



Notice is hereby given that an Ordinary Meeting of Southland District Council will be held on:

Date: Thursday, 23 November 2017
Time: 1pm
Meeting Room: Council Chambers
Venue: 15 Forth Street, Invercargill

Council Agenda - Late Items OPEN

MEMBERSHIP

Mayor	Mayor Gary Tong
Deputy Mayor	Paul Duffy
Councillors	Stuart Baird
	Brian Dillon
	John Douglas
	Bruce Ford
	Darren Frazer
	George Harpur
	Julie Keast
	Ebel Kremer
	Gavin Macpherson
	Neil Paterson
	Nick Perham

IN ATTENDANCE

Chief Executive	Steve Ruru
Committee Advisor	Alyson Hamilton

Note: The reports contained within this agenda are for consideration and should not be construed as Council policy unless and until adopted. Should Members require further information relating to any reports, please contact the relevant manager, Chairperson or Deputy Chairperson.

TABLE OF CONTENTS

ITEM	PAGE
REPORTS - POLICY AND STRATEGY	
7.4 Draft Infrastructure Strategy - Supporting Document for the 2018-2028 Long Term Plan	5

Draft Infrastructure Strategy - Supporting Document for the 2018-2028 Long Term Plan

Record No: R/17/11/28234
Author: Nicole Taylor, Project Co-ordinator Corporate Planning
Approved by: Steve Ruru, Chief Executive

☐ Decision ☒ Recommendation ☐ Information

Purpose

- 1 To consider and recommend to Council the endorsement of the draft Infrastructure Strategy as part of the information pack to be audited by Audit NZ. These documents will form part of the 2018-2028 Long Term Plan Consultation Document being adopted in February 2018 for consultation.

Executive Summary

- 2 The development of the 2018-2028 Long Term Plan (LTP) is based around the scene set by the financial and infrastructure strategies. Both are required as part of the supporting documentation of the 2018-2028 LTP Consultation Document. The strategies become part of the final LTP when it is adopted in June 2018.
- 3 The 2018-2028 Infrastructure Strategy (Attachment A) has been built up from the infrastructure-related Activity Management Plans (AMPs) and taking into account the significant issues facing Council over the next 30 years. A number of these were discussed by Council at the LTP workshop on 9 August 2017.

Recommendation

That the Council:

- a) Receives the report titled “Draft Infrastructure Strategy - Supporting Document for the 2018-2028 Long Term Plan” dated 20 November 2017.**
- b) Determines that this matter or decision be recognised as not significant in terms of Section 76 of the Local Government Act 2002.**
- c) Determines that it has complied with the decision-making provisions of the Local Government Act 2002 to the extent necessary in relation to this decision; and in accordance with Section 79 of the Act determines that it does not require further information, further assessment of options or further analysis of costs and benefits or advantages and disadvantages prior to making a decision on this matter.**
- d) Endorses the draft Infrastructure Strategy, with any amendments from this meeting for use in the audit, noting that the final documents will be presented for adoption in February prior to consultation.**

Background

- 4 All councils are required by legislation to adopt a Long Term Plan (LTP) and review it every three years. The LTP sets out Council's activities, plans, budgets and policies and must be adopted before the beginning of the first year it relates to, having used a special consultative procedure to consult with the community.
- 5 Instead of a draft LTP, local authorities are required to develop a Consultation Document for the purpose of consulting with the community as well as making publicly available the information that provides the basis for the preparation of the LTP. The Infrastructure Strategy forms part of the supporting information and will inform the 2018-2028 LTP Consultation Document.
- 6 A number of workshops and meetings have been held over the past 18 months in preparation for the LTP. As part of this, the content of Council's Financial Strategy and Infrastructure Strategy have been discussed with the attached Infrastructure Strategy a reflection of those discussions.
- 7 The Infrastructure Strategy brings together the significant infrastructural issues that are likely to arise over the next 30 years, including their financial and non-financial consequences, the principal options for managing them and the implications of these issues.

Issues

- 8 The Infrastructure Strategy is a summary of the significant infrastructure issues facing the District over the next 30 years and the options that the Council has for managing these.
- 9 In their report *Matters Arising From The 2015-25 Local Authority Long-Term Plans*, the Office of the Auditor General commented that infrastructure strategies should be:
- *visionary – telling the story about where local authorities were, where they expected to be, and how they intended to get there;*
 - *realistic – including relevant assumptions and disclosures on funding, data, risks, and delivery; and*
 - *relational – creating the right debate and being credible by connecting with financial strategies, demographic change, and other relevant influences.*
- 10 The 2018-2048 Infrastructure Strategy outlines the key issues around infrastructure provision. The issues identified in the strategy are similar to the issues identified in the 2015 Infrastructure Strategy. These include:
- increasing environmental standards around water quality and water management which is impacting on the Council's 3 waters activities
 - changes in population demographics with ageing and pockets of declining population
 - affordability, particularly with ageing infrastructure and associated renewal costs
 - the need to improve asset information/modelling to more accurately forecast renewals and evaluate options for extending asset life
 - climate change impacts on infrastructure design and re-design as it needs to be renewed.
- 11 The strategy outlines high-level options for managing these issues that will be used to guide Council's planning and decision-making.
- 12 At a high level, the Infrastructure Strategy identifies the following priorities:
- manage the District's infrastructure assets in the most cost effective way

- manage the impacts of changing activity on the roading network
- meet legislative compliance e.g. drinking water standards
- manage the effects of declining community populations
- provide affordable services to communities.

13 The Strategy identifies the a number of key decisions facing Council, including:

Key Decision	Indicative Timeline
Comparison of renewal programmes eg, bridges versus pavement renewal.	2018 -2021
Which option to construct for disposal of treated wastewater effluent at the Kepler site?	2018
What are the options and which is the best option for the provision of a head office building?	2019
What are the options and which option is best for finalising and for funding completion of the Around the Mountains Cycle Trail?	2018
What is the appropriate level of development for the District's open spaces and how much investment in improvements is needed?	2018-21
How to fund stormwater capital improvement works and whether a District funding model is appropriate	2018-2021
Whether to continue to provide a service or to implement a withdrawal strategy for specific declining communities.	2021 on

14 The Infrastructure Strategy is still subject to review and refinement as the LTP, Financial Strategy and AMPs are completed. These documents are yet to be reviewed to ensure that they are in alignment. Although the final Infrastructure Strategy is not adopted until June 2018, the draft as proposed by Council is adopted as part of the supporting documentation for the LTP Consultation Document.

15 The key aspects that are yet to be completed include:

- Addition of an issue around a major natural disaster and potential impact on infrastructure
- Finalisation of some project costs.

16 The draft document includes comments indicating what information is still to come.

Factors to Consider

Legal and Statutory Requirements

- 17 Section 93G of the Local Government Act states that
- Before adopting a Consultation Document, the local authority must prepare and adopt the information that:*
- (a) is relied on by the content of the consultation document adopted under Section 93A; and*
 - (b) is necessary to enable the Auditor-General to give the required reports*
 - (c) provides the basis for the preparation of the Long Term Plan.*
- 18 Part One of Schedule 10 outlines the information to be included in LTP's. Section nine states that part of the information to be included in the LTP is Councils Infrastructure Strategy.
- 19 Section 101B outlines that:
- (1) A local authority must, as part of its long-term plan, prepare and adopt an infrastructure strategy for a period of at least 30 consecutive financial years.*
 - (2) The purpose of the infrastructure strategy is to—*
 - (a) identify significant infrastructure issues for the local authority over the period covered by the strategy; and*
 - (b) identify the principal options for managing those issues and the implications of those options.*
 - (3) The infrastructure strategy must outline how the local authority intends to manage its infrastructure assets, taking into account the need to—*
 - (a) renew or replace existing assets; and*
 - (b) respond to growth or decline in the demand for services reliant on those assets; and*
 - (c) allow for planned increases or decreases in levels of service provided through those assets; and*
 - (d) maintain or improve public health and environmental outcomes or mitigate adverse effects on them; and*
 - (e) provide for the resilience of infrastructure assets by identifying and managing risks relating to natural hazards and by making appropriate financial provision for those risks.*
 - (4) The infrastructure strategy must outline the most likely scenario for the management of the local authority's infrastructure assets over the period of the strategy and, in that context, must—*
 - (a) show indicative estimates of the projected capital and operating expenditure associated with the management of those assets—*
 - (i) in each of the first 10 years covered by the strategy; and*
 - (ii) in each subsequent period of 5 years covered by the strategy; and*
 - (b) identify—*
 - (i) the significant decisions about capital expenditure the local authority expects it will be required to make; and*
 - (ii) when the local authority expects those decisions will be required; and*
 - (iii) for each decision, the principal options the local authority expects to have to consider; and*
 - (iv) the approximate scale or extent of the costs associated with each decision; and*

- (c) include the following assumptions on which the scenario is based:*
 - (i) the assumptions of the local authority about the life cycle of significant infrastructure assets;*
 - (ii) the assumptions of the local authority about growth or decline in the demand for relevant services;*
 - (iii) the assumptions of the local authority about increases or decreases in relevant levels of service; and*
- (d) if assumptions referred to in paragraph (c) involve a high level of uncertainty,—*
 - (i) identify the nature of that uncertainty; and*
 - (ii) include an outline of the potential effects of that uncertainty.*

(5) A local authority may meet the requirements of section 101A and this section by adopting a single financial and infrastructure strategy document as part of its long-term plan.

(6) In this section, infrastructure assets includes—

- (a) existing or proposed assets to be used to provide services by or on behalf of the local authority in relation to the following groups of activities:*
 - (i) water supply;*
 - (ii) sewerage and the treatment and disposal of sewage;*
 - (iii) stormwater drainage;*
 - (iv) flood protection and control works;*
 - (v) the provision of roads and footpaths; and*

- 20 The 2018-2048 Infrastructure Strategy also includes information related to Community Services/ Facilities such as open spaces, halls and buildings which are not required to be included under section 101B(6).

Community Views

- 21 The Infrastructure Strategy will be publicly available on Council's website during the LTP public consultation period as a supporting document to the LTP 2018-2028. As a result of submissions received, Council may decide to amend any of the supporting information documents when it adopts the LTP in June 2018.

Costs and Funding

- 22 There are no direct cost or funding considerations related to the development of the Infrastructure Strategy.

Policy Implications

- 23 The Infrastructure Strategy sets the framework the asset-based AMPs need to consider as part of their planning.

Analysis of Options

Option 1 - Endorse the draft Infrastructure Strategy, as presented, amended for any changes agreed at the meeting

<i>Advantages</i>	<i>Disadvantages</i>
<ul style="list-style-type: none"> The documents can proceed to Council for formal adoption and meet the auditing requirements. 	<ul style="list-style-type: none"> The Council would not get any further information if it required it before endorsement.

Option 2 - Request staff to consider other options and incorporate these into the documents before endorsing the draft Infrastructure Strategy, as presented, or parts thereof

<i>Advantages</i>	<i>Disadvantages</i>
<ul style="list-style-type: none"> The Council would get the additional information it needed before endorsing. 	<ul style="list-style-type: none"> The auditing process may be held up depending on the time needed to provide the necessary information.

Option 3 - Do not endorse the draft Financial Strategy as presented

<i>Advantages</i>	<i>Disadvantages</i>
<ul style="list-style-type: none"> None identified 	<ul style="list-style-type: none"> The auditing process may be held up depending on the time needed to provide the necessary information. Staff would not have Council's input into or agreement on what the significant infrastructure issues are options for responding to these.

Assessment of Significance

- 24 In terms of Council's Significance and Engagement Policy, these matters are not considered significant. The LTP is a significant decision as it is the primary way that Council is held accountable for public expenditure.

Recommended Option

- 25 Option One - Endorse the draft Infrastructure Strategy, as presented, amended for any changes agreed at the meeting.

Next Steps

- 26 The draft Infrastructure Strategy (incorporating any changes from the meeting) will be reviewed by Audit New Zealand as part of their audit of the LTP Consultation Document in late November 2017.
- 27 Staff will also review the strategy to ensure that it is consistent with the draft Financial Strategy, AMPs and financial information.

- 28 The draft strategy will then be formally adopted by Council in February 2018 as part of the supporting documentation for the LTP Consultation Document. The final Infrastructure and Financial strategies, incorporating any changes as a result of consultation, will be adopted in June 2018.

Attachments

- A Draft Infrastructure Strategy 2018-2048 [↓](#)



**Southland District Council
30 Year Infrastructure Strategy
2018 - 2048**



r/17/8/12538

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Item 7.4 Attachment A



Quality Record Sheet

Southland District Council
30 Year Infrastructure Strategy
2018 - 2048

Issue Information	
Issue Purpose:	Draft
Issue Date:	November 2017
Version Number:	V002

Authorisation	
Southland District Council	
Prepared By:	I Marshall
Reviewed By	
Date:	Date 2017
Reference No.:	r/17/6/12538

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TABLE OF CONTENTS

1.0	EXECUTIVE SUMMARY	3
2.0	INTRODUCTION	4
2.1	Strategy Layout	4
2.2	Purpose	4
2.3	Southland District Core Infrastructure Assets	5
3.0	SOUTHLAND DISTRICT	7
3.1	Linkage with Other Documents	7
3.2	Southland District Council Infrastructure	13
4.0	CORE INFRASTRUCTURE	14
4.1	Asset Description	14
4.2	Assumptions and Risk	15
5.0	EMERGING ISSUES	18
5.1	Changing Government Priorities and Legislative Environment	18
5.2	Management of Water - Quality of Water	19
5.3	Management of Water - Ownership, Governance and Management	20
5.4	Demographic Changes	21
5.5	Climate Change	26
5.6	Affordability	30
5.7	Infrastructure Resilience	31
5.8	Aging infrastructure	32
6.0	THIRTY YEAR STRATEGY	34
6.1	The Organisation's Priorities	34
6.2	Asset and Service Management Strategy	34
6.3	Cost Effective Delivery of Services	34
6.4	Addressing Resilience	35
6.5	Evidence Base	36
6.6	Significant Decisions Required	36
7.0	SIGNIFICANT INFRASTRUCTURE ISSUES	39
7.1	Water Supply	40
7.2	Wastewater	43
7.3	Stormwater	44
7.4	Roads, Bridges and Footpaths	47
7.5	Community Services Infrastructure	49
7.6	Summary of Significant Infrastructure Issues	52
8.0	FINANCIAL ESTIMATES	53
8.1	Water	53
8.2	Sewerage	54
8.3	Stormwater	55
8.4	Roads and Footpaths	56
8.5	Other Infrastructure One	Error! Bookmark not defined.
8.6	Other Infrastructure Two	Error! Bookmark not defined.
8.7	Total Expenditure	58
8.8	Financial Impacts of the Infrastructure Strategy	59

DRAFT

Item 7.4 Attachment A

DRAFT

**TABLE OF TABLES**

Table 2.1: Strategy Layout	4
Table 2.2: Southland District Infrastructure Assets	5
Table 4.1: Significant Assumptions	16
Table 5-1: Migration loss and gain by age bracket 2006 - 2013 Census	22
Table 5-2: Proportional migration loss and gain by age bracket 2006 - 2013 Census	22
Table 5-3: Residents 75 years and over Southland District townships Census 2006 and Census 2013 comparison	23
Table 5-4: Residents over working age (65 years +) Southland District townships Census 2006 - Census 2013 comparison	24
Table 5-5: Township median age Census 2006 - Census 2013 comparison	25
Table 6.1: Data Improvements	36

TABLE OF FIGURES

Figure 3.1: Infrastructure Strategy- Linkages with other Documents	12
Figure 8.1: Projected Capital Expenditure - Water	53
Figure 8.2: Projected Capital Expenditure - Sewerage	54
Figure 8.3: Projected Capital Expenditure – Stormwater	55
Figure 8.4: Projected Capital Expenditure – Roads and Footpaths	56
Figure 8.5: Projected Capital Expenditure – Other Infrastructure One	57
Figure 8.6: Projected Capital Expenditure – Other Infrastructure Two..Error! Bookmark not defined.	
Figure 8.7: Projected Capital Expenditure- Infrastructure Assets	58
Figure 8.8: Projected Operational Expenditure –Infrastructure Assets	59

DRAFT

Item 7.4 Attachment A



1.0 EXECUTIVE SUMMARY

This is Southland District Council's second Infrastructure Strategy. It has been prepared from Council's 2018 suite of Activity Management Plans and the Long Term Plan of which it forms part.

