Clutha District Council

INFRASTRUCTURE STRATEGY

YOUR COMMUNITY YOUR COUNCIL YOUR FUTURE 2015/25

MANAGING OUR INFRASTRUCTURE

Council is charged with planning for and managing a billion dollars worth of infrastructure on behalf of Clutha District residents and ratepayers.

This Infrastructure Strategy outlines Council's approach to maintaining and improving core infrastructure during the period of 2015 to 2045. It includes information about how we are going to manage it; the main challenges we face; and based on the information we have right now how we are proposing to address these.

This strategy covers in detail roads and footpaths, urban water supply, rural water schemes, sewerage and the treatment and dispoal of sewage and stormwater drainage. Our district is also facing longer term infrastructure issues with waste management and community facilities and these are discussed at a high level.

OUR INFRASTRUCTURE STRATEGY PRINCIPLES ARE TO:

- **Generally maintain the assets we have, but target funding to where we get the most benefit.**
- **Continue to use internal borrowing/debt to fund infrastructure that residents and ratepayers will benefit from, both now and into the future.**
- **Assume that growth will not significantly change, as our actions to promote growth will not impact in the short term.**
- **Use our solid financial position and existing infrastructure as a platform to provide for the impacts of medium to long term growth in our rating base.**
- **Keep rates affordability at the forefront of our actions and decisions, and work to keep rates increases at a low level.**

WHERE WE WANT TO BE

In developing our 2015/45 Infrastructure Strategy, Council has taken the opportunity to examine the current and future needs of the district. It's important to look ahead and consider what our organisation can do to help future proof our district.

We want to continue to consolidate and build on our existing asset base, while we sustainably manage and maintain key infrastructure for residents and future generations throughout our district. In some instances we will increase levels of service to meet compulsory requirements, such as increasing standards for sewage discharges and drinking water.

Importantly, Council will also look at facilitating growth where there is potential for this to help achieve our goal of growing the rating base. We acknowledge this is a medium to longer term goal.

WHERE WE HAVE COME FROM

Clutha District Council formed in 1989 with the merging of a number of boroughs and counties with assets of varying ages and condition.

In recent years there has been substantial investment in infrastructure, and our communities are experiencing the benefits of these works. Our roading network is generally in good condition when compared with other similar networks and NZTA benchmarks and this has reduced capital works for sealed roads compared to 10 to 15 years ago. Significant investment in new footpaths has also seen improvements in our footpath network and customer satisfaction. There has also been a focus on providing improved drinking water and sewage treatment upgrades for the majority of our towns. We have also considered community facilities on a case-by-case basis and adapted and in

some instances divested facilities if this is the most sustainable longer term option.

The majority of improvements referred to above have increased Council's costs during recent years. In developing both this Infrastructure Strategy, and the related Financial Strategy, Council has spent a considerable amount of time considering the impact of increasing rates on ratepayers' ability to pay. Rates affordability and the sustainability of service levels and expenditure are key considerations for both the Infrastructure and Financial strategies.

WHERE WE ARE NOW

GENERALLY OUR CORE INFRASTRUCTURE IS IN GOOD CONDITION AND OVERALL HAS PLENTY OF LIFE LEFT IN IT.

We have a lot of infrastructure to maintain, particularly for roading and water supply – especially compared to our relatively low population.
A substantial portion of roading and rural water infrastructure exists to support our crucial primary production sector. Urban water, sewerage and stormwater infrastructure supports our various townships.

A substantial proportion of our infrastructure was constructed in the 1970s and 1980s, e.g. rural water schemes and many of our sewerage schemes.

Generally our core infrastructure is in good condition. On average overall it has 60% of its life left. Based on current information the table to the right illustrates how much life is left for the different types of core infrastructure.

Summary of Core Infrastructure

CORE INFRASTRUCTURE	VITAL STATISTICS	VALUE ($M)	REMAINING LIFE*
Roads and footpaths	826km sealed roads 2,091km unsealed roads 239km footpaths 161km surface water channels 401 bridges and bridge culverts	**859.4**	**68%**
Water supply (urban and rural)	22 schemes 2,443km or reticulation 17 treatment plants 46 pump stations	**57.4**	**58%**
Sewerage	11 schemes 183km of sewers 28 pump stations 1 treatment plant 10 oxidation ponds (5 with Biofiltro) 3 wetlands	**37.5**	**63%**
Stormwater	8 systems 84km of pipes 4 pumping stations	**10.3**	**48%**
Overall		**964.6**	**60%**

* Remaining life is the current value of the assets divided by the replacement cost. This is an estimate of the remaining life our assets have.

OVERALL CHALLENGES WE FACE

This strategy acknowledges the following general challenges, and outlines the assumptions we have made in preparing this strategy:

POPULATION TRENDS

We have a widespread rural district with a relatively small, stable and aging population.

For planning purposes Council uses the medium series projections, which project a marginal decrease during the next thirty years to around 16,250. But the biggest change expected is to the age structure of our population.

In common with the rest of New Zealand and much of the world, Clutha's population is ageing. Now and into the future a high and growing proportion of our population will be over 65, while young people (0-14) and the working age population (15–64 year olds) is predicted to decline.

