Notice is hereby given that a Meeting of the Finance and Audit Committee will be held on:

Date:	**Thursday, 16 November 2017**
Time:	**1.30pm**
Meeting Room:	**Council Chambers**
Venue:	**15 Forth Street**
	Invercargill

Finance and Audit Committee Agenda
OPEN

MEMBERSHIP

Chairperson	Ebel Kremer
	Mayor Gary Tong
Councillors	John Douglas
	Paul Duffy
External Member	Bruce Robertson

IN ATTENDANCE

Chief Financial Officer	Anne Robson
Committee Advisor	Fiona Dunlop

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Website: www.southlanddc.govt.nz

Full agendas are available on Council's Website
www.southlanddc.govt.nz

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.

Terms of Reference – Finance and Audit Committee

The Finance and Audit Committee is responsible for:

- Ensuring that Council has appropriate financial, risk management and internal control systems in place that provide:
  - An overview of the financial performance of the organisation.
  - Effective management of potential opportunities and adverse effects.
  - Reasonable assurance as to the integrity and reliability of Council's financial and non-financial reporting.
- Exercising active oversight of information technology systems.
- Exercising active oversight of "Council's health and safety policies, processes, compliance, results and frameworks"
- Relationships with External, Internal Auditors, Banking Institutions and Insurance brokers.

The Finance and Audit Committee will monitor and assess the following:

- The financial and non-financial performance of Council against budgeted and forecasted outcomes
- Consideration of forecasted changes to financial outcomes
- Council's compliance with legislative requirements
- Council's risk management framework
- Council's Control framework
- Council's compliance with its treasury responsibilities.

The Finance and Audit Committee shall have the following delegated powers and be accountable to Council for the exercising of these powers and will operate within:

- policies, plans, standards or guidelines that have been established and approved by Council;
- the overall priorities of Council;
- the needs of the local communities; and
- the approved budgets for the activity.

The Finance and Audit Committee will have responsibility and delegated authority in the following areas:

Financial and Performance Monitoring

(a) Monitoring financial performance to budgets;
(b) Monitoring service level performance to key performance indicators.

Internal Control Framework

(a) Reviewing whether Council's approach to maintaining an effective internal control framework is sound and effective;
(b) Reviewing whether Council has taken steps to embed a culture that is committed to probity and ethical behaviour;
(c) Reviewing whether there are appropriate systems, processes and controls in place to prevent, detect and effectively investigate fraud.

Internal Reporting

(a) To consider the processes for ensuring the completeness and quality of financial and operational information being provided to the Council;
(b) To seek advice periodically from internal and external auditors regarding the completeness and quality of financial and operational information that is provided to the Council.

External Reporting and Accountability

(a) Agreeing the appropriateness of the Council's existing accounting policies and principles and any proposed change;

(b) Enquiring of internal and external auditors for any information that affects the quality and clarity of the Council's financial statements and statements of service performance, and assess whether appropriate action has been taken by management in response to the above;

(c) Satisfying itself that the financial statements and statements of service performance are supported by appropriate management signoff on the statements and on the adequacy of the systems of internal control (ie, letters of representation), and recommend signing of the financial statements by the Chief Executive/Mayor and adoption of the Annual Report, Annual Plans, Long Term Plans;

Risk Management

(a) Reviewing whether Council has in place a current, comprehensive and effective risk management framework and associated procedures for effective identification and management of the Council's significant risks;

(b) Considering whether appropriate action is being taken to mitigate Council's significant risks.

Health and Safety

(a) Review, monitor and make recommendations to Council on the organisations health and safety risk management framework and policies to ensure that the organisation has clearly set out its commitments to manage health and safety matters effectively.

(b) Review and make recommendations for Council approval on strategies for achieving health and safety objectives.

(c) Review and recommend for Council approval targets for health and safety performance and assess performance against those targets.

(d) Monitor the organisation's compliance with health and safety policies and relevant applicable law.

(e) Ensure that the systems used to identify and manage health and safety risks are fit-for-purpose, being effectively implemented, regularly reviewed and continuously improved. This includes ensuring that the Council is properly and regularly informed and updated on matters relating to health and safety risks.

(f) Seek assurance that the organisation is effectively structured to manage health and safety risks, including having competent workers, adequate communication procedures and proper documentation.

(g) Review health and safety related incidents and consider appropriate actions to minimise the risk of recurrence.

(h) Make recommendation to the Council regarding the appropriateness of resources available for operating the health and safety management systems and programmes.

(i) Any other duties and responsibilities which have been assigned to it from time to time by the Council.

Internal Audit

(a) Approve appointment of the internal auditor, internal audit engagement letter and letter of understanding.

(b) Reviewing and approving the internal audit coverage and annual work plans, ensuring these plans are based on the Council's risk profile;

(c) Reviewing the adequacy of management's implementation of internal audit recommendations;

(d) Reviewing the internal audit charter to ensure appropriate organisational structures,

authority, access, independence, resourcing and reporting arrangements are in place.

External Audit

(a) Confirming the terms of the engagement, including the nature and scope of the audit, timetable and fees, with the external auditor at the start of each audit;
(b) Receiving the external audit report(s) and review action(s) to be taken by management on significant issues and audit recommendations raised within;
(c) Enquiring of management and the independent auditor about significant business, political, financial and control risks or exposure to such risks.

Compliance with Legislation, Standards and Best Practice Guidelines

(a) Reviewing the effectiveness of the system for monitoring the Council's compliance with laws (including governance legislation, regulations and associated government policies), with Council's own standards, and Best Practice Guidelines as applicable.
(b) Conducting and monitoring special investigations, in accordance with Council Policy, and reporting the findings to Council.
(c) Monitoring the performance of Council organisations, in accordance with the Local Government Act.

Business Case Review

(a) Review of the business case of work, services, supplies, where the value of these or the project exceeds $2million or the value over the term of the contract exceeds $2million.

Insurance

(a) Consider Council's insurance requirements, considering its risk profile
(b) Approving the annual insurance renewal requirements

Treasury

(a) Oversee the treasury function of Council ensuring compliance with the relevant Council policies and plans
(b) Ensuring compliance with the requirements of Council's trust deeds are met
(c) Recommending to Council treasury policies.

The Finance and Audit Committee is responsible for considering and making recommendations to Council regarding:

(a) Policies relating to risk management, rating, loans, funding and purchasing.
(b) Accounting treatments, changes in generally accepted accounting practice, and new accounting and reporting requirements.
(c) The approval of financial and non-financial performance statements including adoption of the Annual Report, Annual Plans and Long Term Plans.

The Finance and Audit Committee is responsible for considering and making recommendations to the Services and Assets Committee on business cases.

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1 Apologies

At the close of the agenda no apologies had been received.

2 Leave of absence

At the close of the agenda no requests for leave of absence had been received.

3 Conflict of Interest

Committee Members are reminded of the need to be vigilant to stand aside from decision-making when a conflict arises between their role as a member and any private or other external interest they might have.

4 Public Forum

Notification to speak is required by 5pm at least two days before the meeting. Further information is available on www.southlanddc.govt.nz or phoning 0800 732 732.

5 Extraordinary/Urgent Items

To consider, and if thought fit, to pass a resolution to permit the committee to consider any further items which do not appear on the Agenda of this meeting and/or the meeting to be held with the public excluded.

Such resolution is required to be made pursuant to Section 46A(7) of the Local Government Official Information and Meetings Act 1987, and the Chairperson must advise:

(i) the reason why the item was not on the Agenda, and

(ii) the reason why the discussion of this item cannot be delayed until a subsequent meeting.

Section 46A(7A) of the Local Government Official Information and Meetings Act 1987 (as amended) states:

"Where an item is not on the agenda for a meeting,-

(a) that item may be discussed at that meeting if-

  (i) that item is a minor matter relating to the general business of the local authority; and

  (ii) the presiding member explains at the beginning of the meeting, at a time when it is open to the public, that the item will be discussed at the meeting; but

(b) no resolution, decision or recommendation may be made in respect of that item except to refer that item to a subsequent meeting of the local authority for further discussion."

6 Confirmation of Minutes

6.1 Meeting minutes of Finance and Audit Committee, 06 September 2017

Finance and Audit Committee

OPEN MINUTES

Minutes of a meeting of Finance and Audit Committee held in the Council Chambers, 15 Forth Street, Invercargill on Wednesday, 6 September 2017 at 8.37am.

PRESENT

Chairperson	Ebel Kremer
Councillors	John Douglas
	Paul Duffy
External Member	Bruce Robertson

IN ATTENDANCE

Councillor Dillon (8.43am - 10.40am, 11.02am – 11.50am)
Councillor Keast (8.43am - 10.40am, 11.02am – 11.50am)
Councillor Perham (8.51am – 10.40am, 11.02am – 11.12am, 11.16am – 11.50am)
Chief Executive Officer – Steve Ruru
Chief Financial Officer – Anne Robson
Group Manager, Community and Futures – Rex Capil
Group Manager, Environmental Services – Bruce Halligan
Chief Information Officer – Damon Campbell
People and Capability Manager – Janet Ellis
Committee Advisor – Fiona Dunlop

1 Apologies

Apologies for absence have been received from Mayor Tong.

Moved Chairperson Kremer, seconded Cr Duffy and **resolved:**

That the Finance and Audit Committee accept the apology.

2 Leave of absence

There were no requests for leave of absence.

3 Conflict of Interest

There were no conflicts of interest declared.

4 Public Forum

There was no public forum.

5 Extraordinary/Urgent Items

There were no Extraordinary/Urgent items.

6 Confirmation of Minutes

Resolution

Moved Cr Douglas, seconded Chairperson Kremer **and resolved:**

That the Finance and Audit Committee confirms the minutes of ordinary meeting held on 7 June 2017 and the extraordinary meeting held on 19 July 2017 as a true and correct record of those meetings.

Order of Business

The Chair advised that the agenda would be taken as follows:

Item 7.4 Draft Unaudited Annual Report 2016/2017
Item 8.5 Analysis of Actual Results to forecast for the year ended 30 June 2017
Item 8.6 Overall Programme of projects for 2017/18 including the projects proposed to be carried forward
Item 7.3 Draft Fraud policy
Item 7.1 Draft Remission and Postponement of Rates Policy
Item 7.2 Draft Investment and Liability Management Policy
Item 8.4 Digitisation Project Update
Item 8.2 Health and Safety
Item 8.3 2018-28 Long Term Plan Audit Fees
Item 8.1 Options for Council funding of the Around the Mountains Cycle Trail
Item C9.1 Risk Register September 2017 update
Item C9.2 Corporate Performance report for the year ending 30 June 2017

7.4 Draft Unaudited Annual Report 2016/2017

Record No: R/17/8/20209

Nicole Taylor – Project Co-ordinator Corporate Planning and Jacobus Meyer were in attendance for this item.

Purpose

Miss Taylor advised that the purpose of the report was to enable the Finance and Audit Committee to consider recommending the Annual Report 2016/2017 for adoption by Council at the meeting on 27 September 2017.

The Meeting noted that the Council is required to develop and adopt an Annual Report within four months of the end of a financial year. The Annual Report compares and comments on the performance of Council against the budget and operating targets set in year two of the Council's 10 Year Plan 2015 – 2025 and what was programmed in the Annual Plan 2016/2017.

Miss Taylor also advised that a Summary of the Annual Report is also being prepared separately for review and audit later in September/early October.

The Meeting also noted that that Committee is asked to consider the report and make a recommendation as to whether Council should adopt the Annual Report on 27 September 2017 as presented with any changes.

(During discussion on the report Councillors Keast and Dillon joined the meeting at 8.43am and Councillor Perham joined the meeting at 8.51am.)

Resolution

Moved Cr Duffy, seconded Cr Douglas **and resolved:**

That the Finance and Audit Committee:

a) Receives the report titled "Draft Unaudited Annual Report 2016/2017" dated 30 August 2017.

b) Determines that this matter or decision be recognised as 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) Delegates authority to the chair of the Finance and Audit Committee to confirm changes to the Annual Report 2016/2017 resulting from either audit or officer review.

e) Recommends to Council that it adopts the Annual Report 2016/2017 at its meeting on 27 September 2017, incorporating any changes resulting from "d" above; and

f) Notes that the Summary Annual Report 2016/2017 is also being prepared

and will be circulated to the Committee and Council for comment and released to the public in October.

8.5 Analysis of Actual results to Forecast for the year ended 30 June 2017

Record No: R/17/8/19349

Robert Tweedie – Management Accountant was in attendance for this item.

Mr Tweedie advised that the report compares the actual results to the forecast approved for 2016/17.

The Meeting noted that during the year Council considered and approved changes to the budget set as part of forecasting the year end position. The comparison is made using the same reporting layout as the Annual Report. This reflects the Groups of Activities of Council supported by the Funding Impact Statements included in Attachment A of the officers report.

Resolution

Moved Cr Douglas, seconded Cr Duffy **and resolved:**

That the Finance and Audit Committee:

a) Receives the report titled "Analysis of Actual results to Forecast for the year ended 30 June 2017" dated 31 August 2017.

8.6 Overall Programme of Projects for 2017/18 including the Projects proposed to be Carried Forward from 2016/17.

Record No: R/17/8/20049

Susan McNamara – Management Accountant was in attendance for this item.

Miss McNamara advised that the report was to inform the Committee of the overall programme of projects in the 2017/18 financial year. It also included an overview of the projects for Council teams showing the proportion of projects for 2017/18 that have originally been budgeted for in earlier years.

The Meeting noted that the Carry Forward expenditure noted in this report is subject to Council approving a report on its 6 September 2017 agenda.

Resolution

Moved Cr Douglas, seconded Cr Duffy **and resolved:**

That the Finance and Audit Committee:

a) Receives the report titled "Overall Programme of Projects for 2017/18 including the Projects proposed to be Carried Forward from 2016/17." dated 31 August 2017.

7.3 Draft Fraud Policy 2017

Record No: R/17/8/18473

Sheree Marrah – Finance Manager and Rebecca McElrea – Policy and Planning Consultant were in attendance for this item.

Miss McElrea advised that the purpose of the report was to update the 2005 Fraud Policy which is overdue for a review.

The Meeting noted that in undertaking the review, Council have incorporated a number of recommendations from the Shared Service Business Process review undertaken by Deloitte in 2016.

Miss McElrea also advised that as part of the review, a fraud response plan is also being developed to compliment the Fraud policy.

The Meeting also noted that in the next 6 months Council will be undertaking a fraud risk assessment process. As part of this and the resulting gap analysis undertaken, further changes to this policy may occur within the coming 12 months.

Resolution

Moved Cr Douglas, seconded Cr Duffy **and resolved:**

That the Finance and Audit Committee:

a) Receives the report titled "Draft Fraud Policy 2017" dated 31 August 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) Endorses the draft Fraud Policy.

d) Recommends to Council that the draft Fraud Policy be adopted.

7.1 Draft Remission and Postponement of Rates Policy

Record No: R/17/5/9991

Robyn Rout – Policy Analyst was in attendance for this item.

Mrs Rout advised that the purpose of the report was to inform the Committee that no submissions were received on the draft Remission and Postponement of Rates Policy when it was put out for consultation.

The Meeting noted that that the Remission and Postponement of Rates Policy specifies the circumstances where the Council will consider remitting or postponing rates.

Mrs Rout further advised that the Policy aims to:

- provide financial assistance and support to ratepayers where it is reasonable;
- address possible rating anomalies; and
- provide Council with the ability to act reasonably in administering its rating powers and policies.

The Meeting also noted that some minor changes were made to the Policy before it went out for consultation. The remission of rates for natural disasters and emergencies has been included, and the remission of rates in exceptional circumstances now has a clause including individual rating units which have been subject to fire. There has been clarification of the supporting documentation required and the applicable remission periods for each of the remission and postponement categories. The responsibilities and financial limits in the roles and responsibilities

schedule have also been clarified.

Mrs Rout also advised that this report recommends the Committee both endorses the draft Policy and recommends to Council that the Policy be adopted.

Resolution

Moved Cr Duffy, seconded Cr Douglas **and resolved:**

That the Finance and Audit Committee:

a) Receives the report titled "Draft Remission and Postponement of Rates Policy" dated 31 August 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 Remission and Postponement of Rates Policy.

e) Recommends to Council that the draft Remission and Postponement of Rates Policy be adopted.

7.2 Draft Investment and Liability Management Policy

Record No: R/17/8/18448

Sheree Marrah – Financial Accountant and Robyn Rout – Policy Analyst were in attendance for this item.

Mrs Marrah advised that the purpose of the report was to outline the Investment and Liability Management Policy and how Council will manage its investments, including what Council will invest in, and how investment risk will be assessed and managed. The Policy also outlines how Council will manage borrowings.

The Meeting noted that the Committee endorsed a draft Policy in March 2017 and recommended that it be released for public consultation. The draft Policy incorporated some minor changes to the current policy, including clarity around the intent of Council in the setting of interest on internal loans, and changes to roles and responsibilities.

Mrs Marrah advised that although no feedback was received, Officers have subsequently noted that the current Investment and Liability policy was out of alignment with the 2015-2025 Long Term Plan. The Long Term Plan allowed for Council to borrow up to 100% of total revenue, the current Investment and Liability policy allowed for 150% of total revenue. Given Councils discussion at the time of approving the LTP, the attached draft Investment and Liability Policy has been changed from 150% to 100% of total revenue.

The Meeting also noted that as no feedback was received on the draft Policy, officers are now requesting that the Committee endorses the draft Policy as amended and recommends to Council that the Policy be adopted..

Resolution

Moved External Member Robertson, seconded Cr Douglas **and resolved:**

That the Finance and Audit Committee:

a) Receives the report titled "Draft Investment and Liability Management Policy" dated 31 August 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 Investment and Liability Management Policy with changes to sections 3.56 and 3.57 as follows indicated in red:

3.56 Council aims to minimise the risk of default and variability of interest rates. It does this by:

- Ensuring that investments are made with entities that have at least a strong capacity (Long Term A- or Short Term A-1) rating from Standard and Poor's or equivalent rating in Fitch or Moodys.
- Limiting total exposure to prescribed amounts.
- Monitoring compliance against set limits.

3.57 Based on Standard and Poor's rating, investments are to be spread as follows:

TABLE 1 - How the Southland District Council will Spread its Investments				
Authorised Asset Classes	**Overall Portfolio Limit as a Percentage of the Total Portfolio**	**Approved Financial Market Investment Instruments (must be denominated in NZ dollars)**	**Credit Rating Criteria - Standard and Poor's (or Moody's or Fitch equivalents)**	**Limit for each issuer subject to overall portfolio limit for issuer class $**
New Zealand Government	100%	• Government Stock	Not Applicable	Unlimited
		• Treasury Bills	Not Applicable	Unlimited
Rated Local Authorities	70%	• Commercial Paper	S&P short term rating of A-1 or better	3.0M
		• Bonds/Medium Term Notes (MTN)/Floating Rate Notes (FRN)	S&P long term rating of A- or better S&P long term rating of A+ or better	2.0M 3.0M

			S&P long term rating of AA or better	5.0M
Unrated Local Authorities	50%	• Commercial Paper	Not Applicable	2.0M
		• Bonds/MTNs/FRNs	Not Applicable	2.0M
New Zealand Registered Banks	100%	• Call/Term Deposits/Bank Bills/Commercial Paper	S&P short term rating of A-1 or better	10.0M
		• Bonds/MTNs/FRNs	S&P long term rating of A- or better	3.0M
			S&P long term rating of A+ or better	5.0M
State Owned Enterprises	50%	• Commercial Paper	S&P short term rating of A-1 or better	3.0M
		• Bonds/MTNs/FRNs	S&P long term rating of BBB+ or better	1.0M
			S&P long term rating of A+ or better	3.0M
Corporates	50%	• Commercial Paper	S&P short term rating of A-1 or better	2.0M
		• Bonds/MTNs/FRNs	S&P long term rating of A- or better	1.0M
			S&P long term rating of A+ or better	2.0M
			S&P long term rating of AA or better	3.0M
Financials	30%	• Commercial Paper	S & P short term rating of A-1 or better	2.0M
		• Bonds/MTNs/FRNs	S&P long term rating of A- or better	1.0M
			S&P long term rating of A+ or better	2.0M
			S&P Long term rating of AA or better	3.0M
Building Societies	20%	• Call and Term Deposits	To be individually approved by Council	3.0M

e) Recommends to Council that the draft Investment and Liability Management Policy be adopted.

8.4 Digitisation Project Update

Record No: R/17/8/19204

Gillian Cavanagh – Team Leader, Knowledge Management and Damon Campbell – Chief Information Officer was in attendance for this item.

Mr Campbell advised that the purpose of the report was to update the Committee on the progress to date on the digitisation project.

Resolution

Moved Cr Douglas, seconded Cr Duffy **and resolved:**

That the Finance and Audit Committee:

a) Receives the report titled "Digitisation Project Update" dated 24 August 2017.

8.2 Health and Safety

Record No: R/17/8/19028

Janet Ellis – People and Capability Manager was in attendance for this item.

Mrs Ellis advised that the purpose of the report was to provide an update on Health and Safety activity within the Southland District Council.

Resolution

Moved External Member Robertson, seconded Cr Duffy **and resolved:**

That the Finance and Audit Committee:

a) Receives the report titled "Health and Safety" dated 31 August 2017.

8.3 2018-28 Long Term Plan Audit Fees

Record No: R/17/8/19170

Anne Robson – Chief Executive Officer was in attendance for this item.

Miss Robson advised that the purpose of the report was to advise Council of the fees that Audit New Zealand can set for the audit of the 2018-2028 Long Term Plan.

Resolution

Moved Cr Douglas, seconded Cr Duffy **and resolved:**

That the Finance and Audit Committee:

a) Receives the report titled "2018-28 Long Term Plan Audit Fees" dated 31 August 2017.

b) Notes the content of the letter and attachments from the Office of the Auditor General.

8.1 Options for Council funding of the Around the Mountains Cycle trail

Record No: R/17/5/9187

Anne Robson – Chief Financial Officer was in attendance for this item.

Miss Robson advised that the purpose of the report was to obtain a view from the Committee to recommend to Council for a decision on how to fund the balance of costs to date for the Around the Mountains Cycle Trail to be consulted on as part of

the 2018-2028 Long Term Plan.

The meeting adjourned for morning tea at 10.40am and reconvened at 11.02am.)

(During discussion on the item, Councillor Perham left the meeting at 11.12am and returned at 11.16am.)

Resolution

Moved Cr Duffy, seconded Chairperson Kremer **recommendations a to d, e with changes as indicated (with ~~strikethrough~~ and underline) and new f and g and resolved.**

That the Finance and Audit Committee:

a) Receives the report titled "Options for Council funding of the Around the Mountains Cycle trail" dated 29 August 2017.

b) Determines that this matter or decision be recognised as 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) Recommends to Council that the decision on how to fund the net cost to date of $4.6 million incurred to develop the Around the Mountains Cycle Trail be made as part of the 2018-2028 Long Term Plan.

e) Recommends to Council that options to be consulted on for funding include:

i) The preferred option, ~~based on current Council policy,~~ is funding by way of Loan over 30 years, with loan repayments collected by way of ~~the Roading rate~~ Uniform Annual General Charge.

ii) Funded by the Strategic Asset Reserve, with no repayments of the reserve.

iii) Funded 50% by way of a loan over 30 years, with repayments collected by way of ~~the roading rate~~ Uniform Annual General Charge and 50% funded by the Strategic Assets Reserve, with no repayments of the reserve.

f) Recommends to Council that the decision on how to fund the $4.6million of the Around the Mountains Cycle Trail costs be included as a separate issue in the 2018/2028 Long Term Plan consultation document as prescribed in terms of Section 93C of the Local Government Act 2002.

g) Recommends to Council that it amends the Revenue and Financing Policy to include funding of the loan repayments for the Around the Mountains Cycle Trail from the Uniform Annual General Charge.

Public Excluded

Exclusion of the Public: Local Government Official Information and Meetings Act 1987

Moved Chairperson Kremer, seconded Cr Duffy **and resolved:**

That the public be excluded from the following part(s) of the proceedings of this meeting.

C9.1 Risk Register - September 2017 update

C9.2 Corporate Performance Report for year ending 30 June 2017

The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter, and the specific grounds under section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution are as follows:

General subject of each matter to be considered	Reason for passing this resolution in relation to each matter	Ground(s) under section 48(1) for the passing of this resolution
Risk Register - September 2017 update	s7(2)(e) - The withholding of the information is necessary to avoid prejudice to measures that prevent or mitigate material loss to members of the public. s7(2)(i) - The withholding of the information is necessary to enable the local authority to carry on, without prejudice or disadvantage, negotiations (including commercial and industrial negotiations).	That the public conduct of the whole or the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding exists.
Corporate Performance Report for year ending 30 June 2017	s7(2)(c)(i) - The withholding of the information is necessary to protect information which is subject to an obligation of confidence or which any person has been or could be compelled to provide under the authority of any enactment, where the making available of the information would be likely to prejudice the supply of similar information or information from the same source and it is in the public interest that such information should continue to be supplied. s7(2)(h) - The withholding of the information is necessary to enable the local authority to carry out, without prejudice or disadvantage, commercial activities.	That the public conduct of the whole or the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding exists.

That the Chief Executive Officer, Group Manager, Environmental Services, Group Manager, Community and Futures, Chief Financial Officer, Chief Information Officer, People and Capability Manager, Committee Advisor and Planning and Performance Analyst be permitted to remain at this meeting, after the public has been excluded, because of their knowledge of the items **C9.1 Risk Register - September 2017 update and C9.2 Corporate Performance Report for year ending 30 June 2017**. This knowledge, which will be of assistance in

relation to the matters to be discussed, is relevant to those matters because of their knowledge on the issues discussed and meeting procedure.

The public were excluded at 11.29am.

Resolutions in relation to the confidential items are recorded in the confidential section of these minutes and are not publicly available unless released here.

The meeting concluded at 11.50am.

CONFIRMED AS A TRUE AND CORRECT RECORD AT A MEETING OF THE FINANCE AND AUDIT COMMITTEE HELD ON WEDNESDAY 6 SEPTEMBER 2017.

DATE:.....

CHAIRPERSON:.....

Management Report from Audit New Zealand for the year ended 30 June 2017

Record No: R/17/11/26370
Author: Sheree Marrah, Finance Manager
Approved by: Anne Robson, Chief Financial Officer

☐ Decision ☐ Recommendation ☒ Information

Summary of Report

1 As part of the audit process, Audit New Zealand provides Council with a report at the conclusion of the interim and final stages of its Annual Report audit, outlining the work that was performed and any recommended areas for improvement.

2 The management letter from Audit New Zealand (Audit NZ) addressing the interim stage of the Annual Report audit for the year ended 30 June 2017 was included in the Finance and Audit Committee 7 June 2017 agenda.

3 Attached is the management letter received from Audit NZ in relation to the final audit (Attachment A) for the year ended 30 June 2017.

4 Audit New Zealand did not identify any significant or material issues during Council's audit for the year ended 30 June 2017, and thus on 27 September 2017, Audit New Zealand issued an unmodified audit opinion on Council's Annual Report for the year ended 30 June 2017.

5 This meant that Audit New Zealand found the Annual Report had no "material" misstatements and it met its statutory purpose. However, during the process Audit NZ did identify some areas for improvement.

6 The table below outlines the recommendations made by Audit NZ in this management report, in the form of an action list. Staff will work through the recommendations identified by Audit NZ.

7 Additionally, staff have included matters carried forward from prior management letters as separate action lists, many of which have been completed as at the date of this report. Staff have indicated the due dates in the table. Most reflect April 2018, which is the date of the interim audit for the 30 June 2018 annual report.

Matters from Final Management Report	Responsibility	Status	Due Date
Non-financial performance reporting Review and make the necessary changes to ensure appropriate processes and controls, including quality assurance, are in place for the ongoing reporting required.	Nicole Taylor	Not started	April 2018
Interest Register Review and update the interest register regularly, specifically when there is a change in Councillor or Key Management Personnel.	Clare Sullivan	Not Started	February 2018

Milford Community Trust (MCT) consolidation Consider implications and early adoption of PBE IPSAS 34 and 35 in relation to consolidation of MCT.	Sheree Marrah	Not started	April 2018
Joint ventures Review and confirm Council's position in relation to accounting for the various joint ventures in which Council has an interest.	Sheree Marrah	Not started	April 2018
Other Audit NZ assurance engagements Implement the following recommendations from the recent Audit NZ assurance engagements: - Implement conflict of interest management processes as early in the tender process as possible. - Include all procurement key decision-makers in the conflict management processes, not just the Tender Evaluation Team members. - Ensure documentation of the conflict management processes is completed and retained. - Consider whether any incumbent supplier relationship should be disclosed as a potential conflict of interest, to highlight awareness of the possibility of bias in decision-making.	Ian Marshall	Not started	April 2018
NZTA audit Implement the following recommendations from the recent NZTA audits: – Update the procurement strategy to reflect the NZTA in-house professional service policy requirements. - Get the updated procurement strategy endorsed by NZTA. – Include the late tenders' policy in all contract tender documents.	Ian Marshall	Not started	April 2018

Matters from Previous Management Reports (Appendix 3)	Responsibility	Status	Due Date
Super user accounts The list of users with access to the domain administrator group should be reviewed and limited only to those system and user accounts that require this access to perform their function. In addition, the built in administrator account password should be changed and usage of the account limited. Good practice is for the password to be changed when IT staff leave or every six months.	Damon Campbell	In progress	June 2018
Formal IS Agreement Develop a formal agreement with Invercargill City Council should the Council retain the IS services provided by the Invercargill City Council.	Damon Campbell	Not started	June 2018
Non-financial performance reporting Review and make the necessary changes to ensure appropriate processes and controls, including quality assurance, are in place for the ongoing reporting required.	Strategy and Policy Manager	Not started	April 2018

Matters from Previous Management Reports (carried forward by SDC but not noted by Audit NZ)	Responsibility	Status	Due Date
Policies Ensure all policies are up to date and periodically reviewed.	Strategy and Policy Manager	In progress	Ongoing
Contract management Develop a formal approach to contract management. Develop a contract management policy.	Ian Marshall	In progress	December 2017
Legislative compliance Develop a formal system for legislative compliance.	Strategy and Policy Manager	In progress	June 2018
Policy development and review • implement the recommendations from the Deloitte Shared Business Process	Strategy and Policy Manager	Complete	N/A

Matters from Previous Management Reports (carried forward by SDC but not noted by Audit NZ)	Responsibility	Status	Due Date
Review; • continue to implement a formal programme of review for policies; and • ensure staff are able to locate key polices, and are aware of their contents.			
Property, plant and equipment reconciliation Complete a monthly reconciliation between the fixed asset register and general ledger. The reconciliation should be reviewed by an independent person on a one-up basis.	Sheree Marrah	Complete	N/A
Purchase order system Complete an independent review of purchase orders raised and authorised by the same person. Review core data changes made by administration users.	Sheree Marrah	Complete	N/A
Creditor masterfile changes All masterfile changes should be independently reviewed and signed off.	Sheree Marrah	Complete	N/A
Policy development and review • implement the recommendations from the Deloitte Shared Business Process Review; • continue to implement a formal programme of review for policies; and • ensure staff are able to locate key polices, and are aware of their contents.	Strategy and Policy Manager	Partially complete	June 2018

Recommendation

That the Finance and Audit Committee:

a) Receives the report titled "Management Report from Audit New Zealand for the year ended 30 June 2017" dated 9 November 2017.

Attachments

A Final Audit NZ Management Report for year ended 30 June 2017 ⇩

AUDIT NEW ZEALAND
Mana Arotake Aotearoa

Report to Council on the annual audit of

Southland District Council

for the year ended 30 June 2017

Key messages

We have completed the audit for the year ended 30 June 2017. This report sets out our findings from the audit, including our recommendations for improvement.

Our opinion

We issued an unmodified opinion on the District Council's annual report on 27 September 2017.

Issues identified during the audit

The following table summarises our recommendations and their priority:

Section	Recommendation	Urgent	Necessary	Beneficial
3.2	**Non-financial performance reporting**			
	We recommend that appropriate quality assurance (QA) processes and controls be put in place to ensure that results reported in the annual report are accurate. This includes ensuring that supporting information from Council Activities agree to the results submitted by the preparer.		✔	
3.3	**Interest Register**			
	We recommend the interest register be updated when there is a change in Councillors or Key Management Personal. This will help to ensure that any related party transactions are identified, and appropriately authorised and disclosed.		✔	
3.4	**Milford Community Trust not consolidated**			
	There are new accounting standards which become effective for periods beginning on or after 1 January 2019 relating to Consolidation and Separate financial statements - PBE IPSAS 34 and 35. Early adoption is available. The District Council should begin the review process of these standards to determine if early adoption is appropriate. Until such time as these standards are mandatory, the requirements of PBE IPSAS 6: *Consolidated and Separate Financial Statements* apply and the District Council should review the recognition principles to ensure that District Council complies with these requirements.		✔	
3.5	**Joint Venture entities**			
	We recommend the District Council confirm their position with respect the various Joint Venture entities in which they have an interest.		✔	

3.6	**Other assurance reports provided by Audit New Zealand**			
	We would like to draw attention to the following recommendations noted in the other assurance reports completed during the year. • Implement conflict of interest management processes as early in the tender process as possible. • Include all procurement key decision-makers in the conflict management processes, not just the Tender Evaluation Team members. • Ensure documentation of the conflict management processes is completed and retained. • Consider whether any incumbent supplier relationship should be disclosed as a potential conflict of interest, to highlight awareness of the possibility of bias in decision-making.			✔
3.7	**NZTA Audit**			
	During the year NZTA has completed two audits on the District Councils investment performance. We would like to draw attention to a couple of NZTA's recommendations on the procurement strategy and late tender policy. NZTA recommended that the District Council updates their procurement strategy to reflect the NZTA in-house professional service policy requirements and that the updated strategy document should be endorsed by NZTA. NZTA also recommended that the late tenders' policy is included in all contract tender documents			✔

There is an explanation of the priority rating system in Appendix 1.