The Infrastructure Strategy covers the core infrastructure the Council owns, operates and maintains. This includes:

Water Supplies, Wastewater systems, Stormwater systems, Roads, Bridges and Footpaths and Community Facilities.

The strategy list a number of issues that are affecting or will affect the operation of the infrastructure and may affect levels of service to be provided by the infrastructure.

These issues include:

Central Government issues relating to water quality and water management, population demographics, climate change, affordability, infrastructure resilience, aging infrastructure.

Affordability is an issue that is dealt with in detail in the Financial Strategy but it has a significant impact in the provision of infrastructure. This is because a large percentage of the Councils revenue is spent on the maintenance and operation of infrastructure in order to provide the services the customers want and need.

In this strategy document issues are firstly identified and discussed at a generic level as though they might apply to several aspects of the Council's business. Later the same issues are discussed in more detail within each activity where they will have an impact.

As with any planning document unless absolutely everything can be defined it is essential to make decisions based on assumptions. This strategy is no exception. Assumptions are stated for each issue and in relation to each activity.

The implication of these issues varies for each activity:

Water quality and management of water services are issues that will impact on water related services. Water quality will be controlled through the Regional Council's Water and Land plan. The water quality limits that will be developed in this plan will dictate the quality of wastewater discharges. This in turn will dictate the level of treatment Council's wastewater plants will have to achieve. As consents expire plants will have to be upgraded to achieve the quality needed. Allowances for this has been made in the LTP budgets.

The population demographics indicate a number of small communities are declining in population and will continue to do so. The impact for infrastructure is whether a community declines to the point providing a service such as water supply or wastewater treatment remains viable. More study and analysis is needed to plan for the mid to long term.

Aging infrastructure is an issue that has implications for roads, bridges, water pipes, sewer pipes, stormwater pipes and above ground infrastructure and buildings. Understanding the remaining life of underground assets and road pavements needs more information and study. Better information will lead to better prediction of future costs. The Councils head office building is at the stage where significant decisions have to be made whether to maintain and upgrade or to replace with a new building.

Climate change too will impact on the management of infrastructure and the provision of services. The question is how much and when. More extreme weather events are occurring around the world. Sea level rise is happening. Infrastructure design will take into account the latest weather data but more analysis is needed to inform decisions on policy and design for the future. Policy on Council's role in coastal erosion and the extent of protection to private property is needed.

Finally the financial implications of operating and maintain the infrastructure is demonstrated graphically in the final section (Section 8)

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2.0 INTRODUCTION

This is Southland District Council's second Infrastructure Strategy. It has been prepared from Council's 2018 suite of Activity Management Plans and the Long Term Plan of which it forms part.

The issues discussed reflect the current legislative environment and the communities' priorities across the district/city.

The financial forecasts are estimates and the reliability of the forecasts decreases beyond ten years and towards the thirty year planning horizon.

2.1 Strategy Layout

The Strategy document sections and corresponding LGA Act sections are tabled below:

Strategy Section		LGA 2002 (Section 101B)
1	Executive Summary	
2	Identifies the purpose of the Infrastructure Strategy and the core infrastructure included in this strategy	2(a) and 6
3	Describe the district/city and illustrate the linkage between strategic documents	2(a)
4	Describe the core infrastructure, its condition and performance while recording the significant assumptions, risks and mitigation	2, 3(e), 4 (c) & (d)
5	Discuss the emerging issues that will impact on the core infrastructure assets	3 (b) to 3(e)
6	Discuss Council's response to the emerging issues and the significant decisions to be made during the term of this strategy	2(b), 4(b)
7	Identifies the response options for the significant issues and documents the benefits, cost, when and funding source	2(b); 3(a) to (e) & 4(a) to (c)
8	Identifies the costs associated with the actions proposed	4(a)

Table 2.1: Strategy Layout

2.2 Purpose

Section 101B - Infrastructure Strategy states:

1. A local authority must, as part of its long-term plan, prepare and adopt an infrastructure strategy for a period of at least 30 consecutive financial years.

The stated purpose of the Infrastructure Strategy is to:

- (a) Identify significant infrastructure issues for the local authority over the period covered by the strategy; and
- (b) Identify the principal options for managing those issues and the implications of those options.



Section (6) defines infrastructure assets as including:

- (a) Existing or proposed assets to be used to provide services by or on behalf of the local authority in relation to the following groups of activities:
 - i. water supply,
 - ii. sewerage and the treatment and disposal of sewage,
 - iii. stormwater drainage,
 - iv. flood protection and control works,
 - v. the provision of roads and footpaths; and
- (b) Any other assets that the local authority, in its discretion, wishes to include in the strategy.

2.3 Southland District Core Infrastructure Assets

The core Southland District Council Infrastructure Assets are tabled with 2017 replacement values below:

Asset	Description	Replacement Value Not available yet	% of total
Roads and footpaths	Roads (arterial, collectors, local; curbs and gutters), bridges, footpaths	\$1,602.2M	
Water	Water extraction, treatment and distribution	\$180.1M	
Wastewater	Wastewater collection, treatment and discharge	\$123.5M	
Stormwater	Stormwater collection and discharge	\$35.5M	
Solid waste	Collection and disposal of solid waste	Not valued	
Stewart Island Electrical Supply Authority (SIESA)	Generation, distribution and retailing of electricity on Stewart Island	No data	
Community housing	Provision of good quality affordable housing to a group with specific needs.	\$4.8M	
Parks and Reserves	Provision of a blend of urban and rural reserves and open spaces.	No data	
Public toilets	Provision of public toilets and dump stations within the District.	\$5.5M	
Community facilities	Provision of accessible facilities for communities, clubs, organisations and individuals to enjoy for sporting, social, cultural, educational and recreational pursuits.		
Cemeteries	Provision of cemeteries to protect public health in the District by providing appropriate facilities for interments. It also offers a record of a community's history and heritage.		
TOTAL		\$M	100%

Table 2.2: Southland District Infrastructure Assets

DRAFT

Item 7.4 Attachment A



2.3.1 Other Activities

In addition to the mandatory requirements, this Council includes those activities that involve the provision of either a significant number of infrastructure assets or a few very significant assets such as the Community facilities asset/activity, in the Infrastructure Strategy. Including these asset/activities provides a complete reflection of the Council's asset-based activities. The Southland District Council also considers it to be a valuable contribution towards the strategic planning for these activities to be extended to a 30 year timeframe.

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3.0 SOUTHLAND DISTRICT

Southland District is a large rural district covering the majority of the land area in the Southland Region in the southern part of New Zealand. The District's land area (30,198 km²) makes up 11% of New Zealand's total land area and includes two National Parks (Rakiura and Fiordland) and 2,877 km of coastline. The District borders the separate territorial authority areas of Invercargill City (including Bluff) to the south and Gore District (including Mataura) to the east. The District also shares boundaries with Queenstown Lakes, Central Otago and Clutha Districts to the north and east.

The diverse topography of Southland District means the climate varies across the region. From high rainfall in Fiordland to the drier conditions of Northern Southland. Populated regions have a pleasant, moderate climate with long summer daylight hours and well defined seasons. The District is rich in raw material and the high quality soils on the plains and lower hills are ideally suited to intensive grazing, cropping, horticulture, and forestry.

The population in Southland is relatively small in comparison to the land area and people are widely dispersed across the District. Just over half (53%) of the population live in a rural environment, while the balance live in an urban setting in one of the District's 30 townships. These townships have populations ranging in size from less than 50 in Fortrose to 2,628 in Te Anau. Over the next 30 years, the total District population is expected to grow from 29,613 (2013 Census) to 37,021 in 2043 (based on Infometrics medium scenario). The pattern of people living rurally (53%) and in urban townships (47%) is also expected to continue, however Council is expecting that different parts of the District will conform to different growth patterns over the next 30 years. The majority of township populations are expected to stay relatively static or slightly increase through until 2043. Winton is the only township predicted to have a high level of growth (21%) during this period; Ohai, Nightcaps, Orepuki and Tokanui populations are projected to decline by between 10 and 17% over that time.

Ethnic diversity in Southland is increasing. While still predominantly European (86%), the proportion of Asian and Māori residents has been increasing reaching 4% and 10% respectively in 2013. This trend has resulted from a growing migrant population coming to the region for work in the dairy and agriculture industries. This trend is expected to continue over the next 30 years.

The proportion of the population that are aged 65 years and above is also expected to increase over the next 30 years. Around 14% of the population in 2013 was aged over 65 years (median age of 39.1 years) and this is expected to increase to around 24% of the population by 2043.

The number of dwellings in the district is also expected to increase by around 25% over the plan period from 14,835 in 2013 to 18,640 in 2043. Around 80% of these dwellings are occupied. The number of rating units in Southland District was recorded at 19,095 in June 2017.

Southland District's economy relies heavily on primary production and this is expected to continue over the next 30 years. Around 5.70% of Southland District's land is used for dairy farming (164,173 hectares) and it is expected that this will increase over the next 30 years to make up around 7.5% of the total land use. In comparison, other pastoral farming is expected to reduce from 27.44% of the total land area in 2013 to 23.57% by 2043. Land involved in forestry is also expected to increase slightly from 2.44% of the total land area in 2013 to 3.96% in 2043.

3.1 Linkage with Other Documents

Several key Council documents are interconnected. Those key documents are:

- Southland District Council's Strategic Framework,
- Financial Strategy,
- Infrastructure Strategy,
- Significance Policy,
- Activity Management Plan - Part A,
- Activity Plans.

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Item 7.4 Attachment A

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Southland District Council's Strategic Framework

This framework is made up of:

What we want to be	Vision <i>Where we want to be</i> Community Outcomes <i>What end result looks like for our community</i>	Southland- one community offering endless opportunities
How we will work	Mission: <i>How we will go about our role</i> Our Approach: <i>The way we approach our work</i>	Working together for a better Southland
The Challenge		
What we need to do	Strategic Priorities: <i>What we need to focus on to ensure that we and our communities are making informed decisions to move from where we are now towards our shared vision.</i>	

This is represented in the following table:



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SDC STRATEGIC FRAMEWORK (10 Year Plan 2018-2028)

What we want to be	Vision: <i>Where we want to be</i>	Southland – one community offering endless opportunities			
	Community Outcomes: <i>What end result looks like for our community</i>	Proud, connected communities that have an attractive and affordable lifestyle This means Southland District is a place where people have everything they need to live, work, play and visit, where they are connected to each other, the environment and the world outside Southland, and where they can enjoy a safe and fulfilling life in our unique natural environment.		Resilient communities that leave a legacy for tomorrow This means Southland District is made up of strong communities that take a sustainable approach by considering the impact on the environment and the social, cultural and economic wellbeing of our communities now and in the future.	
How we will work	Mission: <i>How we will go about our role</i>	Working together for a better Southland			
	Our Approach: <i>The way we approach our work</i>	We will work in partnership with our communities	We will constantly look for better ways	We will work as one team	
		<ul style="list-style-type: none">Consider the community in everything we doSmall council, big communityAcknowledge that Council doesn't always have the answer or the best ideas and that some of the best ideas come from othersSupport our communities to make good decisionsWork to better understand our community's changing needs and prioritiesRecognise Council is part of the solution, not the solutionInvolve the community in our decisions and explain the reasons behind our decisionsHave conversations with our communitiesBuild better communication channels into our communitiesDebate issues openly and honestlyWork together to maximise regional opportunitiesBe accountable for our actions	<ul style="list-style-type: none">Find ways to make it easy to do business with Council and in SouthlandBe open to and look for new ways of doing thingsFind efficiencies and don't waste money or resourcesRegularly review activities, services, assets and contracts to ensure efficient and effective management and deliveryFocus resources on doing things that are needed and that will make a real differenceAnticipate and adapt to changeDevelop other revenue streams to supplement ratesMaximise returns from existing investmentsLook at initiatives to bring more people and business to SouthlandCollaborate with others to deliver efficiencies and work smarterMinimise the impact our activities have on the environment.	<ul style="list-style-type: none">Focus on what is best for Southland's communitiesUnderstand district and local responsibilitiesClearly define roles at the political and operational levels so everyone knows what is expected of themTrust each otherEnsure we act as "we" not "me"Do the things we say we will and be accountableDeal with any problems honestly and up-front and admit and learn from our mistakesFix problems rather than assign blameMake the best use of the skills and expertise our people have and seek external help when we need toBuild our team capabilitiesLook out for each other and our health and safety.	
	The challenge:	Fundamental shifts are occurring in our communities affecting where and how people live that raise questions about how we can best achieve our shared vision.			
What we need to do	Strategic Priorities: <i>What we need to focus on to ensure that we and our communities are making informed decisions to move from where we are now towards our shared vision.</i>	We need to provide strong community leadership and work with our communities on how to adapt to these changes so that the infrastructure, local services and regulatory functions we provide are appropriate and support the achievement of our shared vision			
		Improve how we work	Provide appropriate infrastructure/services	Make informed decisions	More people
		Ensuring that the business of Council is running efficiently and effectively and finding ways to do more with less. Key aspects include: <ul style="list-style-type: none">Operate in a financially responsible mannerContinue to adaptDoing what we say we willBusiness improvement workEase of doing businessSignificant projects managed effectivelyCommunity partnershipsCultureFocus on customer support.	Ensuring that we are providing infrastructure and services that are fit for purpose for current and future community needs. Key aspects include: <ul style="list-style-type: none">Ensuring infrastructure and services are cost-effectively and efficiently managed over the long-termEnsuring legislative / regulatory complianceConsidering environmental sustainability and best use of natural resourcesConsidering alternative asset / service delivery optionsGetting good asset data / service information (e.g. useful lives)Considering appropriate levels of serviceMitigating risks – eg, business continuity planning (natural hazards / critical lifelines) and climate change (sea level rise, rainfall)Better understanding of the future and what this means for communities.	Ensuring that we have what is needed to make good decisions. Key aspects include: <ul style="list-style-type: none">Building resilient communitiesUndertaking community engagement and partnership activities and open communicationWorking regionally and collaboratingCommunity governance and representation reviewDeveloping community leadership plans.	Ensuring that we build great local places where people want to live and supporting new development opportunities that will help attract more people to Southland. Key aspects include: <ul style="list-style-type: none">Working with the community to create great local placesHelping to build strong communitiesSupporting Southland Regional Development Strategy initiatives:<ul style="list-style-type: none">Tourism (destination creation, management, marketing)AquaculturePrimary sector extensionDigital connectivity.
Consider what is appropriate, affordable, acceptable and achievable for communities long-term					



Financial Strategy

The Financial Strategy sets out how the Council plans to manage its financial performance over the next 10 years. It provides a guide for how the Council will consider and approach funding and expenditure proposals. It defines how much can be spent and how its business will be funded. It also sets guiding principles for detailed service provision and funding decisions later on.

