. Primary industries account for the largest proportion of gross domestic product in our district (40%), which is higher than in the national economy (7%). Among broad industries<sup>7</sup> mining was the largest in our district in 2019, accounting for 22% of total GDP, with agriculture, forestry and fishing coming in second (19%), followed by manufacturing (6%), health care and social assistance (6%) and rental, hiring and real estate services (6%). Since the opening of the Hauraki Rail Trail cycleway in 2013 our district has seen an increase in tourism spend. In 2009 and 2010 tourism spend was \$52 million. In 2019 it reached \$91 million and contributed to 4% of our district's GDP.

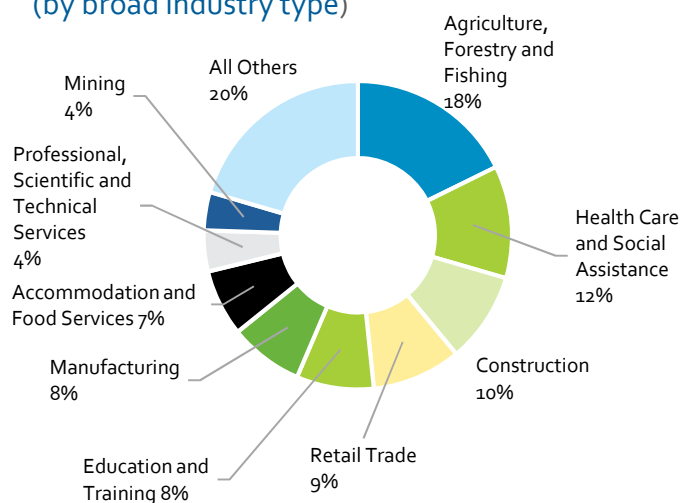
Although a 'broad industry' may be growing rapidly, if it is small relative to a region's total economy its contribution to overall GDP growth may also be small. Taking into account their relative sizes, the broad industries that contributed the largest to the overall growth of our district's economy to March 2019 were mining, followed by health care and social assistance, and agriculture, forestry and fishing, then retail trade and public administration.

We have more people employed in our district that are self-employed (24%) than the New Zealand average (16%). Since 2000 there has been a steady decrease in the self-employed rate in the district, when it was 38% in Hauraki and 20% in New Zealand. Growth in the number of business units gives us an indication of entrepreneurial activity. In 2019 there were 2,832 business units recorded in our district, up 0.4% from a year earlier. Over the last ten years the biggest growth in business units occurred in construction and rental, hiring and real estate services (66 units each) followed by financial and insurance services (39 units).

Industry proportion of GDP in 2019  
(by broad industry type)



Proportion of filled jobs in 2019  
(by broad industry type)



The average annual unemployment rate in the district for 2019 was 4.4%, compared with New Zealand's rate of 4.3%. We had 15% of our young people aged 15-24 years not in education, employment or training (NEET rate) compared to 12% in New Zealand. In 2019 we had 7,699 filled jobs in our district, up 1.9% from 2018. 18% of those jobs (1,385 people) were in primary industries, compared with 4% in mining. Since 2009 the most job creation has occurred in accommodation and food services, health care and social assistance, and public administration.

<sup>6</sup> GDP is the total value of goods produced and services provided by all people and companies in the country during one year. In this profile, Gross Domestic Product is estimated in 2019 prices.

<sup>7</sup> There are 54 specific industry groups, which are grouped into 21 broad industry groups.



## Our economy

There is still uncertainty about the longer term effects of the Covid-19 pandemic, however the economic rebound in New Zealand in the September 2020 quarter has set us on a more optimistic course than initially forecast. Sustained export activity, combined with New Zealanders opening their wallets to domestic tourism, new cars, and home improvements, has created confidence that the New Zealand economy will emerge from Covid-19 less impacted than other parts of the world.

Hauraki District's economy had also shown a strong rebound in activity in the September 2020 quarter. Provisional estimates show a 3.0% per annum rise in economic activity (GDP) over the quarter, limiting the year-end decline to -0.4% per annum. Growth was higher than the New Zealand average year-end decline of -3.3%.

Households remain willing to spend on the whole, with a 6.3% per annum rise in consumer spending in the September 2020 quarter and local monthly spend rebounding to pre-Covid levels. However, this spending hadn't been enough to make up for the lack of spending earlier in 2020, with spending between January and September 2020 still 5% below 2019 levels. Car and commercial vehicle registrations are up, reinforcing the underlying economic momentum and the number of property listings and sales has returned to pre-Covid levels.

With New Zealand's borders remaining closed to all but essential travellers, returning citizens and residents, tourism expenditure continued to decline across New Zealand. The annual visitor spend in Hauraki was \$82 million in the year to September 2020. Total tourism expenditure in the district decreased by -9.9% (\$9 million) on 2019 spending, compared with a decrease of -16.5% in New Zealand.

105 new dwelling consents were issued in the district in 2019/20, down slightly on 2018/19 when 119 were issued. There was an expectation at the national level that there will be a slowing in the construction activity as a result of Covid-19, however we are yet to experience that in the district.

Mining activity in the district has continued to shift ahead and the primary sector is proving resilient as New Zealand's trade activity continues. Fonterra's recent upwards revision to the farmgate milk price will help, with the 2020/21 pay-out expected to bring \$251 million into the local economy.

We saw an increase of 292 people receiving Jobseeker Support since January 2020, with 1,019 recipients at September 2020 and 13 people on the Covid-19 Income Relief Payment. That is a 23% increase since September 2019, which is lower than the national increase of 27%. In total, over 204,000 New Zealanders were on a Jobseeker Support benefit in September 2020 up over 61,000 from September 2019. The labour market hit from Covid-19 has been less severe in our district than originally thought, with fewer job losses than forecast. However, across New Zealand data shows some workers are still employed but working fewer hours, whereas others are out of a job, but not looking for a new role yet.

**1,385** people employed in *primary industries* which is **18%** of workers

**923** employed in health care and social assistance



**731** employed in retail and trade, **731** employed in construction

**7,699** filled jobs in 2019

**↑1.9%** from 2018

Since 2009 most jobs created in *accommodation and food services, health care and social assistance, and public administration.*

**1,019**

*Jobseeker Support recipients*

September 2020

**↑23%** from January 2020 to September 2020



**110,479** cows in 2019 (-0.9% on previous year)



## Our Future



### Our population<sup>8</sup>

After a period of minimal population growth between 2006 and 2013, the district experienced relatively strong population growth between 2013 and 2018. In five years the district population grew by 12.4% to reach 20,022 at the 2018 Census. This growth has mainly been driven by more people moving into our district than those moving out, as opposed to a natural increase (more births than deaths) rate. The increase is likely to have occurred in part because of high national migration and inflated property prices in nearby districts and cities.