Thank you

We would like to thank the District Council's s management and staff for their assistance throughout the audit.

Ian Lothian
Audit Director
27 October 2017

Contents

1 Our audit opinion

1.1 We issued an unmodified audit opinion

We issued an unmodified audit opinion on 27 September 2017. This means that we were satisfied that the financial statements and statement of service performance fairly reflected SDC's activity for the year and its financial position at the end of the year.

In forming our audit opinion, we considered the following matters.

1.2 Uncorrected misstatements

The financial statements are free from material misstatements, including omissions. During the audit, we have discussed with management any misstatements that we found, other than those which were clearly trivial. The significant misstatements that have not been corrected are listed in Appendix 2 along with management's reasons for not adjusting these misstatements. We are satisfied that these misstatements are individually and collectively immaterial.

2 Significant Capital Projects

The District Council has several high value and high profile capital projects in process. We updated our understanding on the progress with the following significant projects.

2.1 Around the Mountain Cycle Trail (ATMCT)

The District Council has placed sections 8 and 9 of stage two of the project on hold, while the District Council considers their options, though we understand the appeal from Southland Fish and Game to the Environment Court was resolved during the current financial year.

We confirmed that as at 30 June 2017, there were no potential contingencies or liabilities arising from the appeal that would require disclosure in the annual report.

We note the District Council engaged an independent review of the project, following revisions to project costings around $14 million. Total project costs incurred to 30 June 2017 were $10.9 million.

Several recommendations in the independent report are relevant to other significant capital projects. We will continue to review the accounting and reporting issues relative to the ATMCT in future years.

Management comment

Council has begun development of a business case process to analyse the current situation and to assess the options for bringing the cycle trail project to conclusion. The current timeline for this work will see the business case presented to Council in December 2017.

Recommendations in the independent report are being implemented particularly relating to; project management, resource management, risk management, probity auditor and contract management.

As an example these lessons are being applied currently to the Catlins Seal extension project.

2.2 Catlins seal extension

This project relates to sealing the last section of the Catlins Road (alternative coastal route), primarily for safety reasons but also to encourage economic growth. It was proposed in the 2016/17 Annual Plan consultation document to include an extra section of road leading to the popular tourist attraction of Waipapa Point lighthouse.

NZTA has approved the business case for funding subject to the District Council getting a peer review carried out of the indicative business case. Construction has started in the 2016/17 financial year and is expected to be completed in 2017/18.

We note there is risk around sourcing reliable but cost-effective materials for this project.

The total cost for this project is expected to be $9.5 million. Total project costs incurred to 30 June 2017 were $925,500. We will continue to monitor the progress of the Catlins seal extension in 2017/18.

Management comment

The reliability risk (material that has the physical properties required to provide the strength and durability needed act as a durable long life pavement) is managed by the process of specifying industry standard material properties, in the contract specifications. This is underpinned by quality assurance testing using industry standard practices. Together these actions ensure materials complying with the specifications are used and placed in the construction of the project.

2.3 Te Anau wastewater discharge project

We understand resource consent has been granted for the discharge of treated wastewater to land north of the Te Anau Airport Manapouri (Kepler Block), as part of the Te Anau wastewater discharge project. However, the consent has been appealed to the Environment Court.

The District Council is currently in the process of preparing a business case, while a public process is being undertaken to see if the District Council can purchase land as an alternative for the wastewater project.

We have confirmed that there are no potential contingencies or liabilities arising from the appeal that would require disclosure in the 2017 annual report.

Total project costs incurred to 30 June 2017 were $2,334,000 for the wider wastewater project. A dedicated governing committee has been formed to oversee this project.

Management comment

The previous appeal to the Environment Court was settled in December 2016. Since then work has been undertaken in identification of any further potential alternatives while recognising critical timelines in terms of expiry of the current short term consent and the period of time required to give effect to the consented Kepler proposal. Council is

currently in the process of preparing the business case in support of the consented proposal.

Noted.

3 Other areas of audit focus

3.1 Revaluation of infrastructure assets

Findings

The reporting standard PBE IPSAS 17 *Property, Plant and Equipment* requires that the revaluation of assets recorded under the revaluation model be conducted with sufficient regularity to ensure that the carrying amounts of qualifying assets do not differ materially from fair value at the balance sheet date. The District Council's policy is to revalue roads, water reticulation, sewerage reticulation and stormwater systems on an annual basis.

The valuation of the District Council's infrastructure assets as at 30 June 2017 was conducted by independent valuers. We reviewed the valuation reports, the underlying assumptions, and the specific representations provided to us by the valuers.

From our review, we are satisfied that carrying amounts of revalued assets are not materially different from their fair values, and that the disclosures made on the basis of the valuation comply with accounting standards. However, it was noted in the 2017 financial year that there was an error of $761,000 in the 2016 valuation. The overall impact to the statement of comprehensive revenue and expenses is not material to the financial statements as a whole, and therefore the effect of the adjustment has been recorded in the 2017 annual report.

Management comment

Noted, Council staff will be working with the Valuers to ensure the error does not occur again.

3.2 Non-financial performance reporting

Findings

During the audit we noted some areas where improvement should be made to the QA processes in place to ensure the accuracy of information flow from the Council Activities to what is disclosed in the annual report. We found instances where the information or data had been conflicting and inaccurate. The following are examples of where there had been a lack of QA process in place:

- some targets used in the annual report were inconsistent with those set in the LTP and therefore did not comply with the Local Government Act 2002;
- not all targets that were included in the LTP had been included in the annual report; and
- prior year comparatives were missing for some measures.

All of the above examples have been corrected. However, it is important to have dedicated responsibility for QA processes and controls over all non-financial performance reporting, to ensure that results are accurately reflected in the annual report.

Recommendation

We recommend that appropriate quality assurance (QA) processes and controls be put in place to ensure that results reported in the annual report are accurate. This includes ensuring that supporting information from Council Activities agrees to the results submitted by the preparer.

Management comment

Although some targets were changed in the Annual Report due to errors when setting them for the LTP, it is clearly noted beside the revision what the original target was and the reason for the change.

Council is continuing to work on improving its QA processes in relation to non-financial reporting and in particular as part of the review of key performance indicators ahead of the 2018-2028 LTP. This will include improving processes to ensure that supporting information is accurate and available in a timely manner.

3.3 Interest Register

During the audit it was noted that the Interest register provided had not been updated to reflect the appointment of three staff members.

Recommendation

We recommend the interest register be updated when there is a change in Councillors or Key Management Personal. This will ensure that any related party transactions are identified by management and appropriately authorised and disclosed.

Management comment

Council recognises the importance of the Interest Register being updated on a regular basis when there is a change in Councillors or Key Management Personal and will ensure that this is updated on a regular basis.

3.4 Milford Community Trust not consolidated

Findings

The Milford Community Trust (MCT) is a Trust that was established in 2007 in conjunction with the Department of Conservation and with the assistance of Environment Southland. At the inception of the Trust, the Office of the Auditor-General wrote to the Trust, with a copy sent to the Council, to indicate that the Trust is considered to be a public entity and that it is also a controlled organisation, under the control of the Council. However, currently the District Council does not consolidate the results of MCT, as required by the reporting standards PBE IPSAS 6: *Consolidated and Separate Financial Statements.*

Recommendation

We recommend Council consolidate the results of MCT in line with reporting standards.

Management comment

Given the size of the Milford Community Trust operations, Council has previously not consolidated, however a summary of the key financial and performance indicators have always been included in the annual report in the CCO section.

3.5 Joint Venture entities

Findings

During the course of the audit, we reviewed the District Council's treatment of the various Joint Venture entities associated with the operations of the Council, some of which the Council already identifies as being Council Controlled Operations.

Current Council identifies Milford Community Trust and Southland Museum and Art Gallery Trust as being Council Controlled Operations, but the results of these organisations are not included in the financial report of the Council. Please refer to Section 3.4 for our comment around the consolidation of the Milford Community Trust.

In addition to these organisations, the District Council has interests in the Joint Venture arrangements of Venture Southland, Southland Regional Heritage Committee, Emergency Management Southland, and WasteNet Southland.

The District Council has proportionately consolidated the results of Venture Southland and WasteNet, which is an appropriate treatment for these entities.

The results of the Southland Regional Heritage Committee and Emergency Management Southland have not been included in the financial results of the Council in the current or preceding years. On the basis of materiality, these interest are not sufficiently material to affect the District Council's audit opinion.

Recommendation

We recommend that Council reviews the various relationships that it has with its Joint Venture entities. These relationships should be assessed in terms of PBE IPSAS 8: *Interests in Joint Ventures* and the treatment options under this standard should be clearly recorded as evidence of Council's decisions.

Management comment

To date Council have considered the operations and assets of the unrecognised joint ventures to be immaterial and thus have not consolidated these. Council will consider the relevant reporting standard and the impact of consolidating the joint ventures prior to 30 June 2018.

Noted.

3.6 Assurance reports completed

Findings

During the year Audit New Zealand was engaged to review the tender selection process for two of the District Council's projects. Although there were no issues raised from the review of the selection of Alliance partners for the roading network, there are some recommendations of the review in relation to the alternative coastal route project.

Recommendation

We would like to draw attention to the following recommendations, for adoption by Council

- implement conflict of interest management processes as early in the tender process as possible;
- include all procurement key decision-makers in the conflict management processes, not just the Tender Evaluation Team members;
- ensure documentation of the conflict management processes is completed and retained; and
- consider whether any incumbent supplier relationship should be disclosed as a potential conflict of interest, to highlight awareness of the possibility of bias in decision-making.

Management comment

Council has a policy. For all major contracts tender evaluation team (TET) members are required to formally sign a conflict of interest declaration. Councils have also included a non-Council member as part of the TET team (consultant) to assist with tendering process. For the largest contracts an independent Probity Auditor is appointed to ensure compliance with the notified procedure and objective analysis.

All tenders which attract NZTA funding also require a suitably qualified procurement member as part of the TET team to.

It should also be noted that a very limited supply market exists within the Southland Area. As a result NZ Audit probity have been engaged on large value tenders to help mitigate the risk of bias and to help insure due process.

However we note the Audit NZ comments in relation to a wider application of the Conflict Resolution Process and will review the application of the policy in light of this comment.

3.7 NZTA Audit – Policy recommendations

Findings

During the year NZTA has completed two audits on the District Councils investment performance.

Recommendation

We would like to draw attention to a couple of NZTA's recommendations on the procurement strategy and late tenders policy, for adoption by Council. NZTA recommended that Southland District Council updates their procurement strategy to reflect that Transport Agency's in-house professional service policy requirements and that the updated strategy document should be endorsed by the Transport Agency. NZTA also recommended that the late tenders' policy is included in all contract tender documents.

Management comment

An updated procurement strategy was supplied to NZTA earlier in the year. No feedback was received until the NZTA audit. The procurement strategy is in the process of being updated to reflect the NZTA changes.

3.8 Rates

During the year there has been interest in the local government sector about the legality of Northland Regional Council's rates setting process, and the flow-on implications, if any, for other Regional Councils and/or Territorial Authorities. The final judgment was received on 17 August 2017 relating to the judicial review in the matter between the Mangawhai Ratepayers and Residents Association, and Mr and Mrs Rogan; against Northland Regional Council (NRC) and Kaipara District Council (KDC). We understand this may be appealed.

The requirement to specify rates payments dates in rates resolutions was a relevant factor. We understand that Southland District Council sought legal advice on its rates setting process and has changed the wording in the rates resolution to specify specific dates for the payment metered water targeted rates.

Management comment

Council recognise that there is a potential risk associated with the outcome of this case in relation to the metered water targeted rates set for the 2016/2017 year. We note that the final judgement is being appealed, and therefore consider it is not 'final' at this point in time. We confirm that our rates resolution for the 2017/18 year was amended to include specific payments dates for metered water.

3.9 Forestry valuation

Southland District Council's forests increased in value by $773,000, based on the forestry valuation performed by Woodlands Pacific Consulting Limited. The total value of forestry assets at 30 June 2017 is $13,724,000.

We reviewed the forestry valuation, its underlying assumptions, and obtained a letter of representation from the valuer. We concluded that the valuation complies with the relevant accounting standards and was appropriate to be used for the valuation of the forestry assets in the 30 June 2017 financial statements.

3.10 Legislative compliance

We limit our legislative compliance review to obtaining assurance that the District Council has complied with significant legislative requirements that may directly affect

the financial statements or general accountability. This means our review does not cover all of the District Council's legislative compliance requirements.

We were not advised of any breaches of legislation during the 2017 financial year, and we did not identify any breaches during our testing.

3.11 Fraud Risk

We discussed with management and those charged with governance the risk of fraud occurring at the District Council. We updated our understanding of the accounting and internal control systems in place to prevent and detect fraud. We consider the systems in place to be appropriate.

Management and those charged with governance confirmed to us that they were not aware of any material fraud during the 2017 financial year. No instances of fraud were noted during our audit.

3.12 Management override

We have considered the risk of management over-ride, which is a risk inherent to all of our clients. We have not identified any significant issues that require your attention.

4 Control environment

During our interim audit we performed a high-level review of the control environment. We considered the overall attitude, awareness, and actions of the Council and management in establishing and maintaining effective management procedures and internal controls. In performing this assessment we tested the key financial and service performance systems and controls.

Overall, as a result of our work completed at the interim audit, we found that the District Council's overall control environment was "effective" for our audit purposes. This meant that we were able to place reliance on the information produced from the District Council's systems, when planning the most effective approach to our audit of the annual report.

Our interim management report dated 23 May 2017 detailed our findings in relation to our testing and review of the control environment and systems of internal controls.

5 Status of previous recommendations

The status of each matter that was outstanding in last year's report to the Council is summarised in Appendix 3.

Summary of action taken against previous years' recommendations:

Number of recommendations from previous years' audits	Current status
One	Matters that have been resolved
Two	Progress is being made, but not yet fully resolved
One	No progress has been made

This summary needs to be read in conjunction with the status of recommendations raised in previous years' management reports as detailed at Appendix 3.

Appendices

Appendix 1: Explanation of priority rating system

Our recommendations for improvement and their priority are based on our assessment of how far short **SDC** is from a standard that is appropriate for the size, nature, and complexity of its business.

We have developed the following priority ratings for our recommended improvements:

Urgent Major improvements required	**Needs to be addressed *urgently*** These recommendations relate to a significant deficiency that exposes the District Council to significant risk. Risks could include a material error in the financial statements [and the non-financial information]; a breach of significant legislation; or the risk of reputational harm.
Necessary Improvements are necessary	**Address at the earliest reasonable opportunity, *generally within 6 months*** These recommendations relate to deficiencies that need to be addressed to meet expected standards of good practice. These include any control weakness that could undermine the system of internal control or create operational inefficiency.
Beneficial Some improvement required	**Address, *generally within 6 to 12 months*** These recommendations relate to deficiencies that result in the District Council falling short of best practice. These include weaknesses that do not result in internal controls being undermined or create a risk to operational effectiveness. However, in our view it is beneficial for management to address these.

Appendix 2: Uncorrected misstatements

Note	Statement of comprehensive income		Statement of financial position	
	Dr $000	Cr $000	Dr $000	Cr $000
1	967	952	78	93
2	826	825	624	626
3	-	-	251	251

Explanation for uncorrected misstatements

1 To record the potential unrecorded entities for the current year

This is to record the current year aggregate effect of exclusion of the results of Milford Community Trust, share of Southland Rural Heritage Trust and share of Emergency Management Southland.

2 To record the potential unrecorded entities for the prior year

This is to record the prior year effect of exclusion of the results of Milford Community Trust, share of Southland Rural Heritage Trust and share of Emergency Management Southland.

3 Impairment of GST receivable

This relates to GST receivable from 2010, which is currently recorded in receivables that should be included in the provision for doubtful debts.

Appendix 3: Status of previous recommendations

Outstanding matters

Recommendation	Current status	Priority	Management's proposed action
Formal IS agreement We recommend a formal agreement be developed to define the IS services provided by Invercargill City Council to the Southland District Council.	Open	Beneficial	Comment as per last year stands. Due to some structural changes in the Council the decision regarding the systems hosted by ICC was delayed.
Super user accounts on the network The list of users with access to the domain administrator group should be reviewed and limited only to those system and user accounts that require this access to perform their function. In addition the built in administrator account password should be changed and usage of the account limited. As a good practice the password should be changed when IT staff leave or every 6 months.	Progress is being made	Beneficial	Council is working through the systems and processes that rely on the administrator account. Once these have been identified the account will be removed from the domain administrator group, the password changed and replaced with specific service accounts.
Statement of Service Performance We recommend that appropriate quality assurance (QA) processes and controls be put in place to ensure that results reported in the annual report are accurate. This includes ensuring that supporting information from Council Activities agree to the results submitted by the preparer.	Progress is being made	Necessary	Council is continuing to review the process around SSP processes, including engaging an independent consultant to assist with setting more meaningful measures for the 2018-2028 LTP.

Matters that have been resolved

Recommendation	Outcome
Sensitive Expenditure We recommend that all sensitive expenditure transactions be accompanied by appropriate invoices/receipt. In addition, sufficient detailed narration should be provided to explain the purpose of the expenditure, and to assist the approver to assess the reasonableness of each transaction and correctly code/classify the expense.	All samples selected in our testing were supported by appropriate invoices/receipts. Sufficient narrations were included to explain the purpose of the expenditure.

Appendix 4: Mandatory disclosures

Area	Key messages
Our responsibilities in conducting the audit	We carried out this audit on behalf of the Controller and Auditor-General. We are responsible for expressing an independent opinion on the financial statements and reporting that opinion to you. This responsibility arises from section 15 of the Public Audit Act 2001. The audit of the financial statements does not relieve management or the Council of their responsibilities. Our audit engagement letter contains a detailed explanation of the respective responsibilities of the auditor and the Council.
Auditing standards	We carry out our audit in accordance with generally accepted audit standards. The audit cannot and should not be relied upon to detect every instance of misstatement, fraud, irregularity or inefficiency that are immaterial to your financial statements. The Council and management are responsible for implementing and maintaining your systems of controls for detecting these matters.
Auditor independence	We are independent of the District Council in accordance with the independence requirements of the Auditor-General's Auditing Standards, which incorporate the independence requirements of Professional and Ethical Standard 1 (Revised): *Code of Ethics for Assurance Practitioners*, issued by New Zealand Auditing and Assurance Standards Board. Other than the audit, we have no relationship with, or interests in, the District Council.
Other relationships	We are not aware of any situations where a spouse or close relative of a staff member involved in the audit occupies a position with the Southland District Council that is significant to the audit. We are not aware of any situations where a staff member of Audit New Zealand has accepted a position of employment with the Southland District Council during or since the end of the financial year.
Unresolved disagreements	We have no unresolved disagreements with management about matters that individually or in aggregate could be significant to the financial statements. Management has not sought to influence our views on matters relevant to our audit opinion.

NZ Transport Agency Investment Audit Report for the period 2013/14 to 2016/17

Record No: R/17/11/26372
Author: Dylan Rabbidge, Commercial Lead Roading
Approved by: Ian Marshall, Group Manager Services and Assets

☐ Decision ☐ Recommendation ☒ Information

Summary of Report

1 As part of NZTA requirements an investment audit is undertaken every three years to provide assurance that the NZTA's investment in SDC's land transport programme is being well managed and delivering value for money. Due to the tendering of SDC's Maintenance Contracts, Professional Services and Southern Scenic Route, NZTA delayed the audit to four years for this audit cycle. NZTA provides Council with a report at the conclusion of the audit, outlining the work that was performed and any recommended areas for improvement.

2 The NZTA audit covers five key areas:

- Previous audit issues
- Financial Management
- Procurement
- Contract Management
- Professional Services.

3 Attached is the NZ Transport Agency Investment Audit Report received from NZTA in relation to the final audit (Appendix A) for the financial periods of 2013/14 to 2016/17.

4 NZTA identified several areas for improvement this was in Procurement and Professional Services.

(a) Under Procurement it was recommended that SDC includes its late tender's policy in all contract tender documents in future.

ACTIONED: SDC has advised its Professional Services contractors of this requirement and this is now included in all of SDC's contracts moving forward.

(b) It was identified that SDC need to adjust its existing process around in-house professional services to reflect NZTA's policy and that SDC update its procurement strategy to reflect the changes which is required to be endorsed by NZTA.

ACTIONED: Roading has adjusted how its internal professional services are procured, these changes come into effect from 01 July 2018. The procurement strategy has been updated and reviewed by Ron Wheeler (NZTA Investment Auditor). This was submitted to NZTA on 13 October and we are awaiting approval.

5 Overall NZTA found that there were only the two areas identified above that "Some Improvement Needed" while the other three areas are deemed "Effective". Appendix B (page 9) in the NZTA report outlines the NZTA rating system.

Recommendation

That the Finance and Audit Committee:

a) Receives the report titled "NZ Transport Agency Investment Audit Report for the period 2013/14 to 2016/17" dated 4 November 2017.

Attachments

A New Zealand Transport Agency Investment Audit Report 2017 ⇩

September 2017

NZ TRANSPORT AGENCY INVESTMENT AUDIT REPORT

Monitoring Investment Performance

Report of the investment audit carried out under section 95(1)(e)(ii) of the Land Transport Management Act 2003.

Approved Organisation (AO):	**Southland District Council**
NZ Transport Agency Investment (2015 – 2018 NLTP)	**$40,459,040 (budgeted programme value)**
Date of investment audit:	**24 – 27 July 2017**
Investment Auditor:	**Ron Wheeler**
Report No:	**RARWI-1773**

OBJECTIVE

The objective of this audit is to provide assurance that the New Zealand Transport Agency's investment in Southland District Council's land transport programme is being well managed and delivering value for money. We also sought assurance that the Council is appropriately managing risk associated with the Transport Agency's investment. We recommend improvements where appropriate (for audit programme refer appendix A).

EXECUTIVE SUMMARY

Council has effective procedures and management controls in place to support the delivery of its land transport programme.

This investment audit found inconsistent application of Council's late tenders' policy in Request for Proposal documents. The need to update its contract procurement strategy to reflect changes in Transport Agency policy was also identified. Council's professional services expenditure as a percentage of its maintenance and operations outputs presents as high when compared to similarly resourced approved organisations. A review of these activities is suggested to identify improvement opportunities.
Council's collaborative maintenance alliances for managing its network are targeted to provide value for money outcomes.

Audit: Southland District Council

AUDIT RATING ASSESSMENT

	Issue	Rating Assessment*
Q.1	Previous audit issues	Effective
Q.2	Financial management	Effective
Q.3	Procurement	Some Improvement Needed
Q.4	Contract Management	Effective
Q.5	Professional Services	Some Improvement Needed

* Key to rating assessment - refer appendix B

Note: Before being finalised this report was referred to Southland District Council for comment. Council's responses are included in the body of the report.

RECOMMENDATIONS SUMMARY

That Southland District Council:

	Recommendation	Implementation Target Date
Q.3	Confirms its late tenders policy will be included in all contract tender documents in future.	01/10/2017
Q.5	a) Confirms it has updated its Procurement Strategy to reflect the Transport Agency's in-house professional services policy requirements; and b) Confirms that the updated strategy document has been endorsed by the Transport Agency.	a) 30/06/2018 b) 30/06/2018 Submitted to NZTA

FINDINGS

Question 1:	What issues, if any, remain unresolved from the previous audit?
Findings	The previous procedural audit in April 2014 made three recommendations. These related to repayment of over-claimed funding, signing of the in-house service level agreement for professional services, and establishing a programme for its minor improvement projects. These issues were reviewed as part of this audit and all matters have been addressed.

* * *

Audit: Southland District Council

Question 2:	Does Southland District Council have good financial systems in place to effectively manage the NZ Transport Agency's investment in the delivery of its land transport programme?	
Findings	Council has good financial systems in place to successfully deliver its agreed land transport programme. A dedicated management accountant within Council's transportation group has significantly strengthened its capability to manage its programme. There is evidence of good financial management practices in effect. Funding assistance claims for the four years ending 30 June 2017 were successfully reconciled to Council's general ledger. Expenditure testing on a sample of 2016/17 transactions confirmed all were eligible for funding assistance. Council has phased out the use of contract retentions and adapted a form of systems thinking (Vanguard Method) to manage supplier performance. To date, this method has reduced administration processing and is delivering desired outcomes.	

* * *

Question 3:	Has Southland District Council acted in accordance with its endorsed procurement strategy and the NZ Transport Agency's procurement requirements?	
Findings	A sample of ten contracts was selected for the review of Council's contract procurement procedures (refer appendix C). Council omitted to include its late tender's policy in tender proposal documents for two of the contracts, although tender acceptance close-off times were stated. Council needs to ensure its late tender's policy is consistently applied in future. The remainder of the sample met the Transport Agency's procurement requirements and all are consistent with Council's procurement strategy. Operations and maintenance on Council's network is delivered through three alliance contracts. All three were let in June 2017 using the quality based procurement method. Negotiated prices were still to be confirmed at the time of this audit.	
Recommendation	That Southland DC confirms its late tenders policy will be included in all contract tender documents in future.	
Southland DC response	Future contract documents will be amended to include this as per the policy. This has been relayed to our professional services consultant to ensure this is included.	Implementation Target Date 01/10/2017

* * *

Audit: Southland District Council

Question 4:	Has Southland District Council contract management practices in place to ensure contracts are managed effectively?
Findings	Contract management activity is well documented and good management practices are evident. There are good processes in place for administration of contract files. Effective controls are in place for managing contract variations and these are closely monitored. Regularly scheduled meetings at both leadership and team level are in place for the three network alliance contracts. These meetings play an important role for Council in managing planned activity on the network and for monitoring supplier performance. The Alternative Coastal Route project (Contract 16/50) was reviewed for compliance with road safety audit requirements. The design stage audit satisfied the requirements and responses from the designer, safety engineer, and project manager were appended. The project is still under construction. A post construction audit is to be completed after the project is finished. Council now has a dedicated resource for its minor improvements programme, which has been ramped up to deliver an expansive programme of works scheduled for this 2017/18 financial year.

* * *

Question 5:	Are Southland District Council's professional services providing value for money?
Findings	During the reconciliation of claims for financial assistance it was noted Council's professional services costs as a percentage of its maintenance and operations expenditure has averaged 26% over the previous four years. This presents as very high when compared to other approved organisations with similar resourcing. Services are provided both in-house and outsourced. Council might consider an economic efficiency review of its professional services activities to identify opportunities for improvement. Transport Agency policy changes which came into effect on 1st July 2015 introduced new procedures for the way in which Approved Organisations obtain and retain approval for claiming funding assistance for the delivery of in-house professional services. Approved Organisations must document the formal management structure for in-house operations and address how professional services are to be procured, including which services (if any) are to be obtained in-house, in their procurement strategy (refer NZTA Planning & Investment Knowledge Base [hyperlink]). Council needs to review and update its documented Procurement Strategy to reflect these requirements. Amendments to the strategy document will also require Transport Agency endorsement.

Audit: Southland District Council

Suggestion	Southland District Council should consider reviewing the delivery of its professional services activities for opportunities to improve economic efficiency.	
Recommendations	That Southland District Council: a) Confirms it has updated its Procurement Strategy to reflect the Transport Agency's in-house professional services policy requirements; and b) Confirms that the updated strategy document has been endorsed by the Transport Agency.	
Southland DC response	This is in the process of being addressed with a review of how in-house services are procured. The Strategy document will be amended and sent to NZTA by the 30th June 2018.	Implementation Target Date a) 30/06/2018 b) 30/06/2018

* * *

APPENDIX A

Audit Programme

1. Previous audit April 2014
2. Land Transport Disbursement Account
3. Final Claims for 2013/14, 2014/15, 2015/16, and 2016/17
4. Transactions (accounts payable) – 2016/17
5. Retentions Account
6. Reconciliation between ledgers supporting final claim and the audited financial statements
7. Procurement Procedures
8. Contract Variations
9. Contract Management & Administration
10. Professional Services
11. Transport Investment On-line (TIO) Reporting
12. Other issues that may be raised during the audit
13. Close out meeting

APPENDIX B

AUDIT RATING TABLE

Rating	Definition
Effective	**Investment management** – effective systems, processes and management practices used. **Compliance** – Transport Agency and legislative requirements met. **Findings/deficiencies** – opportunities for improvement may be identified for consideration.
Some Improvement Needed	**Investment management** – acceptable systems, processes and management practices but opportunities for improvement. **Compliance** – some omissions with Transport Agency requirements. No known breaches of legislative requirements. **Findings/deficiencies** - error and omission issues identified which need to be addressed
Significant Improvement Needed	**Investment management** – systems, processes and management practices require improvement. **Compliance** – significant breaches of Transport Agency and/or legislative requirements. **Findings/deficiencies** – issues and/or breaches must be addressed or on-going Transport Agency funding may be at risk.
Unsatisfactory	**Investment management** – inadequate systems, processes and management practices. **Compliance** – multiple and/or serious breaches of Transport Agency or legislative requirements. **Findings/deficiencies** – systemic and/or serious issues must be urgently addressed or on-going Transport Agency funding will be at risk.

Audit: Southland District Council

APPENDIX C

(from Question 3)

CONTRACTS AUDITED

Contract Number	Tenders Received	Date Let	Description	Contractor		
			Professional Services			
17/4	2	Aug 2017	Engineering Consultancy Services Contract	Opus (pending approval at time of audit)	Estimate Let Price Final Cost	$ 1,950,000 $ 1,943,520 Ongoing
			Physical Works			
13/41	3	Feb 2014	Stewart Island Slip Repairs	Duncan Farm Holdings	Estimate Let Price Final Cost	$ 557,000 $ 507,382 $ 475,637
14/15	5	Nov 2014	Taringatura Area Pavement Rehabilitation	The Roading Company	Estimate Let Price Final Cost	$ 621,042 $ 617,000 $ 652,564
14/29	5	May 2014	Drainage Improvements Northern Area	Wilson & Keen	Estimate Let Price Final Cost	$ 420,000 $ 453,074 $ 386,727
14/49	2	Jan 2015	Bridge Replacement – Dunrobin Road & Waimahaka Fortification Road	Wilson & Keen	Estimate Let Price Final Cost	$ 190,000 $ 234,673 $ 215,607
14/49	2	Jan 2015	Bridge Replacement – McDonald Road & Piano Flat	SouthRoads	Estimate Let Price Final Cost	$ 260,000 $ 251,915 $ 233,259
16/50	4	Mar 2017	Alternative Coastal Route Improvements	The Roading Company	Estimate Let Price Final Cost	$ 7,150,000 $ 8,536,459 Ongoing
17/01	2	Jun 2017	Roading Network Management, Operations & Maintenance Alliance – Foveaux Region	Fulton Hogan	Estimate Let Price Final Cost	N/A Pending Ongoing
17/02	2	Jun 2017	Roading Network Management, Operations & Maintenance Alliance – Central Region	SouthRoads	Estimate Let Price Final Cost	N/A Pending Ongoing
17/03	2	Jun 2017	Roading Network Management, Operations & Maintenance Alliance – Waimea Region	SouthRoads	Estimate Let Price Final Cost	N/A Pending Ongoing

Audit: Southland District Council

Investment Audit of Southland District Council

Report Number: RARWI – 1773 September 2017

Prepared by:

Ron Wheeler, Senior Investment Auditor

Reviewed by:

Glenn McGregor, Senior Investment Auditor

Approved by:

Jenny Fildes, Practice Manager Audit and Assurance

Development of the Business Case in Support of Kepler Options

Record No: R/17/11/26772
Author: Ian Evans, Strategic Manager Water and Waste
Approved by: Ian Marshall, Group Manager Services and Assets

☐ Decision ☒ Recommendation ☐ Information

Purpose

1 To provide an update to the Finance and Audit Committee on the development of the Te Anau Wastewater Business Case.

Executive Summary

2 At its meeting on 17 May 2017 Council asked officers to proceed with development of a business case for the upgrading of the Te Anau Wastewater Scheme. It also asked that officers develop selection criteria and a process via which possible alternative disposal sites might be identified.

3 This report provides an update on the progress being made with development of the business case. The Business Case currently considers scoring of options that can be undertaken under the current consent, or with a variation to that consent on the Kepler site. It may be appropriate to review these depending on the any Council decision around alternative site selection which will be considered in December 2017.

4 It is anticipated that a draft of the finalised business case can be brought to elected members by November 2017 with a decision to be made on whether to grant formal approval by December 2017. The Business Case has incorporated comments from Alan Bickers who sits on the Te Anau Wastewater Discharge Project Committee. The attached draft version now includes a procurement plan and timeline as well as financial analysis and detailed risk register.

Recommendation

That the Finance and Audit Committee:

a) Receives the report titled "Development of the Business Case in Support of Kepler Options" dated 10 November 2017.

b) Determines that this matter or decision be recognised as 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) Notes the process that has been followed to develop a Business Case for the Te Anau Wastewater Project.

e) Recommends to Council the adoption of the Business Case Development of the Business Case in Support of Kepler Options.