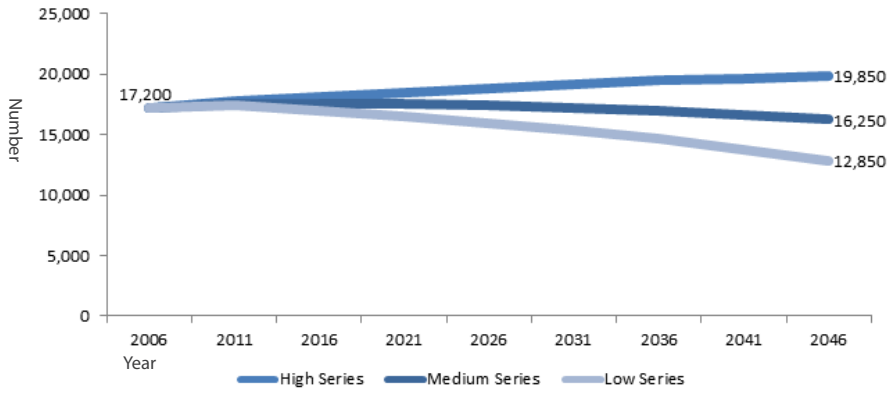
CHANGES IN OUR RATING BASE

Despite a declining population, our rating base has continued to grow, albeit at a low rate. Based on historical data, growth in the rating base has varied between 0.12% and 1.12% per annum over the last ten years. Therefore, a conservative estimate of 0.2% growth per annum has been assumed.

ECONOMIC TRENDS

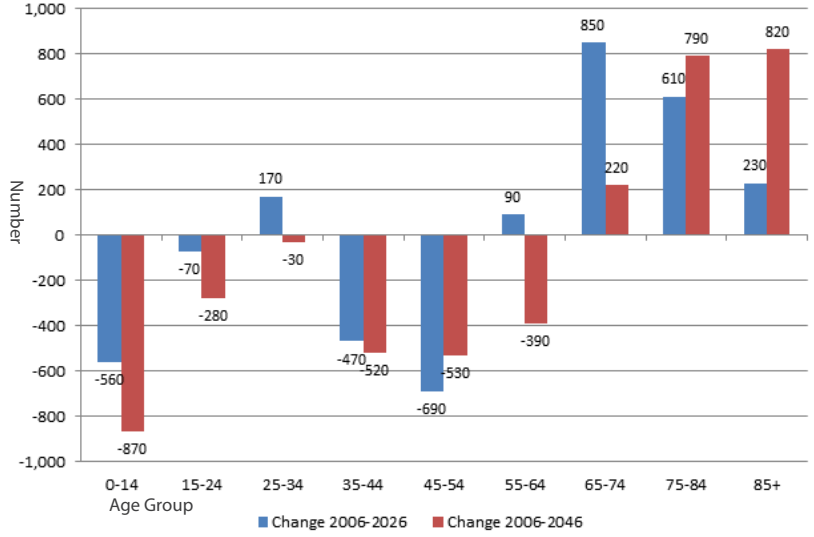
As our district's economy significantly depends on the primary sector, the ability to absorb and sustain labour in the district is influenced by this sector's economic performance. The sector has been positive across the previous decade, showing employment and GDP gains since 2000. Conversions to dairying

Clutha District Summary of Population Projections 2006 (Base) to 2046*



* Source: Statistics New Zealand (September 2014). Note: The most up-to-date population projections covering the period of the Financial and Infrastructure strategies uses the 2006 Census for its base.

Projected Population Change by Age Group 2006 (Base) to 2046 (Medium Series)



* Source: Statistics New Zealand (September 2014)

have driven much of this. We assume this sector will continue to remain relatively strong over the next ten years, although its performance may be volatile due to factors like the exchange rate, climate and fuel costs . Likewise, increased productivity trends and consolidation of rural processing industries will continue to impact on the number of jobs required to sustain this sector of the economy. The tourism sector has also shown growth in recent years, and is expected to continue to do so, although it is only about 3% of the district's economy.

LAND USE CHANGES

No major shifts in land use are expected during the life of this strategy that will impact on core infrastructure.

It is expected that conversions to dairying and increases in dairy herd sizes will continue. Conversion and intensification are expected to be subject to water availability and being able to meet increasing standards for environmental discharges. Many recent conversions have sourced their own water supply and as such provision of Council water is not expected to be a barrier to future conversion in many areas.

Maturation of forestry blocks and subsequent harvesting and processing throughout the district may impact on roading infrastructure. However, our current regulatory framework provides for any impacts to be dealt with directly with forestry owners as the demand for this infrastructure arises.

Council has made provision for urban growth in some areas of the district over the last 10 years and with the growth focus into the future this is expected to continue through the District Plan review, so as to facilitate urban and industrial growth where there is demand in key areas of the district.

LEGISLATIVE AND STRUCTURAL UNCERTAINTIES

Council is assuming that the Clutha District will retain its existing boundaries, functions and status as a territorial authority during the life of this plan. Should amalgamation with neighbouring authorities or significant boundary changes take place, this could significantly impact on this strategy. We have tagged this as a medium risk for the ten year term of this strategy. There is also a regulatory risk of higher standards for stormwater and sewerage discharges that may impact on this strategy. This is considered a medium risk for this strategy.

MANAGING THE RISKS WE FACE DUE TO NATURAL HAZARDS

Managing the risks associated with natural hazards is an issue that has been flagged as a consideration in Council's infrastructure strategy. Council utilises guidance from the Ministry for the Environment, information being developed by Otago Regional Council and Risk Reductions lifelines group. Resilience and natural hazard mitigation is considered on a project by project basis for all capital projects.

FINANCIAL SUSTAINABILITY AND RATES AFFORDABILITY

In recent years Council has committed to a substantial amount of funding to invest in infrastructure, particularly for water and sewage treatment. This has been funded from reserves and internal borrowing. The 2015/25 Long Term Plan provides information about funding for the first ten years of the infrastructure strategy, and information about rates impacts where these apply.

INFRASTRUCTURE-SPECIFIC CHALLENGES WE FACE

THIS STRATEGY ACKNOWLEDGES THE FOLLOWING CHALLENGES AND OUTLINES THE ASSUMPTIONS WE HAVE MADE IN PREPARING THIS STRATEGY:

ROADING

Co-investment by the NZTA

A main source of funding for roading comes from New Zealand Transport Agency (NZTA). A baseline level of funding is received for the maintenance of the existing roading network, while funding for new projects may be received depending upon the costs and benefits of each project. Based on information at hand the baseline levels of funding have been assumed as 60% in 2015/16, dropping to 59% for the remainder of this strategy. An annual inflation-adjustment on the financially assisted roading programme of 2.4% has also been assumed.