At June 2020 the estimated population was 21,400 people and we are expecting that the district will continue to experience population growth for the next 30 years. However, due to COVID-19 border closures and the uncertainty about what that means for national net migration figures, we have planned for the next ten years using the medium growth scenario, instead of the high growth scenario. The assumption is population growth will continue in the district, however at a slower rate than between 2013 and 2018. It is projected that at 1 June 2021 our population will be 21,520 and will reach 22,750 by 2031. That's an increase of 5.6% or 1,230 people over the ten year period of the long term plan.

In the longer term, 2031-2051, we have undertaken our infrastructure planning based on the high growth scenario, because we believe people from other areas in New Zealand will continue to move to our district and international net migration will recover. We need to be able to readily cater for this growth and we do not want to underinvest in our infrastructure. Under the high growth scenario, by 2051 it is projected that our population will reach 24,200, an increase of 1,450 people from the estimated June 2031 population. Our population growth will start to slow after 2031, but is not projected to stop over the next thirty years.

From 2021 to 2031 we expect population growth to be spread across the district, with only the areas of Kaiaua, Pūkorokoro-Miranda and Hauraki Plains North projected to decline in population. Between 2021 and 2031 Paeroa's population is projected to grow by 400 people, Waihi by 330 people and Ngatea by 100 people.

With almost a quarter of our population over 65 years, we have an 'ageing population' when compared to the national average of 15%. We will continue to have a greater number of older people living in our district for the next 30 years, despite the national projection that by 2045 the grandchildren of the baby boomer generation will outnumber the baby boomers themselves.

With an older population it is common that the number of people living in each household decreases. In 2006 there was an average of 2.5 people living in each home in our district and this is expected to decrease to 2.1 people by 2051.

Estimated **5.6%** increase in population - 2021 to 2031



1 June 2021 ≈ **21,520**

by 2031 ≈ **22,750**

by 2051 ≈ **24,200**

Estimated **population** increase

by 2031 **↑1,230**

**Paeroa + 400**

**Waihi +330**

**Ngatea +100**



### Ageing population

By 2051 it's estimated that around **40%** of our population will be over **65**

**2.5** people on average living in each home in our district in 2006, **expected to decrease to** **↓2.1** by 2051

**New Zealand** median age

**37.4 years** (2018)

**Hauraki** median age

**46.8 years** (2018)

<sup>8</sup> The projection data in this section was produced by Infometrics Limited for the Council, prepared in May 2020.



## Our dwellings

Growth in dwelling numbers can be driven by an increase in population and/or a demand for holiday homes. It can also occur if more homes are needed to house less people per dwelling e.g. because of an ageing population. Due to continued population growth we're seeing a steady number of building consents for new homes being lodged and ongoing interest in our district's housing market.

Under the medium growth scenario, in 2021 it is projected the Hauraki District will have 10,220 dwellings and this will increase to 10,990 dwellings by 2031. That's an average increase of 77 dwellings per annum. After 2031 the growth in dwelling numbers slows in line with the slowing of population growth. By 2051 it is projected our district will have 11,820 dwellings, an annual average increase of 41 dwellings from 2031 to 2051.

Over the ten years of this plan the district is projected to have 770 additional dwellings, with 142 in Paeroa, 178 in Waihi and 58 in Ngatea. The remainder of new dwellings are expected to be built in the smaller settlements and rural areas. The proportion of occupied dwellings (that means dwellings that are usually lived in and not for example holiday homes) has remained relatively stable, increasing from 88% at the 2013 Census to 90% at the 2018 Census. We expect this to remain constant over the period of this plan.



## Our rating units

Our district has various types of rating units; residential, residential lifestyle, rural industry, commercial and industrial, mineral related and 'other'. Rating unit growth is driven by the economy, population growth and other changes in demographics and lifestyle patterns.

In 2021 it is projected our district will have 10,995 rating units. Over the ten-year period of this plan it is projected that the number of rateable units will increase by an average of 90 per annum, reaching 11,890 by 2031. By 2051, it is projected that the number of rating units in our district will reach 13,220. That's an annual average increase of 66 rating units per year.

The majority of the projected increase in rating units over the next 30 years is in the residential and residential lifestyle rating unit categories. This is because the district's growth in rating units closely follows the growth trend in the number of dwellings in the district. In 2021 residential and residential lifestyle properties are projected to account for 77% of the district rating units. However this is expected to decrease by 2051, when 71% of the rating units are projected to be residential and residential lifestyle properties. This is linked to a slowing of population growth, but a steady growth in the number of commercial and industrial rating units.

For further information on our district profile please see the Statistics New Zealand website [www.stats.govt.nz](http://www.stats.govt.nz) or our Infometrics Community and Economic Profiles on our Business Hauraki web page: [www.hauraki-dc.govt.nz/business-hauraki/](http://www.hauraki-dc.govt.nz/business-hauraki/)



### Occupied dwellings

increased from **88%** in 2013 to **90%** in 2018

*More permanent homes and less holiday homes*

Estimated increase in dwellings by 2031 **↑770**

**Paeroa +142**

**Waihi +178**

**Ngatea +58**

Estimated increase in *rating units* by 2031

**↑900**

**Paeroa +160**

**Waihi + 199**

**Ngatea +95**

**77%** of the rating units are *residential and residential lifestyle properties*

in **2021**

**71%** of the rating units are *residential and residential lifestyle properties* in **2051**



# Our financial and other general assumptions | Tā mātou whakakake

Forecasting assumptions are one of the building blocks of the long term plan (LTP). The long term plan must disclose all *significant* forecasting assumptions and risks, the level of uncertainty associated with each of these assumptions, and quantify the potential effect of the uncertainty on the financial estimates.

## Types of assumptions

Legislation prescribes that assumptions are required to be made and disclosed about some particular matters including, but not limited to, the life cycle of significant assets and sources of funds for replacement of assets. Others are identified by the Council as important to make assumptions about.

There are three types of forecasting assumptions to be prepared:

1. **General assumptions:** assumptions that apply organisation or corporate-wide and are applicable to all or most activities.
2. **Financial assumptions:** assumptions that apply to all of our 'finances'. They are usually corporate wide in nature but relate specifically to financial matters.
3. **Activity assumptions:** assumptions that are specific to one or some activities. Activity assumptions may include applying general assumptions at an activity level.

Significant forecasting assumptions need to be:

- realistic,
- evidence-based – especially where assumptions are outside industry norms,
- internally consistent with other assumptions,
- applied consistently across the long term plan and supporting documents (unless there is good reason not to and the difference in treatment and reason are both explained).

## Risk analysis

Having developed a set of forecasting assumptions, we are then in a position to consider the future risks and determine if we are willing to accept the risk or whether some means of treating the risk is necessary. That analysis is likely to be grounded in an analysis of the impacts of certain forecasting assumptions not coming to pass, or coming to pass in a different way or to a different extent than expected (also known as sensitivity analysis).

Risk analysis is one of the stress-tests for an long term plan. If the risk analysis is pointing to significant financial or delivery risks, it may be a sign that an aspect of our direction needs to be revisited.