Background

5 At its meeting on 17 May 2017 Council asked officers to proceed with development of a business case for upgrading of the Te Anau Wastewater Scheme using the consented Kepler option.

6 It also asked that officers develop selection criteria and a process via which possible alternative disposal sites might be identified. This report provides an upgrade on the progress being made with development of the Kepler business case and seeks comment on the work undertaken to date. The Business Case currently considers scoring of options that can be undertaken under the current consent, or with by a variation to that consent. Overall, four options have been evaluated with the highest ranking option being the consented proposal.

7 The Wastewater Project Committee have previously been advised of the following high level timetable for the development of the business case. The dates in this table represent targeted dates and there is likely to be movement in them as work is progressed and particularly as drafts of the business case are reviewed:

Provide TAWC a copy of the business case project problem definition, investment objectives, and constraints.	31/8/17	Complete
Advertise alternative site criteria.	1/9/17	Complete
Report to Council on business case project problem definition, investment objectives, and constraints.	27/9/17	Complete
Provide to Council the initial business case draft on the Kepler options - as these are the ones that are currently known.	30/9/17	Complete
TAWC meeting to discuss the initial business case draft and get comments.	17/10/17	Complete

Close off date for expressing interest in providing an alternative site.	11/10/17	Complete
Consideration of the alternative sites identified.	25/10/17	Ongoing
Meeting with TAWC to discuss alternative sites and process from here.	9/11/17	Complete
Report to Council on the outcome of the alternative site process.	15/11/17	Services and Assets Committee 15/11/2017 Finance and Audit Committee 16/11/2017
Business case report to Council	13/12/17	

8 The detailed business case is being developed following the models used by both Treasury and NZTA in support of development of significant infrastructure investment decisions, albeit somewhat modified to reflect the scale of investment and the relatively advanced nature of the project.

9 Typically the business case is a multi-stage process based on the following assessments:

- Strategic assessment - what is the need?
- Economic assessment - generally to demonstrate value for money against any viable alternatives.
- Commercial assessment - can it be delivered and what are the options in terms of procurement/delivery models?
- Financial assessment - is it affordable and what are the funding sources (loans, contributions etc) referenced through the LTP?
- Management assessment - can it be successfully delivered including any further consenting requirements?

10 For the purposes of the current document the above five elements are being combined into one single document with some amendments to headings and terminology. The Economic Assessment, for example, is called an Options Assessment.

11 The Commercial, Financial and Management assessments will be replaced with the Procurement Approach, Financing and Funding Arrangements and Timeframe sections in the final version of the business case. The document is a live draft and has been updated incorporating comments from a representative of the Te Anau Wastewater Discharge Project Committee.

12 Any business case should clearly identify the problem or issue that is being addressed, the reasons why investment is necessary and the assumptions around what realistic options are available to address the issue/problem.

13 The current business case has used the Treasury model which has been amended to a more 'user friendly' wording following advice/guidance from Committee Member Bickers who has reviewed the case on behalf of Committee Members.

Issues

14 At its meeting on 27 September 2017, Council confirmed the Problem Statement (Need), Investment Objectives and Constraints being used to guide development of the Te Anau Wastewater Business Case. Based on comments received from Council, individual Committee Members and member Bickers the Business Case has been further developed and is presented as Attachment A.

15 It is important to reiterate that the only options considered are based around further treatment and disposal to the Kepler Block given that this is the site that Council currently has consent for, but noting that this may change subject to identification of a more suitable alternative site through the registration of interest process.

16 The four options considered at Kepler are outlined within the Business Case document and can be broadly summarised as:

- Option 1 Consented Option – pipeline to Kepler with irrigation via centre pivot with provision of land treatment via nutrient uptake through pasture and bacteria die off from both UV radiation from natural sunlight and also as treated wastewater passes through the soil. Additionally odour risk would be controlled by a trickling filter.
- Option 2A - this is essentially similar to option 1 with addition of a membrane filter at the oxidation ponds to treat flows up to 2000m3. This would provide additional treatment for the majority of occasions.
- Option 2B - This is essentially the same as option 1 but with a membrane filter sized to treat flows to the consented peak of 4500m3.
- Option 3 - This is similar to option 2B with membrane treatment up to peak flow of 4500 m^3 but with further land based treatment through sub surface drip irrigation rather than centre pivot irrigation.

17 The Business Case further outlines the criteria by which the alternatives were scored relative to each other, with a favoured option being identified. Options were scored independently by each member of an evaluation panel with final agreement of scores agreed through a final 'arbitration' process. All information on the scoring evaluation and scoring process is included in the Business Case.

18 Following scoring of all options the consented proposal (Option 1) scored as the highest ranked option, with Option 2A scoring only slightly less albeit incurring additional capex of $2.9 million. Option 1 will remain Council's preferred option subject to identification of suitable alternative available land. Should such land become available Council must decide whether any option for further treatment and disposal should be developed to the point where it can be scored using the same constraints and criteria outlined in the Business Case and noting key constraints.

19 Following on from the Committee meeting on 17 October 2017 officers have continued to develop the business case, which is now largely complete albeit still in draft form pending feedback and endorsement from both the Services and Assets and Finance and Audit Committees.

Factors to Consider

Legal and Statutory Requirements

20 It is noted that all decisions of the Council are subject to the decision-making provisions detailed in Part 6 of the Local Government Act 2002. In broad terms, these provisions require that the Council assess the advantages and disadvantages of each reasonably practicable option.

21 The extent of consideration given should have regard to the level of significance of the proposed decision.

22 Under section 14 of the Local Government Act 2002 Council is required to undertake commercial transactions in accordance with sound business practice. A decision on a significant capital investment, such as that involved with the upgrading of the Te Anau Wastewater scheme would fall within this definition.

Community Views

23 There are a number of different groups or sections of the community whose views need to be considered as Council proceeds through the process of making a decision on which option to pursue. These include:

- The residents and communities of Te Anau and Manapouri. FSO is an organisation that purports to represent the views of a number within these communities.
- The district wastewater user community who will be collectively required to fund the final solution through a targeted rate.
- All district ratepayers who ultimately carry a level of responsibility and risk for all Council activities.
- Tangata whenua. Note that under section 77(1)(c) of the Local Government Act 2002 there is a requirement for the Council to take into account the relationship of Maori with their ancestral land and waters if the decision being made is considered to be significant. It is clear that a decision about how to dispose of wastewater for Te Anau would be such a decision given that the Lake is a natural state waterbody and statutory acknowledgement area.
- Stakeholder groups and organisations with an interest in the Te Anau Catchment. These include Fish and Game NZ, Guardians of the Lakes and Department of Conservation.

24 In making the decision to proceed with the development of a business case for the Kepler option Council has taken the views of these stakeholders into account. These include recognition of the fact that there are a number of people within the Te Anau and Manapouri communities who are concerned about the current Kepler consented option.

25 It is relevant that Council continue to consider the full range of views that exist as it considers the appropriateness of the criteria proposed through this report.

Risk Analysis

The Business Case considers the Key risks to Council through the endorsement of the business case and also includes a full detailed risk register with proposed mitigation measures.

Overall the most significant risk is associated with the impact of further delays to the project to continue further investigation of alternative sites. The current consent to discharge to the Upukerora expires by December 2020 and Council must have any new consent arrangements in place and scheme constructed by that date to be able to continue operating. Currently the procurement plan section of the Business Case indicates that the preferred option can be delivered at Kepler ahead of this date. Delaying the project further to allow further investigation work increases the risk that this date would not be met.

Under the terms of Reference for the Finance and Audit Committee there is a responsibility to review, refine and comment on the overall risk register included within the Business Case.

Costs and Funding

26 At this stage the draft 2018-28 Long Term Plan (LTP) includes a budget of approximately $14.7 million. This is the cost estimate included in the business case for the preferred option, with inflation added for year two. The updated business case identifies additional capital expenditure required from the amount included in the 2015-25 LTP to complete the work. This has arisen largely as a result of review of contract rates and additional scope around pipeline design.

27 Also included in draft 2018-28 LTP are changes to the operational expenditure included based on the business case. These costs have changed from the 2015-25 LTP. The most significant operational cost change is that the cut and carry operational will break even rather than produce a surplus that can be used to offset any other costs.

28 All operational expenditure is funded directly from rates in the year that it is incurred. Capital expenditure is to be funded from available development contributions and depreciation reserves, with the remainder funded by loans over 30 years. The loans are serviced directly from the district wastewater rate.

29 The impact of the preferred option on the district wastewater rate (along with all other work programmed) in the draft 2018-28 LTP is:

Year	2018 /19	2019 /20	2020 /21	2021 /22	2022 /23	2023 /24	2024 /25	2025 /26	2026 /27	2027 /28
Percentage increase	2.15%	2.56%	9.51%	0.86%	5.50%	5.59%	6.50%	2.44%	2.01%	2.32%
Rate (excl GST)	$397	$408	$446	$450	$475	$502	$534	$547	$558	$571

30 The GST exclusive rate for district wastewater in 2017/18 is $389 and increases to $571 in 2027/28. Residential ratepayers are impacted by GST inclusive rate of $448 in 2017/18 increasing to $657 in 2027/28.

31 The appropriateness of this cost estimate, and the current LTP budget assumptions, will need to be considered further once the financial costs and risks associated with development of the Kepler option, and any others that Council may want to consider further, have been reviewed as part of the current business case process and decisions are made about whether Council has a desire to investigate an alternative disposal site.

32 It is likely that investigation of any alternative would need to be undertaken concurrently with the development of the Kepler option if the December 2020 deadline is not able to be moved. Currently the draft 2018-28 LTP has $500 thousand allowed for investigation into alternative sites, funded from reserves. Any funds not required for investigation of the alternative sites will be used to reduce the loan required to fund the capital expenditure. This will reduce the loan repayments required to be funded from rates in future years.

Policy Implication

33 It is noted that procurement of the preferred option will be undertaken in line with Councils current Procurement Policy.

34 The funding mechanisms proposed are in line with the current Revenue and Financing Policy.

35 Council's external debt levels as a result of this project will be line with Council's Investment and Liability Management Policy. The policy requires that net external debt not to exceed 100% of total revenue.

Project Committee Feedback

36 Member Bickers has undertaken a critical review of the Business Case on behalf of the Te Anau Discharge Project Committee and has offered a number of comments that have been incorporated into the attached document.

37 Finance and Audit Committee Members now have the opportunity to provide comment and recommend any potential amendments to the Business Case.

Alternative Site Options

38 Following 17 May 2017, Council decision a set of criteria and process for identification of possible alternative disposal sites were developed and subsequently approved by the Project Committee.

39 Council has advertised for expressions of interest for alternative sites that people may wish to sell to Council. A number of criteria have been developed based on the type and area of land Council would require if it was to look at land availability for any new wastewater discharge. The criteria were initially advertised on 1 September 2017 with any expressions of interest required to be with Council by 11 October 2017. A separate report outlines the process and provides information on how any such alternatives will be evaluated.

40 If potentially suitable site(s) are identified there will be a need for Council to make a decision on whether to proceed with a detailed investigation programme for that site knowing the timescales involved with the investigation and consenting phases of the process. This work would likely need to proceed in parallel with work on the consented Kepler option.

41 The Services and Assets Committee are reminded of a resolution of Council from it meeting of 16 November 2016 where it *'Agrees that it is unacceptable for the Council to not have a consented discharge for the Te Anau Wastewater Scheme'*.

Analysis

Options Considered

42 The options considered are to endorse the Business Case as presented, endorse the Business Case with amendments or not endorse the Business Case.

Analysis of Options

Option 1 – Endorse the Business Case as presented

Advantages	*Disadvantages*
• Will allow progress to be made with development detailed design • Provides greater degree of certainty that critical timelines can be met • Enables the Committee to bring to Council's attention any relevant matters that Council should consider in making a decision on the business case.	• None identified.

Option 2 - Endorse the Business Case with amendments

Advantages	*Disadvantages*
• None identified.	• Business case as drafted may not fully reflect all relevant matters. • May add degree of risk that critical timelines will not be met if any amendments result in delays to the current timeline outlined through the Business case.

Option 3 - Do not Endorse the Business Case

Advantages	*Disadvantages*
• None identified.	• Business case as presented may not fully reflect all relevant matters. • Adds risk that critical timelines around expiry of the current consent will not be met.

Assessment of Significance

43 The decisions that Council is making on how to proceed with the development of a new long term solution for the disposal of Te Anau Wastewater is significant. It involves a significant level of capital investment on an important piece of Council infrastructure.

Recommended Option

44 It is recommended that the Finance and Audit Committee endorse the Business Case either as presented or subject to amendment with approval to present the final version to Council for approval at its meeting on 13 December 2017.

Next Steps

45 Work will continue to finalise the Business Case with a view to presenting to Council for approval on 13 December 2017.

Attachments

A Te Anau Business Case - Kepler Option ⇩

SOUTHLAND DISTRICT COUNCIL
Te Rohe Pōtae o Murihiku

Stantec

TE ANAU WASTEWATER SCHEME
KEPLER BLOCK
BUSINESS CASE

Prepared for Southland District Council

QUALITY STATEMENT

PROJECT MANAGER		PROJECT TECHNICAL LEAD
Rima Krause		Roger Oakley
PREPARED BY		
Roger Oakley, Sue Bennett, Ian Evans, Simon Moran, Susan McNamara	.....	...10 / 11 / 2017
CHECKED AND REVIEWED BY		
Ian Evans, Simon Moran (SDC)	.....	...10 /11 / 2017
APPROVED FOR ISSUE BY		
Rima Krause (as working draft)	.....	...10 / 11 / 2017

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REVISION SCHEDULE

Rev No	Date	Description	Signature or Typed Name (documentation on file).			
			Prepared by	Checked by	Reviewed by	Approved by
1.0	10 Oct 2017	Partial Working Draft for TAWWDPC	RO. SB	I Evans	S Moran	R Krause
2.0	10 Nov 2017	Working Draft for Council	RO. SB, IE, SM	I Evans	S Moran	R Krause

Te Anau Wastewater Scheme - Kepler Block Business Case

Contents

Executive Summary

Purpose of Business Case

The Business Case analyses the options available for the treatment and disposal to land of treated wastewater from Te Anau to a block of land known as the Kepler Block. It recommends a preferred option and provides a justification for approval of the project by Southland District Council (SDC). The option assessed were:

Option 1: This is the scheme allowed by the resource consents. It continues to use the existing oxidation ponds near Te Anau prior to further land treatment and disposal at the Kepler Block by Centre Pivot Irrigation.

Option 2A: This is Option 1 with an additional membrane filtration step sized to treat base flows up to 2,200 m^3/day at the WWTP.

Option 2B: This is Option 1 with an additional membrane filtration step sized to treat peak flows up to 4,500 m^3/day at the WWTP.

Option 3: This is Option 2B with Subsurface Drip Irrigation at the Kepler Block instead of Centre Pivot Irrigation.

Except for Option 2A, all options are designed for the predicted peak flow of 4,500 m^3/day.

The consent for the current discharge of treated wastewater to the Upukerora River expires in November 2020.

The Business Case seeks formal approval to undertake a proposed upgrade of the Te Anau Wastewater discharge by discontinuing the direct discharge to the Upukerora River and replacing it with an alternative land based treatment and disposal method based on the option selected by Council.

The Business Case is being prepared to critically review the Kepler Block based options. It is focused on the irrigation to land for the purposes of further treatment and disposal at the Kepler Block to the north of Te Anau Airport Manapouri. If other options become available, particularly in response to the public request for land that concluded in October 2017, they will be reviewed against the advertised criteria and then against the Key Constraints as outlined in the Business Case.

The Business Case comprises:

- the 'Strategic Assessment', which provides a compelling case for change
- the 'Options Assessment', which identifies the preferred option
- the 'Procurement Approach', which includes the 'Timeframe', and
- the 'Financing and Funding Arrangements'.

The design of treatment and disposal options for the Kepler Block or any alternative must have the capacity to handle flows and loads resulting from the expected population growth and business development in Te Anau beyond the life of the current consent.

The Drivers for the project are:

- a long-term sustainable solution;
- an improvement in environmental outcomes; and
- discharge to land is the preferred final treatment stage.

The Investment Needs of the project are:

- The expiry date of the present consent to discharge to the Upukerora River is 30 November 2020;
- Recent 2017 amendments to the National Policy Statement – Freshwater Management mean that gaining even short term additional consents for the existing discharge may not be possible.
- An upgraded or new scheme to meet environmental standards acceptable for a long term consent of at least 25 years. This needs to be in place by the expiry date of the present consent to discharge to the Upukerora River.
- The existing wastewater treatment and disposal facility is unlikely to capable of treating to a sufficiently high quality to allow future long term discharge to water. The existing facility has limited ability to be adapted to improve environmental performance but existing infrastructure has the potential to be reused as part of the overall solution if appropriate.
- The existing scheme can cope with higher flows and loads without any major loss of performance, with only minor upgrades needed (provision of more aeration). Such upgrades will not improve performance to a level that would allow a long term consent for discharge to water to be granted.
- Any existing or new processes, or process units, must have capacity to adapt, in a reasonably cost effective way, to higher flows and loads.
- A new scheme is needed that takes into account the requirements of the community as well as the key stakeholders. This includes recognising the two key themes of Iwi, being removing direct discharges to water, and continuous improvement.
- Any new scheme should have upgrade options to further reduce nutrient contribution to the Waiau Catchment, beyond whatever limit is consented for the initial long-term consent.
- The present Long Term Plan budgets $12.1Million for capital expenditure for any new scheme, and solutions are sought that are aligned to this.

Preferred Option

Option 1 being the discharge of oxidation pond treated wastewater to the Kepler Block by Central Pivot Irrigation is marginally preferred over Option 2A. Option 1, through being consented, is determined to have effects that are less than minor, or ones that can be adequately mitigated. It also achieves the project objectives at least cost.

Option 2A comes a very close second with some improvements primarily in nitrogen removal, but at a cost of an additional $2.9M.

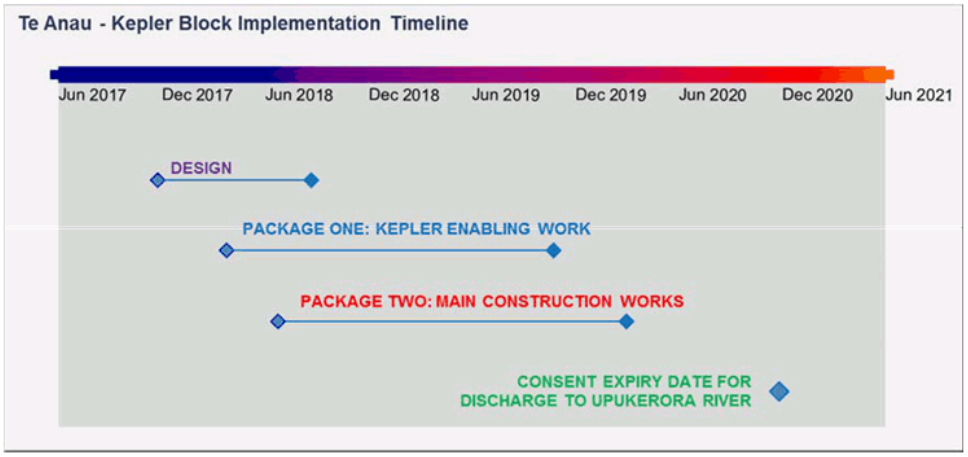
Procurement Strategy

The Procurement Plan has been developed to comply with the SDC Procurement Policy. The works will be split into two packages:

- Package one: Kepler enabling works which is scheduled early to allow time for the establishment of the block prior to irrigation commencing

- Package two: Main construction works which will include a combination of separate design and tender for the standard elements of the pipeline and earthworks, and design-build elements for the mechanical/electrical and process elements such as centre-pivot irrigators and trickling filter.

Timeline



Financing and Funding

The capital work to be completed will be funded from available reserves accumulated from funding depreciation with the remainder funded by a 30 year loan. In 2018/19 the remaining loan will be $4.4 million and in 2019/20 $8.6 million.

The additional operational costs will be funded directly from the rates in the year that the cost is incurred.

1 Introduction

1.1 Purpose

The Business Case analyses options available for the treatment and disposal of wastewater at the Kepler Block and provides a justification for approval of the project by Southland District Council (SDC) should that be deemed appropriate. It also provides a basis for future reporting of progress of implementation of the project.

1.2 Current Situation

The consent for the current discharge from the Te Anau Wastewater Treatment Plant to the Upukerora River will expire in November 2020.

The Region's planning framework states that discharges to land are preferred over discharges to water. Therefore, SDC purchased the Kepler Block, designated the land for the discharge of wastewater and was granted resource consents. These approvals were on the basis of the use of centre pivot irrigation for the purposes of land treatment, particularly the removal of nutrients and pathogens.

The Kepler scheme has a 25 year resource consent and is designed to have capacity to allow for predicted growth until at least 2041. This Business Case also assesses the potential for the scheme to be developed to provide further capacity beyond 2041.

There is currently $12.1 million identified in the current Long Term Plan to construct and commission a new wastewater treatment and disposal scheme for Te Anau at the Kepler Block by November 2020.

1.3 Options Considered

The Business Case evaluates the Consented Scheme against three alternatives also based on land treatment at the Kepler Block. The options considered are:

Option 1: This is the consented scheme which continues to use the existing oxidation ponds prior to further land treatment and disposal at the Kepler Block by Centre Pivot Irrigation.

Option 2A: This is Option 1 with an additional membrane filtration step sized to treat base flows up to 2,200 m^3/day at the WWTP.

Option 2B: This is Option 1 with an additional membrane filtration step sized to treat peak flows up to 4,500 m^3/day at the WWTP.

Option 3: This is Option 2B with further filtration after the pipeline prior to Slow Rate Drip Irrigation at Kepler Block instead of Centre Pivot Irrigation.

1.4 Structure of Business Case

The structure of the business case is a modified version of the Treasury Template[1], reflecting the advanced nature of the project.

The Business Case includes the following stages:

- the 'Strategic Assessment', which provides a compelling case for change
- the 'Options Assessment', which identifies the preferred option
- the 'Procurement Approach', which includes the 'Timeframe', and
- the 'Financing and Funding Arrangements'.

[1] http://www.treasury.govt.nz/statesector/investmentmanagement/plan/bbc/guidance

2 Strategic Assessment –the Case for Change

2.1 History of Project

The SDC provides sanitary works for the reticulation, treatment and disposal of wastewater in eighteen (18) communities within its District. Te Anau is one such community, where the service has been provided since 1967. The SDC is the owner and operator of the Te Anau Wastewater Treatment Plant (Te Anau WWTP), which is located on land owned by SDC.

The original Te Anau reticulation and WWTP was commissioned in 1967 to service the town centre along the old state highway. Further expansion of the scheme occurred in the early 1970s as reticulation was extended to residential areas. In 1984, an additional oxidation pond was constructed at the treatment plant to cater for increased loading resulting from the continued growth in the town.

SDC held a permit from the Southland Catchment Board, pursuant to the Water and Soil Conservation Act 1967, to discharge treated wastewater to the Upukerora River and then to Lake Te Anau (Water Right No.91018).

In 1995, the SDC lodged an application for a resource consent under the Resource Management Act 1991[2] (RMA) to replace the Water Right with the Southland Regional Council (referred to as Environment Southland, ES). During public notification of the application, a number of submitters expressed opposition to the continued discharge of wastewater to the Upukerora River.

The submitters requested that SDC determine the suitability of the treatment plant site for land disposal. A number of investigations took place between February 2001 to July 2002 and as a result of these investigations, SDC concluded that the land at the Te Anau WWTP was not suitable for the discharge of treated wastewater[3].

In 2004, SDC was granted a ten year resource consent for the continued discharge of treated wastewater from the Te Anau oxidation ponds to the Upukerora River, subject to a number of treatment upgrades being undertaken, including an inlet screen, aeration, wetlands and monitoring conditions. A further condition of the consent was that SDC investigate a long term strategy for the management of wastewater from Te Anau that looked to move away from a direct discharge to water.

In order to undertake the Strategy Review, SDC met with representatives of key stakeholders, which led to the formation of the Infrastructure Working Group (IWG). The IWG comprised the key interested stakeholders (as identified in Appendix 1) and had the objective of assisting the Council in developing the long term strategy for the wastewater. IWG met a number of times over the period 2005 – 2007.

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[2] The RMA replaced the Water and Soil Conservation Act 1967.

[3] The series of reports by MWH were included as Appendix A of the 2004 consent application as follows:

- Te Anau Sewage Treatment Plant: Site Investigation Report and Recommendations, April 2001
- Te Anau Sewage Treatment & Disposal System - Design Concept & Site Investigation Recommendations, December 2001
- Te Anau Sewage Treatment Plant: Hydrogeological Investigations, June 2002.
- Te Anau Sewage Treatment Plan: Conceptual Design Review, July 2002.

After reviewing alternative options for treatment and disposal[4], the IWG identified that the land treatment and disposal of treated wastewater was preferred. They agreed that the parcel of land surrounding the airport, approximately 6 kms north of Manapouri township was the best option. This land is known as the 'Kepler Block' and was owned by Landcorp. The approach was confirmed by the Te Anau Community Board and Council in 2007 and the Kepler Block was purchased by the SDC in June 2008. The area purchased included areas to the north and south of the airport. The decision to proceed with the disposal of treated wastewater to land at the Kepler Block was reconfirmed by the Te Anau Community Board in 2010 and 2012.

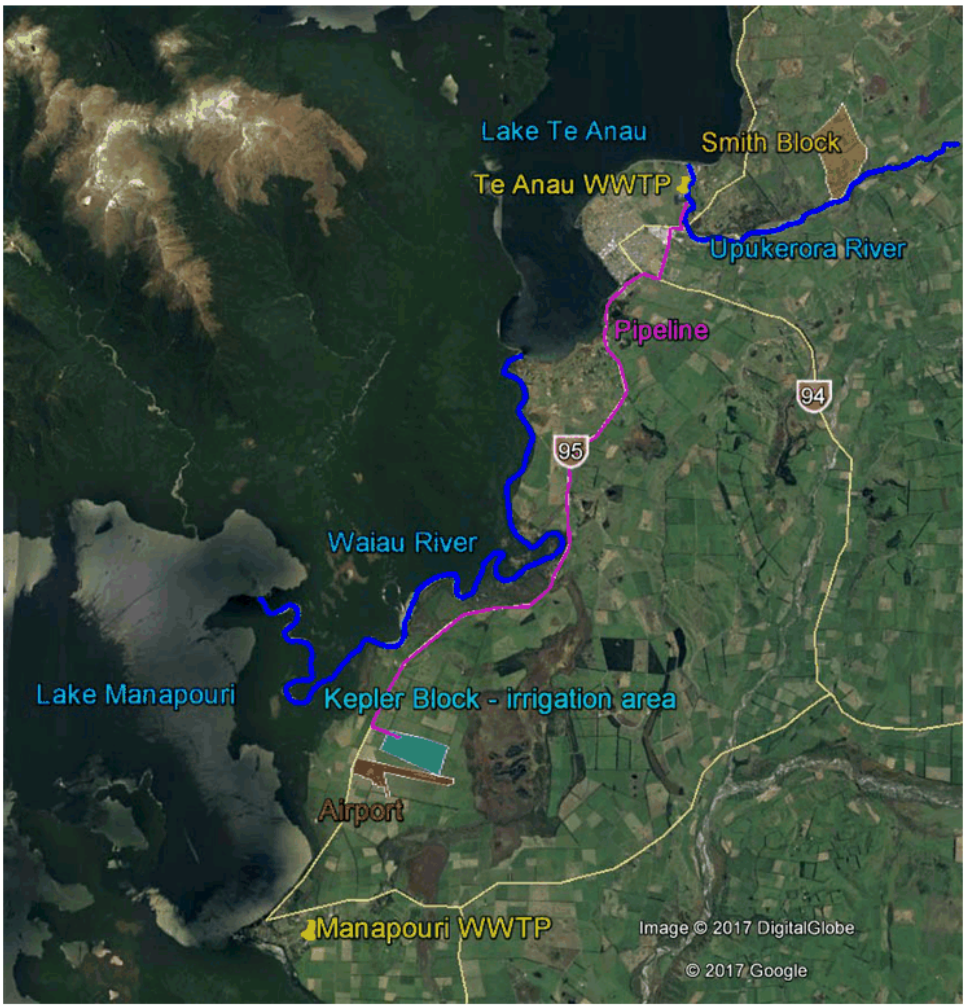

Figure 1: Location of Relevant Sites

In 2012, after further meetings with the IWG, a consent application for the discharge to land of treated wastewater at the northern part of the Kepler Block was prepared and lodged in September 2013. The hearing before independent commissioners was held in July and November 2014. The decision on the

[4] A compilation of the process undertaken by the IWG is given in "*Te Anau Sewerage: Status Report on Improvement Strategy for Treatment and Disposal*", by MWH, dated October 2007

granting of consents for Kepler Block was released in January 2015 and appealed by Fiordland Sewerage Options Inc (FSO) and two individuals. The appeal was referred to Court appointed mediation.

In May 2015, Council set up the Te Anau Wastewater Discharge Project Committee (the Committee) which was tasked with providing governance oversight around delivery of the project. A key first step in the process was to undertake a peer review of the consented option and compare how it ranked against any potential alternative option. The review undertaken by Pattle Delamore Partners (PDP) indicated no fatal flaws with the Kepler proposal. However, it did identify two potential sites that may warrant further scrutiny. These sites are known locally as the Smith Block and the Slee Block. Further work undertaken identified that the Smith Block would most likely be more suitable for treated wastewater irrigation.

During the appeal process, in 2016, both the Te Anau Community Board and the Manapouri Community Development Area Subcommittee formally resolved not to support the development of the Kepler option, but did not identify any viable alternative to the proposal.

Through the appeal all parties indicated a willingness to enter into Environment Court appointed mediation. This led to further work being undertaken by experts for both parties with a conferencing of experts undertaken in September 2016. While full agreement could not be reached either through conferencing and mediation there was a willingness between parties to continuing dialogue with a view to settling the appeal without the need to proceed to Court.

SDC and FSO reached an agreement on 21 December 2016 under which SDC agreed to investigate the use of a site referred to as the "Smith Block" for wastewater treatment and disposal. FSO agreed to withdraw its appeal. In the event that the Smith Block was not found to be a viable option, the agreement provided that SDC could implement the resource consents for the Kepler Block as the default disposal option.

As a result of this agreement, the appeal was resolved in December 2016 with consent issued in January 2017 as Discharge Permit 302625-01, effective 17 Jan 2017. SDC began to investigate the Smith Block as an alternative site for potential land treatment and disposal. During the investigation, it became clear that this site would not be a viable option because it was unavailable to SDC. SDC was then able to implement the consents at the Kepler Block.

The consent for the existing discharge to the Upukerora River expired in October 2014. A further short term consent for this discharge was sought to allow SDC time to complete the consent process for the Kepler Block and, if granted, implement the scheme. This short term consent was granted in December 2015 for a period of five years expiring on 30 November 2020.

In 2017, Council resolved to develop this business case for the Kepler Block. At the same time, SDC agreed to undertake one final request for landowners who would be willing to offer land to SDC if they believed that it met with a set of specified technical criteria. This public registration of interest process closed on 11 October 2017.

2.2 Strategic Context

This section identifies the key parties involved and summarises the legislative framework for the project.

2.2.1 Organisational overview

The key stakeholders and organisations involved with the project are given in Appendix 1.

2.2.2 Local Government Act

As a local authority, SDC must act in accordance with the Local Government Act 2002 (LGA). In undertaking its functions under the LGA, it must comply with other relevant legislation, such as the Resource Management Act 1991 (RMA).

A more detailed summary of the specific provisions of the LGA, Council's Significance and Engagement Policy and the associated public law principles, as they apply to this Business Case, is provided in Appendix 6.

SDC must meet its responsibilities to deliver infrastructural services in an environmentally responsible manner and in a way that recognises and, as far as reasonably practicable, responds to the needs and wants of its communities. It is committed to the health and welfare of people, communities, culture and the environment within the District. This is demonstrated by the Council's Vision, Mission and Outcomes.

The Council's vision is given below, noting that SDC intend to review their vision and mission by the end of 2017:

To have thriving, healthy Southland communities.

The Council's mission is:

Working together for a better Southland.

The three outcomes the Council strives for are:

a. Supporting Our Communities
b. Making the most of our Resources
c. Being an Effective Council

These statements describe the philosophy that guides the Council in decision making and guides the staff in planning and operational tasks.

Infrastructure Planning

Section 101B of the LGA requires 30 year planning of infrastructure. In total, the SDC's 30 year Infrastructure Strategy (2015-45) has a capital expenditure budget of $1.15 billion.

SDC is also developing a long-term wastewater strategy (the Wastewater Strategy). The Wastewater Strategy is focussed on understanding current and future wastewater management challenges facing each scheme in the District and identifying efficient, effective and appropriate wastewater options that are cost-effective for the District to achieve sustainable management of the environment.

Long Term Plan

Section 93 of the LGA requires SDC to have a 10 year plan (LTP) in place at all times as it is the primary way SDC is held accountable to its communities. The plan describes the activities and service

levels Council intends to provide and sets out the accompanying budgets. It also highlights key issues the District is facing and the strategies intended to address these. The LTP must be consistent with the costs identified in the 30 year Infrastructure Strategy.