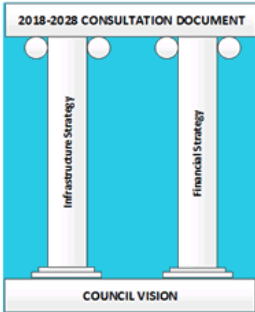
The Financial Strategy should determine the financial realities about what the Council can deliver. This then shapes the extent of the services that are able to be provided.

The Strategy is also required by legislation to:

- 1. Set parameters that a local authority uses to balance the community's current and future interests.
- 2. Define the local authority's approach to funding activities equitably between ratepayers.
- 3. Provide the foundation principles on which the rating requirements is established.
- 4. Be built on a principle of managing prudently and in manner that promotes current and future interests of the community.

A Financial Strategy must be prepared and adopted as part of the LTP including mandatory consultation with the public

The Financial Strategy and this Infrastructure Strategy are linkages between Council's vision as captured in the Strategic Framework and the LTP through the consultation document.



Financial Strategy Content

Draft Financial Goals

This section provides Council with some draft financial goals for the coming 10 years. The goals should set the scene for where Council wants to be by 2028.

In relation to:	Goals
Income	Only hold assets for the strategic benefit of Council and its community ensuring that the return on these assets are acceptable for the purpose for which they are being retained.
	Review current and investigate additional commercial business opportunities. The end goal being that income from these operations are self-funding and contribute long term to the offsetting of rates.
	Continue to advocate strongly for a fair contribution from Central Government towards the district's roading network and other activities where available.
Rates	Fees and Charges will be sought where private benefits, other than a public good, from Council services are received (how does this work with development contributions in remission).
	Limit rates to xx% of Council's total revenues (currently 66.67%).
	Annual Rate increases will be no more than (currently Local Government Cost Index (LGCI) plus 2%).
	Undertake a full review of rating mechanisms considering the cost/benefit of having 171 rate types.

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Infrastructure Strategy

The Infrastructure Strategy informs and is informed by the Activity Plans. Firstly it informs the development of the AMPs by identifying and discussing the key strategic issues facing Council. These are the issues that are generic across many activities. The implication of each issue may be different for each activity though and those differences are teased out in the individual AMPs.

The Office of the Auditor General expanded on the definition of a good infrastructure strategy as follows.

An Infrastructure Strategy should stand alone as a key piece of information. Its role in bridging the gap between strategic and operational planning setting the direction for more detailed asset management planning.

...it is not enough to discuss issues. It is important to be clear what approach is being taken to address the issues and why.

... Significant issues should be:

- linked to the significant infrastructure issues and options that have been identified;
- few in number – some infrastructure might not have any significant decisions required;
- explicit; and
- Linked to genuine options with approximate costs/benefits for the alternatives.

(OAG 2017)

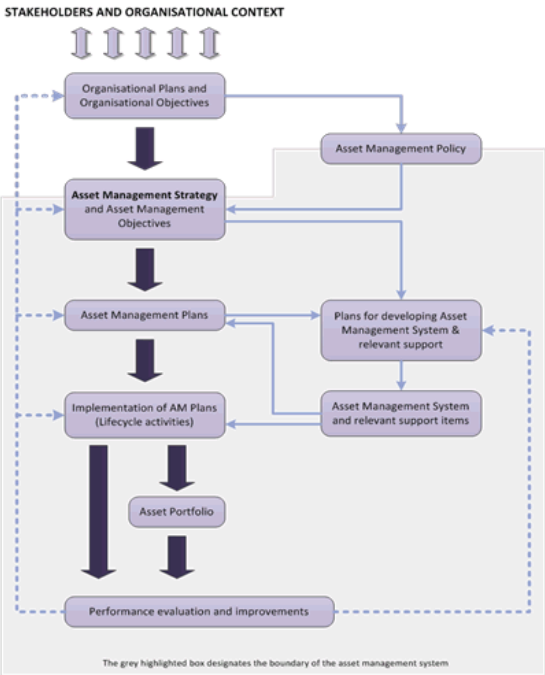


Figure 3.1: Infrastructure Strategy- Linkages with other Documents

This provides direction beyond legislative compliance to a document that is more strategic and narrative.

Activity Plans

Each activity plan includes information about the issues that are specific to that activity. Sometimes unique to that activity. In other instances it is a generic issue affecting several activities but in a different way in each case. These differences are explored within the respective activity plan and using the assumptions and options arising from the issue the plan is compiled on the basis of those options. The end result within the plan is then fed back into the Infrastructure Strategy in the form of issues in section 7 and financial information in section 8.



Significance and Engagement Policy

Southland District Council's Significance and Engagement Policy determines the significance of issues within the District, and how to align our engagement with the public based on the degree of significance of the issue.

The general approach - the Council will follow a three-step process to inform decision-making:

Step 1 - Determine significance - the Council will use particular factors to decide if a matter is of higher or lower significance. This part of the policy also gives guidance on what to do if a matter is of high significance.

Step 2 - Identify community views - the Council will determine what it knows about community views and identify if there is a need for more information.

Step 3 - Deciding on an approach to community engagement - the level of significance and what the Council wants to know about community views will guide Council on an appropriate level of engagement, and how and when to engage. This part of the policy provides clarity on how and when communities can expect to be engaged in different issues. It also identifies how Council will respond to community preferences about engagement.

Strategic Assets

In respect to "strategic assets", a key consideration is whether an asset is essential to the continued delivery of an "outcome" that Council considers important for the well-being of the community. Decisions to transfer ownership or control of a strategic asset to or from Council cannot be made unless they are first included in the Long Term Plan.

For the purpose of Section 76AA(3) of the Act, Council considers the following assets, or a network of assets, to be strategic assets:

- Rooding/bridge network as a whole.
- Individual water treatment plants and reticulation networks.
- Individual township sewerage treatment plants and reticulation networks.
- Individual township stormwater reticulation networks.
- Portfolio of District Reserves (Parks/Reserves).
- Stewart Island Electricity Supply Authority.
- Te Anau Manapouri Airport.
- Community housing as a whole.

3.2 Southland District Council Infrastructure

Southland District Council owns and manages \$1.6 Billion of infrastructure and property assets, including:

- 12 community water supply schemes servicing 6,900 connections (\$2M).
- 18 wastewater schemes servicing 8,200 properties (\$123.5M).
- 26 stormwater schemes (\$35.5M).
- 5,000 km of road and 1065 bridges (\$1.6B).
- 32 community halls (\$26M).
- 31 Council buildings - offices, libraries and depots (\$16M).
- 76 public toilets and dump stations (\$5.5M).
- 20 solid waste management sites (transfer stations, recycling depots, green waste).
- 69 community housing units (\$4.8M).
- 155 reserves including sportsfields, playgrounds, etc.
- 21 cemeteries - 14 operational.
- Stewart Island Electricity Supply.
- Te Anau Airport Manapouri.

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Item 7.4 Attachment A

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4.0 CORE INFRASTRUCTURE

The core infrastructure is made up of:

- Water supply systems
- Wastewater (Sewage) systems
- Stormwater systems
- Roads and Bridges
- Community Services assets
- Stewart Island Electrical Supply assets
- Te Anau Airport Manapouri

4.1 Asset Description

4.1.1 Water

- 10 urban potable water supplies
- 11 rural stock water supplies

4.1.2 Sewerage

- 19 wastewater systems

4.1.3 Stormwater

- 25 stormwater systems

4.1.4 Roads and Footpaths

- 1,963 km sealed Roads
- 3,004 km unsealed roads
- 852 bridges

4.1.5 Community Services

- Halls
- Community centres
- District parks
- Public toilets
- Council offices
- Water Structures

4.1.6 Stewart Island Electrical Supply assets

- Generation powerhouse
- Distribution network

4.1.7 Te Anau Airport Manapouri

- Terminal building
- Main runway
- Airport land



4.2 Assumptions and Risk

4.2.1 Risk

The Council operates within a Risk Management Policy. This policy exists to:

- Make risk management a reality of how we do things,
- Integrate best practice risk management into policy, planning and operational decisions based on Joint Australian New Zealand Standard - Risk Management - Principles & Guidelines (AS/NZ ISO 31000:2009),
- Develop a holistic approach to managing a range of risks facing Council,
- Develop awareness and common understanding of Council's risk management expectations,
- Incorporate risk management into all key decision-making processes, business planning and reporting,
- Embed best practice risk management into every day work in a balanced, structured and cost effective way,
- Provide risk management training and learning opportunities for Council and employees.

The Council recognises that risk management is not an isolated activity, nor a yearly compliance activity. To be truly effective, risk management must integrate into the organisational structure and the objectives of the Council. The integrated framework below visually represents the inter-relationship between:

- Risk management process
- Focus
- Organisational Structure



This matrix shows that the risk management process applies to all the objectives of the Council and penetrates down through from the highest /eve/ of the Council organisational structure to the very lowest level. In turn, it should also be clear that objectives do not sit in isolation at each level in the organisation structure but that each part of the Council structure works to support the strategic objectives.



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4.2.2 Significant Risks associated with Infrastructure

The current risk register shows the following infrastructure related risks;

Risk Description	Risk Profile (before treatment)	Risk Profile (after treatments)	Risk Profile after proposed treatments
Te Anau Wastewater project - failure to deliver project within budget and resource consent timelines.	High	High	Moderate
Critical staff leaving with unique knowledge and unable to recruit	High	High	Negligible
Physical Condition of SDC Building - Forth Street, susceptible to leaking and earthquake risk.	High	High	High
Lack of Contractor Management and Hazardous works	High	Moderate	Moderate
Failure to comply with legislation	High	Moderate	Moderate
Extreme weather events including Civil Defence emergency affecting provision and continuity of services.	High	Moderate	Moderate
Drinking water Contamination affects public health	Extreme	Moderate	Moderate
Emergency event causing damage to underground infrastructure	Moderate	Moderate	Moderate

4.2.3 Significant Assumptions

Table 4.1: Significant Assumptions

Population changes			
Description	Significant Assumptions	Uncertainty	Impact
Population decline	Our growth assumptions are based on projections for declining populations in a number of our smaller communities	Low	An underestimated level of decline will lead to slower than anticipated reduction in the number of residents in a town meaning the impacts will be further out than expected.

Mitigation measures – monitoring trends and updating prediction models based on latest available data

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Water and Land Plan limits			
Description	Significant Assumptions	Uncertainty	Impact
Water quality limits	Our planning for the impacts of the Water and Land Plan water quality limits setting is based on feedback	Medium	An underestimated level of constraint will mean proposed treatment improvements are inadequate

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Water and Land Plan limits

Description	Significant Assumptions	Uncertainty	Impact
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Mitigation measures – Monitor closely the progress of the plan through its planning and consultation phases. Maintain a close relationship with Environment Southland so as to aware of developments as soon as possible and where possible influence them.

Climate Change

Description	Significant Assumptions	Uncertainty	Impact
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Impacts of climate change and sea level rise	Our assumptions are that climate change will bring more extreme weather events and that sea levels will continue to rise but that changes will be over the medium to long term.	Medium	If changes occur much faster than anticipated unexpected surface flooding and coastal erosion may occur.
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Mitigation measures – monitoring studies and prediction reports. Having a dynamic service delivery model that can readily react to unexpected events.

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Item 7.4 Attachment A

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5.0 EMERGING ISSUES

Operating and maintaining these infrastructure assets in an **affordable** and **sustainable** manner is becoming increasingly difficult in view of a number of overarching issues and a number of asset or service specific issues.

Issues with varying degrees of impact are either known or have been signalled. Discussion and analysis of these issues is dealt with in two levels in this strategy document.

The two levels are:

- **Generic Issues.** These are national, regional and local issues that will have some impact or impact to varying degrees across one or more infrastructure types. The issue may be a trend that is deemed likely to evolve and so impacts are difficult to predict. These issues will impact differently on each asset. For these issues an assumption is made within each activity as to the implications of the issue on that activity.
- **Asset or service specific issues.** These are issues that are activity specific and can be planned for in detail. These are covered under each activity type in Section 7.

National political issues

- **Management of Water.** Central Government has signalled that Local Government needs to do better at managing water.
- **Quality of water.** Central Government is concerned with the safety of drinking water as highlighted by the Havelock North incident. New mandatory requirements could be required to be implemented for Community Water supplies

Regional political issues

- **Environmental impacts** - the impacts of the Southland Water and Land Plan.
- **SORDS development strategy objectives.**

Council political issues

- The Southland District Council is working through a detailed process with the communities to find a more ideal Governance structure for the District.

5.1 Changing Government Priorities and Legislative Environment

The government's objective is that, by 2045, New Zealand's infrastructure should be resilient and coordinated and contribute to growth and increased quality of life. This will be achieved through better use of existing assets and better allocation of new investment, as set out in the New Zealand Infrastructure Plan 2015.

The National Infrastructure Plan 2015 (NIP 2015) was the third National Infrastructure Plan to be released by the government.

The NIP provides a Vision for New Zealand's Infrastructure that:

"By 2045 New Zealand's infrastructure is resilient and coordinated and contributes to a strong economy and high living standards."

Environmental compliance and progress is reflected through national policy statements and promulgated through regional and district plans.

Water and Land Plan

The Southland Water and Land Plan gives effect to the National Policy Statement for Renewable Electricity Generation 2011 and the New Zealand Coastal Policy Statement 2010, to the extent that they apply to the Plan. The Plan also gives effect to the National Policy Statement for Freshwater Management 2014, which will be further implemented through a time-staged implementation programme to set objectives and limits for all Freshwater Management Units in Southland.



Clean Water. New Zealand Government

The government wants New Zealand's rivers and lakes to be safe for swimming as often as possible. Specifically, it has set a target of 90% of rivers and lakes (as defined) to be swimmable by 2040. The expectation is that more of these rivers and lakes will be swimmable more of the time. The risks to human health from contact with fresh water must be reduced. There is an interim goal of 80% of these rivers and lakes to be swimmable by 2030.