Topic	Forecasting Assumption	Level of Uncertainty	Potential effects of that uncertainty on the financial estimates provided	Risk
1. Inflation	<p>Our forecast financial information includes provision for inflation. We have used forecasts of price level changes prepared specifically for the local government sector by Business and Economic Research Limited (BERL) to calculate the inflation rate for each year of this plan.</p> <p>The BERL forecast inflation rates were set in September 2020 and are listed in Figure 1 below. The cost adjustors are projected under three scenarios, which are consistent with economic forecasts published by the Reserve Bank of New Zealand, the New Zealand Treasury and BERL. The Council is using the mid-scenario considered to be a likely outcome relevant to most regions of New Zealand.</p> <p>In year one of this plan there has been no inflation applied to operational costs (with the exception of salaries). This is considered appropriate given that the first year budget has been prepared within six months of commencement of spend. The inflation rates used for years 11-30 in the 30 year infrastructure strategy are the average of the rate used in this plan for that activity over the next 10 years.</p>	Medium	<p>Inflation is affected by external economic factors. Our costs and the income required to fund those costs will change by the difference between the actual rate of inflation and the rate of inflation used in the forecast.</p> <p>We have relied on the current parameters the Reserve Bank is required to operate under in terms of inflation being held within the range of 1% to 3%.</p> <p>A 1% increase in inflation would increase annual operating expenditure by approximately \$390,000 and capital expenditure in 2020/21 by approximately \$200,000.</p>	That inflation will be significantly higher or lower than forecast. However, as BERL notes it is more likely that growth and employment is lower than higher in this scenario.
2. Interest	Interest on term debt is calculated at an average of 2.7% over the ten years. This is our expected cost of borrowing and is based on market interest rate expectations taking into account the proportion of our debt that is covered by fixed interest rate instruments.	Medium	Interest rates are influenced by international economic factors. We will manage this through interest rate risk management instruments authorised in our liability management policy for external debt, and by using internal borrowing as much as possible.	That the interest rates will be significantly different from those in the calculations.
3. Waka Kotahi NZ Transport Agency	The Funding Assistance Rate (FAR) government roading subsidy is 60% in 2020/21 and is forecast to remain at this level for the following nine years of this plan. This is based on projections supplied by Waka Kotahi, the government funder of roading.	High	A 1% reduction in the FAR subsidy rate would amount to a reduction in subsidy income of approximately \$65,000 per annum. If there is a reduction, the subsidy may not cover the cost of works we have planned for.	That the rate of subsidy will be lower than the rates budgeted for.

Topic	Forecasting Assumption	Level of Uncertainty	Potential effects of that uncertainty on the financial estimates provided	Risk
4. Carbon credits and liabilities	<p>It is assumed that we will not have to purchase carbon emission units (NZUs) under the New Zealand Emissions Trading Scheme for our waste activities. No budget for the purchase of NZUs has been allocated in the long term plan.</p> <p>We assume that we will continue to replant our forestry lots, which currently earn NZUs under the Emissions Trading Scheme. As at 30 June 2020, the number of NZUs held by the Council is 6,900 with a market value of \$28 per unit.</p>	Medium	The Climate Change Response Act 2002 now includes targets for the reduction of biogenic methane, which includes wastewater treatment and discharge. The first emissions budget period is 2022 to 2025, and will be gazetted by 31 December 2021. It must include all greenhouse gases. However, the Ministry for the Environment has advised at this point in time wastewater treatment and disposal will not be included in the Emissions Trading Scheme.	That we will have to purchase or relinquish NZUs, which is not budgeted for.
5. Covid-19 and the economy	<p>Measures to contain COVID-19 in New Zealand have resulted in an economic downturn. Levels of activity and employment have declined, with income and spending consequently uncertain. Hauraki's economy is highly dependent upon agriculture and mining, and our tourism sector is mainly based on domestic tourism (85%). To date Hauraki seems to have been less affected than most of New Zealand.</p> <p>However, it is assumed the unemployment rate in the district could increase from approximately 4% (pre-COVID-19 rate) up to 9% during the first year of this plan. BERL forecast unemployment slowly recovering to near 5% by around 2030. This outlook assumes the COVID-19 eradication strategy is successful and a vaccine is developed sometime in 2021 allowing the border to reopen and life to return to somewhat normal.</p>	Medium	If the economic downturn continues and we have high levels of unemployment and our communities ability to pay for our services is affected, there is potential for an increase in rate defaults/ postponement applications particularly for year one of this plan.	There is more severe impact on our community's ability to pay than predicted.

Topic	Forecasting Assumption	Level of Uncertainty	Potential effects of that uncertainty on the financial estimates provided	Risk
6. <b>Revaluation of assets</b>	It is assumed that the value of our assets will be consistent with the valuations conducted.	Medium	We periodically re-value our assets. This is set out in more detail in our accounting policies and Infrastructure Strategy. Land was last re-valued as at 30 June 2019. Buildings and utility assets were last re-valued as at 1 July 2017. Roading assets were last re-valued as at 1 July 2019. Water, wastewater, stormwater and drainage were last revalued 1 July 2017. The projections provide for changes in asset valuations every three years based on capital works, retired assets and the amount of inflation over that period of time. The value of our assets and subsequent depreciation expense may change as a result of changes in valuation methodologies or cost changes being significantly different to those projected. This could lead to an increase in rates.	That the cost of construction/replacing assets will be significantly higher or lower than forecast by the valuations.
7. <b>Vested assets, being the assets the Council receives and becomes responsible for.</b>	We have forecast that we will receive a minimal, but certain level of vested assets. We also assume that the impact of vested assets will be neutral, in that the costs associated with the additional assets will be offset by a proportionate increase in rates revenue.	Low	Vested assets can fluctuate considerably from year to year but the impact is usually offset by a proportionate increase in rates revenue. It is highly unusual that we would enter into an arrangement with a developer where the ongoing costs associated with the vested assets are disproportionate to the increase in rates revenue.	That we will have more assets vested thereby increasing the depreciation expense in subsequent years that is not offset by a proportionate increase in rates revenue.
8. <b>Funding sources</b>	Sources of funds will be obtained as detailed in our revenue and financing policy. The policy also includes the sources of funds for future replacement of significant assets, and both operational and capital expenditure (the latter of which is primarily through borrowing).	Low	There is little risk that sources of funds will not be achieved given our ability to levy rates. The main risk concerns capital expenditure, as that is primarily funded through borrowing. If we aren't able to borrow to the levels forecast than this could affect the timing or viability of our capital works programme.	That we will not be able to fund our planned work programme.