In the 2015-2025 LTP, SDC has budgeted to spend some $15.1 million to improve wastewater discharges. The proposed upgrade for Te Anau represents the major portion of this budget being $12.1 million[5] of capital expenditure with an allowance of $15.9M for Net Present Value[6].

Wastewater is funded as a District activity by way of a targeted rate on all serviced properties across the whole District. Although scoring highly in accordance with Council's adopted prioritisation criteria, the Te Anau wastewater project still needs to be considered in the context of overall District spending.

In addition to the funding in the LTP, SDC has already incurred significant costs associated with the development of the Kepler Scheme, including the purchase of the Kepler Block in 2008, and resource consenting costs, which have been treated as either operating costs or as "Work in Progress (WIP)" on the Council balance sheet.

2.2.3 Resource Management Act

The purpose of RMA is to promote sustainable management of natural and physical resources. Figure 3 shows the hierarchy of planning documents that exist under the RMA, with lower order documents being required to be consistent with those above them[7].

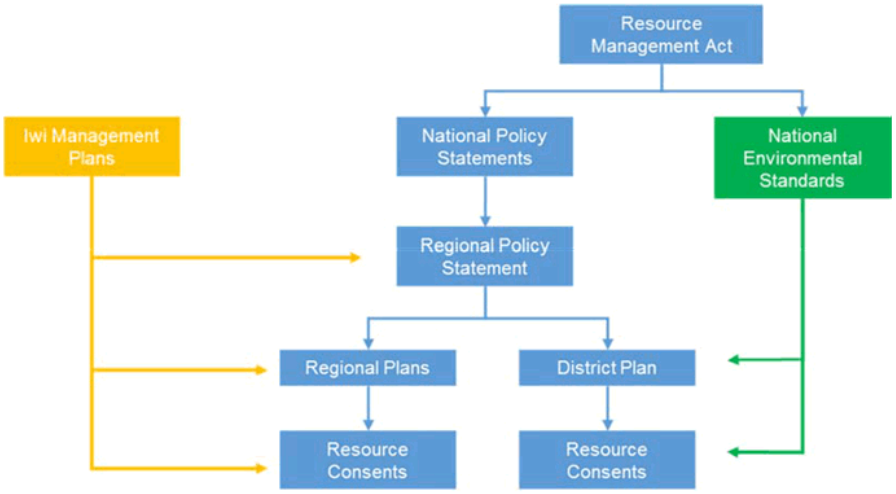

Figure 3: Hierarchy of Planning Documents

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5 This was based on the previous cost estimate, which has been updated. As noted in Table 10 of this report, the current cost estimate for the consented option is $14.5M.

6 This is calculated on the previously budgeted capital expenditure of $12.1M being spent in year one, and a uniform series of operational expenditure cost of $300k each year for 25 years at a 6% discount rate. The period and rate were agreed at a meeting with SDC on 21 August 2017, being consistent with their internal liability policy. The operational cost in the current estimate has increased as given in Table 11.The current spending profile for the project as given in Section 5, is for staged spending over the three years from 2017 to 2020, rather than all in the first year as assumed in the 2015/25 LTP.

7 Appendix 2 provides a summary of the planning documents that provide guidance to the project.

National Policy Statement for Freshwater Management

National Policy Statements are promulgated by Central Government and are a key tool to achieve the sustainable management purpose of the RMA. The National Policy Statement for Freshwater Management (NPS-FM) sets out the objectives and policies for freshwater management under the Resource Management Act 1991. It first came into effect in 2011 and was amended in August 2017.

The primary impacts of the NPS-FM on the Te Anau project are:

- The implementation of the "Limit setting process". Environment Southland is in the process of implementing this process which may require nutrient load reductions, either on an individual wastewater scheme basis or potentially at a catchment level for each of five main river catchments in the Southland region.

  The consented Kepler Block option results in up to 50% reduction in the projected nitrogen load from Te Anau to freshwater through the cut and carry operation[8], with other contaminants being largely removed through land treatment. This reduction in contaminant load represents the SDC response to limit setting for the Te Anau WWTP.

- The 2017 amendment to the NPS-FM required that when considering applications for discharge consents, the Regional Councils must now have regard to the health of people and communities as affected by their contact with fresh water (Policy A4). The 2017 amendment revised the standard from "secondary contact" to "contact".

  This rule would apply to an application to extend the existing Te Anau wastewater discharge consent which expires in November 2020. This means that gaining a further short term consent for discharge to the Upukerora River to allow for the development of options that are not already consented will have become more difficult.

Regional Planning Documents

The regulatory framework in the existing and proposed Regional Planning documents provide strong direction to maintain or improve water quality. This is identified in a number of objectives and policies in the Regional Policy Statement, the Regional Water Plan and the Proposed Southland Water and Land Plan, which will replace it.

All of these documents also identify a preference for discharge to land over discharge to water. This direction is consistent with the relevant iwi plans and statements, which is in accordance with the RMA requirement that iwi plans be taken into account in plan making.

The discharge of wastewater to land is a discretionary activity compared to a discharge to surface water which is non-complying. Not only is non-complying a higher bar to meet but the strong policy direction in the regional plans and recent changes to the NPS-FM reinforce this need to significantly improve discharges to water. This means that any new consent to discharge to the Upukerora River may well be required to have a much higher level of treatment in order to even get a short term consent as decisions by Environment Southland will need to be consistent with the NPS-FM.

Furthermore, Lakes Te Anau and Manapouri are subject to a high level of protection because they are part of the Fiordland National Park, are Statutory Acknowledgement Areas and are recognised as Natural State Waters.

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[8] "Cut and carry" means that the harvest will be cropped, baled and removed from the site. This is the primary mechanism for the removal of nitrogen from the system.

Resource Consents

The option description in Appendix 4 includes a summary of the status of the required consents.

2.2.4 Growth Projections for Te Anau

It is important to consider the future growth projections for Te Anau because both the tourist and permanent resident populations are expected to grow by 50% over the next 25 years. It is assumed that the flows and loads for the scheme will increase in proportion to the increase in population as this is typically the case except where the type of influent changes i.e. there is a disproportionate increase in the type or volume of commercial or industrial wastewater.

The scheme needs to be designed for the expected peaks in wastewater flows. The projected increase in population based summer and winter peak flows[9] are presented in Table 1 and Table 2 and shown in Figure 4 and Figure 5. The design flows for the project were developed from the 2041 projections including an allowance of 50% to provide for increased flows resulting from rainfall on the oxidation ponds and provision to rapidly draw down accumulated buffer storage in pond 1 after a significant rainfall event. The design flows are summarised in Table 3.

The peak flow of 4,500 m^3/day has been used because it is considered to reflect the volume that is likely given the Stats NZ population projections to 2041. Figure 6, shows the recorded inflows received at the Te Anau wastewater treatment plant and the associated rainfall data. In 2016 there was a period of ten days where the inflow exceeded 2,500 m^3/day, this does not include the volume of rainwater that falls on the ponds nor an allowance for increasing population.

[9] These projections are documented in Appendix F of the Kepler Consent Application.

Table 1: Summer Peak Flows

Summer Peak		Flows (m^3/day)									
Normally resident growth	Visitor growth (% per annum)	2006	2011	2016	2021	2026	2031	2036	2041	2046	2048
Stats NZ Low Projection	Stats NZ Low Projection	1792	1878	1850	1897	1897	1878	1895	1914	1896	1897
Stats NZ Medium Projection	Stats NZ Medium Projection	1792	1878	1944	2001	2038	2098	2135	2171	2208	2227
Stats NZ High Projection	Stats NZ High Projection	1792	1916	2019	2114	2199	2265	2374	2429	2485	2503
Stats NZ Medium Projection	2%	1792	1926	2059	2198	2337	2501	2667	2848	3046	3132
Stats NZ Medium Projection	3%	1792	1973	2166	2380	2612	2890	3196	3547	3950	4131
Stats NZ Medium Projection	2.5%	1792	1950	2112	2285	2468	2684	2913	3168	3455	3582

Table 2: Winter Peak Flows

Winter Peak		Flows (m^3/day)									
Normally resident growth	Visitor growth (% per annum)	2006	2011	2016	2021	2026	2031	2036	2041	2046	2048
Stats NZ Low Projection	Stats NZ Low Projection	843	884	870	892	892	884	892	900	892	892
Stats NZ Medium Projection	Stats NZ Medium Projection	843	884	915	941	959	987	1004	1022	1039	1048
Stats NZ High Projection	Stats NZ High Projection	843	901	950	995	1035	1066	1117	1143	1169	1178
Stats NZ Medium Projection	2%	843	902	959	1018	1075	1144	1211	1285	1365	1400
Stats NZ Medium Projection	3%	843	921	1001	1089	1182	1295	1417	1557	1717	1788
Stats NZ Medium Projection	2.5%	843	911	980	1052	1126	1215	1307	1409	1524	1575

Table 3: Design Flows

Staging	Design flows for Options 1, 2A and 2B		Design flows for Option 3	
	Summer (m^3/day)	Winter (m^3/day)	Summer (m^3/day)	Winter (m^3/day)
Initially installed	4,500	2,000	2,250[10]	2,000
After upgrade in year 10	4,500	2,000	4,500	2,000

[10] Proposed by P Riddell, section 6 of Will Say statement. Refer to the Option overview, Appendix 4, regarding the risks and consequences of this initially lower capacity.

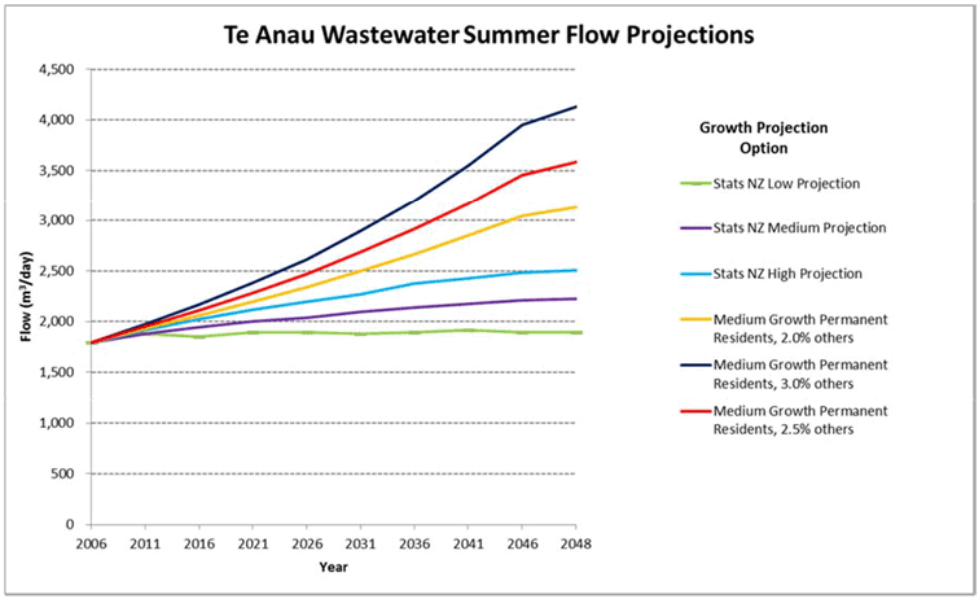

Figure 4: Increase in summer Peak Flows

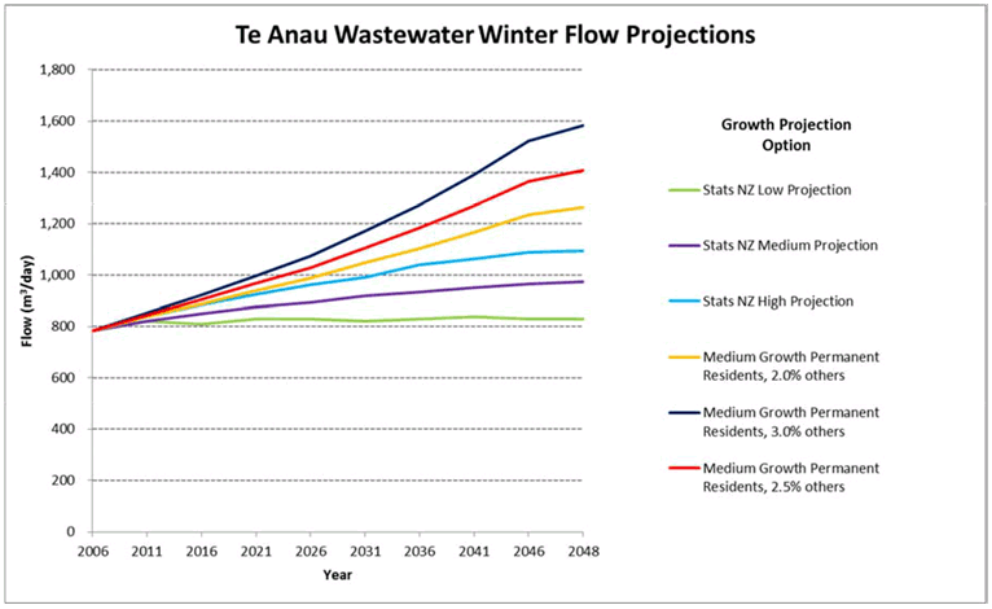

Figure 5: Increase in winter peak flow

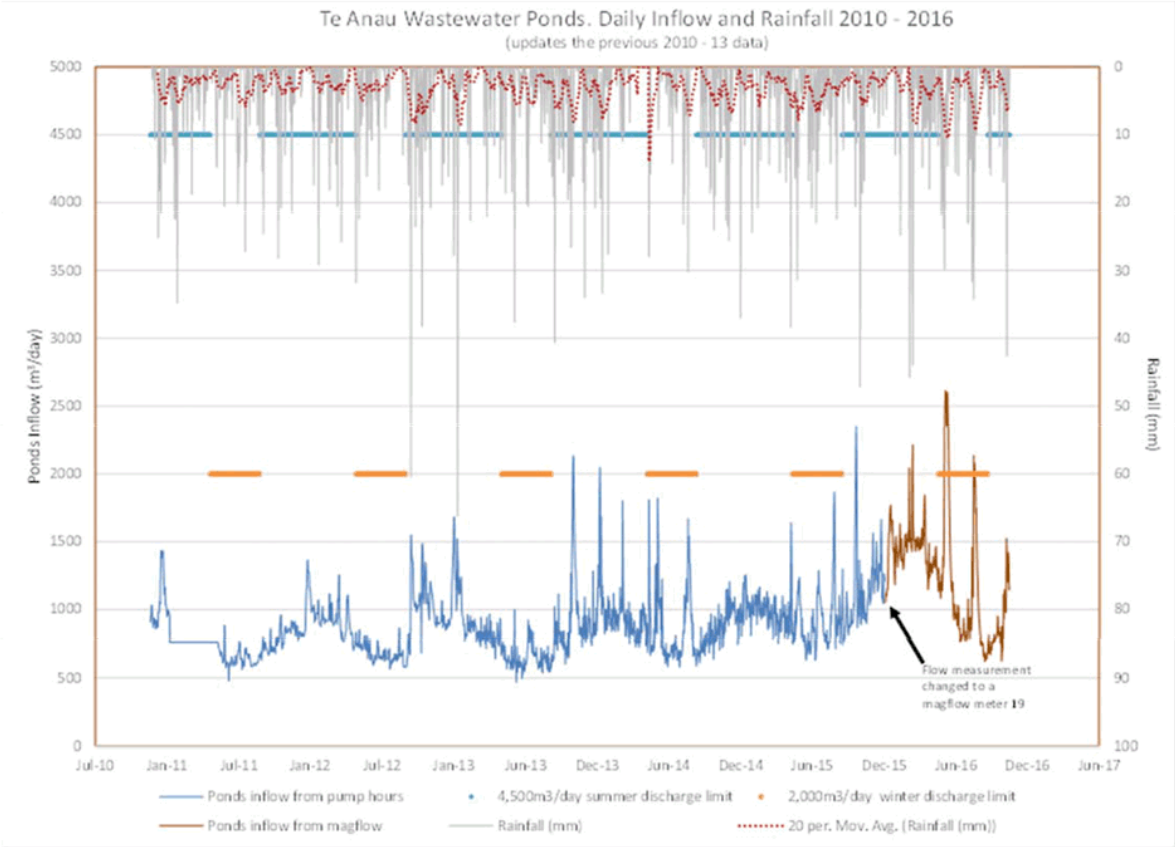

Figure 6: Recorded Pond Inflow and Rainfall

2.3 Drivers and Needs

There are always key reasons for the decision to make a change. This section explores the key 'Drivers' for change and the key needs/issues that have been identified.

2.3.1 Drivers

Driver One – A Long-Term Sustainable Solution is urgently needed

Environment Southland and key stakeholders have clearly signalled that continuation of the discharge to the Upukerora River is no longer acceptable.

Discharge Permit AUTH-20157778-01 expires on 30 November 2020. This consent was granted in the knowledge that SDC were in the final stages of the consenting for a discharge to the Kepler Block. It is unlikely a further extension of this timeframe will be granted.

Driver Two– An Improvement in Environmental Outcomes is required

The proposed Southland Water and Land Plan (pSWLP) requires the maintenance or improvement in water quality across the Region. Given the projected population increase in Te Anau with its associated increase in loads, a treatment upgrade to the existing discharge is required.

Driver Three – Discharge to Land is the Preferred Final Treatment Stage

The planning framework, iwi and other key stakeholders have stated a preference[11] for wastewater to be discharged to land.

In the long term, given the direction in the pSWLP, land based discharges will continue to be preferred, where practicable.

2.3.2 What is the Need?

Being clear about what the 'Drivers' are that influence the decision means that the 'Need' can then be defined.

Need One - Operate Within the Appropriate Statutory Framework

Council must have a consent in place for the sustainable long term disposal of Te Anau's treated wastewater.

The current consent expires in November 2020 and any planned upgrade must be operable by this date at the latest.

Need Two - Invest with Confidence

Given the scale of the investment, there should be high likelihood that a scheme can be consented and subsequently reconsented.

This longer term certainty will enable continued growth in Te Anau.

Recent 2017 amendments to the NPS-FM mean that gaining additional short term consents for the existing discharge might not be possible.

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[11] As noted in their submissions on the various consenting processes undertaken.

Need Three - Recognise the Cultural Values of iwi

Ngai Tahu has a significant relationship with Lakes Te Anau, Manapouri and the Waiau River, as recognised by their Statutory Acknowledgement

The existing direct discharge to the Upukerora River or any other water body is unacceptable to iwi.

Need Four - Recognise the Social Values of the local and wider community

The local community has to live with the scheme and the wider community has to support it.

The values of the community and key stakeholders, are not met by the current discharge to the Upukerora River.

Need Five - Need to maintain and improve water quality

The pSWLP requires that water quality is maintained or improved and that discharge to land is preferred, where practicable.

The loads from the WWTP will increase with the increase in population. In the absence of a treatment upgrade, this would reduce water quality.

Need Six - Minimise effect on Natural State Water body[12]

The existing discharge is into a river that leads to a Natural State water body and Statutory Acknowledgement Area, Lake Te Anau, where no degradation of physical or chemical properties are accepted.

2.4 Investment Objectives

The investment objectives articulate the outcomes required for the project to address the drivers and needs identified in previous sections:

- **Investment objective one:** A solution with the ability to meet current environmental standards to give a high probability of obtaining long term resource consents (35 year, 25yr as a minimum), for wastewater treatment and disposal for the Te Anau community, with a high degree of certainty of reconsenting at the end of this first term.
- **Investment objective two:** A solution with treatment and disposal processes that are adaptable to being efficiently upgraded to achieve higher environmental standards in a cost effective way, should future discharge standards tighten. Section 3.3 describes the environmental requirements for the scheme.
- **Investment objective three:** A solution that has treatment and disposal processes that are adaptable to being efficiently upgraded, as future discharge flows and loads increase as shown in Figure 4 and Figure 5.

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12 Natural state waters (for water quality purposes) means waters within: areas defined as National Park managed under the National Parks Act 1980 (including land for the time being administered as if it was a national park pursuant to any statute or written agreement with the owners); and public conservation land managed under the Conservation Act 1987 and the Reserves Act 1977 where the overall water quality is largely unmodified or unaffected by human activities.

- **Investment objective four**: A solution that meets the cultural and social aspirations of Iwi and the community.
- **Investment objective five**. A cost effective solution based on +/- 50% of the Net Present Value of the consented Kepler Block option which has a 2015-25 LTP capital expenditure budget of $12.1M

2.5 Current State and Future Needs

Table 4 provides a snapshot for each investment objective of where things are at (the current state) and what needs to be done.

Table 4: Current State and Future Needs

Investment Objective One	**Meet current environmental standards to obtain a long term consent**
Current State	Recent 2017 amendments to the NPS-FM mean that gaining even short term further consents for the existing discharge may not be possible. The expiry date of the present consent to discharge to the Upukerora River is 30 November 2020 (Discharge Permit 20157778-01)
What is Needed	An upgraded or new scheme to meet environmental standards acceptable for a long term consent. This needs to be in place by the expiry date of the present consent to discharge to the Upukerora River. Note. It is important that a new scheme has a high likelihood of being readily reconsented in 25+ years' time.
Investment Objective Two	**A solution that is adaptable to being efficiently upgraded in the future to achieve higher environmental standards**
Current State	Existing facility is unlikely to be capable of treating wastewater to a sufficiently high quality to allow future long term discharge direct to water. The existing facility has limited ability to be adapted to improve environmental performance but existing infrastructure has the potential to be reused as part of the overall solution if appropriate
What is Needed	An upgraded scheme that reduces nutrient contributions to the environment and can be further enhanced to meet higher standards in the future.
Investment Objective Three	**A solution that is adaptable to being efficiently upgraded in the future to accept higher flows and loads**
Current State	The existing scheme can cope with higher flows and loads without any major loss of performance, with only minor upgrades needed (provision of more aeration). However, such upgrades will not improve performance to a level that would allow a long term consent for discharge to water to be granted. Therefore, the existing facility has potential value as an element of a new treatment scheme.
What is Needed	Any existing or new processes, or process units, must have capacity to adapt, in a reasonably cost effective way, to higher flows and loads. Figure 4 and Figure 5 detail the range of predictions for flows up until 2048. As a minimum the worse-case projected flows must be able to be accommodated.

Investment Objective Four	A solution that meets the cultural and social aspiration of Iwi and the community
Current State	Iwi, Fish and Game, DoC, Guardians of the Lake and other stakeholders have formally expressed, through the 2004 re-consenting process, their objection to the discharge in its current form and expressed a preference for a direct discharge to water to cease in the future.
What is Needed	A scheme that sufficiently takes into account the requirements of the community as well as the key stakeholders. This includes recognising the two key themes of Iwi, being removing direct discharges to water, and continuous improvement. Any new scheme should have upgrade options to further reduce nutrient contribution to the Waiau Catchment, beyond whatever limit is consented for the initial long-term consent. Recognition of the views on affordability of the scheme for the wider Southland District Community should be taken into account.
Investment Objective Five	**A cost effective solution**
Current State	The present wastewater scheme is commonly used around the world as a cost effective solution for wastewater treatment with minimal operating costs.
What is Needed	A cost efficient solution that takes into account capital and operating expenditure, and the likely cost, if required, of upgrades signalled in Investment Objectives 2 and 3. Cost effectiveness will be measured by comparing the capex and NPV of the various options. The present LTP budget is $12.1Million capex, and solutions are sought that are aligned to this. It should also be noted that the consent for the Manapouri wastewater discharge to Home Creek expires in 2023 and that the consented Kepler scheme may be suitable as one of a number of potential solutions for managing the Manapouri discharge. Following changes to the National Policy Statement for Freshwater Management which come into effect from 6 September 2017 requiring consenting authorities to have regard to the health of people and communities affected by their contact with water, it is apparent that the current arrangement for Manapouri may not able to be reconsented. It is therefore important that a number of viable alternatives preferably involving disposal to land are available for consideration.

2.6 Key Constraints

The proposal is subject to the following constraints. Any option that does not meet these key constraints will not be considered further as a short-listed option.

Table 5: Key Constraints

Constraints	Notes
Must comply with consent limits under all flow and load fluctuations.	A solution must stay within its consented parameters while facing reasonably predicted fluctuations in flow and load. These predictions are based on observations of flow fluctuation in the period 2010 – to date and expected increases in population. If consented parameters are not available, predicted parameters based on the Minimum Requirements of Table 8 shall be used.

Constraints	Notes
Implement before 30 November 2020.	Discharge consent for present scheme expires in November 2020, with an understanding that extending it may prove a risky option, as increased standards may be imposed due to recent NPS-FM amendments, even for a short term consent to continue to discharge treated wastewater directly to the Upukerora River.
No direct discharge to water.	It is clear that a discharge to water option is highly unlikely to be consentable given that a viable land discharge option has been identified.
Ability to gain long term Consents	The maximum consent term under law is 35 years, with a 25 year term considered an acceptable duration noting that investment in a new scheme requires confidence that the scheme could be reconsented at the end of the current term to better reflect the expected life of the key infrastructure components of the upgrade.
For land disposal – require ability to purchase the land.	The wastewater scheme is a long term investment by SDC, and this requires certainty, both for the consented term, and for future development. Ownership of the wastewater disposal site is considered crucial to ensure that SDC have control over their activities.
Life of new infrastructure	Any proposal must have confidence that the infrastructure and sites can be used for a minimum of 35 years even if that is not initially reflected in the consent term.

3 Option Assessment

This section identifies the option that optimises value for money as defined by the evaluation criteria and subject to the Key Constraints. Currently, the business case concentrates on the options that may be available for the Kepler Block only, as a resource consent has been granted for that scheme.

The development of the business case is generally an internal process for an organisation and this is no different for a council such as SDC. The community have taken their opportunity to make their concerns known and these have been reflected in the criteria and their weightings used in the scoring process.

3.1 Representative Group

An internal group was set up to represent various viewpoints that are considered in a business case process. The group was comprised of:

Table 6: Representative Group Members

Person	Organisation	Background, and viewpoint to represent
Ian Evans	Southland DC, Strategic Manager, Water and Waste.	Owner
Simon Moran	Southland DC, Community Partnership Leader	Community (incl Iwi)
Sue Bennett	Stantec, Principal Environmental Scientist	Environmental
Roger Oakley	Stantec, Principal Civil Engineer	Engineering

The group developed the evaluation criteria based on Environmental, Cultural, Social and Economic values. The weightings for each criteria were then agreed and when scoring options, each member of the group scored separately, without reference to the others. The group then met to arbitrate and agree a final group score.

3.2 Evaluation Criteria

The Representative Group assigned the Investment Objectives to one of more of the four Key Values of Environment, Iwi, Social and Economic. These Key Values reflect the four bottom lines that are commonly used in the evaluation of options for infrastructure projects.

Initially, equal weighting was assigned to each Key Value. However, it was recognised that elements of iwi and social values are similar for this project and also are reflected in the other two values and hence equal weighting of each value would result in their over-representation in the final score. Therefore, relatively equal weightings of a third each were given to the Environment, Economic and the combination of Iwi and Social values.

Evaluation criteria were developed under each Key Value to ensure that each Investment Objective is appropriately evaluated. A relative weighting of each evaluation criteria within each Key Value was assigned to reflect the relative importance of each Investment Objective.

The resultant criteria and weighting is summarised in Table 7.

Table 7: Evaluation Criteria and Weightings

Key Values	Weighting of Key Values	Investment Objective	Evaluation Criteria	Weighting of Evaluation Criteria within Key Values
Environmental	32.5%	1	• Ability of scheme to obtain long term consents.	40%
		2	• Adaptability of scheme to meet increased environmental standards	30%
		3	• Adaptability of scheme to meet increased flows and loads.	30%
Iwi Acceptability	15%	4	• Extent to which scheme meets the aspirations of Iwi.	100%
Social Acceptability	20%	4	Extent to which scheme meets the social aspirations of the local community.	100%
Economic	32.5%	5	• Capex	60%
		5	• NPV[13], Te Anau scheme plus Manapouri scheme[14]	40%

3.3 Environmental Requirements

The environmental requirements are defined in terms of the key parameters for the discharge. While many parameters are able to be measured, the parameters were selected as being those that are of primary relevance to wastewater discharges. There are a range of outcomes that can be achieved for each environmental parameter. Table 8 allows the comparison of environmental outcomes for each option considered as follows:

- The minimum requirement is what is needed to deliver the essential or core outcomes (the must haves)
- The intermediate requirement is what is needed to deliver essential and desirable (may want to have) requirements, and
- The maximum requirement is what is needed to deliver the essential, desirable and aspirational (nice to have) requirements.

Desirable requirements may typically be considered if they represent good marginal value for money. The aspirational requirements (or "nice to haves") are generally only considered further if they are affordable. No further value is recognised for outcomes higher than the maximum requirements because there is no additional environmental benefit.

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[13] NPV is calculated over 25 year life with a discount rate of 6% which is consistent with Council policy. The NPV cost is based on construction and operation only.

[14] The Manapouri wastewater discharge consent expires in September 2024. Based on the Te Anau experience, an alternative to the current situation will be required. For the purposes of this Business Case, this has been considered to be either a connection to the Te Anau scheme or a stand-alone disposal to land based upgrade

Table 8: Environmental Parameters and Requirements

Environmental Parameters	Requirements			
	Minimum	Intermediate	Maximum	Out of Scope
Total Nitrogen loss to ground or surface water[a, b, c] **(average values)**	7,730 kgN/yr.	3,865 kgN/yr.	1,930 kgN/yr.	<1,930 kgN/yr.
Odour	Valid confirmed complaints[d] detectable very occasionally (e.g. less than 3 per year) for short durations (e.g. 6hrs max)	As per minimum but complaints only once a year.	No complaints except if plant malfunction.	Never detectable
E.coli **(in ground water)**	not detectable at any existing water supply bore	not detectable at any existing water supply bore	not detectable at any existing water supply bore	No minimum
E.coli **(at point of mixing with surface water)**	<1,000/100ml DD after zone of mixing (Regional Water Plan standard for stock drinking water)	<100/100ml after zone of mixing ('swimmable')	<1/100ml after zone of mixing ('drinking')	No minimum
Phosphorus [e] **(at point of mixing with surface water)**	8mgP/l	3mgP/l	0.5mgP/l	<0.5mgP/l

Notes:

a) Options for direct discharge to surface water are excluded, refer to Section 2.6: Key Constraints.

b) The Intermediate scope for Total Nitrogen (TN) discharge loading is based around discharge consent 302625-01 for the Kepler Block. Condition 7(e) states 'The modelled leaching of nitrogen from the North Block shall not exceed 32kg/N/Ha/yr. based on a 5-yearly rolling average'. The North Block has an area of 120.8Ha, as defined in the land use designation. 32kg/Ha/yr. x 120.8Ha = 3,865kg/yr. This represents a reduction in nitrogen load to the aquifer of 50%. Minimum and Maximum Scope are selected as half or double this value.

The minimum scope is based on no reduction in nitrogen load lost to water from the scheme. It is possible that a "no nitrogen load reduction" option could be identified that addresses the relevant environmental effects such that it could gain a consent, particularly if the scheme has significant support from the community. However, it is recognised that given the limit setting process which is underway, an option based on this minimum scope may be difficult to consent. This minimum scope has been established so as not to unduly limit the consideration of options.

c) The above TN loadings are based on predicted flows and loads in 2041, the expiry date of the Kepler consent,

d) As defined in the existing Kepler consents.

e) Phosphorus limits are based on: 8mg/l, existing level in discharge from ponds: 3mg/l, expected reduction using slow rate irrigation: 0.5mg/l, expected reduction using membrane bioreactor.
f) Proposed discharge limits are a judgement, based on achieving long term consents (25yrs+)

3.4 Scoring Guidelines

To enable a consistent approach for individuals to score the Evaluation Criteria across multiple options, the following guidelines were agreed by the Representative Group for scoring each Factor out of 10:

Table 9: Scoring Guidelines

Evaluation Criteria Broad Description	Scoring Guidelines
Investment Objective One Ability of scheme to obtain long term consents.	If 25 year consent granted, then score 10. Otherwise use: **0** Meets the Minimum Scope of Table 8, detailing Environmental Requirements for key parameters. **5** Generally meets the Intermediate Scope of Table 8, detailing Environmental Requirements for key parameters. **10** Generally meets the Maximum Scope of Table 8, detailing Environmental Requirements for key parameters. ***Notes:*** • Consent term not included in above parameters, as it is inherent in them.
Investment Objective Two Adaptability of scheme to meet increased environmental standards	**0** Treatment processes only provide minimum requirements for a 25 year consent and cannot be efficiently reused as part of an upgrade. **5** Any treatment processes can be utilised in a future upgrade. **10** All existing treatment processes can be fully utilised in an efficient manner for a future upgrade. This is regardless of which of the environment parameters are being improved. (e.g. nitrogen or BOD).
Investment Objective Three Adaptability of scheme to meet increased flows and loads.	**0** Can only cater for 2041 predicted flows **5** Can cater for greater than 2041 predicted flows with significant modifications to scheme **10** Can cater for greater than 2041 predicted flows with minor modifications to scheme. ***Notes:*** • Loads are assumed to increase in proportion to flows, excluding stormwater inflow and infiltration effects.