Aligning to nationally consistent levels of service

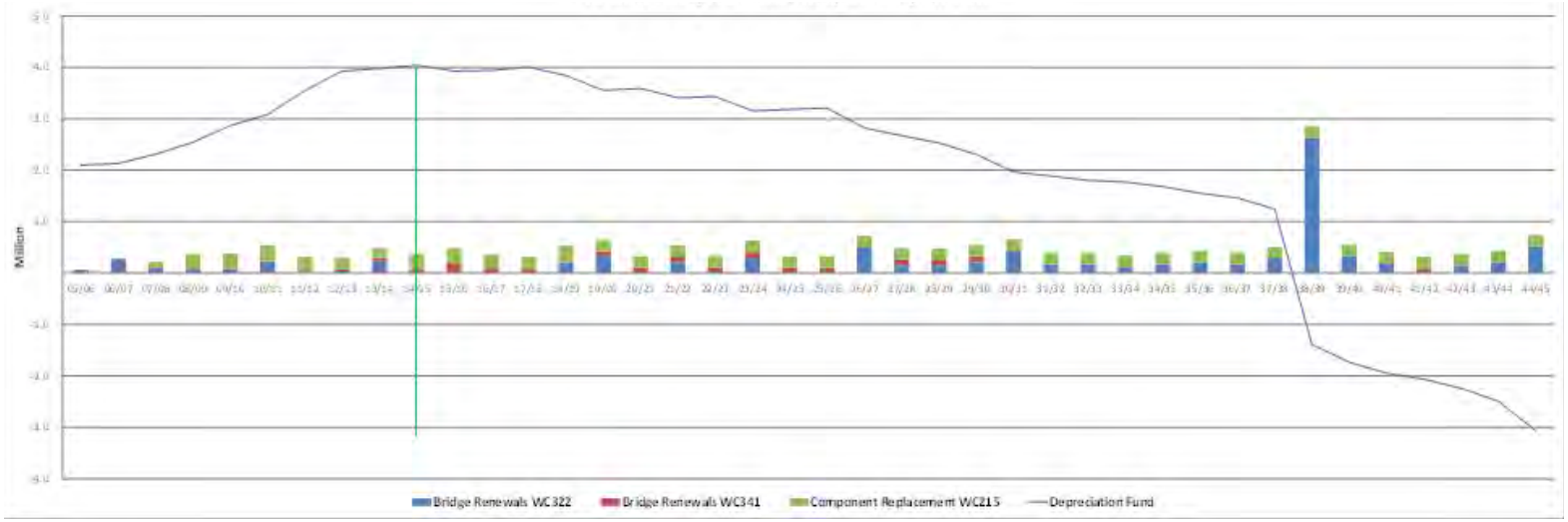
The One Network Road Classification (ONRC) is a joint initiative of Local Government New Zealand and the NZTA's Roading Efficiency Group (REG) to provide a nationally consistent framework to inform activity management planning including choices about roading investments, maintenance and operations.

The initiative aims to standardise the road user experience nationally, to support consistent asset management across the country. It also aims to facilitate collaboration and prioritisation between organisations responsible for planning and service delivery for the national road network.
The classification aims to promote a customer focus and investment decisions will be based on whether the roads are fit for purpose and meeting the needs of users. According the information at hand there are some aspects of our network, particularly for the rural sealed part of our network, that are above the ONRC standards.

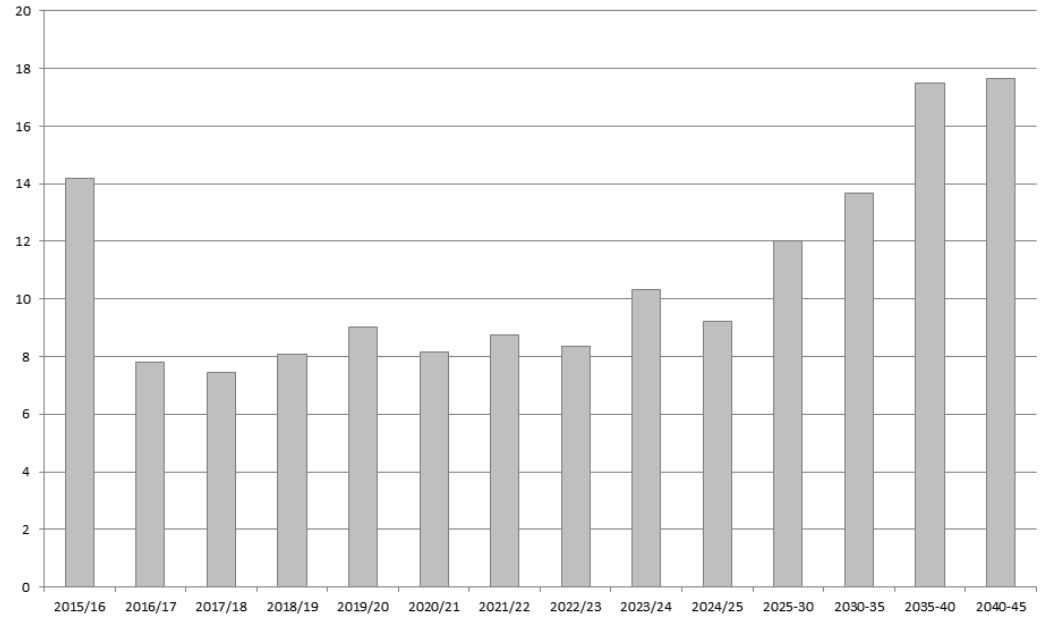
Renewing our network of bridges

Bridges are a very important part of our transportation network and a forward works programme to renew and upgrade them has been identified. This programme includes the Clydevale Bridge which is a key transport link across the Clutha River and a very large and expensive bridge. Major strengthening work in the last few years has extended its life but it is projected to be replaced within the term of this strategy along with many smaller bridges. The projected renewal and component replacement programme is below including the proposed level of depreciation funding for our share. This shows a loan requirement in year 2038/39 at this stage when the Clydevale Bridge is due to be renewed.