Topic	Forecasting Assumption	Level of Uncertainty	Potential effects of that uncertainty on the financial estimates provided	Risk
	The Local Government Funding Agency (LGFA) will continue to be able to raise funds from capital markets providing us access to more favourable loan funding.	Low	<p>A significant amount of the capital funding is sourced from overseas capital markets. There is a risk that access to these markets may become restricted.</p> <p>The financial effect of the Local Government Funding Agency not being able to access capital markets would be less favourable loan options being available to us.</p>	That the Local Government Funding Agency no longer has access to capital markets.
<b>9. Delivery of capital projects and COVID-19</b>	Resources will be available so we can deliver our capital works programme. On average, costs of major capital works will not vary significantly from costs estimated at the concept stage, subject to general inflation trends.	High	Some capital project costs could be greater than estimated resulting in increased debt levels from those forecast	Due to the ongoing effects of COVID-19 on our supply chains and possible fluctuations in the price of goods, there is a risk that capital projects will not be delivered as planned due to the required resources being unavailable.
<b>10. Asset life</b>	It is assumed the useful lives of our assets as recorded in our asset management plans approximate reality.	Medium	If an asset were to fail or wear out significantly earlier than its estimated life capital projects could be brought forward which would affect interest costs. Depreciation expense may also increase.	Asset life is based upon estimates by actual performance, industry standards and valuers and is considered reasonably accurate. However, we are in the process of improving our level and accuracy of asset data for core infrastructure recognising the current information could be improved.
<b>11. Development contribution and/or financial contribution revenue</b>	We will implement our reviewed development contribution policy effective from 1 July 2021. We will have legacy financial contributions as well during the life of this plan.	Low	Revenue from financial contributions will be considered on a case by case basis. Revenue from development contributions has been included as part of this long term planning process.	If less revenue is collected from development contributions than forecast, the cost of the additional capacity will fall to existing ratepayers.
<b>12. Ngatea North subdivision</b>	We will be able to sell the Council owned lots in the Ngatea North subdivision at market price.	Low	If the residential market suffers a downturn and section prices fall, then the Council would hold the sections until the market improved. This will result in Council debt being up to \$4 million higher than forecast until the sections are sold.	That the construction costs for the development of stage 4 of the Ngatea North subdivision are not recovered once sections sell.

Topic	Forecasting Assumption	Level of Uncertainty	Potential effects of that uncertainty on the financial estimates provided	Risk
<b>13. Infrastructure insurance</b>	We have sufficient insurance to replace our infrastructure assets in the event of a disaster.	Medium	We manage the financial risk associated with natural disasters through the provision of insurance up to the current replacement value. Central government currently covers anything above this amount.	Treasury signalled a review of the level of financial assistance that the Government provides to local authorities after a natural disaster in 2018. Although this is still on the agenda, it is not a current priority of Treasury. A discussion paper is on hold until more certainty from Treasury is provided while this plan is developed.
<b>14. Population growth</b>	<p>For the life of this plan (2021-2031), we have decided to plan using the medium growth scenario for the district, instead of the high growth scenario. This is because of the COVID-19 border closures and the uncertainty about what that means for national net migration figures. The assumption is population growth will continue in the district, however at a slower rate than between 2013 and 2018, which was at an average rate of 2.4% per annum.</p> <p>Under the medium growth scenario, it is projected the usually resident population of the Hauraki District at 1 June 2021 will be 21,520. It is projected our population will reach 22,750 by 2031. That is an increase of 1,226 people, or a population increase of 5.6% over the ten-year period of this plan. The average annual increase is 165 people or 0.5% growth per annum. Growth will continue to be driven predominantly by net migration (people moving into the district).</p>	Medium	<p>Should the population be less than expected this may have an effect on our income if this trend is coupled with less rating units than projected. The financial effect would likely mean a rise in rates due to a smaller number of rateable properties.</p> <p>We believe there is no risk of overinvesting if we base our planning on the medium or high projections, given the two scenarios are not significantly different.</p>	<p>There is a chance the population growth projected in this plan may be lower than anticipated. This could occur due to lower than forecast net migration or a lower than anticipated birth rate and higher death rate.</p> <p>There is less risk that we will experience more growth than projected in the first three years of this plan because COVID-19 border closures means New Zealand is likely to experience minimal net migration for several years. However, more New Zealanders may move to the regions in search of more affordable lifestyles meaning we still experience some net migration as a District. In the longer term (2031-2051), there is a risk that the district may not</p>



Topic	Forecasting Assumption	Level of Uncertainty	Potential effects of that uncertainty on the financial estimates provided	Risk
	<p>In the longer term, 2031-2051, we have undertaken our infrastructure planning based on the high growth scenario, because we believe people from other areas in New Zealand will continue to move to our district and international net migration will recover. We do not want to underinvest in our infrastructure. We need to be able to readily cater for this growth.</p> <p>Under the high growth scenario, the district population will be approximately 24,200 in 2051. That is an increase of 1,450 people over the twenty years from 2031-2051. In years 11-30 of our infrastructure strategy, the population increase by an average of 73 people per year, or 0.2% growth per annum.</p>			<p>experience as much population growth as projected. The medium growth scenario projects a plateau of growth around 2031, then a slow decline in population at a rate of -0.3% per annum.</p>
<b>15. Household size</b>	<p>The average household size (number of people living in a house) has decreased from 2.5 persons in 2006 to 2.3 persons in 2021. This trend is projected to continue and further decrease to 2.2 persons by 2031.</p> <hr/> <p>The average household size is projected to continue to decline to 2.1 persons per household by 2051.</p>	Low	<p>If the rate of household size declines faster than anticipated, this could result in more infrastructure costs if additional dwellings are required. However, the extra costs would likely be off-set by additional rating units.</p> <p>With less people living in each dwelling, rates affordability could become an issue.</p>	<p>The decrease in household size occurs sooner than expected or is greater than expected. This would be driven predominantly by an ageing population where it is more likely elderly people will be living in single person households. An increase in single parent families can also contribute to a declining household size.</p>