Evaluation Criteria Broad Description	Scoring Guidelines
Investment Objective Four Extent to which scheme meets the aspirations of Iwi.	**0** Direct discharge to groundwater where minimal unsaturated zone. **5** Discharge to land in close proximity to a surface water body with minimal load reduction **10** Discharge to land with considerable contamination load reductions before discharge to water. ***Notes:*** • The above scoring criteria are aimed at recognising the two key themes of Iwi, being removing direct discharges to water, and continuous improvement.
Investment Objective Four Extent to which scheme meets the social aspirations of the local community.	**0** Significant residential or community activity within 2km, or known or anticipated objection. **5** Limited residential or community activity within 2km. Mixed anticipated community response. **10** No residential or community activity within 2km, or support of those within this radius. General community support.
Investment Objective Five Capital Expenditure	**0** 150% of Consented Scheme **5** Consented Scheme **10** 50% of Consented Scheme
Investment Objective Five NPV, Te Anau scheme plus Manapouri scheme	**0** 150% of Consented Scheme **5** Consented Scheme **10** 50% of Consented Scheme

3.5 Options Assessment

The options assessed are shown schematically in Figure 7 and are:

Option 1: This is the consented scheme which continues to use the existing oxidation ponds prior to further land treatment and disposal at the Kepler Block by Centre Pivot Irrigation (CPI).

Option 2A: This is Option 1 with an additional membrane filtration step sized to treat base flows up to 2,200 m^3/day at the WWTP.

Option 2B: This is Option 1 with an additional membrane filtration step sized to treat peak flows up to 4,500 m^3/day at the WWTP.

Option 3: This is Option 2B with further filtration prior to Slow Rate Drip Irrigation (SDI) at Kepler Block instead of Centre Pivot Irrigation.

A detailed description of these options and an assessment against the Key Constraints and the Evaluation Criteria are included in Appendix 4. The breakdown and basis of the cost estimate is given

in Table 10. The estimated capital expenditure, operational expenditure and NPV estimates are included in Appendix 5.

The basis of the evaluation of each option is given in Table 11, a summary of the scoring is given in Table 12, and a graph of the components of the scoring for each option is given in Figure 8.

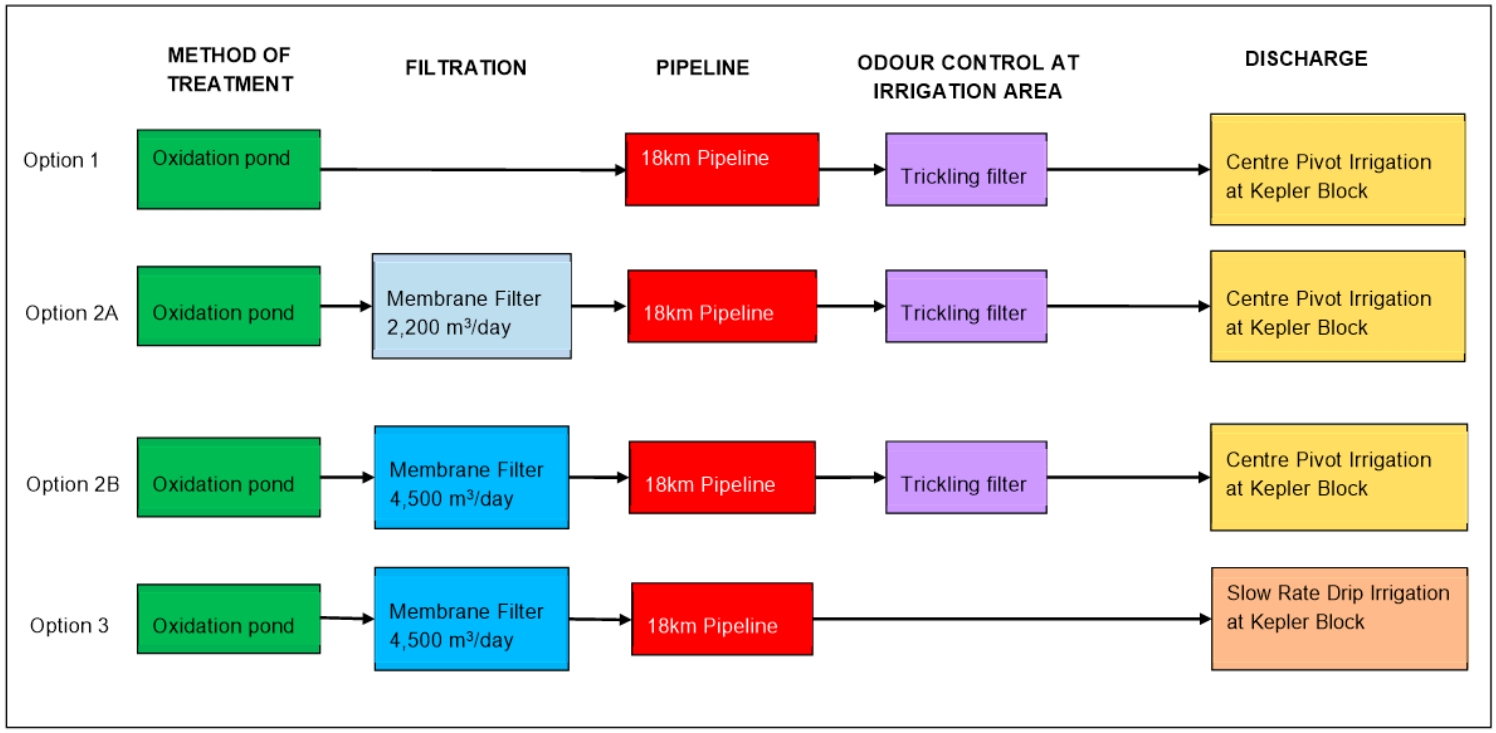

Figure 7: Schematic of Options Assessed

Table 10: Key Components and Basis of Capital Cost Estimate

Item	Cost (Millions)				Comment
	OPTION 1	OPTION 2A	OPTION 2B	OPTION 3	
Preliminary and General	$ 1.1	$ 1.3	$ 1.4	$ 1.6	10% of contract amount
Pond development	$ 0.6	$ 0.6	$ 0.6	$ 0.6	Pond development involves raising of pond for storage, additional pipework and telemetry. Includes scope risk of 5%.
Membrane Filtration Plant	$ -	$ 2.0	$ 3.5	$ 3.5	All options are based on installation of full 2041 capacity initially. Costs based on estimate from Masons with 15% scope risk. Option 2A has smaller MF plant as MF not required for operational reasons and hence it is not required to cope with peak flows. For Option 3 (SDI), MF is required for operational reasons and hence must be sized for peak flows
Pipeline to Kepler, including pump station	$ 70	$ 7.0	$ 7.0	$ 7.0	Design based on 300mm pipework. Cost based on recent similar contract rates from Tasman District Council contracts with scope risk of 5%
Kepler site preparation (incl odour control)	$ 2.4	$ 2.4	$ 2.4	$ 0.7	Site preparation includes power supply to site, odour control for CPI options and shelter belt development and pasture preparation. Costs based on recent similar contracts with scope risk of 5%
Pivot Irrigators	$ 0.5	$ 0.5	$ 0.5	$ -	Cost is based quote from Waterforce for the supply of 3 irrigators with scope risk of 5%
Subsurface Drip Irrigation	$ -	$ -	$ -	$ 3.8	Cost is based on rate from Ecogent Ltd. Assumes installation of 37Ha in first year and replacement in year 20, and install second 37Ha in year 10. Costs include scope risk of 20%
Construction contingency	$ 1.2	$ 1.4	$ 1.5	$ 1.7	Allow 10% of contract total
Contract total	**$ 12.7**	**$ 15.2**	**$ 17.0**	**$ 18.9**	
Non-contract costs	$ 1.8	$ 2.2	$ 2.4	$ 2.9	Design, project management, further consenting, non construction costs. Allow 12% and minor Lump sum items
Total	**$ 14.5**	**$ 17.4**	**$ 19.4**	**$ 21.8**	

Table 11: Basis of Scoring

Key Values	Evaluation Criteria	Option 1 (Pond, Trickling Filter, Centre Pivot Irrigation)	Option 2A (Pond, Baseload Membrane Filter, Trickling Filter, Centre Pivot Irrigation)	Option 2B (Pond, Peak load Membrane Filter, Trickling Filter, Centre Pivot Irrigation)	Option 3 (Pond, Peak load Membrane Filter, Subsurface Drip Irrigation)
Environmental E1	Ability of scheme to obtain long term consents.	• 25 year term consent granted	• **25 year term granted for the main discharge to air and land consents. No variation required to discharge to land consent. Minor variation to discharge to air consent.** • **The addition of MF reduces N loadings to the irrigation site by 30%, and reduces odour risk at Kepler Block by reducing BOD in the pipeline and therefore slowing/delaying the generation of odour compounds.** Sudden flow/load fluctuations would be the principal cause of difficulty. • *E.coli* and P meet max scope.	• **25 year term granted for the main discharge to air and land consents. No variation required to discharge to land consent. Minor variation to discharge to air consent.** • **The addition of MF reduces N loadings to the irrigation site by 30%, and reduces odour risk at Kepler Block by reducing BOD in the pipeline and therefore slowing/delaying the generation of odour compounds.** Sudden flow/load fluctuations would be the principal cause of difficulty. • *E.coli* and P meet max scope.	• **Risk of obtaining consent variation for disposal field if initially only 37Ha of disposal field installed, as peak wet weather flows will require greater depth/day discharge than the presently consented maximum.** • **25 year term granted for the Base Case but variation to discharge to land consent required.** • **The addition of MF and SDI would be designed to balance out to give the same N loadings as the Base Case, but some uncertainty in predictions which will complicate gaining consent and may result in shorter term consent.** • **SDI removes odour and spray drift stakeholder concerns.**
E2	Adaptability of scheme to meet increased environmental standards	• All components straightforward to use in upgrade and are expected to be of practical value. However, some elements (eg Trickling filter at Kepler Block and oxidation pond 2 and 3) may not be required for upgrades. Extra (vs upgraded) process element required to improve N upgrade. • Noted that ponds kept for flow balancing, which is a benefit as it reduces peak flows. • The extra land at Kepler that is owned by SDC but not required for irrigation by treated wastewater could be used to offset nutrient load from other WWTPs in the Waiau River catchment, by retiring the area from production. This could be a cost effective solution to reducing nutrient loads in comparison to implementing nutrient based treatment upgrades at the other WWTPs in the catchment. The viability of this option would depend upon the manner in which Environment Southland implements the limit setting process, which is currently being developed. However, it represents an opportunity for SDC.	• **Addition of MF plant provides a higher standard than required by current consent. The MF plant would be used for a significant plant upgrade to mechanical based treatment.** • All components straightforward to use in upgrade and are expected to be of full practical value. Extra (vs upgraded) process element required to improve N upgrade. • Noted that ponds kept for flow balancing • The extra land at Kepler that is owned by SDC but not required for irrigation by treated wastewater could be used to offset nutrient load from other WWTPs in the Waiau River catchment, by retiring the area from production. This could be a cost effective solution to reducing nutrient loads in comparison to implementing nutrient based treatment upgrades at the other WWTPs in the catchment. The viability of this option would depend upon the manner in which Environment Southland implements the limit setting process, which is currently being developed. However, it represents an opportunity for SDC.	• **Addition of MF plant provides a higher standard than required by current consent. The MF plant would be used for a significant plant upgrade to mechanical based treatment.** • All components straightforward to use in upgrade and are expected to be of full practical value. Extra (vs upgraded) process element required to improve N upgrade. • Noted that ponds kept for flow balancing • The extra land at Kepler that is owned by SDC but not required for irrigation by treated wastewater could be used to offset nutrient load from other WWTPs in the Waiau River catchment, by retiring the area from production. This could be a cost effective solution to reducing nutrient loads in comparison to implementing nutrient based treatment upgrades at the other WWTPs in the catchment. The viability of this option would depend upon the manner in which Environment Southland implements the limit setting process, which is currently being developed. However, it represents an opportunity for SDC.	• All components straightforward to use in upgrade and are expected to be of full practical value. Extra (vs upgraded) process element required to improve N upgrade. • Noted that ponds kept for flow balancing • **Benefit of MF removal of N counterbalanced by reducing size of SDI disposal field.** • The extra land at Kepler that is owned by SDC but not required for irrigation by treated wastewater could be used to offset nutrient load from other WWTPs in the Waiau River catchment, by retiring the area from production. This could be a cost effective solution to reducing nutrient loads in comparison to implementing nutrient based treatment upgrades at the other WWTPs in the catchment. The viability of this option would depend upon the manner in which Environment Southland implements the limit setting process, which is currently being developed. However, it represents an opportunity for SDC.
E3	Adaptability of scheme to meet increased flows and loads.	• Only restriction is the sizing of the transfer pipeline. Cost estimate based on 300mm pipeline rather than 250mm to allow for increased capacity. If it is sized for significantly higher future flows then potential septicity issues at current flows. • Land area of Kepler Block allows good scope for extra flow, but ultimately may need some further N reduction to keep within the kg/Ha/yr limit.	• A restriction is the sizing of the transfer pipeline. If it is sized for future flows then potential septicity issues at current flows. • Land area of Kepler Block allows good scope for extra flow, but ultimately may need some further N reduction to keep within the kg/Ha/yr limit. • **MF plant will be limited in capacity, but flow beyond this capacity will be designed to bypass this additional treatment, given the use of CPI. Otherwise, MF plant reduces N load to irrigation site, meaning increased flows of approx. 30% can be catered for under the conditions of the current consent.**	• A restriction is the sizing of the transfer pipeline. If it is sized for future flows then potential septicity issues at current flows. • Land area of Kepler Block allows good scope for extra flow, but ultimately may need some further N reduction to keep within the kg/Ha/yr limit. • **MF plant will have a limit on peak capacity, but may be acceptable to bypass some flow in peak conditions given use of CPI. Otherwise, MF plant reduces N load to irrigation site, meaning increased flows of approx. 30% can be catered for under the conditions of the current consent.**	• A restriction is the sizing of the transfer pipeline. If it is sized for future flows then potential septicity issues at current flows. • Land area of Kepler Block allows good scope for extra flow, but ultimately may need some further N reduction to keep within the kg/Ha/yr limit. • **MF plant will have a limit on peak capacity, so will need to be configured to allow increased flow and load, with consideration beyond the term of the initial consent**
Iwi Acceptability IA1	Extent to which scheme meets the aspirations of Iwi.	• Discharge to land that received a submission in support from TAMI for the resource consent.	• Direct discharge to land that received a submission in support for the resource consent • **Membrane filtration a further improvement.**	• Direct discharge to land that received a submission in support for the resource consent • **Membrane filtration a further improvement.**	• Direct discharge to land that received a submission in support for the resource consent • **SDI field sized to achieve similar nitrogen reduction as option 1.**

Key Values	Evaluation Criteria	Option 1 (Pond, Trickling Filter, Centre Pivot Irrigation)	Option 2A (Pond, Baseload Membrane Filter, Trickling Filter, Centre Pivot Irrigation)	Option 2B (Pond, Peak load Membrane Filter, Trickling Filter, Centre Pivot Irrigation)	Option 3 (Pond, Peak load Membrane Filter, Subsurface Drip Irrigation)
Social Acceptability SA1	Extent to which scheme meets the social aspirations of the local community.	• Limited community activity within 2km, with regard to residential, which is beneficial in reducing visual effects, and perceptions regarding odour or spray drift. Airport is within this radius. Noted that existing shelter belt will be between airport and irrigation area. • Significant community opposition from Manapouri and Te Anau area.	• Limited community activity within 2km, with regard to residential, which is beneficial in reducing visual effects, and perceptions regarding odour or spraydrift. Airport is within this radius. Noted that existing shelter belt will be between airport and irrigation area. • Significant community opposition from Manapouri area. • **Uncertain whether improved wastewater quality due to MF plant will address the core causes of Manapouri community concern, but can only help.** • **Addition of an MF plant may introduce concerns from community in vicinity of WWTP.**	• Limited community activity within 2km, with regard to residential, which is beneficial in reducing visual effects, and perceptions regarding odour or spraydrift. Airport is within this radius. Noted that existing shelter belt will be between airport and irrigation area. • Significant community opposition from Manapouri area. • **Uncertain whether improved wastewater quality due to MF plant will address the core causes of Manapouri community concern, but can only help.** • **Addition of an MF plant may introduce concerns from community in vicinity of WWTP.**	• **SDI is likely to be more acceptable than CPI, as main concerns regarding spray drift, odour and visual effects are addressed.** • **Does not address the view of some that the Kepler site is inappropriate in any situation.** • **Addition of an MF plant may introduce concerns from community in vicinity of WWTP.**
Economic E$1	Capex	• Capex for Te Anau is $14.5M • Capex for Manapouri is $1.45M	• Capex for Te Anau is $17.4M • Capex for Manapouri is $1.45M	• Capex for Te Anau is $19.4M • Capex for Manapouri is $1.45M	• Capex for Te Anau is $21.8M • Capex for Manapouri is $1.45M
E$2	NPV, Te Anau scheme plus Manapouri scheme. (25year period, 6% discount rate)	• Opex for Te Anau is $347k • Opex for Manapouri is $29k • Therefore NPV is $20.8M	• Opex for Te Anau is $450k • Opex for Manapouri is $29k • Therefore NPV is $25.0M	• Opex for Te Anau is $474k • Opex for Manapouri is $29k • Therefore NPV is $27.3M	• Opex for Te Anau is $467k • Opex for Manapouri is $29K • Therefore NPV is $29.6M

Table 12: Scoring of Consented Scheme and Options

Key Values	Evaluation Criteria	Total Score			
		Option 1	Option 2A	Option 2B	Option 3
Environmental	Ability of scheme to obtain long term consents.[15]	1.30	1.30	1.30	1.04
	Adaptability of scheme to meet increased environmental standards	0.68	0.88	0.88	0.68
	Adaptability of scheme to meet increased flows and loads.	0.78	0.88	0.88	0.68
Iwi Acceptability[16]	Extent to which scheme meets the aspirations of Iwi.	1.35	1.50	1.50	1.35
Social Acceptability	Extent to which scheme meets the social aspirations of the local community.	0.60	0.80	0.80	1.40
Economic	Capex	0.98	0.59	0.39	0
	NPV, Te Anau scheme plus Manapouri scheme	0.65	0.39	0.26	0.13
	TOTAL:	**6.34**	**6.33**	**6.01**	**5.29**

[15] Alternatives 1 and 2 are likely to require variations to the existing consents.

[16] In the absence of Dean Whaanga of TAMI, Don Mowat (iwi representative on the Te Anau Wastewater Discharge Project Committee) confirmed that he generally agreed with the Representative Group's interpretation of the cultural acceptability of each option. The scoring was revised to reflect the iwi perception of the slightly better performance of Options 2A and 2B.

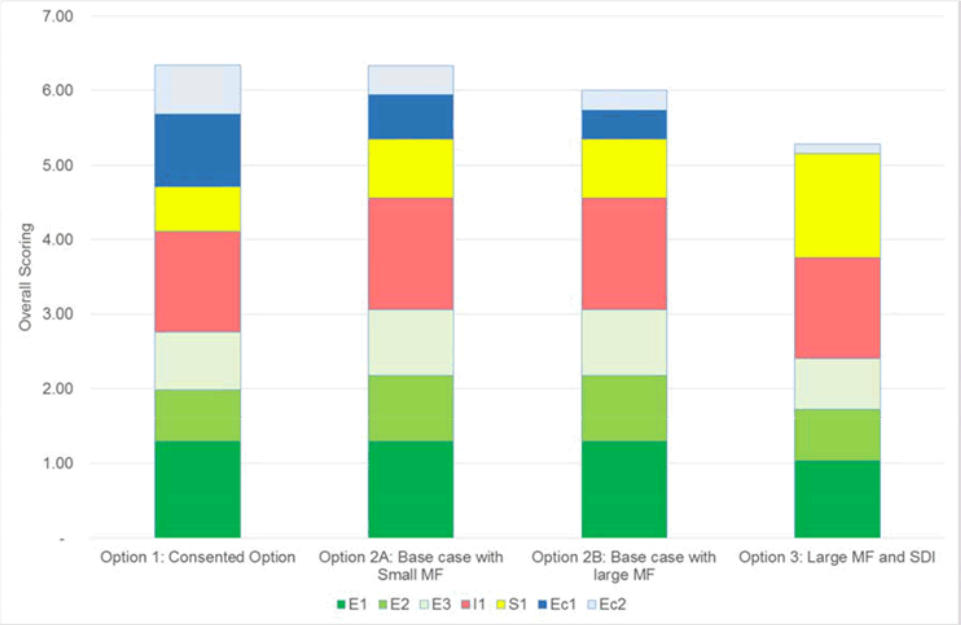

Figure 8: Scoring of the Options

3.6 Sensitivity Analysis

A sensitivity analysis was performed to determine the impact of two of the principal assumptions that were made in the assessment of options. This included:

- Reducing the costs of the subsurface drip irrigation system by $2 million dollars from $4.2 million to $2.2 million. The reason for testing this reduction is because in the past there was disagreement with the sizing and costing of the disposal field. This analysis shows that this cost reduction will not change the overall ranking of Option 3.
- Adjusting the weighting of the Key Values from that given in Table 7, from about a third each to environment, economic and the combination of iwi and social to each of the four Key Values having a weight of 25% each. The reason for testing this scenario was to check whether the weightings agreed by the Representative Group made any significant difference to the outcome.
- Both these factors combined, is essentially testing the limits of sensitivity.

The impact of this change on the overall scoring of the options is given in Table 13.

Table 13: Effect of Sensitivity Analysis on Scoring of Consented Scheme and Options

Key Values	Total Score			
	Option 1	Option 2A	Option 2B	Option 3
Base Assumptions	6.34	6.33	6.01	5.29
Change 1: Subsurface Drip Irrigation reduced in capex by $2M	6.34	6.33	6.01	5.61
Change 2: Alter weighting of Key Values to 25% each	6.38	6.60	6.35	5.95
Both changes together	6.38	6.60	6.35	6.20

3.7 Preferred Option

Option 1 being the discharge of oxidation pond treated wastewater to the Kepler Block by Central Pivot Irrigation is marginally preferred over Option 2A. Option 1, through being consented, is determined to have effects that are less than minor, or ones that can be adequately mitigated. It also achieves the project objectives at least cost.

Option 2A comes a very close second with some improvements primarily in nitrogen removal, but at a cost of an additional $2.9M.

3.8 Residual Risks of Preferred Option

The key current overall project risks relevant to the preferred option are summarised below in Table 14.

The options assessment in Appendix 4 provides further risks against each Decision Criteria.

A detailed risk register for all project matters has been developed over the last 3 years and will continue to be progressively updated throughout the project. This is provided in Appendix 3.

Table 14: Key Residual Risk Summary

Main Risks	Likelihood (H/M/L)	Consequence (H/M/L)	Comments and Risk Management Strategies
Delay due to desire to assess further options.	M	H	Mitigate by ensuring a formal, thorough process for selecting preferred option. Develop minimum acceptance criteria for any option.

Main Risks	Likelihood (H/M/L)	Consequence (H/M/L)	Comments and Risk Management Strategies
Political change of direction leading to unacceptable delays.	M	H	Wastewater schemes such as Te Anau can be subject to the community applying political pressure for certain outcomes, beyond what may be the best technical solution. This can cause a change of direction of the project at any stage. It should be noted that any potential alternative discharge location is likely to be subject to the same level of concerns. Mitigate by ensuring the Critical Success Factors include the community viewpoint, clearly documenting the decision making process (such as summarised by this BBC), and seeking formal Council confirmation before moving beyond identified gateways, noting particular meetings where potential alternatives were discussed but ultimately resolutions passed to proceed with the Kepler proposal.
Change of environmental standards from ES, or in the National Policy Statement for Fresh Water Management.	H	M	This risk increases with time, and as the proposed Water and Land Plan becomes finalised. The requirements of the NPS-FM have recently been tightened with regard to contact recreation. This will have further implications for a continued discharge to the Upukerora as opposed to the proposed Kepler discharge. Managing nutrient loadings through a cut and carry operation fulfils Council's obligations around reducing impact of the discharge on the aquatic environment. This risk is low for the Kepler Block given that it has an existing consent and its implementation will not require extension to the consent for continued discharge to the Upukerora River.
Loss of continuity of knowledge.	L	M	Since 2012 the same people are largely available to continue to develop the project. Prior to 2012 there is less continuity, however, all key finding and assumptions are well documented.
Disposal of herbage harvest for slow rate irrigation land disposal sites.	M	M	A land disposal site is reliant on harvesting and removal of the pasture (cut and carry). Because of perception issues related to wastewater irrigation, there are some restrictions into the use of the baleage that is generated for example restrictions around lactating cattle. Mitigate by establishing a long term contract for pasture management including operation of a cut and carry operation.

4 Procurement and Timeframes

4.1 Introduction

This section addresses the procurement and execution of the physical works, in a way that controls the risks to SDC and maximises the opportunity for best value. Specifically considered is:

- SDC procurement policy
- The procurement strategy
- Timeframes
- Conditions of Contract
- Risk Assessment.

4.2 SDC Procurement Policy

Councils' current approved procurement policy sets out the strategic objectives for how the organisation will set out to procure goods and services. In particular, there is an explicit emphasis on Value for Money in particular around whole of life costs and benefits, and non-monetary qualities that Council seeks to promote.

Key objectives of the policy and how they relate to the current Business Case are expanded on in the following sections.

4.2.1 Ensure purchases are made in an open, fair and transparent manner.

It is intended this this will be managed through the tendering process to procure the work

4.2.2 Deliver best value for money over whole of life: considering both cost and quality.

The Business Case clearly identifies a preferred option based on NPV cost. Council will have the opportunity to resolve that this remains the preferred option and proceed towards detailed design, or highlight an alternative preferred option from those scored through the Business Case process.

4.2.3 Ensure open and effective competition.

It is intended this will be managed through the tendering process.

4.2.4 Support good environmental outcomes, where feasible.

It is noted that the preferred option identified in the Business Case has been granted consent following an extensive process where it was demonstrated that the environmental effects of the activity were less than minor.

4.2.5 Appropriately manage risk.

The Business Case highlights that a risk register has been developed and is regularly considered and updated as the project is developed. It also highlights significant risks associated with further potential delays to the development of the project. Furthermore risks around construction and delivery will be managed through a contractor pre-qualification process which is common within the delivery of significant infrastructure projects.

4.2.6 Promote efficient purchasing practices in a dynamic environment.

It is intended that this will be managed through the tendering process.

Further to these key objectives guidance from the Office of the Auditor general states that good practice considerations include:

- Clearly articulated procurement policies and procedures.
- Regard for the legal implications surrounding procurement, including acting in accordance with the existing enabling legislation, along with wider legal and public law considerations.
- Operating with ethical standards covering confidentiality, disclosure and declarations of interest.
- Awareness of economic considerations in the procurement process including total cost of ownership, value for money and market impact.
- Effective management of risk throughout the procurement process.

4.3 Project Management / Delivery

In terms of actual management of the overall project as it moves towards the detailed design and construction phases it is intended that a team of internal and external resources will be responsible for the overall delivery. The team will include SDC staff along with current Operations and Maintenance Contractors and input from specialist consultants as required. There will also be a requirement for input from various other internal resources within Council, notably representatives from Finance, Communications and Property Services.

Overall it is anticipated that the team will be led by an experienced project manager with the relevant track record in the delivery of significant infrastructure projects. The project manager will be responsible for ensuring that the detailed design of all phases will be fit for purpose through, where necessary, the use of peer review by independent technical wastewater expertise. This will add a further level of quality assurance around the design.

As the project moves on to the construction phase the project manager will be responsible for all aspects of construction including managing contractor performance, health and safety, risk management and overall delivery.

Options available for engagement of a suitably qualified project manager are either direct employment of a full time equivalent on a fixed term basis of the life of the project, or to directly engage a local engineering consultancy to provide the services. Recent experience in attracting the appropriate level of engineering and project management experience to Council will be a consideration in deciding on which approach to take.

4.4 Project Control

A Project Control Group will be established to overview the project, and ensure that it is delivered within the parameters of the agreed Business Case. Membership of the PCG will include Tier 2 SDC management, as project sponsor, the activity manager, a SDC financial representative, the SDC project manager and technical representatives from the designers and SDC operations.

The PCG will meet at agreed regular intervals, with a pre-distributed report that details progress against key project metrics.

4.5 The Procurement Strategy

The procurement strategy focuses on how best to approach the market and procure the required services, subject to complying with any specific SDC rules and policies.

4.5.1 Assessment of the Market

Proposals from the contracting market will be sought in the next 12 months. An assessment was made of the key market drivers in that period by contacting Ollie Turner, the Southern Regional Manager of Civil Contractors NZ Inc on 8 November 2017. They are the industry body that represents contractors. Arising from that conversation:

- The Queenstown – Wanaka – Cromwell triangle is very active, and is restricted by the availability of staff and accommodation. Stantec's recent experience is consistent with this. For example, in 2017 only one tender was received for a contract for 6km of twin 400mm diameter pipelines, which is of similar nature to the Te Anau pipeline.
- Christchurch's post-earthquake civil construction is measurably slowing down. This is creating capacity with Christchurch contractors and they are now looking further afield for work.
- While Civil Contractors NZ's don't hold formal statistics, their opinion is that the Otago Southland market (outside of the QLDC region), is reasonably static and that there is available capacity for projects such as Te Anau.
- Smaller contractors are interested in acting as a head contractor, if the package of work suits their capabilities. Where this is the case, a good, smaller, contractor can add significant value by taking real ownership of the outcomes.
- Diary conversion work in Southland is presently at a lower level.

Based on the above information the assessment of the market is:

- The market is currently very active with significant opportunities for contractors and suppliers for major projects across Southland, with significant major developments attracting suitably qualified labour forces into the Region.
- There is capacity in the civil contracting market to deliver the project.
- This market is presently acceptably competitive.
- The market in the QLDC region is very active, with significant major developments, and is resource limited. The effect of this on the Te Anau project is considered to be within acceptable limits.
- There is scope to improve value to SDC by separately tendering a package of work that may suit medium-sized contractors, where the interface risks can be controlled. The pipeline stands out in this regard.
- It is also considered that a procurement strategy that allows local contractors to competitively bid is wise, and consistent with SDC philosophy.
- Contractors will be most attracted to projects where their risk is controlled and the effort of bidding is within a reasonable minimum. This is particularly relevant if local (vs National) contractors are to be attracted.

4.5.2 Assessment of Project Attributes

The Te Anau scheme has the following key attributes:

- Approximately half of the capital cost is in the pipeline between Te Anau and the Kepler Block. As far as pipeline construction goes, this is long, but relatively straightforward with considerable experience available at both local and regional level.

- About 20% of the project is mechanical/electrical/process plant and there is considerable benefit to tendering this work under one contract. The work involved includes the pump stations, trickling filter, backup oxidant dosing, monitoring equipment, telemetry, SCADA and centre pivot irrigators.
- Raising of pond 1 at the Te Anau WWTP (for buffer storage), is largely civil work, but requires strong quality control and construction management.
- The bulk of the remaining work is site development at the Kepler Block. This includes shelter belts (remove/enhance), fencing and pasture conversion. This is straightforward work, suitable for local contractors, and there are benefits from this occurring early on, compatible with growing seasons and allowing the block to be well established prior to irrigation commencing.
- The scheme has the benefit that there are large and distinctly separate work areas, the Te Anau WWTP, the pipeline, and Kepler site. This makes concurrent work practical and reduces the risk associated with multiple contractors working in one place at the same time.

4.5.3 Approach to Develop Design and take to the Market

Options for procurement methods fall into three main categories:

- **Design-bid-build.** This is a common approach where a package of work is designed in full detail, then competitively tendered. This suits a situation where there is little uncertainty on what is physically required, and/or the purchaser wishes to be involved in the design choices. It is attractive to tenderers as it minimises their risk and tendering cost.
- **Design-build.** Also relatively common, primarily suited to where a performance outcome can be specified, but the market offers multiple proprietary products, for example prefabricated reservoirs, or ultraviolet disinfection equipment. These design of these products is well developed and there is little point in repeating it. Another common incentive for design-build is for complex operating plant, when there are many elements that need to operate coherently as an integrated whole, especially if a range of proprietary products are involved. In this situation the advantage of design-build is that the contractor has a singular responsibility to ensure the successful integration and commissioning of the works. On the other hand design-build has high tendering costs that can reduce the number of tenderers, and the purchaser has less control over the physical works provided. It is relatively common for the tendered offering to be less than what the purchaser intended, and this can be expensive to amend.
- Design-build-operate. An extension of design-build, particularly for mechanical plant, where the contractor is responsible for the ongoing maintenance and operation of the completed works for a specified number of years. Combined with penalty clauses for failing to meet specified performance criteria, this incentivises the contractor to provide more robust works. This has advantages, for example, where the purchaser has limited expertise in the technology being offered.

There is scope to combine elements the above approaches into any single contract, and this is common. For example, a design-bid-build contract may include a design-build element such as a storage tank.

The above assessment leads to the following procurement strategy and is on the basis of Option 1 being the preferred option.