Managing nitrogen and phosphorus

Nitrogen and phosphorus are nutrients that promote aquatic plant growth. In high quantities, nitrogen and phosphorus can promote excessive aquatic plant growth, causing harm to freshwater ecosystems and in very high quantities nitrogen can be harmful to human health. Dissolved inorganic nitrogen (DIN) and dissolved reactive phosphorus (DRP) are measures of nitrogen and phosphorus available for plant growth.

The Freshwater NPS requires councils to manage for Periphyton (slime), but is silent on managing for DIN or DRP. The government proposes amending the Freshwater NPS to clarify that regional councils must establish in-stream objectives for concentrations of DIN and DRP when they are managing for the Periphyton attribute.

Economic wellbeing

Fresh water is vital to New Zealand's economy. It is critical to the success and future of our primary industries and tourism sector. Concerns have been raised that the Freshwater NPS does not specifically oblige councils to consider implications for economic well-being before they establish environmental limits. Meeting the requirements of the Freshwater NPS has substantial economic impacts and it is important community discussions are open and transparent about the costs and benefits. To address these concerns, government proposes amending the Freshwater NPS to make clear that regional councils must consider the community's economic well-being when making decisions about water quantity, deciding what level or pace of water quality improvements will be targeted, and when establishing freshwater objectives.

5.2 Management of Water - Quality of Water

5.2.1 Issue:

This issue is of national significance. The government has issued a document that sets out the government's further work in the ongoing programme of water reform following consultation on Next Steps for Fresh Water ("Next Steps"). Specifically, the government is now:

- Proposing a target of 90% of rivers and lakes swimmable by 2040
- Seeking feedback on proposed amendments to the National Policy Statement for Freshwater Management 2014 (Freshwater NPS)
- Inviting applications for the Freshwater Improvement Fund
- Seeking feedback on the detail of policy proposals for excluding stock from waterways.

During consultation on Next Steps, the government outlined proposals for:

- Amending the Freshwater NPS
- Criteria for a Freshwater Improvement Fund
- Excluding stock from waterways by regulation.

5.2.2 Implications:

This policy work will have implications for the limit setting process in the Regional Council's Water and Land Plan. The lower the limits are set for each water body the harder it will be for the Southland District Council to meet those limits through discharge consents. Specifically the implications could be:

- Lower limits for nitrogen, phosphorous and E.coli meaning that higher levels of treatment for wastewater would be required. This will lead to higher capital and operating costs for wastewater disposal schemes.

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- Lower limits will also set parameters for stormwater discharge limits that will require treatment systems to be installed in situations where no treatment systems exist presently.
- Reduced water allocations which would create reliability problems for water intakes and so lead to a lack of capacity problems for potable water (drinking water) schemes.

5.2.3 Options: The options for the SDC are:

- Work closely with the Regional Council to understand what the most likely outcome will be from the limit setting process in the Water and Land Plan.
- Adopt the knowledge gleaned from discussions with ES by scoping treatment system improvements that will achieve the assumed discharge quality.
- Plan for discharge consent conditions in accordance with what is known now is not a viable option. It is certain water quality limits will be lower. What is not known is by how much.

5.2.4 Assumptions: The assumptions that have been adopted include:

- Planning for reduced water quality limits. That is to say the quality of the water will need to be higher as controlled by limits that will be lower; less nitrogen, less phosphorous, lower bacteria limits.
- Upgraded wastewater treatment systems will be needed to produce higher quality discharges.
- Treatment systems for stormwater discharges will be needed where the discharge will be into sensitive water bodies such as Lakes Te Anau and Manapouri.
- Consent periods will be shorter than the 30 year maximum the RMA allows for, in fact they will be shorter than the Regional Council has granted in the past. Hence there will be more renewal cycles with the associated costs for consent renewal.
- Monitoring requirements will be greater both in terms of the number of parameters monitored and the frequency of monitoring.

5.3 Management of Water - Ownership, Governance and Management

5.3.1 Issue:

The government has signalled that there is concern in government about the performance of local authorities in managing delivery of critical services such as potable water. The outbreak of illness caused by polluted drinking water in Havelock North was a catalyst for this concern. The starting point however was the public satisfaction surveys of the general public that showed a low level of public satisfaction with the general performance of Local Authorities. The stage one report on the Havelock North water supply issue was very critical of the local authorities' performance and highlighted some real weaknesses in the way the service was being managed. Stage Two will address systemic issues and lessons to be learned. This will enable Stage Two to be appropriately focussed.

5.3.2 Implications:

There are a number of significant implications at national and local levels. It is almost certain some form of new regulatory regime will be created to implement and manage a more rigid compliance framework for drinking water supplies. This could be a self-regulated framework managed at the national, local authority or industry level. Or the government could decide that a single central government agency is required. Either way it is highly likely that new compliance testing and reporting regimes will be introduced before the end of 2018.

There are many implications for the SDC as the result of the likely changes. The difficulty is planning for these changes at this stage when there has been no definitive plans issued by government. The implications range from a completely different ownership, governance and management model, such as would be created if Central Government took over ownership of the water supply assets. This could relieve Council off virtually all responsibility for potable water supplies.



A more likely scenario is a new regulatory regime will be implemented and this will require a new quality assurance, testing and reporting regimes to be implemented.

5.3.3 Options:

The options fall broadly into two categories:

- Manage the business in a business as usual state until some certainty is known about new requirements or changes. This will mean the activity plans will be developed on the basis of what is known at the moment.
- Plan for a change in ownership, governance and management structure. This would be a very speculative environment to operate in.

5.3.4 Assumptions:

- There are a number of bodies working on this issue. This includes Local Government New Zealand, Water NZ, which is the industry body for water supply and wastewater management and central government agencies including MfE and others. Direction will come from central government sometime after the general election on 23 September 2017. The speed with which the direction comes will depend on a number of political variables including which party forms a government.
- At this point in time although it is very clear something will change it is not clear what will change. Not enough detail is known at this point in time to make a decision about significant changes that can be adopted in activity plans. Therefore the activity plans will be developed on the basis of the current known structures.
- Analysis, planning and decision making over the next one to three year period will take into account that the regulatory framework, the governance framework management framework is likely to change and so hard-wired inflexible arrangements should not be entered into unless there is a compelling reason for them.

5.4 Demographic Changes

5.4.1 Demographic Characteristics- Age

The proportion of the population that are aged 65 years and above is expected to increase over the next 30 years. According to information prepared by Professor of Demography at Waikato University, Natalie Jackson, the population of Southland Region is ageing at a greater rate than New Zealand overall. This has significant impacts for service provision, rates affordability and asset management. However, because Southland is ageing faster than other regions, a proactive approach could allow us to gain a competitive advantage in competing for funding and new residents before other regions experience the same phenomena.

Previous predictions which used 2006 Census data as a base indicated that the Southland Region (including Invercargill City and Gore District) would experience a loss of people between 15 and 29 years of age and a significant gain in residents over the age of 65 years of age. While it is still likely that there will be a significant increase in those over retirement age, Southland District has not conformed to the prediction of a loss of residents between 15 and 29 years of age. In fact, the District overall has experienced population gain in this age bracket. This is relevant to the types of facilities required, particularly for recreational activities in open spaces.

Table 5 and 6 (below) demonstrates growth in different age brackets between the 2006 and 2013 Censuses for Southland District. In Figure 5, the red shaded area represents the 2013 Census population according to age brackets. The grey shaded area represents the population according to age brackets as per the 2006 Census. The darker area is where the two overlap. Portions of this figure which appear in red and are not overlapped represent a population gain in this age bracket (seen from 50 - 54 years onwards). Areas which appear in grey and are not overlapped represent a population loss in this age bracket (seen from 30 - 49 years).

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Item 7.4 Attachment A

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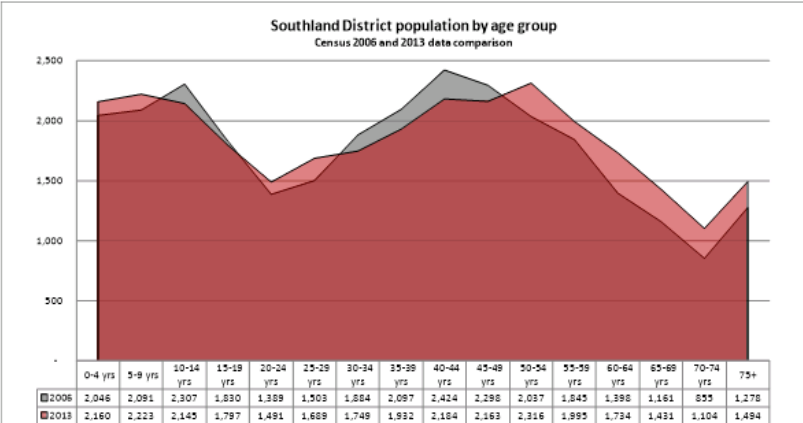


Table 5-1: Migration loss and gain by age bracket 2006 - 2013 Census

Table 6 shows the change in population in each age bracket as a percentage loss or gain. This table shows that there is a significant gain in all age brackets over 50 years, particularly those above retirement age. An ageing population has impacts on issues such as rates affordability and the need for services (eg community housing). At a time when increasing levels of service and support are needed, it may be necessary to reduce expenditure so that rates are affordable for those with fixed incomes.

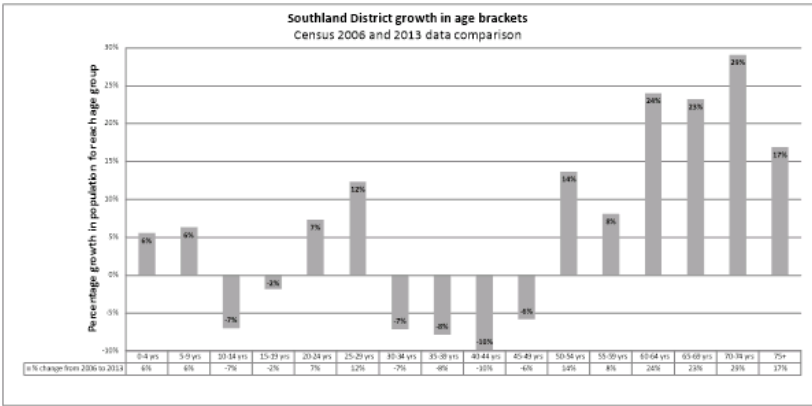


Table 5-2: Proportional migration loss and gain by age bracket 2006 - 2013 Census



As with population growth, the effects of an ageing population vary throughout the District. Although the percentage of the population 75 years and over across the Southland District is currently around 5%, many Census Area Units have a much higher proportion.

For example, Table 7 shows that Winton, Riverton (combined East and West) and Edendale Census Area Units have over 10% of their population comprised of residents over the age of 75 years. This may have an impact on the types of services, infrastructure and facilities needed in these areas.

Analysis was undertaken at a Census Area Unit level as data at a township level had not been released by Statistics New Zealand at the time that this document was developed. Census Area Units do not all align with township boundaries and it is recommended that this map is referenced when using figures in Tables 7 and 8. In some instances, data in age brackets above 75 years was suppressed by Statistics New Zealand for reasons of confidentiality because of a limited number of respondents. However, the overall data accuracy has not been materially affected.

Residents aged 75 years and over				
Area	2006	2013	% of population 2006	% of population 2013
Southland District	1,278	1,494	4.5%	5.0%
Wairio	18	9	2.0%	1.0%
Kaweku	6	9	1.2%	1.6%
Waituna	36	33	2.2%	2.0%
Mararoa River	27	33	2.1%	2.1%
Waianiwa	36	51	2.0%	2.6%
Dacre	30	42	1.9%	2.6%
Fairfax	39	54	2.2%	2.8%
Mossburn	0	6	0.0%	2.9%
Hokonui	99	93	3.6%	3.0%
Toetoes	36	51	2.2%	3.1%
Wallacetown	27	21	4.6%	3.2%
Te Waewae	30	45	2.3%	3.3%
Woodlands	6	9	2.4%	3.4%
Waikaia	45	60	2.9%	3.6%
Makarewa North	6	15	2.0%	4.6%
Manapouri	6	12	2.0%	5.3%
Te Anau	75	102	3.9%	5.3%
Stewart Island	15	21	3.7%	5.6%
Otautau	51	45	6.8%	6.7%
Nightcaps	24	21	7.7%	7.1%
Riversdale Community	24	27	6.1%	7.3%
Tuatapere	36	45	6.2%	8.1%
Lumsden Community	24	33	5.8%	8.1%
Wyndham	42	45	8.1%	8.4%
Ohai	15	27	4.2%	8.8%
Edendale Community	48	57	9.4%	10.3%
Riverton	138	168	9.1%	11.7%
Winton	330	333	15.8%	15.1%

Table 5-3: Residents 75 years and over Southland District townships Census 2006 and Census 2013 comparison

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Item 7.4 Attachment A



The proportion of the population within the Southland District who are 65 years and over is also significant as it may indicate the proportion of residents who are no longer employed. Although the proportion of the Southland District over the age of 65 years is 13.6% overall, several Census Area Units exceeded this proportion. The Census Areas of Manapouri, Nightcaps, Tuatapere, Winton and Riverton all had over 20% of the usually resident population 65 years and over at the time of the 2013 Census.

Area	Residents aged 65 years and over		% of population	
	2006	2013	2006	2013
Southland District	3,294	4,029	11.6%	13.6%
Wairio	51	57	5.6%	6.1%
Waituna	99	117	6.1%	7.0%
Waianiwa	135	150	7.4%	7.6%
Kaweku	30	45	6.0%	7.9%
Mararoa River	90	129	7.0%	8.1%
Makarewa North	21	27	7.0%	8.3%
Fairfax	129	180	7.2%	9.4%
Dacre	93	159	6.0%	9.9%
Wallacetown	60	69	10.2%	10.4%
Hokonui	258	336	9.4%	10.9%
Te Waewae	120	153	9.2%	11.1%
Toetoes	120	186	7.4%	11.3%
Waikaia	147	198	9.4%	12.0%
Woodlands	27	36	10.6%	13.6%
Mossburn	24	30	10.1%	14.5%
Te Anau	222	300	11.7%	15.7%
Riversdale Community	66	60	16.8%	16.1%
Edendale Community	99	99	19.3%	17.8%
Stewart Island	45	69	11.2%	18.3%
Otautau	111	123	14.7%	18.4%
Lumsden Community	60	75	14.5%	18.5%
Wyndham	99	99	19.2%	18.5%
Ohai	42	57	11.9%	18.6%
Manapouri	39	51	12.7%	22.4%
Nightcaps	60	66	19.2%	22.4%
Tuatapere	102	135	17.6%	24.2%
Winton	591	579	28.3%	26.2%
Riverton	324	381	21.5%	26.6%

Table 5-4: Residents over working age (65 years +) Southland District townships Census 2006 - Census 2013 comparison

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The difference in median age in each community between the 2006 and 2013 Censuses is detailed in Table 5-5 (below).