Topic	Forecasting Assumption	Level of Uncertainty	Potential effects of that uncertainty on the financial estimates provided	Risk																									
<b>16. Demographic age distribution for our District</b>	<p>By 2021, it is estimated that 26% of the population of our district will be aged 65+ years. Our district is likely to have an increasingly ageing population with 35% of the population aged 65+ by 2031 and 40% aged 65+ by 2051.</p> <p>The table below shows previous and projected age-distribution:</p> <table border="1"> <thead> <tr> <th>Age</th> <th>2006</th> <th>2021</th> <th>2031</th> <th>2051</th> </tr> </thead> <tbody> <tr> <td>0-14</td> <td>22%</td> <td>18%</td> <td>17%</td> <td>15%</td> </tr> <tr> <td>15-39</td> <td>26%</td> <td>23%</td> <td>20%</td> <td>19%</td> </tr> <tr> <td>40-64</td> <td>35%</td> <td>32%</td> <td>28%</td> <td>25%</td> </tr> <tr> <td>65+</td> <td>17%</td> <td>26%</td> <td>35%</td> <td>40%</td> </tr> </tbody> </table>	Age	2006	2021	2031	2051	0-14	22%	18%	17%	15%	15-39	26%	23%	20%	19%	40-64	35%	32%	28%	25%	65+	17%	26%	35%	40%	Low	The main financial effect would likely be on rates affordability due to a larger percentage of the population being on a fixed income.	<p>Ageing population trends continue to be forecast by Statistics New Zealand for the provinces of New Zealand. There is a risk the age distribution of our district could be older than projected if a greater number of people aged 65+, and fewer families with children, move to the district than anticipated.</p> <p>There is less risk the age distribution will be younger than anticipated.</p>
Age	2006	2021	2031	2051																									
0-14	22%	18%	17%	15%																									
15-39	26%	23%	20%	19%																									
40-64	35%	32%	28%	25%																									
65+	17%	26%	35%	40%																									
<b>17. Rating unit growth</b>	<p>For the life of this plan (2021-2031), we have decided to plan using the medium growth scenario for the district, rather than the high growth scenario. In 2021 it is projected our district will have 10,995 rating units. Over the ten year period of this plan it is projected that the number of rateable units will increase by an average of 90 per annum, reaching 11,891 by 2031. The total number of rating units has been forecast for each year of this plan as follows:</p> <table border="1"> <tbody> <tr> <td>2021/22</td> <td>11,127</td> <td>2026/27</td> <td>11,649</td> </tr> <tr> <td>2022/23</td> <td>11,247</td> <td>2027/28</td> <td>11,727</td> </tr> <tr> <td>2023/24</td> <td>11,355</td> <td>2028/29</td> <td>11,790</td> </tr> <tr> <td>2024/25</td> <td>11,460</td> <td>2029/30</td> <td>11,844</td> </tr> <tr> <td>2025/26</td> <td>11,559</td> <td>2030/31</td> <td>11,891</td> </tr> </tbody> </table>	2021/22	11,127	2026/27	11,649	2022/23	11,247	2027/28	11,727	2023/24	11,355	2028/29	11,790	2024/25	11,460	2029/30	11,844	2025/26	11,559	2030/31	11,891	Medium	The main financial impacts are increased/decreased rate funding from rating units. If rating unit growth is less than that projected there may be a period where the costs associated with certain infrastructure capital expenditure needs to be met by less projected rateable units. Higher than projected rateable units could put pressure on the provision of certain infrastructure.	Rating unit growth is driven by the economy, population growth and other changes in demographics and lifestyle patterns. There is a risk that the growth in the number of rating units will be less than forecast, particularly if our district experiences less population growth than expected. This is because the growth in rating units closely follows the growth trend in the number of dwellings in our district. In 2021 residential and residential lifestyle properties account for 77% of the rating units in our district. In 2051, 71% of the rating units are projected to be residential and residential lifestyle					
2021/22	11,127	2026/27	11,649																										
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Topic	Forecasting Assumption	Level of Uncertainty	Potential effects of that uncertainty on the financial estimates provided	Risk
	<p>In the longer term, 2031-2051, we have undertaken our infrastructure planning based on the high growth scenario. By 2051, it is projected that the number of rating units in our district will reach 13,222. That is an annual average increase of 66 rating units per year in years 11-30 of our Infrastructure Strategy.</p>			<p>properties. This is due to less demand for holiday homes in the district and a slowing in the demand for new dwellings associated with the decrease in population after 2031. COVID-19 lockdowns may also have a slowing effect on the economy, leading to less commercial and rating unit growth.</p>
				<p>In the longer term (2031-2051), there is a risk that the district may not experience as much rating unit growth as projected. Under the medium growth scenario, the number of rating units in our district is projected to reach 12,309. That is an average annual increase of 21 rating units per year in years 11-30 of our Infrastructure Strategy.</p>
<b>18. Dwelling forecasts</b>	<p>For the life of this plan (2021-2031), we have decided to plan using the medium growth scenario for the district, as opposed to the high growth scenario. In 2021 it is projected the Hauraki District will have 10,220 dwellings. It is projected to have 10,990 dwellings in 2031, an increase of 77 dwellings per annum. 10% of those dwellings are unoccupied and this remains constant over the ten-year period of this plan due to a lack of demand for holiday homes.</p>	Medium	<p>If growth in dwelling numbers is less than projected there may be a period where there are less connections to our services and less properties paying for the costs associated with providing those services and associated infrastructure.</p>	<p>A growth in dwelling numbers can be driven by an increase in population and/or a demand for holiday homes. It can also occur if more homes are needed to house less people per dwelling e.g. because of an ageing population or higher couple separation rates. There is a risk the growth in the</p>

Topic	Forecasting Assumption	Level of Uncertainty	Potential effects of that uncertainty on the financial estimates provided	Risk
	<p>In the longer term, 2031-2051, we have undertaken our infrastructure planning based on the high growth scenario. By 2051, it is projected that our district will have 11,820 dwellings. That is an annual average increase of 41 dwellings per year in years 11-30 of our Infrastructure Strategy.</p>		<p>Higher than projected dwelling numbers could put pressure on the provision of certain infrastructure.</p>	<p>number of dwellings will be less than projected, particularly if our district experiences less population growth than expected. There is less risk that we will experience higher growth in dwelling numbers than projected in the next ten years when compared with our historical trends. From 2001 – 2016 our district had on average 85 new residential dwellings per year.</p> <p>In the longer term (2031-2051), there is a risk that the district may not experience as much rating unit growth as projected. Under the medium growth scenario it is projected that our district will have 10,700 dwellings by 2051. That is an average decrease of 15 dwellings per year in years 11-30 of the Infrastructure Strategy.</p>
<p><b>19. Costs associated with provision of services</b></p>	<p>Services will continue to be delivered at the forecast costs in this plan.</p>	<p>Medium</p>	<p>External influences may impact on the forecast costs of the service levels in this plan. For example, inflation, legislative changes, a skilled labour shortage. Alternatively, a more efficient method of delivering the same level of service may be implemented.</p> <p>If the cost to provide the forecast levels of service was to change significantly then we would review the timing and amount of work programmed and undertaken. The financial effect is difficult to predict.</p>	<p>That the service may not be able to be delivered in the same manner, which could impact the cost of providing the same level of service.</p> <p>That costs are increased significantly by commodity prices or economic conditions putting costs above the forecast level of inflation.</p>