CDC Share - Bridge Renewals / Component Replacement



Forecast Roading Capital Expenditure 2015/45 ($M)



WATER

Improving water and compliance with drinking water standards

Council is required to "take all practicable steps" to meet national drinking water standards. This means that Council is undertaking treatment upgrades across all urban and rural water schemes.

Upgrades have been completed on Balclutha, Kaitangata, Lawrence and Tapanui water supplies with varying levels of funding assistance from the Ministry of Health's Capital Assistance Programme. Milton's new Water Treatment Plant is also capable of fully complying with the new standards.

Further treatment upgrades are required across all of Council's other water supplies (including rural water schemes). Funding assistance for these schemes is unlikely to be available as the communities they supply don't meet funding requirements, and because of the high proportion of stock-water use in the case of rural water schemes.

It is assumed Council will continue working towards compliance for all schemes where this makes economic sense. A total of $4 million has been budgeted for treatment upgrades between 2015/16 to 2017/18.

Increasing environmental standards for discharges to the environment

Under the Resource Management Act 1991, Council is required to have various resource consents in place for its sewerage discharges. Many of these consents require renewal over the next ten years, and in some cases this will mean Council will need to consider costly upgrade options to meet increasingly stringent conditions.

Treatment upgrades are planned for the Heriot and Kaitangata schemes in 2015/16 ($280,000 and $950,000 budgeted respectfully), Clinton ($384,000 budgeted across 2017/18 and 2018/19) to meet requirements of new discharge consents.

A treatment plant upgrade is planned for Balclutha scheme ($2.44 million budgeted across 2018/19 and 2019/20) in order for a new discharge consent to be granted.

In many places around New Zealand treatment of stormwater is required before it is discharged to streams and rivers. Some settling of sludge is achieved in street sumps in most places across our district at present. However, the Otago Regional Council has indicated that this issue is part of their review of the Regional Water Plan and it is expected that increased catchment management and possibly further treatment of stormwater may be required in the future. There is also the Freshwater National Policy Statement to consider. Council will monitor the proposed water plan changes but these may require changes to how we manage stormwater in the future.

Renewal of water, sewerage and stormwater infrastructure

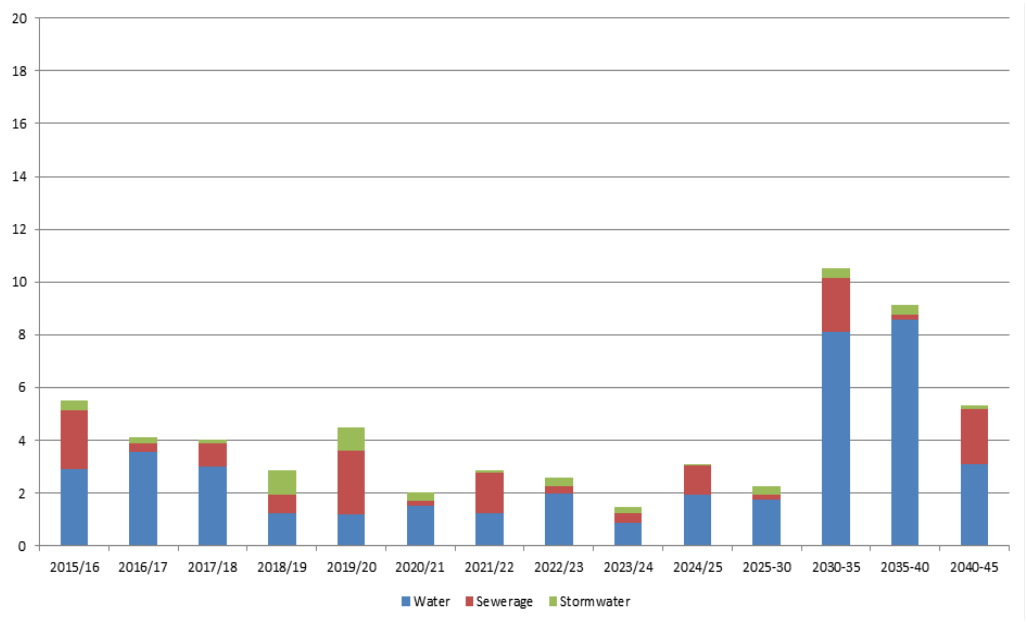
Rural water schemes reservoir renewals – many of the rural schemes reservoir tank farms are approaching to the end of their economic lives over the next ten or so years.

Priority pipeline renewals (rural and urban) – work has been undertaken to identify pipelines that need to be replaced. A programme of renewals has been set

based on criticality of these various pipelines. At this stage we are not expecting any widespread renewal projects for the next ten to twenty years. However, there may be older mains in some urban areas and critical rising mains and AC mains that require replacement within this timeframe.

Asbestos concrete (AC) water main renewals –
There is considerable uncertainty regarding the useful life of the AC water mains around our district and particularly for our rural supplies. Recent assessment work has indicated that some pipes are lasting about 75% to 85% of the typical useful life compared to the NZ average. This is interesting as other parts of NZ have found that these pipes are lasting longer than expected and this may be due to the specific ground conditions, water chemistry and the type of pipes in our district. This is identified as one of the key long term risks and challenges for our water supplies in the next 20-30 years as changes in the life of these pipes would have a significant impact on funding and rates requirements for our water supplies.

Forecast Water, Sewerage and Stormwater Capital Expenditure 2015/45 ($M)



OTHER INFRASTRUCTURE CHALLENGES WE FACE

While not technically considered 'core infrastructure' our solid waste and community infrastructure are important, and there are some future challenges worthy of mention in this strategy.