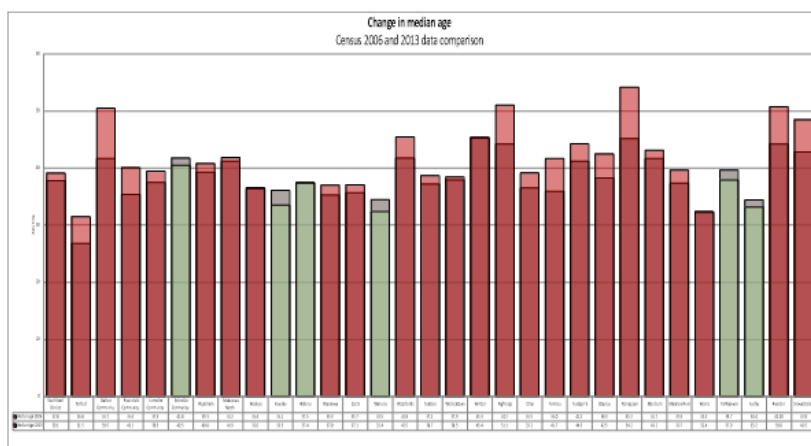


Table 5-5: Township median age Census 2006 - Census 2013 comparison

Implications:

- The population of Southland Region is ageing at a high rate in line with global and national trends. An ageing population, uneven population growth and disparate access to economic opportunity and social services have several key impacts for Council and may influence funding from central government agencies.
- An ageing population also has implications for service provision, rates affordability and asset management.
- An impact on affordability will occur through the increasing percentage of fixed income residents. This effect will not be consistent across the District either. Some communities will experience a much greater occurrence of this change than other communities. In this context "communities" really means "towns".
- Service levels.

5.4.2 Options:

The options considered were:

- To project the growth or decline of each community and then based on the projection, particularly around decline, manage asset renewals in line with the projected decline.
- Consider growth to be either positive or zero and so develop asset management programmes to be optimised on the basis of the demand from that assumption.

5.4.3 Assumptions:

- Given the lack of certainty around declining communities and particularly the rate of decline then it is not appropriate to develop plans on that basis.
- More work will be done over the next LTP three year period to determine with more certainty what will happen with declining communities. A growth or decline model is needed for each community. These models will then be the growth models, positive or negative that will be incorporated in future AMPs.

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- Strategies will be developed to manage infrastructure in a planned retreat scenario which may include replacing community services with individual services.
- Decisions about significant infrastructure renewals in towns that are showing declining trends in the period year1 to year3 will be scrutinised carefully for justification for long term investment.

5.5 Climate Change

5.5.1 Issue:

Notes based on a report published by the Parliamentary Commissioner for the Environment; "Preparing New Zealand for rising seas: Certainty and Uncertainty". November 2015

The report and other publications by the Parliamentary Commissioner for the Environment are available at: www.pce.parliament.nz

It is certain that the sea is rising and will continue to do so for centuries to come. But much is uncertain – how rapidly it will rise, how different coastal areas will be affected, and how we should prepare.

The rising sea will lead to flooding on low-lying land near the coast, erosion of many beaches and 'soft' cliffs, and higher and possibly saltier coastal groundwater.

- *Flooding of coastal areas will become more frequent, more severe, and more extensive.*
- *Erosion – a long-familiar problem around some of our coasts – will become more widespread.*
- *Groundwater linked to the sea will rise and possibly become brackish.*

However, care must be taken with generalisations. Local features matter a great deal.

There are aspects of planning for sea level rise that should be done with some urgency. One is concerned with the granting of consents for greenfields development. New suburbs and the expensive infrastructure they require should be viewed as long-term investments. We now see building new suburbs on land prone to liquefaction in much of the country as foolish. We should see allowing new subdivisions on vulnerable coastal land as equally foolish.

Another is the need to establish much more extensive monitoring systems. This is required before we can develop better models of shoreline erosion and accretion. Such monitoring is also needed for adaptive management, which will be the appropriate strategy in many cases. Adaptive management involves staging interventions over time as trigger points are reached.

Jan Wright

Introduction

However, with rising seas, tides, waves and storm surges will reach further inland than before, resulting in more frequent and extensive flooding. Along some coasts, erosion will increase and shorelines will recede. In some areas, the water table will rise.

Other consequences of climate change, such as changing wind and rainfall patterns, will also come into play, increasing or reducing the impacts of rising seas. For instance, more intense rainfall coinciding with storm surges will exacerbate coastal flooding.

Records collated from tide gauges at ports around the world show that average sea level began rising around 1900. In the last twenty-five years, satellites have enabled more precise measurement and greater global coverage (Figure 1.1).



How fast will the sea rise?

As air temperatures have risen around the world, water in the sea has warmed and expanded, and alpine glaciers have retreated. These two processes have driven most of the global sea level rise observed over the last hundred years or so. In the future, a third process - loss of ice from the huge ice sheets that cover Greenland and Antarctica - is expected to become increasingly significant. 'Ice sheet dynamics' is now the focus of much climate change research.

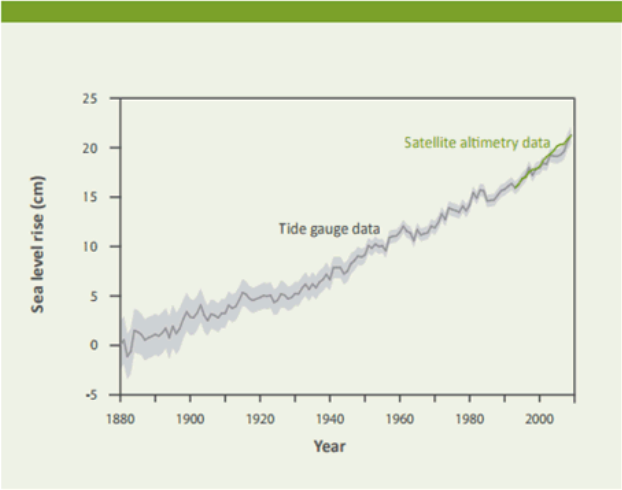


Figure 1.1 Global mean sea level rise relative to 1880

Data: Church and White, 2011.

Long-term weather patterns

Long-term weather patterns can change the level of the sea over many years or even decades. During an El Niño phase of the Southern Oscillation, the level of the sea around New Zealand falls, and during a La Niña phase, it rises. Over longer timescales, the Interdecadal Pacific Oscillation also affects sea levels around New Zealand.

Rainfall

As the atmosphere warms, it can hold more moisture - about 7% for every 1°C increase in temperature. As the climate changes, both the distribution of rainfall across New Zealand and its intensity are projected to change.

Rainfall is projected to increase in the west of both islands and in the south of the South Island. Northland and eastern regions of both islands are projected to become drier. It is also projected that heavy downpours will become more extreme.

Winds

The duration and intensity of winds drives the power of waves. As circulation patterns in the atmosphere change, westerly winds are projected to become more prolonged and more intense in New Zealand, especially in winter. Increased winds would lead to larger waves breaking on the shores of the west coasts of both islands.

Storms

As the atmosphere becomes warmer, storm patterns are likely to change. Storm surges ride on top of the sea and can be driven on to land by wind – their impact will be increased by sea level rise.

It is projected that cyclones that form south of New Zealand in winter will become more intense, leading to stronger winds and larger waves on shores exposed to the south.

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A rising sea will increase coastal erosion

As the sea rises, erosion will increase in many places around the coast.

High-energy storm waves will rush further up beaches and reach higher up soft cliffs. Thus, beaches and cliffs that are prone to erosion are likely to erode faster.

Stable beaches may also begin to erode, and beaches that are accreting may accrete more slowly or begin to erode.

In places where the shoreline is advancing seaward, it may be many years before the sea rises enough to overcome the processes driving the accretion. The sediment supply is critical.

In conclusion

Erosion (and accretion) around much of the coastline of New Zealand is a natural process that has been happening for thousands of years.

Councils have long been dealing with some of the consequences of erosion. Car parks, access ramps, and other public amenities have been relocated, and sections of some roads have been lost. Breakwaters and groynes have been built as defences and the odd building has fallen into the sea.

As the sea rises, cycles of erosion and accretion on beaches will change. The net effect of a higher sea will generally be increased erosion because the high-energy waves that strip sediment will reach further up shores.

As with coastal flooding, generalisations can be misleading. But when it comes to soft seaside cliffs that are already eroding, it is possible to generalise with reasonable confidence - the rate of erosion along such shorelines will increase.

National direction and guidance

Currently, there are two central government documents - the 2010 New Zealand Coastal Policy Statement (NZCPS) and the 2008 MfE Guidance Manual - that provide direction and guidance to councils on how they should deal with sea level rise.

Projections of sea level rise

In its latest report, the Intergovernmental Panel on Climate Change (IPCC) presented projections of sea level rise under four different scenarios of greenhouse gas emissions. Each projection is presented as a trajectory with a best estimate, a lower and an upper limit out to 2100. The projections are relatively consistent for several decades, but then increasingly diverge.

How should such projections of sea level rise be incorporated into direction and guidance for councils?

There are a number of aspects to this, including the following:

- First, the base year must be clear. In its 2013 report, the IPCC averaged mean global sea levels between 1986 and 2005 for use as a baseline.
- Second, adjustments may need to be made for particular regions or localities where the land is known to be rising or falling.
- Third, the IPCC produces its reports every five or six years. A 'living' guidance manual could be quickly updated after each IPCC report.
- Finally, the range in projections under different scenarios of sea level rise should be recognised in sensitivity analysis of coastal assessments.

Engaging with communities

Sometimes difficult decisions will need to be made that will disadvantage some, but they must be made carefully and with empathy.

The first stage of such a process should be the gathering and provision of information, beginning with accurate maps of elevation in coastal areas. Where there are 'soft' shores, all historical aerial photographs that can be found should be provided.



In many situations there will be time to build and share understanding of the risks. Locals know their beaches well so there is value in including local knowledge into coastal assessments.

Coastal communities can also be involved in deciding what the trigger points for a change in management should be.

Fiscal risk associated with sea level rise

Continued sea level rise is not something that might happen - it is already happening, will accelerate, and will continue for the indefinite future. Unlike earthquakes and volcanic eruptions, it is foreseeable.

Adapting to sea level rise will be costly. Homes, businesses, and infrastructure worth billions of dollars have been built on low-lying land close to the coast.

Some may argue that individuals should be allowed to make their own choices and bear the consequences. It may be possible to do this in some situations, but this should be done at no cost to the public.

There are also risks with council planning. Restrictions on development that are premature or overly precautionary will incur significant opportunity costs.

It is inevitable that both central and local government will begin to face pleas for increasing financial assistance. The highest costs will come from large scale managed retreat.

Both the 2008 MfE Guidance Manual and the 2010 NZCPS encourage managed retreat - moving homes and infrastructure to higher ground away from the coast - in preference to building bigger and bigger hard defences.

However, little thinking has been done on how to implement a managed retreat strategy. The critical factor is scale - with scale will come the uprooting of entire communities and the associated financial cost. But the alternative to managing an inevitable retreat will be leaving people living in homes that become uninsurable and then uninhabitable.

New Zealanders have an expectation that central government will provide financial assistance for those affected by natural disasters. Local government New Zealand has suggested that a financial mechanism similar to the Earthquake Commission fund could be created to assist with managed retreat.

It is not too soon to consider the economic and fiscal risks of sea level rise, and include the forward liability into planning and investment decisions. This will require input from representatives of a range of interests - local government, coastal residents and landowners, the insurance and banking industries, and infrastructure providers

5.5.2 Implications:

- Changes in weather patterns will mean more intense rainfalls create capacity problems for drainage systems including stormwater systems. This could lead to more private property flooding.
- Piped drainage networks will be put under greater pressure which will result in a higher rate of blockages, failures and flooding.
- Design criteria for new or replacement drainage systems will need to be updated and kept up to date as better weather data is available.
- Bridge design will need to incorporate the latest weather models to calculate realistic hydraulic capacity of waterways.
- Low-lying infrastructure such as roads and embankments will be subject to coastal erosion.
- Council will be subject to more claims and demands from the public to protect their assets.

5.5.3 Options:

- Incorporate the latest weather prediction calculations in hydraulic designs.
- Design overland flow paths to minimise damage from piped systems being overloaded.
- Roads subject to sea erosion be considered for raising, relocation or abandonment.

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- Define what Council will actively protect from coastal erosion and what Council will not protect from coastal erosion particularly in relation to private property.

5.5.4 Assumptions:

- That the rate of change will be gradual and consistent and so changes can be implemented in the course of infrastructure renewal. No special renewal programmes will be needed.
- The cost of emergency repairs will increase as the number of incidence of capacity being exceeded occurs.
- Council will continue to insure above ground assets and Council will review the need to insure underground assets.
- Council will develop a coastal policy setting out the goals and expectations that the Council will manage and be clear about what the Council will be responsible for and what private individuals and businesses will have to take responsibility for.

5.6 Affordability

5.6.1 Issue:

One of the major considerations is developing response options that will be affordable.

Council has undertaken some research into this area.

Expectations that "the Council will pay" are, in effect, expectations that the community, in whole or in part, will pay. Futures work carried out in 2010 for Victoria University's Institute of Policy Studies identified affordability as one of the four biggest issues for New Zealand's public sector over the next few decades¹.

If the global economy returns to business as usual growth patterns seen from 1990 - 2008 and commodity prices and markets for New Zealand's exports remain strong, this issue may cause less concern. However, there are a number of plausible future scenarios where one or several of these factors fail. In that situation, the District is unlikely to thrive while the rest of the country or the world does not.

If a drop in commodity prices were to continue, the community could be in a situation where it is unable to pay for some of its favoured options. Ensuring the community is prepared for such eventualities is part of building resilience. The demographic information and economic situation analysis in Sections xxx paint a picture of the Southland District community.

The fact that Council's costs rise at a much greater rate than general costs has been recognised in recent legislation changes which acknowledge that the Local Government Cost Index is a fairer indicator of Council's cost movements. However, this does not make increases in Council rates or charges any more affordable for many in our community. In the context of making decisions on Council activities, some options which may be preferred by those affected may place a burden on the whole community which it is not prepared to cover. The rest of the community may be unwilling or simply unable to pay for solutions which benefit the few. Discussions about how such decisions will be made will help set community expectations at realistic levels. Such discussions will increasingly form part of setting levels of service for activity and asset performance. The relationship between costs, levels of service and levels of satisfaction is close and will require careful balancing. In some cases effort may need to be put into lowering expectations rather than raising service levels. In any event, the Council will continue to pay close attention to managing any debt that it may take on in the next decade along with the level of rates and fees and charges, and the relationship of all of this to cost of living movements.

5.6.2 Implications:

- The implications of the affordability issue on infrastructure management is that not all the maintenance and/or renewal programmes will be affordable. The most likely scenario is this issue will only be obvious when the aggregated cost of all the activities, infrastructure based and non-infrastructure based activities, is calculated.



- Given that the affordability issue is likely to manifest itself in small towns in particular then it is the cost of supplying services to those small towns that will become untenable. At a District level the service may be under the affordability threshold but at a community level it may not.