Topic	Forecasting Assumption	Level of Uncertainty	Potential effects of that uncertainty on the financial estimates provided	Risk
<b>20. Delivery of three waters</b>	<p>We will continue to deliver drinking water, wastewater and stormwater services.</p> <p>However, the government has signalled a possible reform that would remove the water, wastewater and stormwater activities and assets from councils, and transfer them to a new entity. If this was to occur, it could happen in 2023 or later. It is likely the income, expenses, assets and debt for these activities will be transferred.</p>	Medium	<p>If the Council no longer delivered the three waters it would mean a substantial change to financial estimates. As at the start of the long term plan, the forecast value of the assets that would be transferred is \$141 million. The debt that would be transferred is \$22 million. The annual cost of providing the three waters activities is \$13.5 million, while Council receives about \$12.6 million of income annually. This is 28% of council's income.</p> <p>We estimate that about 36 staff would no longer be employed by Council in our community. The annual overheads that relate to the three waters activity are about \$2.2 million. We estimate that \$700,000 of this would not be able to be transferred to any new entity and would remain with Council. This cost would likely result in an average overall rates increase of 3%.</p>	<p>This loss of income means that Council will not be able to recover some of its support costs from these activities. Some of these costs will be reduced, however some are fixed and this will leave our remaining activities to bear a greater burden of these costs.</p> <p>We usually have some lead in time to implement new services in which case the implications for financial estimates and our capacity to continue delivering services can be identified and considered through an annual planning, long term planning or long term plan amendment process.</p>
<b>21. Environmental Protection Subsidy</b>	<p>The Government has enacted a suite of legislative and regulation changes to improve the current management of freshwater. Subsequently, we are now forecasting future capital works of \$41 million over the next ten years to again upgrade our wastewater treatment plants. If the reform of water, wastewater and stormwater delivery goes ahead, then Council will likely no longer deliver three waters services. If this reform does not go ahead, then due to the high deprivation in our communities, we have assumed that Council will receive subsidies for 50% of the costs of these upgrades to make it affordable for Hauraki communities. This is based on a long history of Council receiving grants for three waters improvement projects.</p>	High	<p>If no subsidy is received then it is likely that Council will not carry out these works.</p> <p>If Council did still carry out this capital programme, then Council will have to borrow an additional \$20 million for projects. This cost would likely result in an average overall rates increase of 2%. This increase in debt reduces the margin between Council's borrowing and its debt cap. This reduces Council's ability to borrow for other capital works forecast beyond the ten year life of this plan.</p>	That the subsidy we receive is lower than assumed.



Topic	Forecasting Assumption	Level of Uncertainty	Potential effects of that uncertainty on the financial estimates provided	Risk
<b>22. Future for Local Government and the range and nature of services we deliver</b>	<p>Our current role and functions will continue for the life of this plan. The range and nature of our services will remain unchanged from those detailed in this plan and other assumptions.</p> <p>On 24 April 2021, the Minister of Local Government announced that she established a Ministerial Inquiry into the Future for Local Government. The overall purpose of the review is to 'identify how our system of local democracy needs to evolve over the next 30 years, to improve the well-being of New Zealand communities and the environment, and actively embody the treaty partnership.' The review includes, but is not limited to:</p> <ul style="list-style-type: none"> <li>• roles, functions, and partnerships ,</li> <li>• representation and governance, and</li> <li>• funding and financing.</li> </ul> <p>An interim report will be presented to the Minister signalling the probable direction of the review and key next steps on 30 September 2021. A draft report and recommendations to be issued for public consultation is due on 30 September 2022. The final report will be presented to the Minister and Local Government New Zealand on 30 April 2021.</p>	Medium	<p>The requirement to undertake new services or meet new regulations are sometimes hard to determine in advance, but could be significant in terms of affecting our capacity to deliver our services.</p> <p>We usually have some lead in time to implement new services in which case the implications for financial estimates and our capacity to continue delivering services can be identified and considered through an annual planning, long term planning or long term plan amendment process. We also use that process to consider and respond to community-driven demand for changes to services.</p>	<p>While the Future for Local Government review could recommend significant change to what local government is and does, there is no information available on the likely direction for the review at this time.</p> <p>We consider it unlikely that any recommendations could take effect before 1 July 2024 – particularly for changes to roles or functions. Any changes that are made will be incorporated in the 2024-34 long-term plan.</p> <p>In the interim there is still a risk that central government will allocate responsibility for additional services to local government, and/or the Waikato Regional Council will allocate responsibility for additional services or standards to local government in the Waikato Region that requires immediate addressing and affects our capacity to deliver.</p>
<b>23. Resource Management Act reform</b>	<p>We will continue to deliver services associated with the Resource Management Act 1991 such as developing policy (district planning) and implementing rules and regulations (processing resource consents, monitoring and enforcement).</p>	Medium	<p>The initial indication is the overall transition process would be completed within ten years. This will give us time to determine the effects on the organisation once more is known.</p>	<p>The Council may not be delivering these services in the future. The Randerson Report recommends replacing the Resource Management Act 1991 with three Acts. There would be a mandatory plan for each region combining Regional Policy Statements, regional and district plans. New regional hubs would be established to undertake resource management, compliance, monitoring and enforcement.</p>

Topic	Forecasting Assumption	Level of Uncertainty	Potential effects of that uncertainty on the financial estimates provided	Risk
24. Resource consents for water discharges and takes	<p>That the conditions of infrastructure resource consents held by us will be altered over time due to increasing water discharge quality standards and also because of possible increased competition for the allocation of water.</p> <p>The Waikato Regional Council has advised that water bodies in our district are already close to over allocation and that it will be more difficult to obtain new resource consents required for water takes to allow for future growth. The potential implications resulting from changes to allocation of water to our district could include:</p> <ul style="list-style-type: none"> <li>the amount of water we can take,</li> <li>our ability to accommodate population and industrial growth,</li> <li>additional requirements for monitoring and management of water allocations.</li> </ul>	Low (discharges)	<p>This low level of uncertainty means that we have confidence in the need to allocate financial resources for meeting new consent conditions. Changes to wastewater discharge consent standards will result in the need for the upgrading of our wastewater treatment plants, other requirements may result in the need for more of our infrastructure to be upgraded to meet higher standards. Upgrades to stormwater treatment before discharge may also be required. The increase in financial resources needed will impact on the Council's ability to continue providing services within existing budget levels. There remains a level of uncertainty of the quantum and timing of some infrastructure spent.</p>	<p>Additional new or revised legislation, national policy statements, national environmental standards and regional plan changes (the development of the healthy rivers plan change programme) will require changes to activities and service levels not provided for in this plan. Unless otherwise noted, we do not know what changes will be initiated, and of those that we do, what the changes will involve.</p> <p>That conditions of resource consents require higher compliance standards requiring the development of additional infrastructure.</p>
		Medium (Takes)	<p>The financial effects of over allocation of water bodies may be significant and require upgrades and/or new water treatment facilities, however the potential costs cannot be forecast. Additional affects could be the potential to restrict development due to the inability to gain additional water allocation.</p>	<p>That new water take resource consents will be more difficult to obtain.</p>
	<p>That Waikato Regional Council will allow ten years for Council to comply with the new consent conditions for the wastewater treatment plants.</p>	Medium	<p>The budgets are included in year five of the long term plan to start designs and construction on plant upgrades to be compliant in year ten of the consent.</p>	<p>That if we are required to comply earlier than expected there will not be sufficient budgets in earlier years and require prioritising the upgrades over other community needs.</p>