MT COOEE LANDFILL AND FUTURE OPTIONS FOR SOLID WASTE

The current resource consent for Mount Cooee Landfill expires in 2023. Councils preferred option is to work towards renewing the resource consent for Mt Cooee rather than closing the landfill. Council has included a provisional sum in the budget for the installation of additional groundwater monitoring bores as well as increased data collection which will help support an application for renewal. However, there is still a high degree of uncertainty attached to this; if the application is unsuccessful Council will need to close Mt Cooee and look at other options for managing waste produced throughout the district. This would most likely include building a resource recovery park at the Mt Cooee site and transporting this waste out of the district to another landfill. There would be a modest cost involved in building this infrastructure, as well as a moderate increase in user chargers to cover additional transport costs.

EARTHQUAKE STRENGTHENING AND FUTURE OPTIONS FOR THE DISTRICT'S COMMUNITY FACILITIES

Changes to the Building Act 2004 as a consequence of the Canterbury earthquakes means there will be requirements to strengthen buildings to at least 33% of the Building Code, or to demolish them. During the life of this strategy Council is expecting to need to make decisions about future capital works and funding for a number of buildings that are either Council-owned or funded. Detailed structural analyses of these buildings will be carried out to help provide the information Council will need to make longer term decisions in conjunction with local communities. Council assumes that budgets will not be significantly affected by the work required following structural assessments. There is a high level of risk tagged for this assumption.

WHAT WE PLAN TO DO:

- **More investigative work to give us better quality information about our underground assets. This will help us refine and target renewal work to make sure it gets done at the best time to do it.**
- **More work to target where and how we should invest in our roading network and confirm that our proposed approach is sustainable.**
- **Look for greater efficiencies in our biggest areas of spending.**
- **Implement economic development actions and investigate other actions (Living and Working in Clutha) to generate growth in the medium to long term.**
- **Carry out a comprehensive range of activity reviews to generate efficiencies and economic benefit.**

How these general principles will be implemented in each of the asset areas is outlined as follows:

ROADING

Council is signalling that over the next three years we expect to change future spending. Instead of maintaining all roads to a similar level, Council will target roads with the greatest economic benefit to the district and that align with the ONRC hierarchy. In order for Council to be able to target investment on the roads, an 'Economic Network Plan' approach is proposed in addition to Council taking more risk of roads failing.

- **Transition to a 'one network' approach to managing Clutha's local roading network by 2018/19, by implementing the ONRC system and associated customer and technical levels of service.**
- **For Council to start taking greater risks on the timing of maintenance and renewals, i.e. by not carrying out works even if the asset is not in an ideal condition but is still useable.**
- **Reduce spending by reducing road rehabilitation and reseal work. We expect the average reseal life will extend from 14 years to 15 years.**
- **Assess area wide pavement treatments on a case-by-case basis and make decisions about committing funding depending upon the economic benefit of the road, including traffic volumes. This is supported by our current sealed road 'roughness' being significantly better and urban roads being about right when compared to national standards.**
- **Mitigate the greater risk (including financial risk) being taken on by earmarking existing reserve funds of $753K to a roading deferred renewal/maintenance fund to fund work should any unforeseen failures take place.**
- **Council has the option to use weight and speed restrictions to extend the life of bridges and we intend to refine the forward works programme to target spending where there is the greatest economic benefit. This may mean removal of bridges or a lower level of service for some bridges where there are alternatives or little value for the district in upgrading them.**

ROADING IMPROVEMENTS

The Nuggets Road Sealing

The sealing of The Nuggets Road, which leads to the iconic Nugget Point lighthouse and scenic viewpoints, has been included in the plan for construction in the 2015/16 year. Completion of the project is still subject to securing NZTA funding assistance. An overall budget of $2.6 million has been included and Council's share of $1.0 million of this budget is proposed to be loan funded.

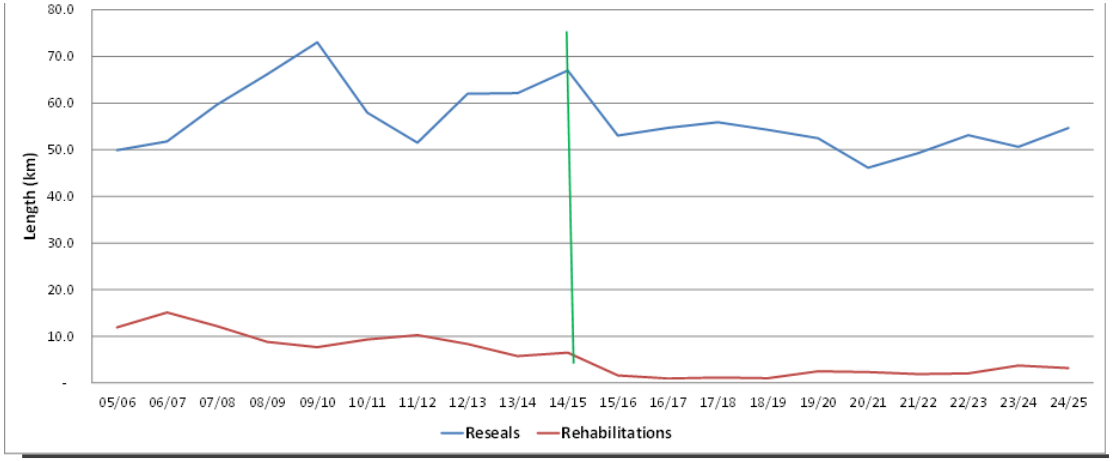
Continuing Balclutha Streetscape Improvements

Council has committed to completing improvements to Balclutha's streetscape, which will take place across the 2014/15 and 2015/16 financial years.