5.6.3 Options:

The options are to:

- Accept the current level of cost is affordable and that significant increases will not be tenable and so use that construct as a constraint to be considered when developing the activity plan.
- Or to use an unconstrained model and develop a purely theoretical optimised maintenance and renewal programme.
- Take a balanced approach whereby affordability is always a consideration but it is not defined by a specific limit but is used to temper the purely theoretical optimal programme. To a degree this is good asset management practice in all situations but the principle here puts more emphasis on the economic impact on an individual community.

5.6.4 Assumptions:

- Activity plans have been developed in a 'business as usual' context. So the affordability issue was not a driver for decision making around maintenance programmes other than it always is in the normal course of developing multi-year programmes. In theory this should allow for balanced optimal programmes to be presented in the first draft of plans.
- Rework of some activity plans may be necessary when the aggregated effect of multiple activities is calculated. Some communities may have particular problems because of coincidental increases in multiple activities for their area or town.

5.7 Infrastructure Resilience

5.7.1 Issue:

Customers have a high expectation of continuing functionality and service delivery. Resilience is based on a design philosophy which acknowledges that failure will occur. Resilience requires early detection and recovery, but not necessarily through re-establishing the failed system.

We have to consider managing and mitigating the risks to, and the resilience of, our infrastructure assets from natural disasters.

5.7.2 Implications:

Generally the services the Council delivers are highly reliable:

- Transport links, roads and bridges are seldom affected for more than a few hours.
- Water supplies are rarely interrupted and when they are it is only for a few hours
- Wastewater schemes very rarely prevent residents using them as and when they need
- Stormwater systems generally handle all but the worst of storms.

The problem this presents is that people are not prepared for a sustained outage of any one of these services let alone multiple service failures that could occur as the result of a major seismic event for example.

Public awareness needs to be raised and people need to have good information about how to take care of themselves for a period of several days.

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Item 7.4 Attachment A

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5.7.3 Options:

The options are not mutually exclusive. Options exist for making the infrastructure resilient, for having resilient management and for facilitating rapid recovery. These include:

- Utilising designs, materials methodologies for maintenance and renewals that are more resilient. Modern high density plastic pipes are more resilient. Jointing methods can be used that are more resilient. Underground structures can be designed and construct so as to better resist seismic movement. Many lessons have been learned recently from Christchurch; we should incorporate those lessons into future works.
- Organisational management needs to plan for recovery situations and consider the best place to locate essential emergency supplies. A key resource that will be needed will be physical works operators so relationships need to be created with these suppliers. Arrangements need to be made in readiness for an emergency response.
- Scenario modelling should be carried out in conjunction with Emergency Management Southland to improve the Council's state of readiness for response.
- Media campaigns could be delivered in communities that advise people of potential scenarios that could leave them without services for several days.

5.7.4 Assumptions:

The assumptions around this issue are:

- That resilient design principles and materials will be incorporated in all renewal and new capital works projects.
- That the maintenance contractor will participate in scenario planning and critical emergency resources will be identified and located in the places deemed best for the likely scenarios.
- That the Council continues to participate proactively with Emergency Management Southland for regional response and for critical Lifelines analysis and management.

5.8 Aging infrastructure

5.8.1 Issue:

The infrastructure in Southland District is of varying ages. The roads vary in age considerably. When they are rebuilt of course they are in effect new:

- The average age of roads is getting older. This will continue to happen as the asset is sweated and low use roads are pushed further and further out before renewal is justified. The critical issue is that the asset is not pushed beyond the efficiency threshold which would mean maintain the asset is more expensive than renewing it.
- The remaining life of a number of wooden bridges in the District is getting shorter to the extent that renewal or significant structural upgrading will be needed soon. The strategy for managing the risk from sub-standard bridges is to impose weight and or speed restrictions on them so they are not subjected to unsustainable loads. A risk still remains from road users ignoring the restriction signs and driving overweight vehicles over the bridge which could cause catastrophic failure.
- The age of stormwater assets is older than most of the other underground assets such as water supply and sewers. This aging stormwater infrastructure is a risk because of the lack of accurate inventory information the Council has. The lack of inventory also means a lack of condition information too. Together these two things makeup the most critical asset management components for predicting remaining life and therefore planning renewals.



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Item 7.4 Attachment A

- The water supply and sewer assets are generally newer than the stormwater and the inventory and condition information is more accurate and complete for these assets. This does not mean there are no issues with these assets. The performance of asbestos pipes is a concern. There are many of these pipes in the Council's networks and they have not performed as well as was expected when they were installed. Consequently in some locations the expected lives are not being achieved and unplanned renewals are likely.
- The Council's head office building in Invercargill is in a condition that requires large amounts of money to be spent to carry out preventative maintenance, bring it up to building code compliance and to provide a modern, healthy, effective work environment.

5.8.2 Implications:

- For all assets it is imperative that good asset management data is collected and maintained. Where inventory data is missing it must be collected. Where condition data does not exist it must be obtained.
- For roads regular condition monitoring is essential. Because the roads are being pushed harder and harder it is vital that condition trends are monitored. It is the change in trends that will start to show when the asset is nearing the efficiency threshold.
- For bridges monitoring is essential. Testing is too. Understanding the structural capacity of any given bridge, particularly week old bridges, is essential. Upgrades and replacements need to be programmed so that the remaining life trend is increasing in the positive direction. The rate of replacement has to exceed the rate of deterioration.
- For stormwater assets basic inventory and condition information must continue to be collected. Given the issues raised in the climate change section it is obvious these assets will be put under pressure from higher hydraulic flows. This will cause more failures of these assets. Planning for that can only occur if robust data about the assets is available.
- For the head office the implication is a significant proportion of a new building cost could be required to upgrade the existing building and yet it would still be inefficient and ranging from 20 to 80 years old.

5.8.3 Options:

- Collect condition information for all sealed roads every two years.
- Continuously monitor unsealed roads.
- Continue programmes of survey and condition rating for underground networks particularly for stormwater assets.
- Implement an asset management improvement project to incorporate property asset information into a standard asset management system.
- Undertake an assessment of options for providing a head office building.

5.8.4 Assumptions:

- That the importance of asset information is considered high priority and that investment in asset management systems is kept up to optimal levels. This is a risk management mitigation that is important.
- That renewals are planned on pro-active principles so that overall costs are kept to optimal levels. Unexpected failures will be minimised but over spending or over investing will be avoided.
- That the Southland District Council will continue to need a head office building.

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6.0 THIRTY YEAR STRATEGY

6.1 The Organisation's Priorities

At a strategic level, Council's priorities are to:

- Ensure that the business of Council is running efficiently and effectively and finding ways to do more with less.
- Ensure that we are providing infrastructure and services that are fit for purpose for current and future community needs.
- Ensure that we have what is needed to make good decisions.
- Ensure that we build great local places where people want to live and supporting new development opportunities that will help attract more people to Southland.

At high level from an infrastructure perspective, Council's priorities are to:

- Manage the Districts infrastructure assets in the most cost effective way.
- Manage the impacts of changing activity on the roading network.
- Meet legislative compliance e.g. drinking water standards.
- Manage the effects of declining community populations.
- Provide affordable services to communities.

6.2 Asset and Service Management Strategy

6.2.1 Purpose

In providing services to residents and visitors through the use of infrastructural assets, Council has an Asset Management Policy. This policy is to be reviewed but the current policy stated purpose is:

"The purpose of Asset and Activity Management (AM) is to provide a desired level of service (as defined by the community of Southland District) through the management of assets in the most cost effective and sustainable manner for present and future customers. AM planning provides direction for future management of assets and activities and a robust basis for long term financial forecasts".

Council's Asset Management Policy defines the appropriate level of asset management planning in line with the discussion contained in the International Infrastructure Management Manual (2015). The policy definitions are as follows:

- | | |
|------------------------|-----------------------|
| • Water | Intermediate |
| • Sewerage | Intermediate |
| • Stormwater | Core |
| • Roads & Footpaths | Intermediate/Advanced |
| • Other Infrastructure | Core. |

Each activity plan will show the gap between the existing level of asset management planning and the desired level of asset management planning. Each Asset Management Policy will contain improvement projects that when achieved will close the gap towards the desired level.

6.3 Cost Effective Delivery of Services

In terms of Section 10 (Purpose of local government) there is a clear requirement to meet the current and future needs of communities for good-quality local infrastructure, local public services, in a way that is most cost-effective for households and businesses.

(2) In this Act, good-quality, in relation to local infrastructure, local public services, and performance of regulatory functions, means infrastructure, services, and performance that are— (a) efficient; and

(b) effective; and

(c) appropriate to present and anticipated future circumstances



In order to demonstrate that the delivery of services are efficient, effective and appropriate; Southland District Council has carried out Service Level Reviews in accordance with s17A of the Local Government Act 2002.

- Roading was reviewed in 2016. The report concluded "Southland has the right management and delivery framework to achieve the optimum performance of its assets over time and has shown considerable leadership in adopting innovative methods to achieve this. Current initiatives are continuing to hold Southland at the leading edge of best practice."
- In July 2017 NZTA carried out an Investment Audit. The audit report received from NZTA included an executive summary with the comment; "Council has effective procedures and management controls in place to support the delivery of its land transport programme."
- Water Services was assessed and in terms of s17A was found to be unnecessary to review. However the performance of the three waters services are extensively monitored through a number of mandatory measures, Council defined measures and resource consent condition measures. There is a high level of compliance across all of these measures.

An assessment of the other activities:

- Parks and reserves
- Cemeteries
- Community facilities
- Community housing
- Public toilets;

is underway and due to be reported to Council in December 2017. Initial findings show that many of these services are being delivered by a myriad of suppliers engaged through many contracts. It is likely and enhanced form of this model will be recommended.

It is proposed to assess SIESA, Te Anau airport and the Forestry unit early in 2018.

6.4 Addressing Resilience

"Resilience is the capacity of individuals, communities, businesses and systems to survive, adapt and grow, no matter what chronic stresses and acute shocks they experience. - 100 Resilient Cities"

Resilience is a measure of both physical characteristics and organisational capability. The physical is the ability to withstand abnormal stresses and strains applied by physical forces such as in an earthquake or other natural event. The organisational capability is important to allow rapid recovery and a return to normal service.

For Southland District the geographical spread of the District provides a level of natural resilience. It is unlikely an event will occur that has the same devastating effects right across the District. The other side of the coin though is that areas in need of help could be long distances from resources needed to repair damage. Transport links could be damaged although only a few areas of the District have only one link. Milford Sound though is an example where there is only one road connection.

Both physical and system resilience are crucial. This means:

- Design and construction standards (where cost effective) that ensure infrastructure is able to withstand natural hazards and long term changes in circumstances such as those resulting from climate change.
- Organisations and networks of organisations with the ability to identify hazards must share information, assess vulnerabilities, and plan for and respond to emergencies.
- Acknowledging the value of adaptability and redundancy in the network to improve business confidence.
- Identifying and managing cross-sector dependencies, such as power supply for communications infrastructure. Engineering Lifelines groups have already undertaken work in this area (NIP 2011).

In order to improve resilience Council approach will be to:

- Actively participate in Regional and in-house CDEM planning and activities.

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Item 7.4 Attachment A

Commented [A7]: Consider the impact of natural scenarios over the next 30-50 years i.e. Alpine Fault & Lower North Island subduction/slow slip fault rupture

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- Participate in Life Lines planning with Emergency Management Southland.
- Use service delivery models that provide a high degree of flexibility and so allows for rapid reconfiguration when recovery is needed. The alliance roading contracts and the partnering water services contract are dynamic flexible contracts that do provide this flexibility.
- Investigate options for alternative service provision and system redundancy.
- Identify critical assets and ensure mitigation methods are developed.
- Obtain insurance where this is deemed to be the most cost effective approach.

6.5 Evidence Base

Council acknowledges there are limitations with its data that affect decision-making. A commitment to improving data collection and analysis is indicated below.

Example			
Activity	Data to be collected	Data to be analysed	Value this data provides
Roading	Asset inventory and condition information for culverts.	Maintenance requirements and condition assessment informing- Remaining life of assets	Proactive maintenance can be programmed. Long term renewal requirements can be mapped out.
Roading	Asset inventory and condition information for sealed pavements.	Condition information and renewal strategies	Development of more refined prediction models that aligns with the 80/20 principle and so gives a more accurate financial profile for 30 years.
Water Supply	Water supply underground assets condition information	Remaining life of assets	Allows for more accurate assessment of renewal profiles and the likely costs. This will help create a more accurate model for calculating depreciation.
Stormwater	Stormwater underground assets condition information	Remaining life of assets	Allows for more accurate assessment of renewal profiles and the likely costs. This will help create a more accurate model for calculating depreciation.
Waste water	Wastewater underground assets condition information	Remaining life of assets	Allows for more accurate assessment of renewal profiles and the likely costs. This will help create a more accurate model for calculating depreciation.

Table 6.1: Data Improvements

The approach to data collection and management will be discussed in the respective asset management plans and budgets included where appropriate.

6.6 Significant Decisions Required

Taking a long term view to the management of infrastructural Assets, Southland District needs to make key decisions in a timely manner. In addressing community desires and priorities the following key decisions have been identified.



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Item 7.4 Attachment A

Key Decision	Indicative Timeframe
Comparison of renewal programmes eg, bridges versus pavement renewal.	2018 -2021
Which option to construct for disposal of treated wastewater effluent at the Kepler site.	2018
What are the options and which is the best option for the provision of a head office building	2019
What are the options and which option is best for finalising and for funding the Around the Mountains Cycle Trail	2018
What is the appropriate level of development for the Districts open spaces and how much investment in improvements is needed.	2018-21
How to fund stormwater capital improvement works and whether a District funding model is appropriate	2018-2021
Whether to continue to provide a service or to implement a withdrawal strategy for specific declining communities.	2021 on.

The Council adopted a Significance and Engagement Policy in June 2017. The policy includes the following useful definition and process for determining significance:

3 STEP 1 - DETERMINING THE LEVEL OF SIGNIFICANCE

3.1 *Significance is about measuring the degree of importance of an issue, proposal, decision, or matter. Council has to determine how people, services, facilities and infrastructure in the District will be affected. Significance is a continuum ranging from matters that have a low impact/risk and therefore low significance, right up to matters that have very high levels of impact/risk and significance.*

3.2 *During the development stages of an issue, proposal, decision or matter, significance should be considered as it will guide both the extent options should be developed, and the degree to which advantages and disadvantages are assessed. Significance should also be considered when determining the appropriate extent and type of community engagement.*

Factors to Assess Significance

3.3 *Council will take into account the following factors when determining the level of significance. These factors are of equal weighting. The greater the cumulative impact of the matter as assessed by these factors, the more significant the issue, proposal, decision or matter will be. Significance means the degree of importance of the matter as assessed by its likely impact on, and likely consequences for:*

- *the current and future social, economic, environmental or cultural wellbeing of the district or region;*
- *people who are likely to be particularly affected by or interested in, the issue, proposal decision or matter;*
- *the capacity of Council to perform its role, and the financial and other costs of doing so;*
- *the ownership or function of a strategic asset.*

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- 3.4 Council may also take into account knowledge it has previously gained about the community and its views on an issue to assess whether the matter has a high level of significance.
- 3.5 When determining the significance of a matter that could have a high level of significance, it is recommended that Council staff discuss the importance of the matter to Māori through Council's partnership with Te Ao Mārama Incorporated, or to take the matter to Te Roopu Taiao forum, which is a meeting of local councils and iwi.
- 3.6 Committees of Council and elected bodies can also be used to help assess the significance of a matter.