Table 15: Proposed Procurement Strategy

Attribute	Proposed	Discussion
Confirmation of design basis	A Basis of Design signed off prior to approval to commence detailed design.	A Basis of Design report provides a full technical understanding of the attributes of the scheme. For example, ultimate capacity of the pumps/pipeline, how it will operate, compromises, risks. Formal review and acceptance of this provides SDC confidence the best decisions have been made before it is too late to adjust them.
Engagement with operations staff/contractors	Structured engagement, from design through to commissioning and handover.	The engagement, skill and understanding of operations staff make a significant difference in any project such as this. It is crucial they are kept informed, and involved at HAZOP and key milestones. This will result in the scheme operating with maximum efficiency.
Extent of design	Except as detailed below, a fully detailed design undertaken prior to tendering. Full survey data provided by a local surveyor.	A full design pre tender reduces contractor's tendering costs and risk. This promotes competitive tendering. The major elements such as earthworks and pipeline are well understood and straightforward to implement and will use this approach. Design-build of a number of key elements is proposed where risks are understood and mitigated against.
Extent of design-build elements	Centre pivot irrigators, trickling filter tank and distributor arm. Design development may later suggest including the Te Anau WWTP pumpstation building.	The advantage of design build occurs when the required outcomes are clear but there are various ways of achieving this. These elements are commonly procured by specifying outcomes, rather than a detailed design. This is because each supplier has highly developed designs of their own. Should Council opt to install membrane filtration as part of the upgrade this will also be tendered as a design build element.
Packaging of work	Two main contracts, being the pipeline and all other works, except: • Identified Kepler establishment works, • Any minor specialist work	Pricing for the majority of works must be received at same time, to allow the full project cost to be understood before any contract is committed to. Reserve the authority to negotiate with a preferred tenderer prior to award to enhance time, cost or quality outcomes. There is an advantage in some Kepler establishment works being separate as they are of lesser cost, and specialist, such as shelter belt planting. The pipeline is physically separate from the other works, reducing interface risks, and is straightforward work attractive to local/regional contractors. Multiple contracts introduce interface risks to SDC, where the performance of one contract affects another, and costs fall upon SDC. More contract packages also require more administrative input. For these reasons further packages are not recommended. The main non-pipeline contract would be responsible for the coherent commissioning of all individual elements into an integrated whole.

Attribute	Proposed	Discussion
Nominated subcontractors or suppliers.	Allow SDC staff to nominate	Typically there are advantages in having some commonality of components and suppliers across all schemes, where their performance is proven. This is particularly with regard to electrical and mechanical items. It may also applies to specialist subcontractors such as for telemetry and SCADA programming. SDC would also directly contract the upgrade of electrical transformers.
Early contractor involvement (ECI)	Include Expression of Interest (EOI) phase for the main contract	An EOI would go to the market 2-3 months ahead of tender documents, with a full project description provided and proposed NZS 3910 special conditions. This allows contractors to plan for the project and engage with subcontractors and suppliers and submit on contract conditions that may limit contractors risk while benefiting Council. It makes the project more attractive. An ECI/EOI process also gives SDC an opportunity to understand the level of interest and address any issues that contractors may raise, prior to issuing the RFT.
Prequalification of tenderers	Recommended, as part of the EOI phase.	Engenders a higher level of engagement at an early stage. Provides confidence to tenderers that their competitors have been vetted to achieve minimum standards in quality, safety and management. Increases tenderer engagement as not at risk of a 'rouge' tenderer. Prequalification requires SDC to be confident that at least 3-4 contractors will tender for the work. Until EOI responses are received SDC will keep the option open to invite interest from further contractors.
Tender price weighting.	Weighted attributes, with a price rating between 30-60%. Non-price attributes include track record, methodology, key personnel and methodology.	Non-price attributes force tenderers to clearly think through their methodology, and propose appropriate key personnel. This significantly reduces risk for all parties. Experience is that price will dominate assessment from as low as a 30% weighting, and definitely from 60%. The attributes from prequalification will be repeated for tendering. While prequalification establishes a minimum standard, use of these attributes allows SDC to recognise their value. For example, of a more highly skilled team or a more robust methodology.
Tender Assessment Method	Generally in accordance with NZTA Price Quality Simple method with significant emphasis given to track record around Health and Safety.	This is an industry accepted method, with well-established protocols and clear probity. Prior to tendering, careful consideration must be given to any areas where procedures should be amended to match the specific requirements of SDC, noting this is not an NZTA project with external funding.

4.6 Timeframes

Timeframes proposed for the delivery of the project are set out in Table 16 and shown in Figure 9.

Table 16: Proposed Procurement Timeframes

Milestone	Period (Date)	Discussion
DESIGN		
Council confirmation of option to implement.	December 2017	
Basis of Design Report	4 months Complete end April 2018	This will include the preparation of the draft environmental, odour, and groundwater management plans required by the consent. Will also include final survey and any remaining site investigations.
SDC review, acceptance and approval to commence detailed design.	1 month Complete end May 2018	This period includes Hazards and Operability (HAZOPS) workshop with operational staff.
Detailed Design and tender documentation	4 months Complete end September 2018	
PACKAGE ONE	**KEPLER ENABLING WORKS**	Shelter belts, fencing, pasture
Tender	April 2018	Allows the maximum establishment time for shelter belts.
Implement	Complete by October 2019	Establishment of new pasture timed to be Spring of the year before irrigation commences.
PACKAGES TWO AND THREE	**PIPELINE AND REMAINING CONSTRUCTION WORKS**	
Contractor pre-qualification.	2 months Advertised early July, confirmed end August 2018	Expresses intent to the market to allow contractors to manage resources
Tender period	6 weeks Complete mid November 2018	Prequalification process allows contractors to prepare in advance.
Tender evaluation, negotiation and award	4 weeks Award mid December 2018 latest.	Allows time for negotiation with preferred tenderer to optimise any part of their bid.
Commence construction	Mid Feb 2019	Allows time for site establishment and initial material supply.

Milestone	Period (Date)	Discussion
Construction period – physical works	1 year Completed Mid Feb 2020	The longest duration activity is the pipeline construction. A one year construction period is sufficient to allow local contractors, with less resources, to participate.
Dry commissioning	2 months	Allows a contingency period to ensure wet commissioning starts as scheduled. Allows for operating and maintenance manuals, training and programming of control systems to be undertaken on a completed system, which reduces risk from changes.
Wet commissioning. **Discharges to the Kepler Block will commence.**	Commence 14 April 2020 (after Easter) 8 weeks duration Completed mid June 2020	Timed to occur in Autumn for two key reasons: • The new pasture requires a full summer growing season to develop. • Commissioning at this times avoids peak season, and the significant flow fluctuations. This minimises risk.
Consent expiry date for discharge to Upukerora river	30 November 2020	

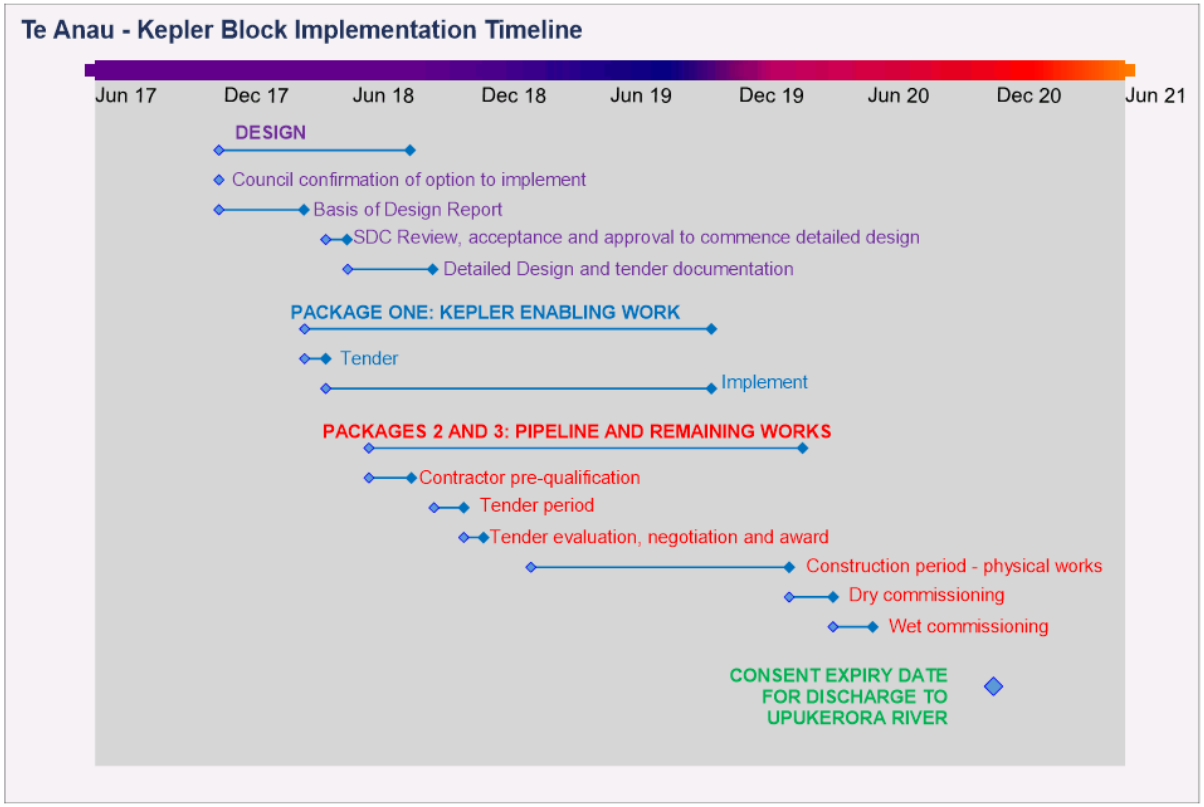

Figure 9: Implementation Timeline

4.7 Conditions of Contract

New Zealand's industry standard General Conditions of Contract for Construction, NZS3910:2013 are proposed to manage all construction contracts.

These are widely understood by the industry, and are well proven for projects such as this. The risk allocation inherent in NZS3910 is considered fair and reasonable. Special conditions will include warranties and guarantees for items of a design and build nature.

A 12 month Defects period would commence from the completion of commissioning.

4.8 Operation of Completed Scheme

It is proposed that responsibility for the operation of the scheme be passed to SDC's operations contractor at the end of commissioning. Experience has shown that it is the most practical option for the long-term operator to take over as soon as possible.

The construction contractor would still be responsible for defects, and the contract will include appropriate response times for any issues that might arise. Maintenance contracts for the irrigators will be entered into.

Prior to commissioning SDC will confirm a management contract for the management of the pasture and the associated cut and carry baleage operation.

4.9 Procurement Risk Assessment

The key procurements risks for Option 1 are summarised below in Table 17.

The options assessment in Appendix 4 provides further risks against each Decision Criteria.

A detailed risk register for all project matters has been developed over the last 3 years and will continue to be progressively updated throughout the project. This is provided in Appendix 3.

Table 17: Key Procurement Risks for Option 1.

Main Risks	Likelihood (H/M/L)	Consequence (H/M/L)	Comments and Risk Management Strategies
Buoyant market increasing tender prices and/or reducing number of tenderers	H	H	Increase attractiveness of project by: • Minimising tendering cost by providing full design. • Providing advance information • Providing 'even playing field' through pre-qualification • Encourage contractor feedback from pre-qualification to enhance the RFP, through design details, contractual requirements and timeframes.
Detailed design does not meet SDC's needs.	L	M	• Prepare a Basis of Design Report that fully describes how the scheme will operate, its strengths and compromises. • Critically assess this report, and amend as needed, before commencing detailed design.
Some design elements difficult to construct.	L	M	• Seek contractor feedback from the pre-qualification stage. • Allow some scope for alternative tenders, subject to the provision of a detailed schedule of compliance and departures.

Main Risks	Likelihood (H/M/L)	Consequence (H/M/L)	Comments and Risk Management Strategies
Lack of clarity on total tendered cost of all packages.	M	H	• Tender main work components in a single contract so that these tender prices are received at the same time.
Market discouraged by unattractive contractual conditions	L	M	• Minimise variations to the standard General Conditions • Subject any such conditions to careful scrutiny for unforeseen consequences.
Highest ranked tender has undesirable elements	M	M	• Ensure tender submissions are required to specify any variations. • Allow time for some negotiation before awarding a contract.
Increased price through local subcontractors not being involved.	M	M	• Ensure local contractors can be involved by the way the work is packaged, the price is scheduled, and its timeframes.
Commissioning problems cause discharge quality issues, or odour non-compliance.	L	H	Commission in Autumn: • Low flows mean buffer storage greater, and a long period of low loads can be expected. • Loads do not fluctuate as much, providing more stable operating environment • Pasture has had a full season to establish. • Temperatures are lower, reducing odour risk.
Commissioning not completed prior to 30 Nov 2020.	L	H	• Ensure Kepler Block pasture sown not later than spring 2019. • Provide buffer time period between physical works completion and commissioning
Operations staff not fully ready at handover	L	M	• Ensure operations staff involved throughout the project timeline, and specifically at HAZOPs. • Ensure training on the Environmental Management Plan and O&M Manuals completed prior to commissioning. • Defined interface between operations staff and land management contract.
Specialist SDC knowledge or procedures not incorporated.	L	M	• Allow incorporation of nominated equipment or subcontractors in specialist areas.
Lack of contractor focus on time and quality	M	M	• Appropriate liquidated damages. • Provide on-site supervision/observation. • Require regular and structured reporting. • Contract documents to specify quality control measures.
Failure of control system	L	M	• All plant able to run on manual mode if required.

5 Financing and Funding Arrangements

The purpose of this section is to determine the funding requirements of the preferred option and to demonstrate that the impact on affordability for ratepayers.

5.1 Financial costing approach

This section focuses on the affordability of the short-listed options evaluated in the Options Assessment, with particular emphasis on the preferred option. The financial costing shows the impact of the financial position of the SDC included in the 2018-28 Long Term Plan of implementing the preferred option.

The capital and operating requirements for the preferred option are detailed separately in the financial analysis, including:

- the capital and operating consequences of the preferred option over four years starting 2018/19. It is expected that the operational costs of the preferred option will be stable at the end of this period. The capital and operational costs shown are those above what is currently being incurred.
- any contingencies (in monetary terms and consistent with previous quantitative risk analysis) necessary to ensure that there is sufficient financial cover for risks and uncertainties have been included in the capital costs shown in Appendix 5
- any shortfall in capital and operating requirements (i.e. funding sought by this business case) and how this is funded in the 2018-28 Long Term Plan.

The key assumptions in the model are:

- inflation on costs has been applied in line with the assumptions for the 2018-28 Long Term Plan.
- all capital expenditure will be incurred by 30 June 2020.
- loans for capital work completed are drawn down at the end of the financial year the funds are required, with repayments starting in the year following. Loans are repaid over for a 30 year period with an interest rate of 4.65%
- the cut and carry operation will break even. There will be no surplus funds available to offset other operational costs.

The proposed funding arrangements are to:

- fund additional operational expenditure directly from rates in the year that it is incurred
- capital expenditure to be funded by available development contributions and depreciation reserves with the remainder funded by loans over 30 years. These loans are serviced by rates.

5.2 Impacts on the Financial Statements

The financial impacts of the project over the intended analysis period are shown in Table 18 for the four years from 2018/19. These are how the costs have been included in the 2018-28 Long Term Plan. By 2022/23 it is expected that the operational costs will be stable, with only increases in inflation occurring.

The capital cost of this project at $14.8 million will have a limited impact on the net assets of Council. At 30 June 2017 Council had total assets of $1.456 billion, including $78.3 million wastewater assets.

The net asset of Council (total assets less total liabilities) was $1.485 billion. Council's wastewater assets have a current net value of $xxx.

Table 18: Financial Costing Model

Component	2018/19	2019/20*	2020/21*	2021/22*	Total
Capital expenditure (total)	5,047,020	9,690,695	-	-	14,737,715
Operating expenditure:					
Additional electricity	-	50,135	102,476	104,730	257,341
Irrigation management	-	-	53,687	54,976	108,663
Monitoring	15,000	15,330	15,667	16,012	62,009
Consent administration fee	3,000	3,066	3,133	3,202	12,401
Loan repayments	-	273,875	804,963	804,963	1,883,801
Total expenditure	5,065,020	10,033,101	979,926	983,883	17,061,930
Revenue:					
Lease income from Kepler block	58,000	32,244	32,953	33,678	156,875
Development Contributions	-	361,220	-	-	361,220
Net cut and carry	-	-	-	-	-
Capital required	5,047,020	9,329,475	-	-	14,376,495
Operating required	(40,000)	310,162	946,973	950,205	2,167,340
Funded by:					
Rates revenue	(6,748)	361,220	946,973	950,205	2,200,592
Reserves	595,437	761,959	-	-	1,357,396
Borrowings	4,418,311	8,567,816	-	-	12,986,127
Total funding	5,007,020	9,639,637	946,973	950,205	16,543,835

Note: * the amounts included in these years include inflation percentages included in the assumptions for the Long Term Plan (LTP) 2018-28.

Capital expenditure in the LTP has been split between increased levels of serves (61.45%) and additional demand (38.55%). All available development contribution ($361,220) have been utilised to fund the additional demand portion. SDC's Development and Financial Contribution policy has been in remission since 1 July 2015. In future if Council decides to make the policy operative any development contributions collected in relation to Te Anau wastewater could be used to fund the remaining demand portion of the capital expenditure.

The capital work to be completed will be funded from available reserves accumulated from funding depreciation with the remainder funded by a 30 year loan. In 2018/19 the remaining loan will be $4.4 million and in 2019/20 $8.6 million.It is expected that pastoral land management costs and costs for harvesting of any baleage will be incurred. The intention is to sell the baleage, however for the purposes of the LTP it has been assumed that any income will only recover the costs rather than produce a surplus that could be used to offset the operational costs of running the wastewater system. These figures will be changed if further information shows the assumption is incorrect. The remaining additional operational costs will be funded directly from the rates in the year that the cost is incurred.

The loans required to fund the capital work will be funded from a mixture of internal and external debt. Internal debt will be used where possible (these are from funds held in reserves) however debt

sourced from external providers will needed to fund the capital construction. It is expected at the end of 2019/20 Council will require external debt of $10.7 million. The Investment Policy and Liability Policy for Council allows effective from 1 July 2018 requires net external debt not to exceed 100% of total revenue. The external debt required 2019/20 is within this limit as total income is no lower than $68 million during the 10 years of the plan.

In addition to the operational costs shown above Council implemented a policy to gradually fund depreciation on wastewater assets in 2015-25 LTP. In 2018/19 financial year, 40% of any depreciation is funded with all depreciation being funded from 2024/25 financial year onwards. To ensure that the current ratepayers are not paying for the use of an asset twice, loan repayments are taken into account in the completion of this calculation. Due to the loan repayment being higher than the depreciation, no additional rates are required to be collected in relation to the policy on funding depreciation.

Appropriate contingencies have been made for risks and uncertainties within the estimated capital expenditure. Due to the uncertainty in relation to the potential revenue from the cut and carry operation a conservative approach has been taken. The forecast included in the LTP is that any income will cover the costs for pastoral management and removal of any baleage, with no excess funds available to offset other operational costs.

Table 19 shows the District Wastewater rates in the draft 2018-28 LTP. These show rates increases between 0.86% and 9.51% in the period, with the GST exclusive rate moving from $389 in 2017/18 to $571 in 2027/28. Residential ratepayers are impacted by the GST inclusive rate of $448 in 2017/18 increasing to $657 in 2027/28.

Table 19: District Wastewater Rates in draft 2018-28 LTP

Financial Year	Percentage Increase	Rate (excl GST)
2018 / 19	2.15%	$397
2019 / 20	2.56%	$408
2020 / 21	9.51%	$446
2021 / 22	0.86%	$450
2022 / 23	5.50%	$475
2023 / 24	5.59%	$502
2024 / 25	6.50%	$534
2025 / 26	2.44%	$547
2026 / 27	2.01%	$558
2027 / 28	2.32%	$571

The impacts on the rates increases are:

- 2020/21 the repayment of loans for option 1
- 2022/23 the repayment of loans for upgrade at Riversdale
- 2023/24 & 2024/25 work completed at Winton along with repayment of loans

The 2015-25 LTP included the construction of the Te Anau consented option in 2016/17 to 2018/19. The capital work was funded by $350,000 development contributions in 2017/18 with the remaining capital work funded loans repaid over 30 years with an interest rate of 6.25%. The majority of

borrowings were expected to be funded from internal sources, but external debt was expected to be required in 2017/18.

Additional operational costs included in 2018/19 were electricity $75,000, resource consents $2,000, monitoring costs $15,000 along with a reduction in rental income of $28,000. In 2019/20 additional maintenance of $50,000 was allowed for irrigation management. The budgets included in the 2015-25 LTP have been undated in the 2017/18 and 2018/19 Annual Plans to reflect any known changes in the timeline. These changes include the removal of construction costs and funding required to complete the construction. The 2018-28 LTP has been updated to reflect the changes included in this business case and will be revised as additional information is received.

Historic Costs

The capital costs detailed in Section 5.2 are the future costs outlined in Appendix 5 that will be incurred in the future. In addition to these costs Council has already incurred costs in relation to the purchase of the land at the Kepler block and costs for initial investigations and obtaining the necessary resource consents. The total cost of purchasing the Kepler block of land was $4.44 million in 2007/08. The purchase was funded by available development contributions and a loan. The loan repayments were funded from the Te Anau sewerage rate until the 2012/13 financial year, when the sewerage activity changed to being funded on a district-wide basis via the district sewerage rate. When district funding of the activity was introduced existing sewerage reserves were used to offset any sewerage loans, with a net result of a loan of $150 thousand. This loan has been repaid.

Included in the wastewater assets at 30 June 2017 is work in progress of $1.7 million relating to the resource consent process. These are costs that have accumulated from 1 July 2013. At 30 June 2017 the wastewater activity had internal loans of $384 thousand. Since the implementation of the district rate, loans have not been identified as relating to a specific project. However the internal loans were incurred in 2014/15 and 2015/16 when significant costs were incurred in the consent process.

5.3 Overall Affordability

The draft financial strategy prepared with the 2018-28 LTP uses a measure of rate affordability equating to no more than 5% of total household income. This measure is consistent with the recommendation made by the Independent Inquiry into Local Government Rates, which reported in 2007. Table 20 shows the number of communities where the percentage of household income paid for Southland District Council rates is greater than 5% of average household income from the 2013 census data (the most recent that is available). The base line comparison to rates is for the 2016/17 financial year. The percentages for rates affordability exclude Environment Southland rates. All ratepayers in the Southland District will be paying Environment Southland in addition to the Southland District Council rates used in the calculation.

Table 20 further shows the number of communities that the rates are higher than 5% of total household income based on the 2016/17 rates under each of the short-listed options given the predicted expenditure for the Te Anau project. The comparison is between the rates and the average household income from the 2013 census data held by Statistic New Zealand for residences only.

Seventeen communities that are connected to the district wastewater rate had residential census data that was available (some communities were excluded by Statistics New Zealand as the sample is too small for release for privacy purposes).

Appendix 7 shows rates affordability for residential ratepayers in each individual community.

Table 20: Impact of Options on Rates Affordability

Option	Number of Communities with rates greater than 5%
Baseline: 2016/17 rate as a percentage of average household income (2013)	2 communities rates affordability 5.26% and 6.20%
Option 1 as a percentage of average household income (2013)	4 communities rates affordability 5.08%, 5.15%, 5.65% and 6.66%
Option 2A as a percentage of average household income (2013)	4 communities rates affordability 5.15%, 5.23%, 5.75% and 6.77%
Option 2B as a percentage of average household income (2013)	5 communities rates affordability5.01%, 5.19%, 5.27%, 5.80% and 6.8%
Option 3 as a percentage of average household income (2013)	5 communities rates affordability 5.04%, 5.22%, 5.31%, 5.84% and 6.89%

6 Conclusions

Option 1 is the preferred solution, being the consented discharge of oxidation pond treated wastewater to the Kepler Block by Central Pivot Irrigation.

If other options become available, particularly in response to the request for land, they will be reviewed against the advertised criteria and then against the Key Constraints as outlined in the Business Case.

Appendix 1: Key Stakeholders and Affected Parties

Stakeholder	Organisation Overview	Organisational Goals/Priorities	Te Anau WW Role and Responsibilities
Infrastructure Working Group (IWG)	The IWG was established to enable efficient communication with key stakeholders during the development of options for the long-term WW strategy that was required by condition 20 of Discharge Permit 201636 issued on 8 October 2004. Representatives from: SDC, Te Ao Marama[17], Department of Conservation, Southland Fish and Game Council, the Guardians of Lakes Te Anau, Manapouri and Monowai and the Te Anau Community Board Environment Southland was invited to all meetings to keep informed.	Assist SDC in developing a long term WW strategy for Te Anau that understands and takes into account the values of the represented groups.	The role of the Working Group was to provide support to SDC to find a sustainable long term solution to the disposal of wastewater. More specifically, the working group had the following functions: • The identification and consideration of significant existing and emerging local issues; • Assisting the dissemination of information about the progress on the strategy for the Te Anau WW Scheme; •
Southland District Council	Territorial authority responsible for: • Sustainable district well-being. • The provision of local infrastructure, including water, sewerage, stormwater, roads. • Environmental safety and health, district emergency management and civil defence preparedness, building control, public health inspections and other environmental health matters. • Controlling the effects of land use (including hazardous substances, natural hazards and indigenous biodiversity), noise, and the effects of activities on the surface of lakes and rivers.	SDC's strategic framework sets out the vision, mission and community outcomes for the Southland District Council. The three community outcomes are: • Supporting our communities • Making the most of our resources • Being an effective council	Responsible for leading, developing and implementing a long term wastewater strategy for Te Anau. Land use consenting authority for the district.

[17] Resource Management Consultants representing Te Runanga o Awarua, Te Runanga o Hokonui, Te Runanga o Oraka/Aparima and Te Runaka o Waihopai.

Stakeholder	Organisation Overview	Organisational Goals/Priorities	Te Anau WW Role and Responsibilities
Environment Southland	Regional authority responsible for: • Sustainable regional well-being; • Managing the effects of using freshwater, land, air and coastal waters, by developing regional policy statements and the issuing of consents; • Managing rivers, mitigating soil erosion and flood control; • Regional emergency management and civil defence preparedness; • Regional land transport planning and contracting passenger services; • Harbour navigation and safety, oil spills and other marine pollution.	The Strategic Plan for Environment Southland identifies five focus areas, which guide Environment Southland's Long-term Plans until 2025. The focus areas are: • Land, Water and Coastal Management • Air Quality • Biosecurity and Biodiversity • Risks and Natural Hazards • Transport	Responsible as regulatory authority for managing discharges for purposes of maintaining and enhancing water quality and the sustainable use of natural and physical resources in the catchment
Manapouri CDA			Interested party
Te Anau WW project committee			Advisory role to SDC regarding scope of work to be considered, and acceptability of proposals
Te Runanga o Ngai Tahu	Te Runanga o Ngai Tahu was established by the Te Runanga o Ngai Tahu Act 1996 to be the tribal servant, protecting and advancing the collective interested of the iwi..	Te Rūnanga o Ngāi Tahu has three key roles: • Support Te Rūnanga o Ngāi Tahu especially in terms of policy and strategy development; • Support and assist the members – Papatipu Rūnanga; • Provide benefits for both the present and future members of Ngāi Tahu Whānui.	Statutory role via the Conservation and Resource Management Acts, and via a Statutory Acknowledgement for the area under the Ngai Tahu Claims Settlement Act 1998 Affected party under Section 95, RMA Member of IWG
Te Ao Marama (inc)	Te Ao Marama is a consultative organisation that represents the interests of the four Murihiku Papatipu Runanga on Resource Management and Local Government matters.	Aligned with Te Runanga o Ngai Tahu. Protection of cultural and spiritual values of Murihiku in relation to the use of land and water.	Representing Oraka/Aparima Runanga Affected party under Section 95, RMA. Member of IWG

Stakeholder	Organisation Overview	Organisational Goals/Priorities	Te Anau WW Role and Responsibilities
Department of Conservation (DOC)	The central government organisation charged with conserving the natural and historic heritage of New Zealand.	DOC's vision is to ensure New Zealanders gain a wide range of benefits from healthy functioning ecosystems, recreation opportunities and through living out history. Their work is based around the following five outcomes: • The diversity of our natural heritage is maintained and restored; • Our history is protected and brought to life; • More people participate in recreation; • More people engage with conservation and value its benefits; • Conservation gains from more business partnerships.	DOC has a statutory role under the RMA in advocating for protection of natural and historic values and the sustainable management of natural and historic resources and where consent applications affect land administered by DOC. Affected party under Section 95, RMA. Member of IWG
Te Anau Community Board			Affected party. Member of IWG Formal role in representing local community.
Guardians of the Lake Manapouri, Monowai and Te Anau	The Guardians were established under the Conservation Act. There are currently eight Guardians of the Lakes including two Ngai Tahu representatives. The appointments are for terms of five years.	The Guardians report annually to the Government on matters arising from the environmental, ecological and social impacts of the Manapouri and Monowai power schemes on Lakes Manapouri, Monowai and Te Anau. The Guardians also make recommendations to Government concerning the operating guidelines for these lakes.	Interested party. Member of IWG

Stakeholder	Organisation Overview	Organisational Goals/Priorities	Te Anau WW Role and Responsibilities
Fiordland Sewerage Options	An Incorporated Society that comprises an executive committee and members.	The objects of the Society are: To ensure that the Te Anau airport at Manapouri or adjacent land does not become the disposal site for Te Anau and /or Manapouri treated or untreated sewage; To help formulate alternative, environmentally friendly options for the disposal of Te Anau and Manapouri sewage; To help the communities of Te Anau and Manapouri well informed and to encourage transparency in all Council activities relating to Te Anau and Manapouri sewage disposal.	Formed following the original 2015 decision by the Commissioners to grant a discharge consent for the Kepler Block. Formed by individuals who were submitters.
Landowners (Landcorp)	Government owned corporate farming and land management organisation. Sold the Kepler Block to SDC as a potential WW disposal site.		Interested Party Formal agreements with SDC regarding land use if Kepler Block used for WW disposal.
Landowners and residents (General)	Landowners and/or residents adjacent to either the existing WW ponds or any new facility are affected by the physical and intangible effects.		Interested party.
Fish & Game	Fish and Game New Zealand is the collective brand name of the New Zealand Fish and Game Council and 12 regional Fish and Game Councils, established in 1990 to represent the interests of anglers and hunters, and provide coordination of the management, enhancement, and maintenance of sports fish and game (Section 26B of the Conservation Act 1987).	The mission of the Southland Fish and Game Council is the management, maintenance and enhancement of the sports fish and game bird resource in the Southland Fish and Game Region. Fish and Game has the following focus: • Species management; • Habitat protection; • Access and participation; • Public awareness; • Compliance; • Licensing; • Coordination and planning.	Affected party under Section 95, RMA. Member of IWG

Appendix 2: Regulatory Framework

This Appendix summarises the regulatory documents and organisations that set standards and/or should be consulted with:

National Policy Statement for Freshwater Management 2014, updated 2017

The National Policy Statement (NPS) for Freshwater Management took effect on 1 August 2014 and was updated in 2017. The NPS sets out objectives and policies that direct local Government to manage water in an integrated and sustainable way, while providing for economic growth within set water quantity and quality limits. The NPS is a first step to improving freshwater management at a national level.

Proposed Southland Regional Policy Statement

The Southland Regional Policy Statement (RPS) guides resource management policy and practice in Southland. It provides a framework on which to base decisions regarding the management of the region's natural and physical resources, gives an overview of the significant resource management issues facing Southland, including issues of significance to tangata whenua, and includes objectives, policies and methods to resolve any identified issues. The RPS also includes measures to indicate whether the objectives have been achieved. All appeals on the RPS have now been resolved through consent orders issued by the Environment Court.

Regional Water Plan

The purpose of this Plan is to promote the sustainable management of Southland's rivers, lakes, groundwater, surface water, and wetland resources. The Plan is aimed at enabling the use and development of fresh water where this can be undertaken in a sustainable way, providing a framework for activities, such as discharges to water, taking and using water, and structures and bed disturbance activities in river beds. Preferences for discharges to land rather than surface water bodies is specifically addressed by way of Policy 7 of the Plan. This states:

"Prefer discharges to land over discharges to water where this is practicable and the effects are less adverse."

Effluent Land Application Plan

This Plan covers sewerage schemes, treatment of foul water by septic tanks, toilet facilities at visitor centres, rest areas and at tramping track huts, campervan and stock truck discharges, trade wastes, and other discharges that may have an effect on groundwater and surface water quality and public health in Southland. The plan looks at how Environment Southland will manage effluent and sludge in Southland.

Proposed Southland Water and Land Plan

The Southland Regional Water and Land Plan has been developed by Environment Southland and is intended to provide direction and guidance regarding the sustainable use, development and protection of water and land resources in the Southland region.

The Plan combines a suite of planning instruments[18] which manage Southland's water and land resources. It provides a regulatory tool for a variety of issues relating to these resources, with particular emphasis on the management of activities that may adversely affect the quality of the

[18] Transitional Regional Plan, Regional Effluent Land Application Plan and Regional Water Plan provisions.

region's freshwater. The Plan outlines objectives, policies and rules that apply to the whole of the region.

The Plan gives effect to the National Policy Statement for Freshwater Management 2014 (NPS-FM). The NPS-FM includes a requirement to define the waterbodies to be managed, and set outcomes, limits, targets and other measures to achieve those outcomes. In accordance with this framework, the Southland region has been divided into five catchments, which stretch from the mountains to the estuaries and sea at the bottom of these catchments. These are the Freshwater Management Units (FMU) for the purposes of the NPS-FM.

Through the FMU limit setting process, objectives, policies and rules will be developed for each FMU. These will be tailored to respond to the pressures faced within each particular catchment. As the FMU limit setting process proceeds, the region-wide objectives, policies and rules in the Water and Land Plan may be added to or replaced by the objectives, policies and rules specific to each FMU. Environment Southland intends to complete its FMU limit setting programme by December 2025.