Safety Improvements

Safety on the network is of paramount importance to our road users. The majority of crashes occur on rural roads. Council will continue to actively target safety improvement opportunities to be incorporated within renewal and maintenance activities. This includes Council's Minor Improvement projects programme which includes work such as intersection improvements, traction seals, bridge renewals, visibility improvements, stock underpasses etc. Budgets to continue Road User Safety education programmes in the district have also been included. All these road safety initiatives support the aims of the National Road Safety Strategy, Safer Journeys 2020.

Change in Reseal and Pavement Rehabilitations (Level of Service Change)



WATER SERVICES

Treatment Upgrades

Renewals

An assessment programme is planned to confirm the condition and renewal requirements for rural water reservoirs; secondly a budget has been established five years after the inspection to replace or upgrade the reservoirs. Exact timing of the reservoir upgrades will be determined by inspection and budgeted spending may be moved forward or backwards following this. Maintenance and repair records will be assessed to consider the best economic time for minor renewals around schemes as is carried out at present.

AC pipelines - Budgets to enable further detailed assessment of AC pipelines have been included. This will enable Council to better predict the renewal requirements for the pipes and future funding requirements. These extensive renewals are currently projected to be in the final 10 years of this strategy and as such there is time to do this work. The final decision on timing of renewals will take a risk-based approach that will include economic and criticality aspects which have already been used to assess current renewals.

A comprehensive programme of treatment upgrades has been approved by Council previously and is included in the first few years of the strategy. As such further detail on these is provided in the Council Activities section.

THE 30-YEAR HORIZON

The graph below summarises our 30 year horizon for capital and operating expenditure for 2015-2045 based on the principles outlined in this strategy.

There are spikes in our forecast capital expenditure in 2034/35, 2039/40 and 2044/45. A big part of these are for asbestos cement pipe renewals across the district's extensive network of rural water schemes. These schemes were built during the 1970s and1980s and the proposed renewals reflect the estimated 60 year life of these pipes.

Summary of Major Infrastructure Expenditure 2015/45*

CORE INFRASTRUCTURE AREA	SUMMARY	VALUE ($M)
Roads and footpaths	Sealed road resurfacing	127.4
	Unsealed road metalling	71.8
	Pavement rehabilitation	70.9
	Footpath renewals	68.7
	Bridge renewals	29.8
	Minor safety roading improvements	26.4
	Bridge component replacements	26.2
	Roading drainage renewals	18.4
	Traffic services reneals	11.0
	The Nuggets Road sealing	2.4
Water supply (urban and rural)	Balclutha pipeline renewals	2.2
	Balclutha cast iron renewals	2.1
	Balmoral 2 pipeline renewals	7.7
	Clydevale/Pomahaka AC renewals	4.9
	Glenkenich AC renewals	10.2
	Kaitangata AC renewals	2.0
	Kaitangata treatment plant renewals	4.9
	Lawrence AC renewals	3.3
	Milton pipeline renewals	6.5
	Milton renewals	4.7
	Moa Flat AC renewals	13.9
	Richardson AC renewals	8.4
	Stirling pipeline renewals	3.0
	Tapanui pipeline renewals	3.6
	Tuapeka pipeline renewals	8.6
Sewerage	Balclutha pipeline renewals	3.5
	Balclutha treatment plant upgrade	2.4
	Clinton pipeline renewals	3.9
	Milton pipeline renewals	8.5
	Owaka pipeline renewals	3.9
Stormwater	Balclutha pipeline renewals	4.0

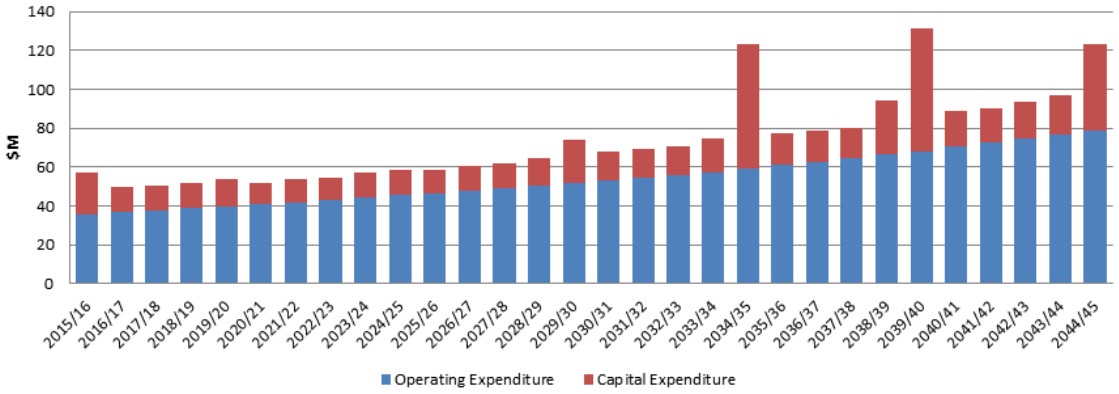
* Greater than $2 million

Clydevale Bridge is one of our district's most important bridges. Work was done to strengthen it in 2013/14 which is expected to extend its life by 25 years. At this stage Council is planning for its replacement in 2038/39.