Topic	Forecasting Assumption	Level of Uncertainty	Potential effects of that uncertainty on the financial estimates provided	Risk
25. Operating environment	There will be no significant changes to our operating environment, which have not already been planned for.	Medium	Due to climatic variation and unforeseen natural disasters there is an increased chance of events changing the operating environment in our district. However, we have faced unexpected events in the past, and coped adequately. There are risk management plans in place for some activities and an operative emergency management plan.	That there will be event(s), e.g. natural disasters and/or legislative reform that significantly affect our ability to operate or change the operating environment.
		Medium	Legislative reform is covered in separate assumptions but can potentially cause significant changes to our operating environment and budgets. Assets are unlikely to be lost other than through planned end of life renewal. Therefore, the financial effect is difficult to predict, but we do carry comprehensive insurance cover on infrastructural and community assets (refer also to insurance assumption).	That there will be significant asset losses.
26. Waihou and Piako River catchments post-Treaty settlement Authority	The Hauraki Collective Treaty Settlement Deed will include provision for an iwi driven authority responsible for developing a strategic vision and direction for natural resource issues in the Waihou and Piako River catchments and the Coromandel catchments.	Low	We will need to make additional funding commitments to allow us to work with post settlement authority with shared governance and responsibility of the Waihou and Piako river catchments.	That the Council is not prepared financially or have capacity to be ready to engage with the river catchment authority once it is established.
		Medium	We may need to make additional funding commitments to meet delivery costs over time should central government not provide funding.	That central government does not provide funding to support the ongoing costs of the river catchment authority once it is established.

Topic	Forecasting Assumption	Level of Uncertainty	Potential effects of that uncertainty on the financial estimates provided	Risk
27. <b>Hauraki collective and individual Hauraki Iwi Treaty settlements</b>	These settlements will identify areas of land that have particular cultural, spiritual, historical and traditional association for iwi and that the settlement legislation will require policy makers and consent authorities to acknowledge these associations and provide input from those affected iwi. Settlements will also trigger mechanisms, which allow iwi to be partners with Council in decision-making.	Low	We will need to update policy protocols and consenting processes and procedures within Council to be ready to incorporate Maori worldviews into decision-making.	That Council is not prepared and processes and procedures are not in place to incorporate Maori world views into decision making.
28. <b>Asset information</b>	Performance, condition and age data for assets is assumed to be accurate.	Medium	The forecast financial information is based on current asset management plan information. When any new information comes to hand, forecast financial information will be changed. The net effect overall may not be significant.	Asset data results over-estimate or under-estimate the need for renewal or replacement and its cost.
29. <b>Land use</b>	There is land zoned to cater for the forecasted residential property growth in our district, however that land is not being made available now to meet the demand. Further residential areas are being investigated in Paeroa and Waihi to support sufficient land being made available.	Medium	<p>If projected residential growth does not eventuate due to shortage in zoned land availability and uptake, we will have less connections to our services and less revenue in the short term.</p> <p>We are not yet certain on when uptake of land zoned for development will occur and therefore when infrastructure investment will be needed. Our financial forecasts would change if we do not have adequate financial or development contributions to fund this investment.</p>	If we experience more population growth in certain areas than planned for, there may not be sufficient land zoned in that particular area.

Topic	Forecasting Assumption	Level of Uncertainty	Potential effects of that uncertainty on the financial estimates provided	Risk
	In some areas of the district there is insufficient land zoned to accommodate industrial and/or commercial growth. There is a proposed Plan Change being developed which will include land proposed to be rezoned for industrial purpose in Waihi and Paeroa. Additional land was zoned for commercial purposes in the recent District Plan review in both Paeroa and Waihi.	Medium	If projected industrial and commercial growth does not eventuate due to shortage in zoned land availability and uptake, we will have less connections to our services and less revenue in the short term.	Economic growth and industrial growth slows, resulting in less or delayed demand for industrial and commercial land.  Alternatively, private land is zoned as industrial or commercial use but the owner/s do not want to subdivide and sell it meaning we do not have capacity for future growth.
<b>30. Natural disaster events</b>	There are no significant local natural disasters during the term of this plan.  The district is classified as a medium risk area for earthquakes, as outlined in the Building Act 2004. Therefore, there is a medium risk of an earthquake affecting our district. In extreme weather events there is also a risk that rainfall events and stopbank overtopping will result in flooding and inundation of land/property and our infrastructure. Currently it is believed there is a low risk that a tsunami event/tidal surge will directly affect the coastline around the Firth of Thames and/or Whiritoa.	Medium	It is likely any significant natural disaster would have impacts on the current planned expenditure within this plan. It is difficult to predict the likely financial impact of a significant natural disaster; however, we are a member of the Local Authority Protection Programme Disaster Fund (LAPP) which is a cash accumulation mutual pool created by local authorities to cater for the replacement of underground infrastructure following catastrophic damage by natural disaster. We also receive a large subsidy on our roads and bridges.	That a natural disaster occurs that has significant impact on our infrastructure and our ability to deliver services. There are adverse effects on the population and/or local economy from the adverse effects of a natural disaster.
<b>31. Climate change and insurance</b>	That all property in the district will continue to be insurable.  Projected changes in the frequency and intensity of the acute hazards people and organisations insure against, such as flood, fire, storm-surge, landslide, hailstorm and tsunami, are causing the insurance industry to change premiums, develop new insurance offerings and adjust availability. These changes are likely to affect many insurance markets, most significantly, the home insurance market.	Medium	Changes to insurance offerings could result in additional hardship following extreme events and have significant flow-on effects for New Zealand society. This could affect people's ability to pay rates.	That private property and assets are no longer insurable, due to ongoing sea-level rise and extreme weather events. Insurers may retreat from an area of New Zealand following a climate event, either in that location or in another New Zealand location. Because most of New Zealand's insurance providers are international, retreat may also be hastened by another country's experiences, which convince them that risk profiles have changed because of sea-level rise or other climatic changes.



### 32. Climate change

We undertake land use planning and design our infrastructure taking into account climate change projections and the risk of increased climate change related weather events. Climate change will affect our district over the medium to long term in line with projections provided by the Ministry for the Environment (MfE) for the Waikato Region. These projections include:

1. Higher temperatures – compared to 1995, temperatures are likely to be 0.7°C to 1.1°C warmer by 2040 (depending on the emission scenario) and 0.7°C to 3.1°C warmer by 2090. By 2090, the Waikato is projected to have from 10 to 60 extra days per year where maximum temperatures exceed 25°C. The number of frosts could decrease by around 5 to 13 days per year in the Waikato.
2. Rainfall - rainfall will vary locally within the region. The largest changes will be for particular seasons rather than annually, this means the total rainfall volume is not predicted to increase significantly, but may fall in more intense events. Winter rainfall in Ruakura and Taupo is projected to increase by 4 to 8 per cent, while spring rainfall is projected to decrease by up to 6 per cent. The Waikato is not expected to experience a significant change in the frequency of extreme rain days because of climate change. For planning purposes, we will use the two upper climate scenarios, radiation concentration pathways (RCP) 6.0 and 8.5, when modelling rainfall scenarios.
3. Wind - the frequency of extremely windy days is likely to decrease by 2 to 3 per cent. There may be an increase in westerly wind flow during winter, and north-easterly wind flow during summer.
4. Storms – future changes in the frequency of storms are likely to be small compared to natural inter-annual variability. Some increase in storm intensity, local wind extremes and thunderstorms is likely to occur. The frequency of ex-tropical cyclones is projected to either decrease or remain unchanged over the 21st century; however the ex-tropical cyclones will likely be stronger and cause more damage as a result of heavy rain and strong winds.