Preferences for discharges to land rather than surface water bodies is specifically addressed by way of Policy 14 of the Plan. This states:

"Prefer discharges to land rather than direct discharges to water."

Te Mana o te Wai

The Plan recognises the national significance of Te Mana o te Wai, which puts the mauri (inherent health) of the waterbody and its ability to provide for Te Hauora o Te Tangata (the health of the people), Te Hauora o Te Taiao (health of the environment) and Te Hauora o Te Wai (the health of the waterbody) to the forefront of freshwater management. Te Mana o Te Wai has three key functions:

- it is a korowai (cloak) or overarching statement associating the values relating to a particular waterbody and freshwater management unit;
- it provides a platform for tangata whenua and the community to collectively express their values for freshwater; and
- it aligns management tools with values and aspirations to maintain and improve both water quality and quantity.

Te Mana o te Wai is fundamental to the integrated framework for freshwater management in Southland. It provides a way of expressing Southland's aspirations for freshwater, now and into the future.

Te Tangi a Tauira – Ngai Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008

The purpose of this Iwi Management Plan is to consolidate Ngai Tahu ki Murihiku values, knowledge and perspectives on natural resource and environmental management issues within the Southland environment. It is an expression of kaitiakitanga. While the Plan is first and foremost a planning document to assist Ngai Tahu ki Murihiku in carrying out kaitaki roles and responsibilities, it also recognises the role of communities in achieving good environmental outcomes and healthy environments, and thus is designed to assist others in understanding tangata whenua values and policy.

Te Tangi a Tauira identifies values, objectives, policies and outcomes sought by the tangata whenua of Murihiku. A notable policy in relation to the Kepler Block proposal is:

"*Avoid the use of water as a receiving environment for the direct, or point source discharge of contaminants. Even if the discharge is treated and therefore considered "clean", it may still be culturally unacceptable. Generally all discharges must first be to land.*"

Avoidance of use of water as a receiving environment is the bottom line for Ngai Tahu ki Murihiku in terms of addressing adverse effects of the discharge of human sewage on cultural values such as mauri, wairua, mahinga kai and wahi tapu.

Ngai Tahu Freshwater Policy Statement

This document has been prepared by Te Runanga o Ngai Tahu as its Freshwater Policy Statement. Its focus is the management of the freshwater resource within the role of Ngai Tahu. As water is central to all life, and as a taonga provided by Maori ancestors, the present generation of Ngai Tahu is responsible for ensuring that this taonga continues to be available for future generations.

Part 2 of the Policy Statement identifies four priority areas (Wahi Tapu, Mauri, Mahinga Kai and Kaitiakitanga) that need to be addressed by natural resource managers and lists the objectives and policies for each priority area and suggested strategies for achieving these objectives and policies. These include the objective to "*Restore, maintain and protect the mauri of freshwater resources and policies "To protect the opportunities for Ngai Tahu uses of freshwater resources in the future" and "To maintain vital, healthy mahinga kai population and habitats capable of sustaining harvesting activity."*

Appendix 3: Risk

Optimism Bias

It is important to identify how natural bias is explicitly considered in a business case. For example, where a proposal has had relatively little scoping work done it is easy to be overly optimistic about how much it will cost i.e. you think it will cost less than it actually will.

In order to deal with this it is important to look at past projects at different stages of design to work out what is an appropriate allowance or contingency factor to add in to the overall costs based on where you are in the design process. Generally, the more design work that has been done the smaller the allowance/contingency (expressed as a percentage of overall cost) that is needed.

The Consented Scheme is at this later stage of development with the lower optimism bias and has a reduced contingency allowance on key items than the other options that are at an earlier stage of development with a higher potential for optimism bias.

Capital Cost

With regard to capital cost, as stated above, experience shows that initial estimates for a new wastewater scheme require an allowance of an additional 50% for:

- Physical works that will be required, but haven't yet been identified,
- Extra cost for identified works, due to a tendency to underestimate the complexity of fully executing the works in a way that meets technical concerns, along with necessary community values,
- Dealing with issues and risks that arise during the construction phase.

Depending upon the method of procurement, the above percentage typically reduces to a contingency allowance of about 10% by the time physical works go to tender. As the project develops, the full scope of work becomes clear, and the ability to properly estimate it improves.

Operational Cost

Operational cost is often understated, as it can focus on tangible immediate costs such as consumables and direct staff hours. Less tangible costs, such as training, third party support, performance assessments and compliance monitoring are often excluded. This omitted cost is proportional to the complexity of the treatment plant, but can be between 50% and 100% of an initial operational expenditure estimate.

Time

With regard to timeliness, for a new investment proposal, optimism bias is estimated as follows:

- In getting to the stage of formally confirming a specific scheme, and gaining the necessary approvals, bias is estimated at one through to several years.
- At the point where the scheme fully consented and funded, optimism bias for the completion date is estimated to be in the region of 6-12 months. This can be due to resourcing, the uncovering of additional details to be resolved as the design becomes more detailed, or further approvals to be gained.

- Once a construction contract is tendered, optimism bias is estimated to be 2 – 6 months. This covers the potential delays in awarding the contract as contract details are finalised, the risk of delays (e.g. weather) that is generally allocated to the owner, and delays in commissioning.

Benefits - Technical Outcomes

On the basis that the above optimism for cost and time is allowed for, for a wastewater scheme such as this, the optimism bias is considered to be the reverse regarding the technical outcomes, i.e. the project will over-perform. Projects are designed with safety margins to ensure that minimum standards are achieved under the range of reasonably foreseeable circumstances. This is because many of the performance criteria are often not negotiable (e.g. consent conditions), so the design process must incorporate a safety margin.

Benefits - General

The principal cultural (and also social) benefit of removing the direct discharge of wastewater to surface water is obviously measurable, and it is a focus of the project to achieve this.

Other benefits, such as SDC's reputation, and enabling growth and tourism, are subjective. The capacity for growth, for example, will be provided, but this is not a decisive factor in making growth happen, as there will be many other commercial factors. Therefore, these subjective benefits should be cautiously stated.

Risk Register

The following attachment is a high-level ongoing Risk Register for whole project – individual risks may not apply to all options.

Risk Register - Te Anau Wastewater Scheme

Project Name: Te Anau Wastewater Scheme | Date modified: 9/11/2017 | Project number: 80508264

id	Risk Area	Risk Description	Effect	Likelihood Rating		Consequence Rating		Risk Score	Owner	Status	Mitigation Description	Mitigation Rating		Residual Risk
	Consenting and Approvals													
1	Regulatory/Compliance	Contaminant limits are tightened by ES subsequent to consent approval. Especially nitrogen.	Upgrade of treatment performance required	Could happen	0.5	Significant effect	0.8	**0.4**	SDC	Live	Determine scope and cost of future upgrades. Refer estimates in 2006, 2007 and 2012 reports.	Effective	0.3	**0.12**
2	Regulatory/Compliance	Flooding of existing ponds from river	Ponds damaged, and/or unable to operate ponds and pumpstation affected while remediation undertaken.	Unlikely to happen	0.3	Significant effect	0.8	**0.24**	SDC	Live	Locate pumpstation so that no effect if ponds 2 and 3 inundated. Raise only pond 1 for emergency storage, as furthest from the river. Use excavated trench material to enhance protection	Effective	0.3	**0.072**
8	Regulatory/Compliance	Other resource consents/approvals needed	Delays to project, and further changes required, especially if consents are of a significant nature.	Unlikely to happen	0.3	Moderate effect	0.5	**0.15**	MWH	Live	Determine all other consents needed for site investigation and construction. Check this with ES and SDC and prepare programme.	Effective	0.3	**0.045**
9	Regulatory/Compliance	Landowner approvals	Delays to project, and further cost and changes required, in order to gain approvals, or to contest at a hearing	Highly unlikely	0.1	Significant effect	0.8	**0.08**	SDC	Live	Ensure SDC owns site. Stakeholder engagement. Obtain written agreement for easements Formalise easements for corridor and access as promptly as possible. Show on programme when they are needed	Excellent	0.1	**0.008**
12	Regulatory/Compliance	Consent conditions re spray drift	Consent condition 6(d) Commissioners thought that whether there is spray drift that is observable by sight, touch and taste was "an objective test that requires no particular expertise", as given in their memorandum, but they are actually subjective, and may be the cause of disputes.	Unlikely to happen	0.3	Moderate effect	0.5	**0.15**	SDC	Live	Pro-active engagement with compliance officer and stakeholders, but a difficult risk to manage. Monitor pivot operation in windy conditions to refine understanding.	Effective	0.3	**0.045**
15	Regulatory/Compliance	Time limit to give effect to consent	Kepler consent application lapses due to delays.	Could happen	0.5	Significant effect	0.8	**0.4**	SDC	Live	Determine whether to continue with Kepler or implement an alternative within timescales. Keep ES informed.	Effective	0.3	**0.12**
20	Political	Cost	Potential for backlash of wider community against cost of adding any further scope to that which is consented.	Unlikely to happen	0.3	Moderate effect	0.5	**0.15**	SDC	Live	Ensure feasibility, costs and benefits are well understood in a Business Case before publicly canvassing the option.	Effective	0.3	**0.045**
	Concept													
23	Procurement	Unable to sell the pasture cut (baleage)	Pasture cut must be removed to remove nitrogen. Therefore more expensive disposal required, rather than income from baleage.	Could happen	0.5	Significant effect	0.8	**0.4**	SDC	Live	Establish a long term contract with a user, even if baleage less than market value.	Effective	0.3	**0.12**
26	Regulatory/Compliance	Odour escape from Kepler pumpstation when filling the rising main. Odorous air comes from inside the rising main	Odour release sufficient to be cause of complaints	Could happen	0.5	Moderate effect	0.5	**0.25**	SDC	Live	Vent pumpstation to the soil filter. Control rising main so that pipe remains full.	Excellent	0.1	**0.025**
34	Regulatory/Compliance	Control of aerobes/pathogens from irrigated wastewater.	Pathogens beyond site boundary, contrary to consent conditions.	Highly unlikely	0.1	Moderate effect	0.5	**0.05**	SDC	Live	Allow for climate station, soil moisture and wind shutoff of irrigation if monitoring indicates saturated soil, runoff and excess wind speed. Irrigator design and droplet size. Groundwater monitoring of mounding and downgradient and key indicators.	Excellent	0.1	**0.005**
38	Financial	Operating and depreciation cost of new scheme too high.		Unlikely to happen	0.3	Moderate effect	0.5	**0.15**	SDC	Live	The Kepler proposal exists as a benchmark, with costings reasonably well developed, and peer reviewed and potential risks well understood.	Effective	0.3	**0.045**

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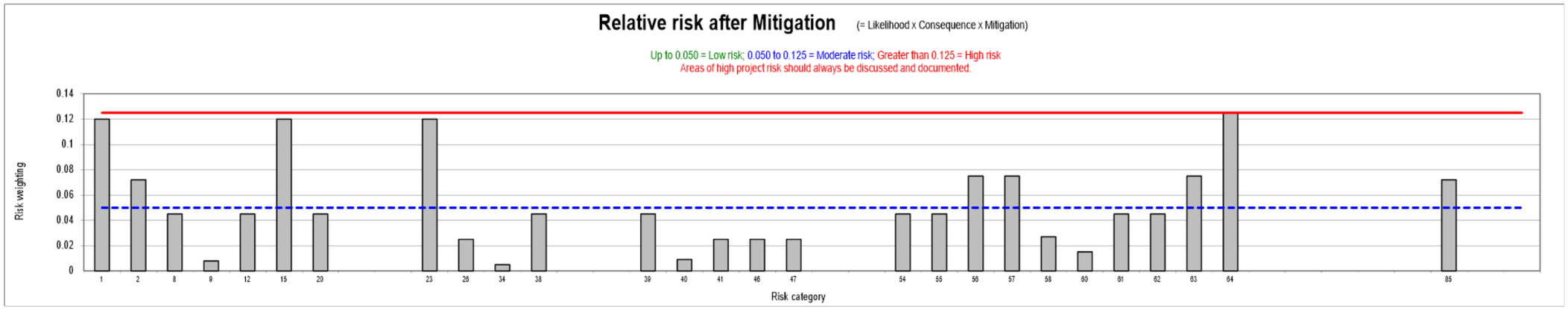
		Project Name: Te Anau Wastewater Scheme				Date modified: 9/11/2017				Project number: 80508264			
id	Risk Area	Risk Description	Effect	Likelihood Rating		Consequence Rating		Risk Score	Owner	Status	Mitigation Description	Mitigation Rating		Residual Risk
	Design													
39	Financial	Unforeseen construction issues with Pipeline	Increased cost	Unlikely to happen	0.3	Moderate effect	0.5	**0.15**	Stantec SDC	Live	Sufficient site investigation, including survey. Budget to include contingency for uncertainty. Refer also to procurement strategy.	Effective	0.3	**0.045**
40	Technical	Inprecise cadastral info and landowner information.	Pipeline built on land without permission, at isolated locations.	Unlikely to happen	0.3	Minimal effect	0.3	**0.09**	Stantec	Live	Initial review (Dec 2016) of boundaries on aerial images. Review cadastral info and thorough check of owners. Confirm with landowners. Engage surveyors to confirm boundaries where close.	Excellent	0.1	**0.009**
41	Technical	Odour at air valves and pumpstations	Residual odour not fully controlled.	Could happen	0.5	Moderate effect	0.5	**0.25**	Stantec	Live	Refer odour management plan. Include carbon or soil filters on all discharge points.	Excellent	0.1	**0.025**
46	Technical	Sulphide residual hard to measure	Residual odour not fully controlled.	Could happen	0.5	Moderate effect	0.5	**0.25**	SDC	Live	Online suphide measurement may be required for load-pacing of oxidant dosing prior to centrepivots	Excellent	0.1	**0.025**
47	Regulatory/Compliance	Irrigation onto snow or frosted ground (see T Davoren email of 17 June 2014)	Unable to irrigate, and therefore overflow at ponds.	Could happen	0.5	Moderate effect	0.5	**0.25**	SDC	Live	Retention storage at ponds. Local operator to assess ground conditions.	Excellent	0.1	**0.025**
	Commercial and Construction													
54	Procurement	Contractor expertise	Contractors with appropriate skills do not tender.	Unlikely to happen	0.3	Moderate effect	0.5	**0.15**	SDC	Live	Refer Procurement Business Case. Consider Regiistration of Interest (RoI) and prequalification. Gives advance warning and a feedback loop that allows adjustment of commercial 'attractiveness'.	Effective	0.3	**0.045**
55	Procurement	Contractors won't accept risk allocation	Contractors with appropriate skills do not tender.	Unlikely to happen	0.3	Moderate effect	0.5	**0.15**	Contractor SDC	Live	Refer Procurement Business Case. Ask Q in ROI about risk share, and take into account the responses. Use industry standard NZS3910 conditions of contract	Effective	0.3	**0.045**
56	Financial	Total project cost.	Tenders exceed LTP budgets (and previous estimates)	Could happen	0.5	Moderate effect	0.5	**0.25**	SDC	Live	Ensure estimates are properly reviewed. Use ROI process to gain feedback on cost. Ensure major tenders received concurrently.	Effective	0.3	**0.075**
57	Procurement	ROI contractors pull out.	Contractors with appropriate skills do not tender.	Could happen	0.5	Moderate effect	0.5	**0.25**	SDC	Live	Refer Procurement Business Case. Allow to include non pre-qualified contractors at a later stage. Retendering as a last resort. Ensure prequalification approves enough tenderers to allow one to back out..	Effective	0.3	**0.075**
58	Procurement	Foreign exchange risk	Dispute over who owns the forex risk.	Unlikely to happen	0.3	Minimal effect	0.3	**0.09**	Contractor	Live	Specify as a Contractor risk except between tender lodge and award. Consider purchasing of forex or hedge.	Effective	0.3	**0.027**
60	Procurement	Extreme Weather during construction, beyond what could be reasonably expected.	Delays and potential for time-related costs.	Highly unlikely	0.1	Moderate effect	0.5	**0.05**	Contractor	Live	To be addressed in the procurement and contractual process	Effective	0.3	**0.015**
61	Procurement	Time to complete	Delivery takes longer with potential reputational damage, and overlap with expiry of Upukerora discharge consent.	Unlikely to happen	0.3	Moderate effect	0.5	**0.15**	Contractor SDC	Live	To be addressed in the procurement and contractual process	Effective	0.3	**0.045**
62	Political	Commissioning	Problems encountered that erode public confidence.	Unlikely to happen	0.3	Moderate effect	0.5	**0.15**	All	Live	To be addressed in the procurement and commissioning/contractual process	Effective	0.3	**0.045**
63	Financial	Buoyant construction market	Cost increases	Could happen	0.5	Moderate effect	0.5	**0.25**	SDC	Live	To be addressed in the procurement and contractual process	Effective	0.3	**0.075**
64	Financial	Value of baleage	Baleage income less than budgeted	Could happen	0.5	Moderate effect	0.5	**0.25**	SDC	Live	The opex budget assumes an income from baleage. This may vary between seasons. Wastewater irrigation may affect the market value in the future. A discounted value incorporated.	Moderate	0.5	**0.125**

		Project Name: Te Anau Wastewater Scheme						Date modified: 9/11/2017			Project number: 80508264			
id	Risk Area	Risk Description	Effect	Likelihood Rating		Consequence Rating		Risk Score	Owner	Status	Mitigation Description	Mitigation Rating		Residual Risk
	Operations *An operational management plan will be developed which will contain a risk assessment and contingency plans to manage and/or mitigate potential consequences and effects of adverse events.*													
	Resourcing													
85	Resources	Continuity of expertise. SDC and Consultant personnel change during the time required to implement project	Sub-optimal outcome due to reduced project understanding	Will probably happen	0.8	Minimal effect	0.3	**0.24**	All	Live	Properly document and file all work as it is undertaken, ensure no information stuck in any individuals head. Shared backup of critical files and processes.	Effective	0.3	**0.072**

Completed by:	R Oakley Nov 2017
Reviewed by:	P Jacobson Nov 2017

Highly unlikely	0.1	No effect	0.1
Unlikely to happen	0.3	Minimal effect	0.3
Could happen	0.5	Moderate effect	0.5
Will probably happen	0.8	Significant effect	0.8
Will happen	1	Disastrous	1

Excellent	0.1
Effective	0.3
Moderate	0.5
Low effectiveness	0.7
Ineffective	0.9



Item 7.3 Attachment A

Appendix 4: Descriptions of Options

TE ANAU WASTEWATER SCHEME - OPTION OVERVIEW

OPTION 1 – CENTRE PIVOT IRRIGATION TO KEPLER BLOCK (CONSENTED OPTION)

General

Option 1 is as described in the resource consent application documentation that was granted on 20 January 2017, amended as necessary by the conditions of that consent, or as below.

Map of Components of Scheme

Figure 1: Location map

Key Components

Component	Description
Method of Treatment	No change to the existing ponds, other than: • The inclusion of additional aeration (2017/18) • Raising of Pond 1 to provide 15,000m³ of emergency storage. • Investigation has confirmed the ponds' treatment performance will be similar to present, for the anticipated demands of the next 35 years.
Transfer to Disposal Site	• Pumped via a continuously full rising main 18km to the Kepler site at 300mm diameter • Activated carbon odour filters on rising main air valves
Disposal Site	• Trickling filter, for odour control, at Kepler site • Allowance for oxidant dosing at Kepler to mop up any remaining odour compounds • Three centre pivot irrigators configured as below (a change from consent documentation). • Cut and carry operation to remove Nitrogen. Crop to be sold as baleage
Option for Manapouri	• Retain existing oxidation pond and transfer to Kepler Block for disposal via 6-7km pipeline. • Would require consent change to include Manapouri WW

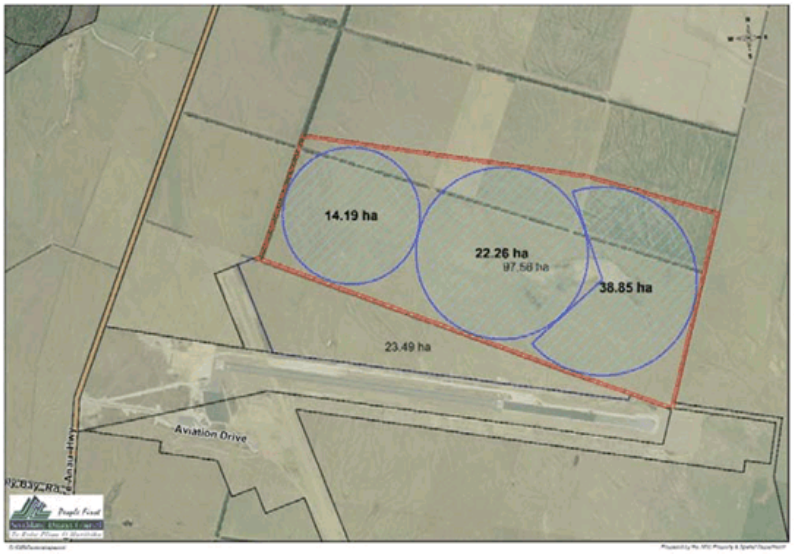


Figure 2: Amended Centre Pivot layout, to keep behind existing shelter belt

The Scoring Guidelines for Evaluation Criteria SA1 cites a radius of 2km from the irrigation site being of particular emphasis for assessing effects on individuals. Figure 3, below indicates this radius for the Kepler site.

Figure 3: Indication of 2km radius – based on closest point to airport and road.

Design Flows (Loads assumed to increase in proportion)

	Summer (m^3/day)	Winter (m^3/day)
Initially installed	4,500	2,000
After upgrade* in year 10	4,500	2,000

* Some options (not Base Case) incorporate staged development

Status of Consents

Regional

a) Discharge to land for Kepler Block – granted, expires in 22 January 2040
b) Discharge to water (WWTP) – granted, expires in 30 November 2020
c) Discharge to air (WWTP) – granted, expires in 30 June 2041
d) Discharge to air (Kepler Block) – granted, expires in 30 June 2041
e) Discharge to air (air valves with carbon filters) – permitted activity
f) Stream crossings and other construction consents for pipeline – to be sought

District

a) Designation for WWTP – in place
b) Designation for Kepler Block – in place
c) Pipeline – may be required

Assessment against Constraints

Constraints	Assessment	Pass/Fail
Must comply with consent limits under all flow and load fluctuations.	Basis of current consent	√
Implement before 30 November 2020.	Principal consents obtained (Discharges to land and air). Other consents are minor and expected to be obtained	√
No direct discharge to water	No direct discharge to Upukoroa River or Waiau River	√
Consentable term	25 year consent granted for main discharge to land consent	√
For land disposal – require ability to purchase the land.	Kepler Block owned by SDC	√
Life of new infrastructure	Predicted asset lives: • WWTP – Civil, 80 years. Mech/elec varies, but normally in region of 25 years. • Pipeline: 80 years minimum • Kepler Block: soil capacity to accept WW for at least 25 years, noting site is 125Ha vs 74Ha required at 2040. • Irrigation and odour control infrastructure; 50 years	√

Option 1 meets all the above constraints

Cost

	Te Anau Scheme	Manapouri WWTP
Capex	$14.5M	$1.45M
Opex. Per annum/NPV	$347k / $4.4M	$29k/$370k
NPV (25yr, 6%)	**$20.8M**	**$1.8M**

A full cost estimate has been produced for Te Anau, major elements are:

Item	Cost (Millions)	Comment
Preliminary and General	$ 1.1	10% of contract amount
Pond development	$ 0.6	Pond development involves raising of pond for storage, additional pipework and telemetry. Includes scope risk of 5%.
Pipeline to Kepler, including pump station	$ 7.0	Design based on 300mm pipework. Cost based on recent contract rates from Tasman District Council contracts with scope risk of 5%
Kepler site preparation (incl odour control)	$ 2.4	Site preparation includes power supply to site, odour control for CPI options. Costs based on recent similar contracts with scope risk of 5%
Pivot Irrigators	$ 0.5	Cost is based quote from Waterforce for the supply of 3 irrigators with scope risk of 5%

Item	Cost (Millions)	Comment
Construction contingency	$ 1.2	Allow 10% of contract total
Contract total	**$ 12.7**	
Non-contract costs	$ 1.8	Design, project management, further consenting, non construction costs. Allow 12% and minor Lump sum items
Total	**$ 14.5**	

The Manapouri WWTP costs relate to the expected need to upgrade this WWTP to enable its consent to be renewed by 2023. Costs are based on the current LTP budgets (sourced from the WW Strategy), $1.2M 2022-25 capex, on the unconfirmed assumption of connection to Kepler scheme. A further $250k is added to the capex for the consent process, budgeted in the LTP for 2020-22. Opex costs are based on a 12% pro-rata value of Manapouri/Te Anau usually resident population statistics from the 2013 census. (228 vs 1914).

Income from Baleage

The opex requires assumptions regarding income from baleage. The total Kepler Block area is 125Ha. The area irrigated by the centre pivots will be up to 74Ha, noting that in early years there will not be enough wastewater to always irrigate the whole 74Ha. There is uncertainty regarding the reduction, if any, on sale price of baleage, due to the use of waste water.

The opex calculation is based on baleage from wastewater irrigated areas being worth half the value of other areas.

Assessment against Minimum Requirements

*Service Requirements	Basis of comparison	Min/Int/Max scope
**Total Nitrogen loss to ground or surface water (average values)	Discharge to aquifer underlying Kepler Block which will discharge to Waiau River Consented annual Load to aquifer in 2040 of 3,862 kgN/yr: • Represents a reduction in nitrogen load of 50% from that in the discharge from the WWTP. • The concentrations in the plume from the irrigation block will comply with the DWSNZ for nitrate. • Effect on N concentrations in Waiau River are non-detectable.	Intermediate
Odour	WWTP: no complaints except in malfunction of oxidation pond or turnover Pipeline: carbon filters on air valves should ensure neglible odour Kepler Block: odour not expected beyond boundary	Maximum

*Service Requirements	Basis of comparison	Min/Int/Max scope
E.coli **(in ground water)**	Only water supply bores in ES database within 5km are down gradient. The groundwater assessment (in Appendix E of the consent application) concluded that due to the availability of a significant depth of unsaturated zone (between approximately 3 and 12 metres), the concentration of microbial contaminants entering the groundwater system is likely to be less than 40 cfu/100mL. The New Zealand Drinking Water Standards (<1/100mL) are likely to be met within a distance of 200 metres of the irrigation area. A detailed well search will be undertaken during the detailed design phase of the project to ensure no drinking water bores are affected.	Maximum
E.coli **(at point of mixing with surface water)**	Plume in groundwater travels 2.5km before mixing with Waiau River. *E.coli* in plume will be <1/100mL at this point	Maximum
Phosphorus (at point of mixing with surface water)	Section 7.3.3 of the consent application states: "half of this (P load to land) would be removed through the cut and carry operation leaving approximately 48 kg/ha/year accumulating in the soil. Within the soil, phosphorus is removed through the combination of adsorption onto clay minerals and precipitation in the unsaturated zone. In the current situation where there is an extensive unsaturated zone, phosphorous removal will be significant and the leaching to groundwater is likely to be minimal." Therefore, discharge to surface water will be minimal (ie less than 0.5mg/l).	Maximum

Key Risks – Option 1

A project risk register has been maintained during the project development and is appended to the BBC. Key risks relevant to the options assessment are:

Decision Criteria	Critical Success Factors Broad Description	Key Risks
Environmental E1	Ability of scheme to obtain long term consents.	• Option 1 is consented, other than minor consents for pipeline stream crossings
E2	Adaptability of scheme to meet increased environmental standards	• Low risk in feasibility of upgrade options. If a future upgrade is required, a further treatment step could be added at the existing ponds, and conventional options exist such as membranes (filtration or bioreactor).
E3	Adaptability of scheme to meet increased flows and loads.	• Main risk is that rising main pipeline is sized too small to allow increased flows over its whole life of 80-100 years. Presently sized at 300mm which gives good scope for increased flows.
Iwi Acceptability IA1	Extent to which scheme meets the aspirations of Iwi.	• Low risk, as Iwi submitted in support.
Social Acceptability SA1	Extent to which scheme meets the social aspirations of the local community.	• Some ongoing concerns among locals about possible spray drift, odour, visual effects and visitor perception of irrigators at Kepler, despite comprehensive mitigation measures. The risk is that continued opposition will affect ability to implement the consented option.
Economic E$1	Capex	• Uncertain influence of buoyant market and a location requiring imported workforce for some elements
E$2	NPV, Te Anau scheme plus Manapouri scheme. (25year period, 6% discount rate)	• The opex budget assumes an income from baleage. This may vary between seasons. Wastewater irrigation may affect the market value in the future. A discounted value incorporated.

Performance against Evaluation Criteria – Option 1

Key Values	Evaluation Criteria	Discussion	Individual Score (0-10)	Criteria Weighting	CSF Weighting	Weighted score
Environmental E1	Ability of scheme to obtain long term consents.	• 25 year term consent granted	10	32.5%	40%	1.30
E2	Adaptability of scheme to meet increased environmental standards	• All components straightforward to use in upgrade and are expected to be of practical value. However, some elements (eg Trickling filter at Kepler Block and oxidation pond 2 and 3) may not be required for upgrades. Extra (vs upgraded) process element required to improve N upgrade. • Noted that ponds kept for flow balancing, which is a benefit as it reduces peak flows. • The extra land at Kepler that is owned by SDC but not required for irrigation by treated wastewater could be used to offset nutrient load from other WWTPs in the Waiau River catchment, by retiring the area from production. This could be a cost effective solution to reducing nutrient loads in comparison to implementing nutrient based treatment upgrades at the other WWTPs in the catchment. The viability of this option would depend upon the manner in which Environment Southland implements the limit setting process, which is currently being developed. However, it represents an opportunity for SDC.	7	32.5%	30%	0.68

Key Values	Evaluation Criteria	Discussion	Individual Score (0-10)	Criteria Weighting	CSF Weighting	Weighted score
E3	Adaptability of scheme to meet increased flows and loads.	• Only restriction is the sizing of the transfer pipeline. Cost estimate based on 300mm pipeline rather than 250mm to allow for increased capacity. If it is sized for significantly higher future flows then potential septicity issues at current flows. • Land area of Kepler Block allows good scope for extra flow, but ultimately may need some further N reduction to keep within the kg/Ha/yr limit.	8	32.5%	30%	0.78
Iwi Acceptability IA1	Extent to which scheme meets the aspirations of Iwi.	• Discharge to land that received a submission in support from TAMI for the resource consent.	9	15%	100%	1.35
Social Acceptability SA1	Extent to which scheme meets the social aspirations of the local community.	• Limited community activity within 2km, with regard to residential, which is beneficial in reducing visual effects, and perceptions regarding odour or spray drift. Airport is within this radius. Noted that existing shelter belt will be between airport and irrigation area. • Significant community opposition from Manapouri and Te Anau area.	3	20%	100%	0.60
Economic E$1	Capex	• Capex for Te Anau is $14.5M • Capex for Manapouri is $1.45M	5	32.5%	60%	0.975
E$2	NPV, Te Anau scheme plus Manapouri scheme. (25year period, 6% discount rate)	• Opex for Te Anau is $347k • Opex for Manapouri is $29k • Therefore NPV is $20.8M	5	32.5%	40%	0.65
					TOTAL	**6.34**

TE ANAU WASTEWATER SCHEME - OPTION OVERVIEW

OPTION 2A – CENTRE PIVOT IRRIGATION TO KEPLER BLOCK WITH MEMBRANE FILTRATION FOR BASELOAD FLOW

General

The consented option is as described in the resource consent application documentation that was granted on 20 January 2017, amended as necessary by the conditions of that consent, or as below.

This option is similar to Option 1 but includes membrane filtration (MF) after the oxidation pond for a baseload flow of approximately 2,200m³/day. The flow in excess of this capacity will be normally diluted due to wet weather, and will not receive this additional MF treatment. This achieves cost savings over a plant sized for peak flow, with a very limited reduction in benefit.

The MF process unit will be located at the existing WWTP, so that the backwash can be discharged to the oxidation ponds. The MF will reduce the solids content of the treated wastewater. This will result in a reduction in the particulate associated contaminant load, particularly the biological oxygen demand, which will reduce the risks of septicity in the pipeline and hence the risk of odour at the irrigation site. The particulate associated nutrient (nitrogen and phosphorus) load will also be reduced, which will reduce the loads which are applied to the land.