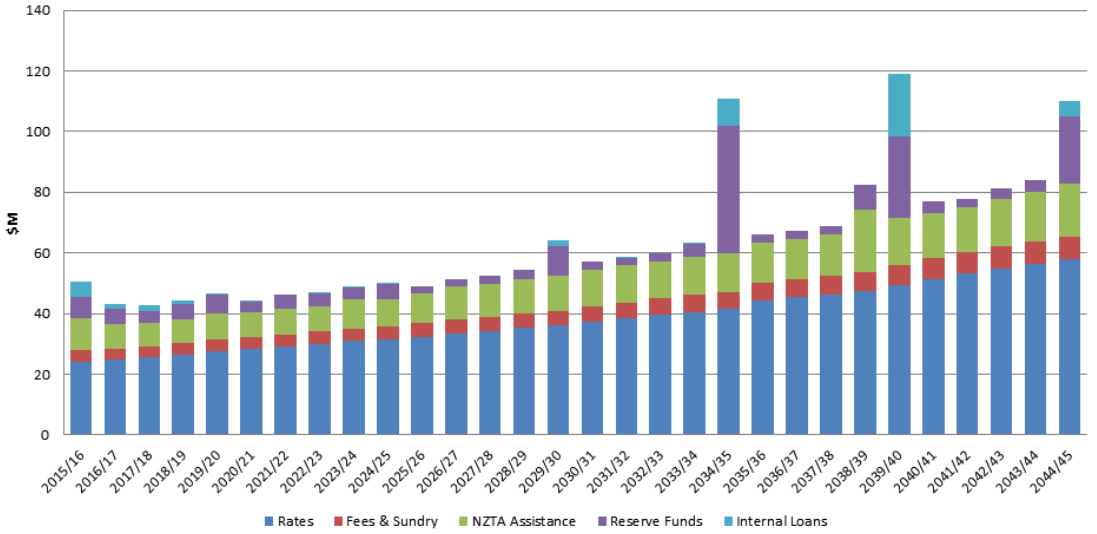
HOW WE WILL AIM TO FUND IT

Council will continue to fund our services and activities from a number of sources, of which rates are a major component. Other income sources include reserves, fees, NZTA funding (for roads), and internal loans. The graph to the right signals Council's forecast funding profile for 2015/45.

Forecast Operational & Capital Expenditure 2015/45



Forecast Funding Profile 2015/45



KEY PLANNING ASSUMPTIONS FOR THIS 30-YEAR INFRASTRUCTURE STRATEGY

WHAT WE HAVE ASSUMED	LEVEL OF UNCERTAINTY	WHAT WOULD HAPPEN IF THIS CHANGED:
Amalgamation/Boundary Changes Council is assuming that the Clutha District will retain its existing boundaries, functions and status as a territorial authority during the life of this plan		Should amalgamation with neighbouring authorities or significant boundary changes take place, this would significantly impact on all of this plan in its entirety.
Representation arrangements Council assumes that the current structure of representation will not change significantly.		In general, any changes to representation arrangements will not have significant budgetary implications. However, there would be changes to rates based on electoral ward.
Stable and aging population For planning purposes Council applies the medium series of the most recent projections supplied by Statistics NZ, the Clutha District Population Projections 2006-2046. The projections forecast a marginal 0.2% decrease during the life of this plan, but the biggest change expected is to the age structure of our population. Council assumes that the number of those aged 65 and over will grow over the next 10 years. This will create changes in demand, especially within the community services area. This strategy assumes that any changes can be met within existing budgets.		An ageing population may put pressure on levels of service which Council cannot meet within existing budgets. Council will be undertaking several strategic reviews that will aim to best plan for issues and opportunities related to our aging population.
Changes to our rating base Based on historical data and changes to the district's rating base Council is projecting that the number of rating units in the district will continue to grow at a rate of a minimum of 0.2% per annum. This doesn't take into account the impacts of Council's focus to grow the rating base as this is too difficult to predict in detail and at this early stage.		Growth following the integrated set of actions Council is proposing in this plan may generate growth at greater levels than what is forecast based on historical data. This may result in additional income, and the ability to spread costs over a greater number of ratepayers.

KEY PLANNING ASSUMPTIONS FOR THIS 30-YEAR INFRASTRUCTURE STRATEGY

WHAT WE HAVE ASSUMED	LEVEL OF UNCERTAINTY	WHAT WOULD HAPPEN IF THIS CHANGED:
Roading maintenance contract renewal Roading budgets assume the price for the Maintenance and Operations 5-year contract will not exceed current expectations.		Operating and maintenance expenditure forecasts for 2016/17 onwards would be lower than required and work would have to be reprioritised or additional funding sought.
One Road Network Classification The levels of service currently provided will be measured against that of the ONRC and it is predicted that for the foreseeable future changes may be required. There is some uncertainty around how this will affect funding levels from year 4 and beyond 2018/19 onwards. It is anticipated that the development of a Transition Plan will reduce this uncertainty.		This may result in a further readjustment of levels of service or additional local funding if a different level of service is agreed to by our communities.
The Nuggets Road seal extension This project has been included in budgets and is part of the Otago Southland Regional Land Transport Plans 2015/21.		If priorities change and funding assistance is not secured, this project would not proceed.
Volatility of oil based supplies Recent history suggests that oil prices will remain volatile for the foreseeable future, but are likely to be lower than the last six years.		Historically, work programmes have been adjusted accordingly to account for price variability in oil based supplies. This approach is assumed to be sustainable over the next ten years.

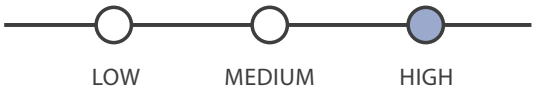
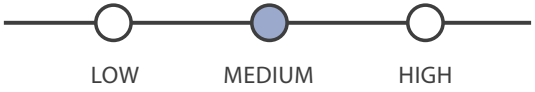
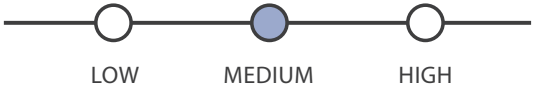
KEY PLANNING ASSUMPTIONS FOR THIS 30-YEAR INFRASTRUCTURE STRATEGY