High

Where the impacts of climate change have a potential implication for our services, options for adaptation will be identified and a planned programme will be prepared.

The additional operating and capital expenditure that is likely to be required falls outside the ten year life of this plan. We have identified projects in years 11-30 of our Infrastructure Strategy that will be required as a result of the impacts of climate change. We will need to balance the needs and expectations of our community so it is able to finance the forecast costs for addressing climate change.

At this stage, assessing the financial implications of adapting to the effects of climate change are ongoing. They will be refined in subsequent plans as investigations are progressed.

In the longer term managed retreat and/or loss of revenue for landowners could affect people's ability to pay rates.

There is a risk that the predictions on climate change as provided by the International Panel on Climate Change and the MfE are over or under estimated.

There is a risk the impacts of climate change for Council assets will be more significant than planned for. It is unlikely the risk will be lower than planned for.

5. Sea-level rise – the 2017 MfE guidance on Coastal Hazards and Climate Change for New Zealand has four sea-level rise scenarios. The sea-level rise projections range from 0.55m – 1.36m sea-level rise by 2120. For land using planning purposes, we will use the high scenario of 1.36m.

What does this mean for our communities and our assets :

- Drought – by 2090, the time spent in drought is likely to increase. More frequent droughts are likely to lead to water shortages and increased risk of wild fires. Prolonged droughts may result in restrictive consent conditions for water takes from streams and waterways. This means our communities may have more water restrictions placed on them. Increased time in drought can damage our roads, particularly on the Hauraki Plains, because moisture level changes create soil movement.
- Flooding – more heavy rainfall will increase the risk of inland flooding in the west of the region and in river catchments in the Coromandel. More rain in an event can lead to more water getting into our wastewater pipes (inflow and infiltration increase) and reduces pipeline capacity during storm events resulting in more frequent overflows of sewage. Our pump stations are also vulnerable to flooding inundation.
- Rising sea levels and storm surge will increase the risk of salt-water intrusion in low-lying coastal areas. The MfE guidance on Coastal Hazards and Climate Change notes by 2050–2070, extreme coastal water levels that are currently expected to be reached or exceeded only once every 100 years (on average) will occur at least once per year or more (on average). Flood gates may not open long enough to drain the land adequately due to sea level rise. More frequent storm surges may require stopbanks to be raised accordingly. There is a potential long term saltwater intrusion risk at our water intake for Kerepehi Water Treatment Plant due to sea-level rise. We have also identified four road sections susceptible to sea level rise.

Topic	Forecasting Assumption	Level of Uncertainty	Potential effects of that uncertainty on the financial estimates provided	Risk
	<ul style="list-style-type: none"> <li>• Erosion and landslides – more frequent and intense heavy rainfall events are likely to lead to more erosion and landslides. There is potential for more slips or under slips and erosion to damage our roads and bridges. High water levels in rivers can also contribute to this.</li> <li>• Tropical diseases may become established in areas where they currently do not exist.</li> <li>• Biosecurity – warmer, wetter conditions (particularly in the south and west of the region) could increase the risk of invasive pests and weeds.</li> <li>• Agriculture – warmer temperatures, a longer growing season and fewer frosts could provide opportunities to grow new crops. Farmers might benefit from faster growth of pasture and better crop growing conditions. However, these benefits may be limited by the negative effects of climate change such as prolonged drought, reduced water availability, increased flood risk, or greater frequency and intensity of storms.</li> <li>• Land use – in the longer-term sea-level rise may result in managed retreat from some low-lying areas of the district. Increased drought may result in current land use practices becoming uneconomical.</li> <li>• Social cohesion – adapting to the effects of climate change can cause loss of peace of mind, displacement of communities, changes in business investment and household consumption. This can lead to social, cultural and economic hardship.</li> </ul>			

Figure 1: Local Government Cost (Inflation) Adjustors, BERL mid-scenario, % change on year earlier and Statistics New Zealand Producer Price Indices and Labour Cost Index that BERL considers to comprise the costs of local governments

Year Ending	Planning & Regulation	Roading	Transport	Community Activities	Water & Environment	PPI Inputs Local Government administration	PPI Inputs Arts and recreation	PPI Inputs – water, sewer, drainage, and waste services	CGI – Earthmoving and site work	CGI - Pipelines	All salary and wage rates – Local government sector	Private Sector Wages
June 2019	3.2	2.3	2.8	2.0	3.8	3.6	2.3	4.9	1.5	4.7	1.8	2.0
June 2020	1.7	1.9	1.8	1.7	2.5	1.6	1.3	2.9	2.1	2.2	2.2	2.2
June 2021	0.5	0.8	0.7	-0.2	-3.8	2.1	0.4	-5.4	0.7	1.5	-3.4	-3.5
June 2022	2.7	3.3	2.9	3.2	6.0	1.7	2.2	7.2	4.4	4.7	4.8	4.3
June 2023	2.5	3.1	2.6	2.7	3.5	2.0	1.9	3.4	4.1	5.0	2.4	2.3
June 2024	2.3	3.0	2.4	2.5	2.6	2.0	1.7	2.1	3.8	4.9	1.5	1.5
June 2025	2.2	2.9	2.4	2.4	2.7	1.9	1.6	2.3	3.8	4.7	1.7	1.6
June 2026	2.2	2.9	2.4	2.5	2.9	1.8	1.6	2.6	3.8	4.6	2.0	1.8
June 2027	2.2	2.9	2.4	2.4	2.8	1.8	1.4	2.3	3.8	4.5	2.2	1.7
June 2028	2.2	2.9	2.4	2.5	3.2	1.7	1.6	3.0	3.8	4.4	2.3	2.1
June 2029	2.2	2.9	2.4	2.6	3.3	1.7	1.7	3.3	3.8	4.4	2.4	2.2
June 2030	2.2	2.9	2.4	2.6	3.4	1.7	1.6	3.3	3.8	4.3	2.6	2.3
June 2031	2.2	2.9	2.4	2.4	3.1	1.6	1.3	2.7	3.8	4.3	2.7	2.0
20 year average	2.0	2.5	2.2	2.1	2.5	1.8	1.5	2.5	3.0	3.1	1.9	1.8