Strategic Assets

- 3.7 In respect to "strategic assets", a key consideration is whether an asset is essential to the continued delivery of an "outcome" that Council considers important for the well-being of the community. Decisions to transfer ownership or control of a strategic asset to or from Council cannot be made unless they are first included in the Long Term Plan.
- 3.8 For the purpose of section 76AA(3) of the Act, Council considers the following assets, or a network of assets, to be strategic assets:
- Roading/bridge network as a whole.
 - Individual water treatment plants and reticulation networks.
 - Individual township sewerage treatment plants and reticulation networks.
 - Individual township stormwater reticulation networks.
 - Portfolio of District Reserves (Parks/Reserves).
 - Stewart Island Electricity Supply Authority.
 - Te Anau Airport at Manapouri.
 - Community housing as a whole.



7.0 SIGNIFICANT INFRASTRUCTURE ISSUES

The Local Government Act 2002 Section 101B - Infrastructure Strategy states:

- (2) The purpose of the infrastructure strategy is to—
- “(a) identify significant infrastructure issues for the local authority over the period covered by the strategy; and
 - “(b) identify the principal options for managing those issues and the implications of those options.

In developing this 30 Year Strategy Council identified the anticipated significant infrastructure issues over the 30 years and considered each significant action and the benefits of the action. The significant infrastructure issues faced by Southland District with the benefits and costs are tabled below.

The following sections discuss each of these issues in a common framework of:

ISSUE: DESCRIBE THE ISSUE; a statement of the issue and which assets and/or services it might impact on.

IMPLICATIONS: a brief description of the implications for the assets or services delivered by the assets

OPTIONS; a list of the most likely options considered to address the issue.

ASSUMPTIONS; a statement about the assumptions adopted in response to the issue given the preferred option in planning a response to the issue.

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Item 7.4 Attachment A

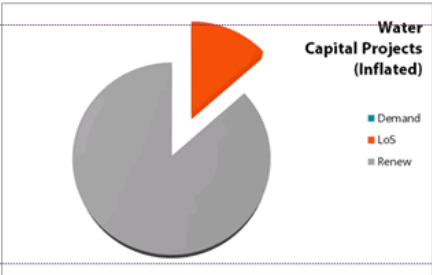
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7.1 Water Supply

The water supply activity in the Southland District is focused on the achievement of the following objectives:

- To provide reliable urban water supplies that are safe to drink and that have adequate pressure and flow for firefighting.
- To provide reliable rural water supplies which have continuous supply and sufficient capacity for stock only.



Commented [A8]: Capex splits to be checked

Commented [A9]: Update this following review of performance management framework once finalised

Significant infrastructure issues are tabled below. The highlighted option is the preferred approach for addressing the identified issue.

Issue: Reliability of Water Quality- Safe drinking water.	
Main Options	Implication of Options
Option 1 – No change to existing management processes.	The current management processes have been effective in delivering safe drinking water to customers but the results are generally internal and so less well scrutinised than in more robust regimes.
Option 2 – Improved auditing and reporting.	Review quality control processes, monitoring and analysis, internal reporting and internal auditing. And where necessary implement new processes to lower the risk, through human error, of harmful water being delivered to customers.
Time period	2018 – 2028
Cost	Within existing budgets
What is the benefit	Higher level of due diligence creating a higher level of certainty that safe drinking water will be delivered 100% of the time.
Assumption	That the current service delivery model is continued.



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Item 7.4 Attachment A

Issue: Declining Population in Communities		
Main Options	Implication of Options	
Option 1– Plan for infinite operation of the Water Supply	Plan and implement renewals as though the system will be needed for the full design life of the renewed assets. This assumes the need for the service will exist into the foreseeable future.	
Option 2 – Plan for optimum service delivery to match population decline.	Analyse the latest population decline predictions and plan for the optimal mix of asset operation, maintenance, renewal or abandonment. Assess alternative means of service delivery including private individual systems to replace the Council system. This assumes specific communities will decline to an unsustainable level at some time in the future.	
Time period	2018 - 2021	
Cost	Incorporated in current budgets. The main impacts will be in the medium to long term.	
What is the benefit	The schemes will operate at the best value for money level that is practical to achieve. Financial investment will be the optimum level and at the optimum time. Assess alternative means of service delivery including private individual systems to replace the Council system.	
Assumption	Population decline projections are accurate.	

Item 7.4 Attachment A



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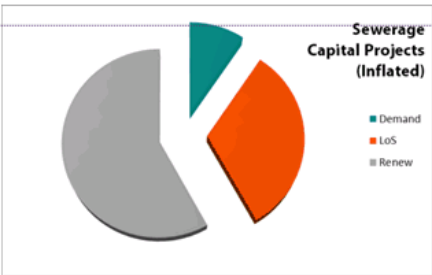
Issue: Reliability of Water Quality- Managing Risk from Nine Stock Water supplies being used for Drinking Water	
Main Options	Implication of Options
Option 1– Rely on the current practice of providing information to users in the hope they self-manage the risk and don't use the water.	Stock water supplies have no treatment systems and therefore there is not safeguard to contaminated water being consumed by users illegally using the water for drinking water purposes.
Option 2– Increased education and monitoring	Increase education campaigns to users about the risk of contamination of the stock water supply. Repeat campaigns at regular intervals.
Option 3– Treat all Stock Water supplies to Drinking Water Standard.	Construct and operate treatment works for all stock water supplies so that any connection will be supplied with water complying with Drinking Water Standards.
Option 4 – Implement and maintain enforcement controls including ongoing monitoring.	Carry out on property testing to identify illegal connections. Disconnect illegal connections. Implement a monitoring and action regime to ensure no illegal connections exist.
Time period	2018 - 2021
Cost	To be calculated.
What is the benefit	Reduced risk of contaminated untreated water being used for human consumption.
Assumption	The water supplies remain as stock water and are not treated.



7.2 Wastewater

The wastewater activity in Southland District (SDC) is focused on the achievement of the following objectives:

- To provide an effective, environmentally friendly wastewater disposal system from our communities for the protection of public health and minimise nuisance associated with odour.
- Ensures that all consents are managed to minimise risk of environmental harm and ensure that Council schemes comply with current and proposed Regional Council discharge plans.



Commented [A10]: Capex splits to be checked

Significant infrastructure issues are tabled below. The highlighted option is the preferred approach for addressing the identified issue.

Issue - Water Quality- Water and Land Plan Implications		
Main Options	Implication of Options	
Option 1 - Continue with current strategies until information from the plan limit setting process is known.	This option is a very reactive option that will most likely mean significant work will have to be done at short notice and at high cost to react to the water limits known to be coming. This option indicates poor foresight of obvious changes in the future.	
Option 2 - Plan for upgrades when consents are due for renewal.	Plan for upgrades at all sites when consents are due for renewal – without understanding the implications of the limit setting process on Council	
Option 3 - Target Key Upgrades	Target key upgrades at a number of key plants that would be seen as delivering the biggest environmental wins within the course of this LTP knowing that further upgrades will be required at other sites in the future. Delivery of upgrades at Te Anau and Winton would for example be seen as the biggest wins while further upgrades at Riversdale and Nightcaps will be undertaken as a result of recent resource consent decisions.	
Time period	2018 - 2028	
Cost	\$ 22.3M (2018)	\$ 23.7M (inflated)
What is the benefit	This will provide a cost effective solution whilst increasing knowledge about environmental risk.	
Assumption	That this strategy is acceptable to the consenting authority	

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Item 7.4 Attachment A



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Issue: Declining Population in Communities		
Main Options	Implication of Options	
Option 1– Plan for infinite operation of the Wastewater systems	Plan and implement renewals as though the system will be needed for the full design life of the renewed assets	
Option 2 - Plan for optimum service delivery to match population decline.	Analyse the latest population decline predictions and plan for the optimal mix of asset operation, maintenance, renewal or abandonment. Assess alternative means of service delivery including private individual systems to replace the Council system.	
Time period	2018 – 2021	
Cost	Incorporated in current budgets. The main impacts will be in the medium to long term.	
What is the benefit	The schemes will operate at the best value for money practical. Financial investment will be the optimum level and at the optimum time.	
Assumption	Population decline projections are accurate.	

Commented [A12]: Graph capex splits to be confirmed (check LOS and Renewal allocations)

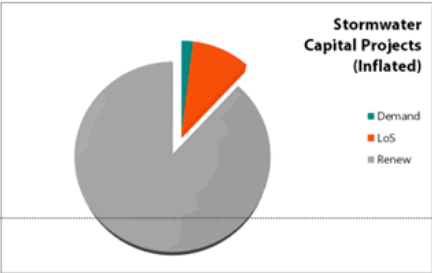


7.3 Stormwater

The stormwater activity in Southland District (SDC) is focused on the achievement of the following objective:

- To provide a reliable stormwater system with adequate capacity, to protect people and property from flooding and to ensure that the roading network is managed in as safe and efficient manner as possible, and that the impact of discharges on the receiving environment is minimised.

Significant infrastructure issues are tabled below. The highlighted option is the preferred approach for addressing the identified issue.



Commented [A13]: Update this following review of performance management framework once finalised

Issue – Water Quality- Water and Land Plan Implications		
Main Options	Implication of Options	
Option 1 – Continue with current strategies until information from the plan limit setting process is known.	This option is a very reactive option that will most likely mean significant work will have to be done at short notice and at high cost to react to the water limits known to be coming. This option indicates poor foresight of obvious changes in the future.	
Option 2 – Work closely with Environment Southland to develop a very good understanding of the strategies they will apply in dealing with stormwater discharge consent applications.	This will allow the maximum forward planning time and provide a good understanding of the likely consent conditions.	
Time period	2020 - 2022	
Cost	\$ ***M (2018)	\$ ***M (inflated)
What is the benefit	Knowing the scale of these conditions will allow more accurate forward planning and financial cost estimates.	
Assumption	That the water limit setting process within the Water and Land plan development will introduce higher water quality standards than currently exist.	

Commented [A14]: Confirm amounts



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Issue: Declining Population in Communities		
Main Options	Implication of Options	
Option 1– Plan for infinite operation of the Stormwater system	Plan and implement renewals as though the system will be needed for the full design life of the renewed assets	
Option 2 - Plan for optimum service delivery to match population decline.	Analyse the latest population decline predictions and plan for the optimal mix of asset operation, maintenance, renewal or abandonment. Assess alternative means of service delivery including non-underground solutions.	
Time period	2018 – 2021	
Cost	Incorporated in current budgets. The main impacts will be in the medium to long term.	
What is the benefit	The schemes will operate at the best value for money practical. Financial investment will be the optimum level and at the optimum time.	
Assumption	Population decline projections are accurate.	

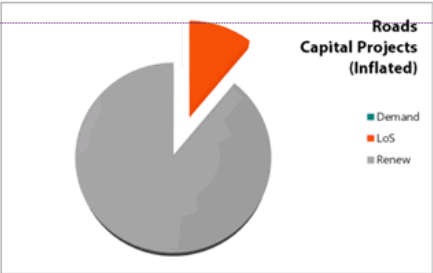


7.4 Roads, Bridges and Footpaths

The primary objective of the Roads and Footpaths activity is:

- To provide an interconnected and integrated transport network which allows individuals and communities to access their business and private destinations in a safe, responsive and sustainable manner.

Significant infrastructure issues are tabled below. The highlighted option is the preferred approach for addressing the identified issue.



Commented [A15]: Graph capex splits to be confirmed (check LOS and Renewal allocations)

Issue – The ageing Sealed Roads network	
Main Options	Implication of Options
Option 1 –Treat all sealed roads as though they were equal	Money will be spent on roads that had a low risk of failure. Roads will be smoother. Risk of failure will be lower. Rates will be higher.
Option 2 – Refine the 80/20-strategy for pavement renewal decisions.	This option is expected to produce the best value for money outcomes for the Council and ratepayers. It will result in the lowest whole of life costs for managing the assets whilst delivering the right level of service.
Time period	2020 - 2022
Cost	Within proposed budgets
What is the benefit	The benefit is the lowest cost to ratepayers for the level of service delivered
Assumption	Existing asset information and continued condition monitoring and analysis of data will lead to higher confidence in prediction models.

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Item 7.4 Attachment A

Item 7.4 Attachment A



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Issue – Wooden bridges requiring restrictions are impacting on travel efficiency and represent an increasing risk in catastrophic failure.		
Main Options	Implication of Options	
Option 1 – Replace bridges predominantly on an affordability basis.	Road users will be constrained by their travel options particularly for heavy traffic freight movements. The number of restricted bridges will continue to increase.	
Option 3 – Develop a more progressive renewal programme.	The number of restricted bridges will trend downwards towards zero.	
Time period	2020 - 2022	
Cost	Within existing budgets.	
What is the benefit	Fewer restricted bridges Improved level of service. The increase in the rate of expenditure on bridge renewals will coincide with a low level of pavement rehabilitation spending. Therefore the overall rates movements will be affordable.	
Assumption	That the low level of expenditure on pavement rehabilitations is sustainable and so a window of opportunity exists to increase the level of spending on bridge renewals. That minor improvement category funding is available and can be prioritised for bridge renewals as opposed to deficiency improvements.	



7.5 Community Services Infrastructure

This is a combination of activities including;

- Cemeteries
- Community Centres
- Community Housing
- Council Offices
- Parks and Reserves
- Public Conveniences
- Water Structures

The primary objective of these activities are:

Cemeteries

- To provide cemeteries that meet the communities' needs and legislative requirements.

Community Centres

- To provide accessible facilities for communities, clubs, organisations and individuals to enjoy for sporting, social, cultural, educational and recreational pursuits.

Community Housing

- To provide good quality affordable housing to a group with specific needs (primarily elderly people).
- To provide, where possible, the ability for people to remain living in their local community.

Council Offices

- To provide buildings that support Council's operational activities and its position as being a good employer, as well as those local buildings that support particular activities in the relevant communities.

Parks and Reserves

- To provide a blend of urban and rural reserves and open spaces that reflects Southland's commitment to township beautification quality recreation and conservation experiences.

Public Conveniences

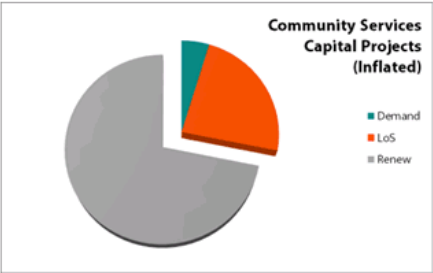
- Protect the environment and public health by preventing contamination by indiscriminate fouling.
- Provide sufficient public toilets and dump stations within the District as a way to provide a healthy safe environment for residents and visitors

Water Structures

- Provision of water structures that are safe to use and maintained in a way which enable recreational and commercial use and allow people to access services, facilities and places.