WHAT WE HAVE ASSUMED	LEVEL OF UNCERTAINTY	WHAT WOULD HAPPEN IF THIS CHANGED:
Useful lives of roading assets It is assumed that budgets at the revised requested levels to the NZTA will mean that the remaining lives of assets (design life for top surface is currently 15 years, design life for rehabs is currently 80 years) will not be exceeded.		If remaining lives are shorter than predicted renewals would have to be undertaken more frequently, impacting on capital renewals budgets. If budgets are not available, focus will be on keeping top surfaces water resistant, with money concentrated on reseals rather than rehabs. Loss in funding for rehabilitations will either result in increased maintenance or increased capital requirements.
Impacts of climate change on roading Climate change is expected to cause sea-level rise and increased frequency of storm events. Sea level changes are not expected to have an impact on roading assets during the life of this plan. However increased storm events and associated flooding are expected to increase the risk of road closures and failure at culverts and bridges. See below regarding Council's Emergency Fund.		If repairs of the roading network as a result of extreme weather events exceed the available budgets, this may affect priorities for other roading projects.
Implications of natural disasters for roading In terms of costs of natural disasters, it is assumed that Council's Emergency Fund would cover Council's share for the repair/replacement of roading assets.		Depending upon the scale and cost of the emergency some assets either won't be replaced/ repaired or will take longer to replace/repair. If roads are disrupted for a period of time this can have significant flow on effects for users.

KEY PLANNING ASSUMPTIONS FOR THIS 30-YEAR INFRASTRUCTURE STRATEGY

WHAT WE HAVE ASSUMED	LEVEL OF UNCERTAINTY	WHAT WOULD HAPPEN IF THIS CHANGED:
Meeting drinking water standards Balclutha, Kaitangata, Milton and Lawrence treatment plants have recently been upgraded to be capable of producing water that is compliant with Drinking Water Standards NZ: 2005 (revised 2008). Compliance with the standards will require significant capital investment to rural treatment plants and Council has committed to a programme of upgrades. It is assumed budgets in this plan will meet the costs of these upgrades.		If more than the $4 million budgeted is needed for the upgrades, Council's strategy towards meeting the standards would need to be reassessed.
Increasing demand for water Increased demand for rural water is expected due to continued conversion from sheep/beef to dairy farming and increasing herd sizes (although at slower rates than experienced in recent times). During the life of this plan Council will aim to supply additional water units where this is feasible and economically viable. Council's approach to servicing any new major industries is to consider any proposal on a case-by-case basis. Provision of adequate water would be a fundamental issue for resolution by negotiation during project feasibility investigations. Work to provide additional capacity for the Clydevale /Pomahaka RWS has been budgeted for 2014/15. It is assumed that demand can be met and the project will be undertaken in that year.		If additional demand or new water infrastructure is required, this would need to be assessed including budgetary/financial impacts. If demand for additional units can't be met within the existing project scope and budgets for Clydevale-Pomahaka, this may affect budgets in this plan.

KEY PLANNING ASSUMPTIONS FOR THIS 30-YEAR INFRASTRUCTURE STRATEGY

WHAT WE HAVE ASSUMED	LEVEL OF UNCERTAINTY	WHAT WOULD HAPPEN IF THIS CHANGED:
Impacts of climate change on water, sewerage and stormwater Potential risks from the impacts of climate change include temperature increases and drier conditions resulting in lower stream flows and water table levels (except those sourcing water from the Clutha River). Increased rainfall and rainfall intensity resulting in higher stream flow/flooding/erosion is also a risk along with sea level changes. At the current projected rates, changes are not expected to impact during the life of this plan. There may be unexpected failures or events affecting infrastructure (also see below).		Further investigative work may determine further capital works are needed to address the impacts of climate change on water infrastructure, with flow on impacts for budgets.
Implications of natural disaster for water, sewerage and stormater In terms of costs of natural disasters, it is assumed that the current level of insurance, Council's Emergency Fund, combined with underground asset self-insurance would cover the repair/replacement of water assets. It is assumed that demand can be met and the project will be undertaken in that year.		Depending upon the scale and cost of the emergency some assets either won't be replaced/ repaired or will take longer to replace/repair. If schemes are disrupted for a period of time this can have significant flow on effects for users.
Levels of service for Balclutha stormwater There has been a budget included to increase the reticulation and outfall capacity for Balclutha. Further investigations into whether this is justified will be undertaken prior to committing the funding.		Further investigation work will determine the scope and nature of this project. This may have a flow on impact to budgets.

KEY PLANNING ASSUMPTIONS FOR THIS 30-YEAR INFRASTRUCTURE STRATEGY

WHAT WE HAVE ASSUMED	LEVEL OF UNCERTAINTY	WHAT WOULD HAPPEN IF THIS CHANGED:
Resource consents Upgrades to gain resource consents renewals for Balclutha, Clinton, Heriot, Kaitangata, Milton and Waihola are included in this strategy. It is assumed that these will progress as programmed, and that they can be achieved within allocated budgets. Council also assumes that it will meet longer term consent conditions for recently upgraded plants at Kaka Point, Lawrence, Owaka, Stirling and Tapanui.		Changes in timing for capital works could affect budgets. If additional capital or operating expenditure is needed this would affect budgets and funding allocations.
Levels of service/demand for sewerage services Provision of sewerage services have recently been extended to Benhar, Tokoiti and Pounawea. This plan assumes that there are no other known residential or industrial developments that would change levels of service and network demand.		Council's approach to servicing new industries is to consider any proposal on a case-by-case basis. Provision of sewerage would be considered in conjunction with relevant parties during the project feasibility investigations. This would determine if there are any flow-on budget implications that need to be planned for.
Increasing environmental standards Through the Freshwater National Policy Statement (NPS) the Government signaled it expects improvements to how fresh water is managed in New Zealand. The full package of reforms is to be rolled out over the next few years as decisions are made and policy is developed. Otago Regional Council has also indicated that stormwater discharges will be reviewed as part of their review of the Regional Plan: Water. It is assumed that further treatment of stormwater flows into our rivers and streams will be required in the future for urban/industrial areas, but budgets have not been included at this time as the extent of potential regulations are not yet known.		Increasing environmental standards may have significant bearing on stormwater costs. If they become mandatory prior to 2018, Council will need to reassess and reprioritise budgets in order to meet the increased standards.