Significant Infrastructure Issues.

Not all of these activities have issues that warrant noting as significant in this strategy document. However the ones that do are noted below.



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Item 7.4 Attachment A

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Significant infrastructure issues are tabled below. The highlighted option is the preferred approach for addressing the identified issue.

Issue – Council Offices- Invercargill Office building maintenance, seismic strengthening and access compliance		
Main Options	Implication of Options	
Option 1 –Retain the existing building; repair and upgrade	The existing building has significant maintenance work that needs to be done. Seismic, fire and access issues need to be improved. Internal décor, layout, heating and ventilation needs to be improved.	
Option 2 – Investigate the options of significantly upgrading or Renew or Replacing the entire building complex. Allow preliminary budgets for replacement in ? year.	The most efficient and effective solution will be found taking into account the long terms needs of the Council	
Time period	2018 - 2023	
Cost	\$ 10.5M (2018)	\$ 11.6M (inflated)
What is the benefit	A modern, safe, healthy, flexible office building will be available.	
Assumption	That carrying out extensive maintenance and refurbishment of the existing building will not be the best value for money solution for Council	



DRAFT

Item 7.4 Attachment A

Issue – Parks and Reserves- Improvement of Open Spaces Facilities and Levels of Service.		
Main Options	Implication of Options	
Option 1 –Continue business as usual	The existing Open Spaces level of service will be maintained.	
Option 3 – Provide for extensive study of the needs of this activity. Provide for extensive capital works to upgrade the current infrastructure to provide an appropriate level of service.	Open spaces will be enhanced to provide a contemporary level of service.	
Time period	2018 - 2028	
Cost	\$0.6 M (2018/21) \$ M (2021/28)	\$ ***M (inflated)
What is the benefit	Additional modern facilities will be provided that meet users expectations, be they local, national or international visitor users.	
Assumption	That visitor growth will continue and expectations of users is for the Councils infrastructure in this activity to be at least as good as most of the rest of the country.	

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7.6 Summary of Significant Infrastructure Issues

To Be Drafted
This section will contain a graphical representation of the significant capex projects along a 10 year or 30 year timeline

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Commented [NT18]: To be updated



8.0 FINANCIAL ESTIMATES

- The Local Government Act 2002 Section 101B – Infrastructure Strategy states:
- (4) The infrastructure strategy must outline the most likely scenario for the management of the local authority’s infrastructure assets over the period of the strategy and, in that context, must—
- “(a) show indicative estimates of the projected capital and operating expenditure associated with the management of those assets—
 - “(i) in each of the first 10 years covered by the strategy; and
 - “(ii) in each subsequent period of 5 years covered by the strategy.

8.1 Water

The projected capital expenditure associated with the water infrastructure assets are graphically represented below:

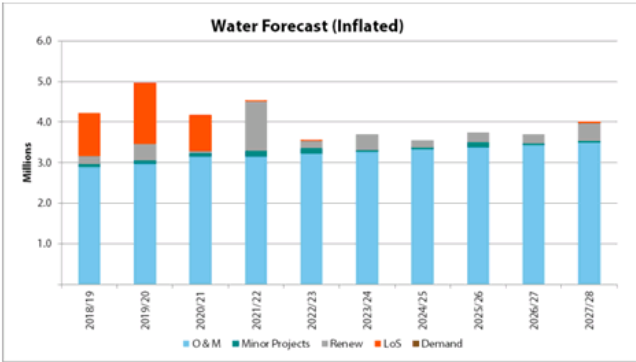


Figure 8.1.1: Projected Capital Expenditure – Water (2018-2028)

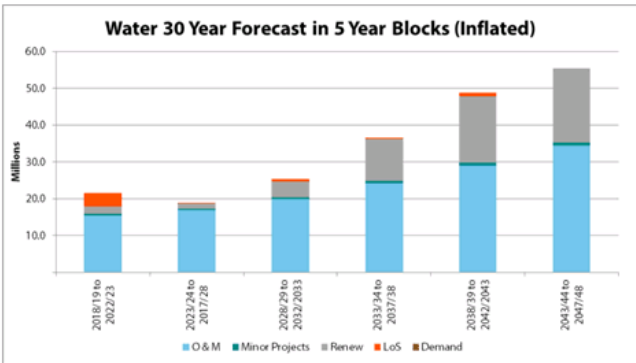


Figure 8.1.2: Projected Capital Expenditure – Water (2018-2048)



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8.2 Sewerage

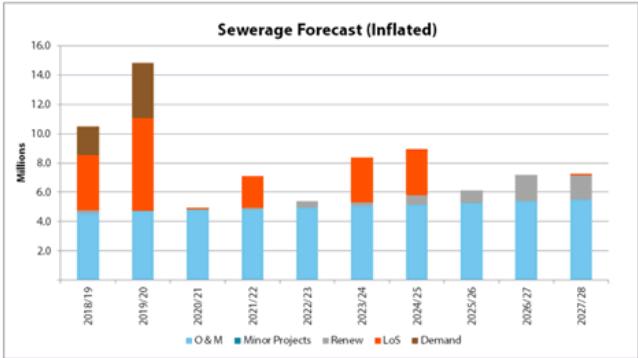


Figure 8.2.1: Projected Capital Expenditure – Sewerage (2018-2028)

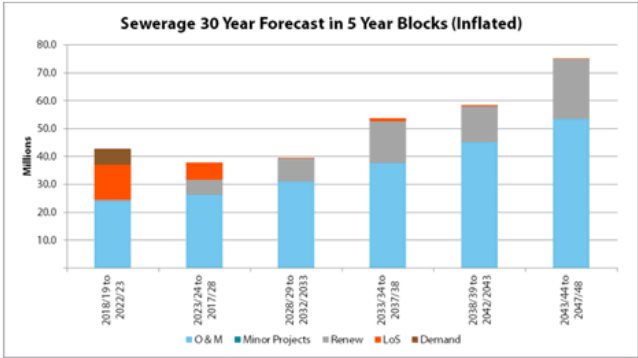


Figure 8.2.2: Projected Capital Expenditure – Sewerage (2018-2048)



8.3 Stormwater

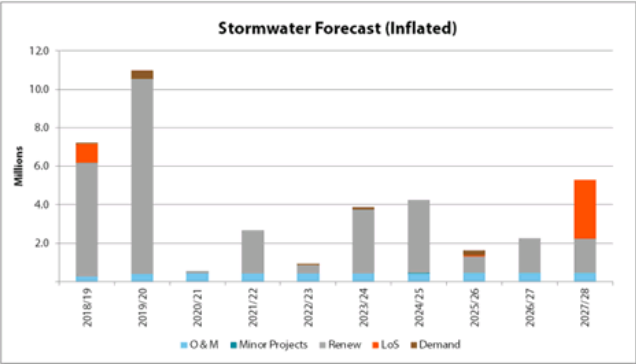


Figure 8.3.1: Projected Capital Expenditure – Stormwater (2018-2028)

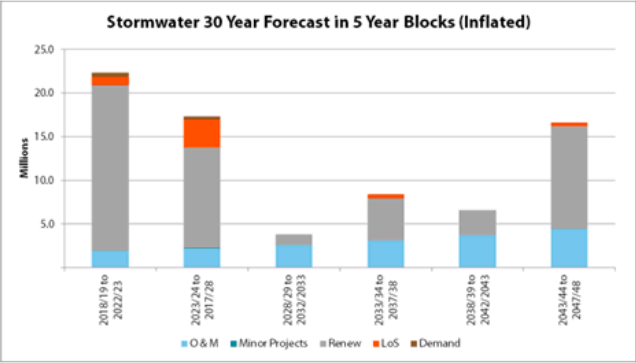


Figure 8.3.2: Projected Capital Expenditure – Stormwater (2018-2048)

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Item 7.4 Attachment A

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8.4 Roads and Footpaths

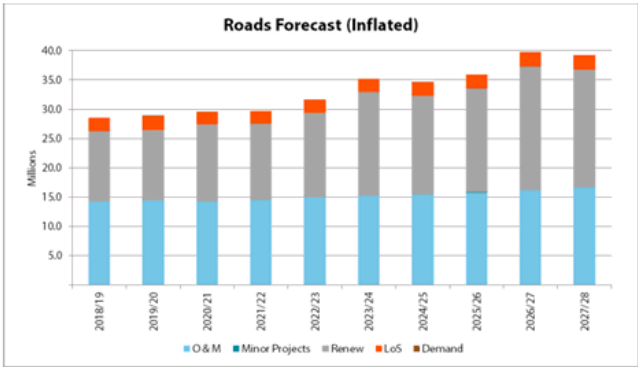


Figure 8.4.1: Projected Capital Expenditure – Roads and Footpaths (2018-2028)

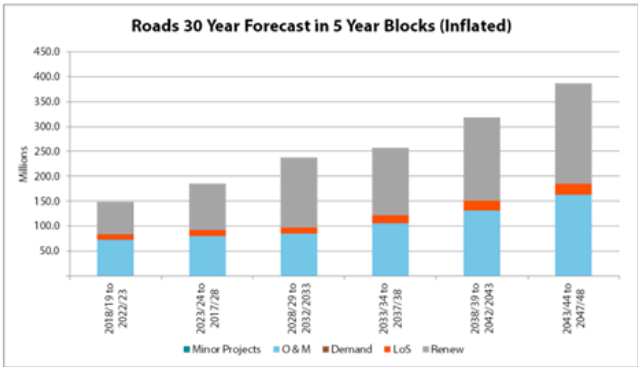


Figure 8.4.2: Projected Capital Expenditure – Roads and Footpaths (2018-2048)



8.5 Community Services/Facilities

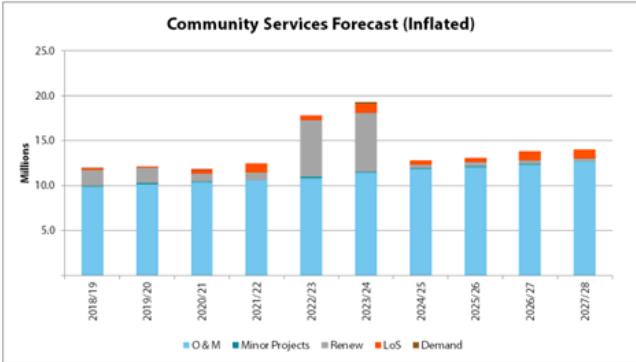


Figure 8.5.1: Projected Capital Expenditure – Community Services/Facilities (2018-2028)

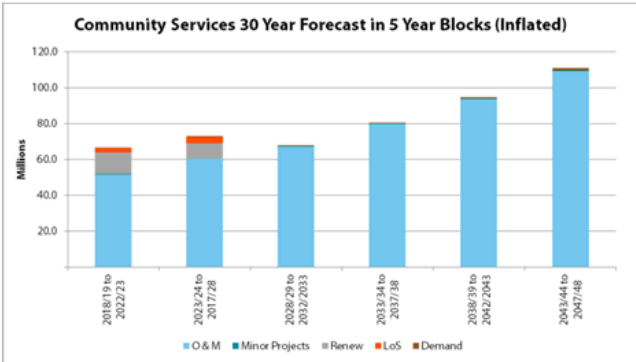


Figure 8.5.2: Projected Capital Expenditure – Community Services/Facilities (2018-2048)

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Item 7.4 Attachment A

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8.6 Total Expenditure

The projected capital expenditure associated with the significant infrastructure assets are graphically represented below:

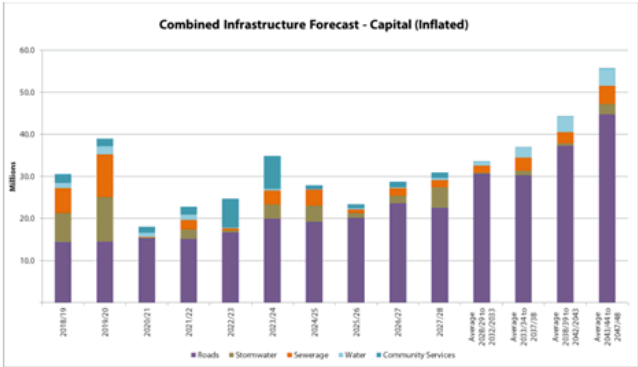


Figure 8.6.1 Projected Capital Expenditure- Infrastructure Assets

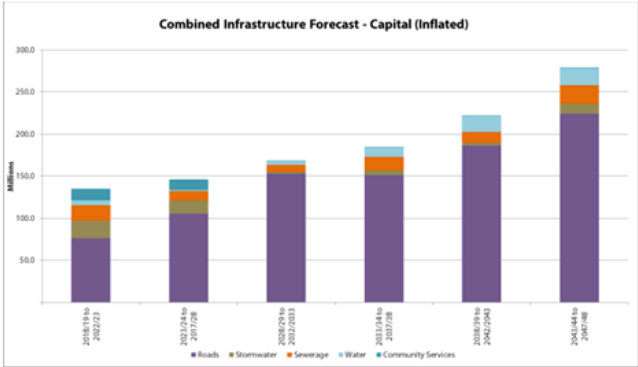


Figure 8.6.2 Projected Capital Expenditure- Infrastructure Assets (5 year blocks)

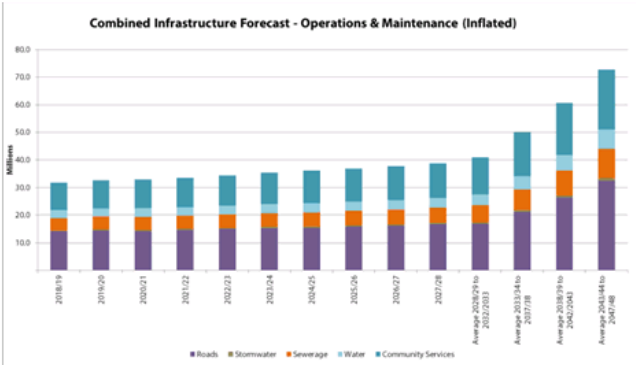


Figure 8.7.1: Projected Operational Expenditure –Infrastructure Assets

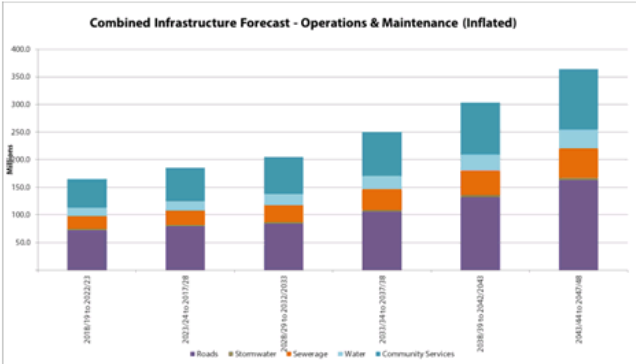


Figure 8.7.2: Projected Operational Expenditure –Infrastructure Assets (5 year blocks)

8.7 Financial Impacts of the Infrastructure Strategy

Discuss the planned response to funding issues and outline the proposed funding for the planned expenditure.

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Item 7.4 Attachment A