Map of Components of Scheme

Key Components

Component	Description
Method of Treatment	No change to the existing ponds, other than: • The inclusion of additional aeration (2017/18) • Raising of Pond 1 to provide 15,000m³ of emergency storage. Ponds fine for 'treatment – raising is for buffering, not treatment • **New membrane filtration process with backwash discharged to oxidation ponds sized for a baseload flow of approximately 2,200 m³/day[1]**
Transfer to Disposal Site	• Pumped via a continuous full rising main 18k to the Kepler site at 300mm diameter • Activated carbon odour filters on rising main air valves.
Disposal Site	• Trickling filter, for odour control, at Kepler site, **and the mitigating effect of a membrane filtration.** • Allowance for oxidant dosing at Kepler to mop up any remaining odour compounds • Three centre pivot irrigators configured as below (a change from consent documentation). • Cut and carry operation to remove Nitrogen. Crop to be sold as baleage
Option for Manapouri	• Retain existing oxidation pond and transfer to Kepler Block for disposal via 6-7km pipeline. • Would require consent change to include Manapouri WW

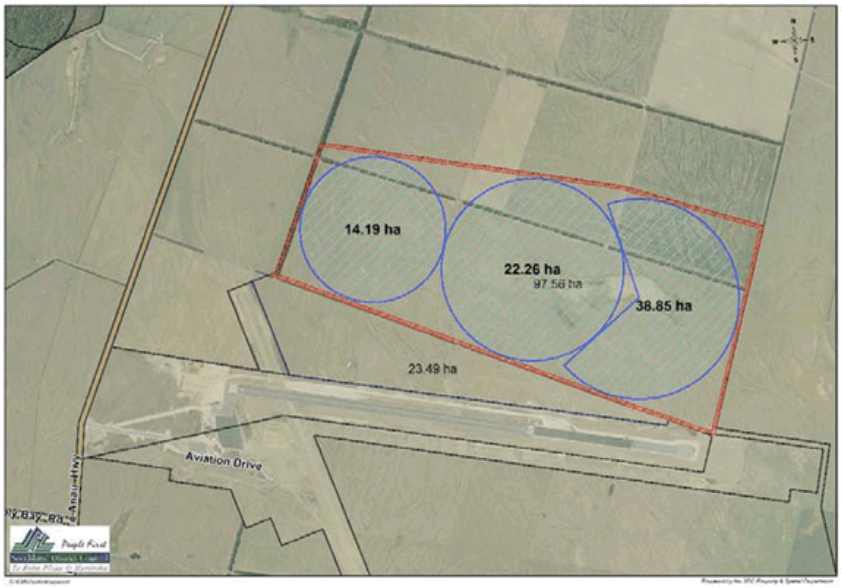


Figure 2: Amended Centre Pivot layout, to keep behind existing shelter belt

The Scoring Guidelines for Evaluation Criteria SA1 cites a radius of 2km from the irrigation site being of particular emphasis for assessing effects on individuals. Figure 3, below indicates this radius for the Kepler site.

[1] Mr Riddell Will Say statement Section 12 included capacity of 3,600m3/day. Cost estimates are based on 4,500m3/day as MF infrastructure will have a longer life than initial consent, and increased flow does not proportionately increase costs.

Figure 3: Indication of 2km radius – based on closest point to airport and road.

Design Flows (Loads assumed to increase in proportion)

	Summer (m3/day)	Winter (m3/day)
Initially installed	4,500**	2,000
After upgrade* in year 10	4,500	2,000

* Some options (not this option) incorporate staged development
** In this option, the MF plant is sized for baseload flow of approx. 2,200m^3/day. Flow in excess of this capacity will be normally diluted due to wet weather will not receive this additional treatment. A very small, if not insignificant, portion of the annual flow will be affected in this way.

Status of Consents

Regional

a) Discharge to land for Kepler Block – granted, expires in 22 January 2040
b) Discharge to water (WWTP) – granted, expires in 30 November 2020
c) Discharge to air (WWTP) – granted, expires in 30 June 2041, **but variation expected to be required to account for the effect of membrane filtration and the return of its waste stream to the ponds.**
d) Discharge to air (Kepler Block) – granted, expires in 30 June 2041
e) Discharge to air (air valves with carbon filters) – permitted activity
f) Stream crossings and other construction consents for pipeline – to be sought

District

a) Designation for WWTP – in place
b) Designation for Kepler Block – in place
c) Pipeline – may be required

Assessment against Constraints

Constraints	Assessment	Pass/Fail
Must comply with consent limits under all flow and load fluctuations.	Membrane filtration step improves the quality of the discharge compared to Option 1, and hence will ensure that the loads defined in the current consent are complied with as flows increase.	√
Implement before 30 November 2020.	Principal consents obtained (Discharges to land and air) and addition of membrane filtration is not expected to impact on the discharge to land consent. Uncertain timeframe to consent the MF plant, but noted that MF is not required to allow discharges to Kepler. However, for cost efficient construction MF building is best to be integral to rising main pump station. Other consents are minor and expected to be obtained	√
No direct discharge to water	No direct discharge to Upukerora River or Waiau River	√
Consentable term	25 year consent granted for main discharge to land consent, which is not impacted by addition of membrane filtration	√
For land disposal – require ability to purchase the land.	Kepler Block owned by SDC. Membrane filtration unit can be sited within the WWTP site on land owned by SDC	√
Life of new infrastructure	Asset lives: • WWTP – Civil, 80 years. Mech/elec varies but normally in region of 25 years. • Membrane filter Civil, 50 years. Mech/elec varies, but normally in region of 25 years. • Pipeline: 80 years minimum • Kepler Block: soil capacity to accept WW for 25 years, noting site is 125Ha vs 74Ha required at 2040. • Irrigation and odour control infrastructure; 50 years.	√

Option 2B meets all constraints, except timeframe which is uncertain given need to vary the consents

Cost

	Te Anau Scheme	Manapouri WWTP
Capex	$17.4M	$1.45M
Opex. Per annum/NPV	$450k/$5.8M	$29k/$370k
NPV (25yr, 6%)	**$25.0M**	**$1.8M**

A full cost estimate has been produced for Te Anau, major elements are:

Item	Cost (Millions)	Comment
Preliminary and General	$ 1.3	10% of contract amount
Pond development	$ 0.6	Pond development involves raising of pond for storage, additional pipework and telemetry. Includes scope risk of 5%.
Membrane Filtration Plant	$ 2.0	Option based on installation of full 2040 capacity initially. Costs based on estimate from Masons with 15% scope risk.
Pipeline to Kepler, including pump station	$ 7.0	Design based on 300mm pipework. Cost based on recent contract rates from Tasman District Council contracts with scope risk of 5%
Kepler site preparation (incl odour control)	$ 2.4	Site preparation includes power supply to site, odour control for CPI options. Costs based on recent similar contracts with scope risk of 5%
Pivot Irrigators	$ 0.5	Cost is based quote from Waterforce for the supply of 3 irrigators with scope risk of 5%
Construction contingency	$ 1.4	Allow 10% of contract total
Contract total	**$ 15.2**	
Non-contract costs	$ 2.2	Design, project management, further consenting, non construction costs. Allow 12% and minor Lump sum items
Total	**$ 17.4**	

The Manapouri WWTP costs relate to the expected need to upgrade this WWTP to enable its consent to be renewed by 2023. Costs are based on the current LTP budgets (sourced from the WW Strategy), $1.2M 2022-25 capex, on the unconfirmed assumption of connection to Kepler scheme. A further $250k is added to the capex for the consent process, budgeted in the LTP for 2020-22. Opex costs are based on a 12% pro-rata value of Manapouri/Te Anau usually resident population statistics from the 2013 census. (228 vs 1914).

Income from Baleage

The opex breakdown details assumptions regarding income from baleage. The total Kepler Block area is 125Ha. The area irrigated by the centre pivots will be up to 74Ha, noting that in early years there will not be enough wastewater to always irrigate the whole 74Ha. There is uncertainty regarding the reduction, if any, on sale price of baleage, due to the use of waste water.

The opex calculation is based on baleage from wastewater irrigated areas being worth half the value of other areas. The addition of membrane filtration is an advantage in reducing this risk, but difficult to quantify.

Assessment against Minimum Requirements

*Service Requirements	Basis of comparison	Min/Int/Max scope
**Total Nitrogen loss to ground or surface water (average values)	Discharge to aquifer underlying Kepler Block which will discharge to Waiau River **Addition of membrane filtration will reduce the nitrogen load to land by 30% [2] through reduction in particulate component.** Predicted annual Load to aquifer in 2040 of **2,703 kgN/yr (based on 3,862 kgN/yr[3] *70%)** • Represents a reduction in nitrogen load of **65%** from that in the discharge from the WWTP. • The concentrations in the plume from the irrigation block will comply with the DWSNZ for nitrate. • Effect on N concentrations in Waiau River are non-detectable.	Intermediate
Odour	WWTP: no complaints except in malfunction of ox pond or turnover. **Additional process unit on WWTP site not expected to result in increased odour from site. Effects on the oxidation pond can be managed appropriately.** Pipeline: **reduced BOD in WW will reduce odour risk** filters on air valves should ensure minimal odour Kepler Block: **reduced BOD in WW will reduce odour risk** odour not expected beyond boundary	Maximum
E.coli **(in ground water)**	Only water supply bores in ES database within 5km are down gradient. The groundwater assessment (in Appendix E of the consent application) concluded that due to the availability of a significant depth of unsaturated zone (between approximately 3 and 12 metres), the concentration of microbial contaminants entering the groundwater system is likely to be less than 40 cfu/100mL. The New Zealand Drinking Water Standards (<1/100mL) are likely to be met within a distance of 200 metres of the irrigation area. A detailed well search will be undertaken during the detailed design phase of the project to ensure no drinking water bores are affected. **No change to Option 1**	Maximum

[2] Based on the relationship between average ammoniacal nitrogen and total nitrogen concentrations as given in Table 2-2 of the application and used by Peter Riddell of Ecogent in his evidence from Environment Court Conferencing.

[3] Based on the maximum consented limit of 32 kgN/ha/year for Option 1.

*Service Requirements	Basis of comparison	Min/Int/Max scope
E.coli **(at point of mixing with surface water)**	Plume in groundwater travels 2.5km before mixing with Waiau River. *E.coli* in plume will be <1/100mL at this point **No change to Option 1**	*Maximum*
Phosphorus (at point of mixing with surface water)	Section 7.3.3 of the consent application states: "half of this (P load to land) would be removed through the cut and carry operation leaving approximately 48 kg/ha/year accumulating in the soil. Within the soil, phosphorus is removed through the combination of adsorption onto clay minerals and precipitation in the unsaturated zone. … In the current situation where there is an extensive unsaturated zone, phosphorous removal will be significant and the leaching to groundwater is likely to be minimal." Therefore, discharge to surface water will be minimal (ie less than 0.5mg/l). **No change to Option 1**	Maximum

Key Risks – Option 2A

A project risk register has been maintained during the project development and is appended to the BBC. Key risks relevant to the options assessment are:

Decision Criteria	Critical Success Factors Broad Description	Key Risks
Environmental E1	Ability of scheme to obtain long term consents.	• **Risk of local affected party opposition to the MF plant, meaning odour, noise and visual effects will need to be well characterised, and mitigated, if needed.** • An enhancement of Option 1, which is consented, other than minor consents for pipeline stream crossings
E2	Adaptability of scheme to meet increased environmental standards	• **Addition of MF plant provides a higher standard than required by current consent, reducing risk of higher standards being required** • Low risk in feasibility of upgrade options. If a future upgrade were required, a further treatment step could be added at the existing ponds, and conventional options exist such as membranes (filtration or bioreactor).
E3	Adaptability of scheme to meet increased flows and loads.	• Main risk is that rising main pipeline is sized too small to allow increased flows over its whole life of 80-100 years. Presently sized at 300mm which gives good scope for increased flows.

		• **MF plant core infrastructure sizing insufficient for flows and loads beyond the first consent horizon.**
Iwi Acceptability IA1	Extent to which scheme meets the aspirations of Iwi.	• Low risk, as Iwi submitted in support. • **Membrane filtration further reduces risk.**
Social Acceptability SA1	Extent to which scheme meets the social aspirations of the local community.	• Some ongoing concerns among locals about possible spray drift, odour, visual effects and visitor perception of irrigators at Kepler, despite comprehensive mitigation measures. The risk is that continued opposition will affect ability to implement the consented option. • **The above risk reduced if community accepts the value of the mitigation provided by the MF plant.**
Economic E$1	Capex	• **The full scope of work required to ensure an MF plant is fully feasible has not yet been undertaken. Some risks, such as the potential for algae fouling yet to be properly understood.** • Uncertain influence of buoyant market and a location requiring imported workforce for some elements
E$2	NPV, Te Anau scheme plus Manapouri scheme. (25year period, 6% discount rate)	• The opex budget assumes an income from baleage. This may vary between seasons. Wastewater irrigation may affect the market value in the future. A discounted value incorporated.

Performance against Evaluation Criteria – Option 2A

Key Values	Evaluation Criteria	Discussion / Explanation of score	Individual Score (0-10)	Criteria Weighting	CSF Weighting	Weighted score
Environmental E1	Ability of scheme to obtain long term consents.	• **25 year term granted for the main discharge to air and land consents. No variation required to discharge to land consent. Minor variation to discharge to air consent.** • **The addition of MF reduces N loadings to the irrigation site by 30%, and reduces odour risk at Kepler Block by reducing BOD in the pipeline and therefore slowing/delaying the generation of odour compounds.** Sudden flow/load fluctuations would be the principal cause of difficulty. • *E.coli* and P meet max scope.	10	32.5%	40%	1.30

Key Values	Evaluation Criteria	Discussion / Explanation of score	Individual Score (0-10)	Criteria Weighting	CSF Weighting	Weighted score
E2	Adaptability of scheme to meet increased environmental standards	• **Addition of MF plant provides a higher standard than required by current consent. The MF plant would be used for a significant plant upgrade to mechanical based treatment.** • All components straightforward to use in upgrade and are expected to be of full practical value. Extra (vs upgraded) process element required to improve N upgrade. • Noted that ponds kept for flow balancing • The extra land at Kepler that is owned by SDC but not required for irrigation by treated wastewater could be used to offset nutrient load from other WWTPs in the Waiau River catchment, by retiring the area from production. This could be a cost effective solution to reducing nutrient loads in comparison to implementing nutrient based treatment upgrades at the other WWTPs in the catchment. The viability of this option would depend upon the manner in which Environment Southland implements the limit setting process, which is currently being developed. However, it represents an opportunity for SDC.	9	32.5%	30%	0.88
E3	Adaptability of scheme to meet increased flows and loads.	• A restriction is the sizing of the transfer pipeline. If it is sized for future flows then potential septicity issues at current flows. • Land area of Kepler Block allows good scope for extra flow, but ultimately may need some further N reduction to keep within the kg/Ha/yr limit. • **MF plant will have be limited in capacity, but flow beyond this capacity will be designed to bypass this additional treatment, given the use of CPI. Otherwise, MF plant reduces N load to irrigation site, meaning increased flows of approx. 30% can be catered for under the conditions of the current consent.**	9	32.5%	30%	0.88

Key Values	Evaluation Criteria	Discussion / Explanation of score	Individual Score (0-10)	Criteria Weighting	CSF Weighting	Weighted score
Iwi Acceptability IA1	Extent to which scheme meets the aspirations of Iwi.	Direct discharge to land that received a submission in support for the resource consent **Membrane filtration a further improvement**	10	15%	100%	1.50
Social Acceptability SA1	Extent to which scheme meets the social aspirations of the local community.	• Limited community activity within 2km, with regard to residential, which is beneficial in reducing visual effects, and perceptions regarding odour or spraydrift. Airport is within this radius. Noted that existing shelter belt will be between airport and irrigation area. • Significant community opposition from Manapouri area. • **Uncertain whether improved wastewater quality due to MF plant will address the core causes of Manapouri community concern, but can only help.** • **Addition of an MF plant may introduce concerns from community in vicinity of WWTP.**	4	20%	100%	0.80
Economic E$1	Capex	Capex for Te Anau is $17.4M Capex for Manapouri is $1.45M	3	32.5%	60%	0.59
E$2	NPV, Te Anau scheme plus Manapouri scheme. (25year period, 6% discount rate)	• Opex for Te Anau is $450k • Opex for Manapouri is $29k Therefore NPV is $25.0M	3	32.5%	40%	0.39
					TOTAL	**6.33**

TE ANAU WASTEWATER SCHEME - OPTION OVERVIEW

OPTION 2B – CENTRE PIVOT IRRIGATION TO KEPLER BLOCK WITH MEMBRANE FILTRATION FOR PEAK FLOW

General

The consented option is as described in the resource consent application documentation that was granted on 20 January 2017, amended as necessary by the conditions of that consent, or as below. This option is similar to Option 1 but includes membrane filtration (MF) after the oxidation pond.

The MF process unit will be located at the existing WWTP, so that the backwash can be discharged to the oxidation ponds. The MF will reduce the solids content of the treated wastewater. This will result in a reduction in the particulate associated contaminant load, particularly the biological oxygen demand, which will reduce the risks of septicity in the pipeline and hence the risk of odour at the irrigation site. The particulate associated nutrient (nitrogen and phosphorus) load will also be reduced, which will reduce the loads which are applied to the land.

In this option, the MF plant will be sized for peak flow conditions.

Map of Components of Scheme

Key Components

Component	Description
Method of Treatment	No change to the existing ponds, other than: • The inclusion of additional aeration (2017/18) • Raising of Pond 1 to provide 15,000m³ of emergency storage. Ponds fine for 'treatment – raising is for buffering, not treatment • **New membrane filtration process with backwash discharged to oxidation ponds sized for the consented flow of 4,500 m³/day[1]**
Transfer to Disposal Site	• Pumped via a continuous full rising main 18k to the Kepler site at 300mm diameter • Activated carbon odour filters on rising main air valves.
Disposal Site	• Trickling filter, for odour control, at Kepler site, **and mitigating effect of membrane filtration.** • Allowance for oxidant dosing at Kepler to mop up any remaining odour compounds • Three centre pivot irrigators configured as below (a change from consent documentation). • Cut and carry operation to remove Nitrogen. Crop to be sold as baleage
Option for Manapouri	• Retain existing oxidation pond and transfer to Kepler Block for disposal via 6-7km pipeline. • Would require consent change to include Manapouri WW

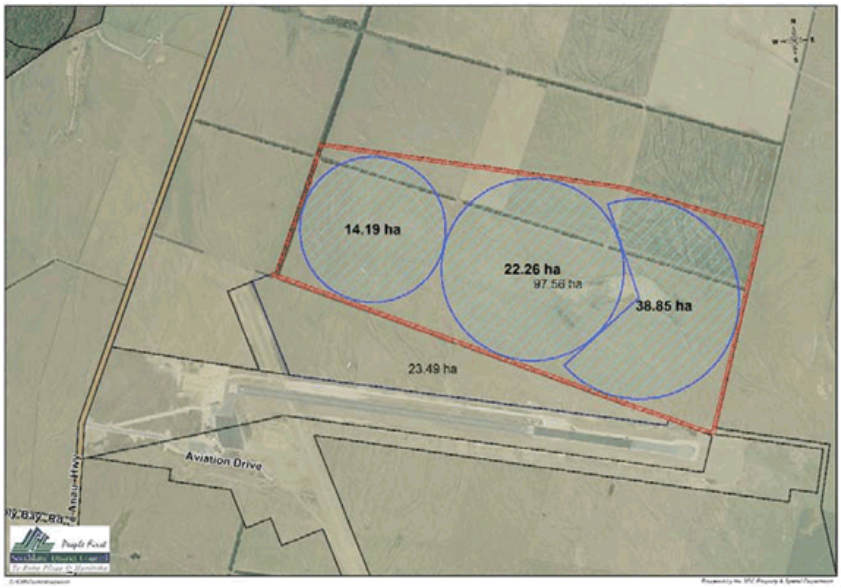


Figure 2: Amended Centre Pivot layout, to keep behind existing shelter belt

The Scoring Guidelines for Evaluation Criteria SA1 cites a radius of 2km from the irrigation site being of particular emphasis for assessing effects on individuals. Figure 3, below indicates this radius for the Kepler site.

[1] Mr Riddell Will Say statement Section 12 included capacity of 3,600m3/day. Cost estimates are based on 4,500m3/day as MF infrastructure will have a longer life than initial consent, and increased flow does not proportionately increase costs.

Figure 3: Indication of 2km radius – based on closest point to airport and road.

Design Flows (Loads assumed to increase in proportion)

	Summer (m3/day)	Winter (m3/day)
Initially installed	4,500	2,000
After upgrade* in year 10	4,500	2,000

* Some options (not this option) incorporate staged development

Status of Consents

Regional

a) Discharge to land for Kepler Block – granted, expires in 22 January 2040
b) Discharge to water (WWTP) – granted, expires in 30 November 2020
c) Discharge to air (WWTP) – granted, expires in 30 June 2041, **but variation expected to be required to account for the effect of membrane filtration and the return of its waste stream to the ponds.**
d) Discharge to air (Kepler Block) – granted, expires in 30 June 2041
e) Discharge to air (air valves with carbon filters) – permitted activity
f) Stream crossings and other construction consents for pipeline – to be sought

District

a) Designation for WWTP – in place
b) Designation for Kepler Block – in place
c) Pipeline – may be required

Assessment against Constraints

Constraints	Assessment	Pass/Fail
Must comply with consent limits under all flow and load fluctuations.	Membrane filtration step improves the quality of the discharge compared to Option 1, and hence will ensure that the loads defined in the current consent are complied with as flows increase.	√
Implement before 30 November 2020.	Principal consents obtained (Discharges to land and air) and addition of membrane filtration is not expected to impact on the discharge to land consent. Uncertain timeframe to consent the MF plant, but noted that MF is not required to allow discharges to Kepler. However, for cost efficient construction MF building is best to be integral to rising main pump station. Other consents are minor and expected to be obtained	√
No direct discharge to water	No direct discharge to Upukerora River or Waiau River	√
Consentable term	25 year consent granted for main discharge to land consent, which is not impacted by addition of membrane filtration	√
For land disposal – require ability to purchase the land.	Kepler Block owned by SDC. Membrane filtration unit can be sited within the WWTP site on land owned by SDC	√
Life of new infrastructure	Asset lives: • WWTP – Civil, 80 years. Mech/elec varies but normally in region of 25 years. • Membrane filter Civil, 50 years. Mech/elec varies, but normally in region of 25 years. • Pipeline: 80 years minimum • Kepler Block: soil capacity to accept WW for 25 years, noting site is 125Ha vs 74Ha required at 2040. • Irrigation and odour control infrastructure; 50 years.	√

Option 2B meets all constraints, except timeframe which is uncertain given need to vary the consents

Cost

	Te Anau Scheme	Manapouri WWTP
Capex	$19.4M	$1.45M
Opex. Per annum/NPV	$474k/$6.1M	$29k/$370k
NPV (25yr, 6%)	**$27.3M**	**$1.8M**

A full cost estimate has been produced for Te Anau, major elements are:

Item	Cost (Millions)	Comment
Preliminary and General	$ 1.4	10% of contract amount
Pond development	$ 0.6	Pond development involves raising of pond for storage, additional pipework and telemetry. Includes scope risk of 5%.
Membrane Filtration Plant	$ 3.5	Option based on installation of full 2040 capacity initially. Costs based on estimate from Masons with 15% scope risk.
Pipeline to Kepler, including pump station	$ 7.0	Design based on 300mm pipework. Cost based on recent contract rates from Tasman District Council contracts with scope risk of 5%
Kepler site preparation (incl odour control)	$ 2.4	Site preparation includes power supply to site, odour control for CPI options. Costs based on recent similar contracts with scope risk of 5%
Pivot Irrigators	$ 0.5	Cost is based quote from Waterforce for the supply of 3 irrigators with scope risk of 5%
Construction contingency	$ 1.5	Allow 10% of contract total
Contract total	**$ 17.0**	
Non-contract costs	$ 2.4	Design, project management, further consenting, non construction costs. Allow 12% and minor Lump sum items
Total	**$ 19.4**	

The Manapouri WWTP costs relate to the expected need to upgrade this WWTP to enable its consent to be renewed by 2023. Costs are based on the current LTP budgets (sourced from the WW Strategy), $1.2M 2022-25 capex, on the unconfirmed assumption of connection to Kepler scheme. A further $250k is added to the capex for the consent process, budgeted in the LTP for 2020-22. Opex costs are based on a 12% pro-rata value of Manapouri/Te Anau usually resident population statistics from the 2013 census. (228 vs 1914).

Income from Baleage

The opex breakdown details assumptions regarding income from baleage. The total Kepler Block area is 125Ha. The area irrigated by the centre pivots will be up to 74Ha, noting that in early years there will not be enough wastewater to always irrigate the whole 74Ha. There is uncertainty regarding the reduction, if any, on sale price of baleage, due to the use of waste water.

The opex calculation is based on baleage from wastewater irrigated areas being worth half the value of other areas. The addition of membrane filtration is an advantage in reducing this risk, but difficult to quantify.

Assessment against Minimum Requirements

*Service Requirements	Basis of comparison	Min/Int/Max scope
**Total Nitrogen loss to ground or surface water (average values)	Discharge to aquifer underlying Kepler Block which will discharge to Waiau River **Addition of membrane filtration will reduce the nitrogen load to land by 30% [2] through reduction in particulate component.** Predicted annual Load to aquifer in 2040 of **2,703 kgN/yr (based on 3,862 kgN/yr[3] *70%)** • Represents a reduction in nitrogen load of **65%** from that in the discharge from the WWTP. • The concentrations in the plume from the irrigation block will comply with the DWSNZ for nitrate. • Effect on N concentrations in Waiau River are non-detectable.	Intermediate
Odour	WWTP: no complaints except in malfunction of ox pond or turnover. **Additional process unit on WWTP site not expected to result in increased odour from site. Effects on the oxidation pond can be managed appropriately.** Pipeline: **reduced BOD in WW will reduce odour risk** filters on air valves should ensure minimal odour Kepler Block: **reduced BOD in WW will reduce odour risk** odour not expected beyond boundary	Maximum
E.coli **(in ground water)**	Only water supply bores in ES database within 5km are down gradient. The groundwater assessment (in Appendix E of the consent application) concluded that due to the availability of a significant depth of unsaturated zone (between approximately 3 and 12 metres), the concentration of microbial contaminants entering the groundwater system is likely to be less than 40 cfu/100mL. The New Zealand Drinking Water Standards (<1/100mL) are likely to be met within a distance of 200 metres of the irrigation area. A detailed well search will be undertaken during the detailed design phase of the project to ensure no drinking water bores are affected. **No change to Option 1**	Maximum

[2] Based on the relationship between average ammoniacal nitrogen and total nitrogen concentrations as given in Table 2-2 of the application and used by Peter Riddell of Ecogent in his evidence from Environment Court Conferencing.

[3] Based on the maximum consented limit of 32 kgN/ha/year for Option 1.

*Service Requirements	Basis of comparison	Min/Int/Max scope
E.coli **(at point of mixing with surface water)**	Plume in groundwater travels 2.5km before mixing with Waiau River. *E.coli* in plume will be <1/100mL at this point **No change to Option 1**	*Maximum*
Phosphorus (at point of mixing with surface water)	Section 7.3.3 of the consent application states: "half of this (P load to land) would be removed through the cut and carry operation leaving approximately 48 kg/ha/year accumulating in the soil. Within the soil, phosphorus is removed through the combination of adsorption onto clay minerals and precipitation in the unsaturated zone. … In the current situation where there is an extensive unsaturated zone, phosphorous removal will be significant and the leaching to groundwater is likely to be minimal." Therefore, discharge to surface water will be minimal (ie less than 0.5mg/l). **No change to Option 1**	Maximum

Key Risks – Option 2B

A project risk register has been maintained during the project development and is appended to the BBC. Key risks relevant to the options assessment are:

Decision Criteria	Critical Success Factors Broad Description	Key Risks
Environmental E1	Ability of scheme to obtain long term consents.	• **Risk of local affected party opposition to the MF plant, meaning odour, noise and visual effects will need to be well characterised, and mitigated, if needed.** • An enhancement of Option 1, which is consented, other than minor consents for pipeline stream crossings
E2	Adaptability of scheme to meet increased environmental standards	• **Addition of MF plant provides a higher standard than required by current consent, reducing risk of higher standards being required** • Low risk in feasibility of upgrade options. If a future upgrade were required, a further treatment step could be added at the existing ponds, and conventional options exist such as membranes (filtration or bioreactor).
E3	Adaptability of scheme to meet increased flows and loads.	• Main risk is that rising main pipeline is sized too small to allow increased flows over its whole life of 80-100 years. Presently sized at 300mm which gives good scope for increased flows.

		• **MF plant core infrastructure sizing insufficient for flows and loads beyond the first consent horizon.**
Iwi Acceptability IA1	Extent to which scheme meets the aspirations of Iwi.	• Low risk, as Iwi submitted in support. • **Membrane filtration further reduces risk.**
Social Acceptability SA1	Extent to which scheme meets the social aspirations of the local community.	• Some ongoing concerns among locals about possible spray drift, odour, visual effects and visitor perception of irrigators at Kepler, despite comprehensive mitigation measures. The risk is that continued opposition will affect ability to implement the consented option. • **The above risk reduced if community accepts the value of the mitigation provided by the MF plant.**
Economic E$1	Capex	• **The full scope of work required to ensure an MF plant is fully feasible has not yet been undertaken. Some risks, such as the potential for algae fouling yet to be properly understood.** • Uncertain influence of buoyant market and a location requiring imported workforce for some elements
E$2	NPV, Te Anau scheme plus Manapouri scheme. (25year period, 6% discount rate)	• The opex budget assumes an income from baleage. This may vary between seasons. Wastewater irrigation may affect the market value in the future. A discounted value incorporated.

Performance against Evaluation Criteria – Option 2B

Key Values	Evaluation Criteria	Discussion / Explanation of score	Individual Score (0-10)	Criteria Weighting	CSF Weighting	Weighted score
Environmental E1	Ability of scheme to obtain long term consents.	• **25 year term granted for the main discharge to air and land consents. No variation required to discharge to land consent. Minor variation to discharge to air consent.** • **The addition of MF reduces N loadings to the irrigation site by 30%, and reduces odour risk at Kepler Block by reducing BOD in the pipeline and therefore slowing/delaying the generation of odour compounds.** Sudden flow/load fluctuations would be the principal cause of difficulty. • *E.coli* and P meet max scope.	10	32.5%	40%	1.30

Key Values	Evaluation Criteria	Discussion / Explanation of score	Individual Score (0-10)	Criteria Weighting	CSF Weighting	Weighted score
E2	Adaptability of scheme to meet increased environmental standards	• **Addition of MF plant provides a higher standard than required by current consent. The MF plant would be used for a significant plant upgrade to mechanical based treatment.** • All components straightforward to use in upgrade and are expected to be of full practical value. Extra (vs upgraded) process element required to improve N upgrade. • Noted that ponds kept for flow balancing • The extra land at Kepler that is owned by SDC but not required for irrigation by treated wastewater could be used to offset nutrient load from other WWTPs in the Waiau River catchment, by retiring the area from production. This could be a cost effective solution to reducing nutrient loads in comparison to implementing nutrient based treatment upgrades at the other WWTPs in the catchment. The viability of this option would depend upon the manner in which Environment Southland implements the limit setting process, which is currently being developed. However, it represents an opportunity for SDC.	9	32.5%	30%	0.88
E3	Adaptability of scheme to meet increased flows and loads.	• A restriction is the sizing of the transfer pipeline. If it is sized for future flows then potential septicity issues at current flows. • Land area of Kepler Block allows good scope for extra flow, but ultimately may need some further N reduction to keep within the kg/Ha/yr limit. • **MF plant will have a limit on peak capacity, but may be acceptable to bypass some flow in peak conditions given use of CPI. Otherwise, MF plant reduces N load to irrigation site, meaning increased flows of approx. 30% can be catered for under the conditions of the current consent.**	9	32.5%	30%	0.88

Key Values	Evaluation Criteria	Discussion / Explanation of score	Individual Score (0-10)	Criteria Weighting	CSF Weighting	Weighted score
Iwi Acceptability IA1	Extent to which scheme meets the aspirations of Iwi.	Direct discharge to land that received a submission in support for the resource consent **Membrane filtration a further improvement**	10	15%	100%	1.50
Social Acceptability SA1	Extent to which scheme meets the social aspirations of the local community.	• Limited community activity within 2km, with regard to residential, which is beneficial in reducing visual effects, and perceptions regarding odour or spraydrift. Airport is within this radius. Noted that existing shelter belt will be between airport and irrigation area. • Significant community opposition from Manapouri area. • **Uncertain whether improved wastewater quality due to MF plant will address the core causes of Manapouri community concern, but can only help.** • **Addition of an MF plant may introduce concerns from community in vicinity of WWTP.**	4	20%	100%	0.80
Economic E$1	Capex	Capex for Te Anau is $19.4M Capex for Manapouri is $1.45M	2	32.5%	60%	0.39
E$2	NPV, Te Anau scheme plus Manapouri scheme. (25year period, 6% discount rate)	Opex for Te Anau is $474k Opex for Manapouri is $29k Therefore NPV is $27.3M	2	32.5%	40%	0.26
					TOTAL	**6.01**

TE ANAU WASTEWATER SCHEME - OPTION OVERVIEW

OPTION 3 - SUB-SURFACE DRIP IRRIGATION TO KEPLER BLOCK WITH MEMBRANE FILTRATION

General

Option 1 is as described in the resource consent application documentation that was granted on 20 January 2017, amended as necessary by the conditions of that consent, or as below. This option is similar to Option 1 but includes membrane filtration (MF) after the oxidation pond and irrigation of wastewater using sub-surface irrigation rather than spray irrigation.

This option is based on the "Will Say" statement of Mr Peter Riddell and Mr Peter Gearing as part of the Conferencing undertaken for the Kepler consent in September 2016.

The MF process unit will be located at the existing WWTP, so that the backwash can be discharged to the oxidation ponds. The MF will reduce the solids content of the treated wastewater. This will result in a reduction in the particulate associated contaminant load, particularly the biological oxygen demand, which will reduce the risks of septicity in the pipeline and hence the risk of odour at the irrigation site. The particulate associated nutrient (nitrogen and phosphorus) load will also be reduced, which will reduce the loads which are applied to the land.

In this option, the MF plant will be sized for peak flow conditions.

The irrigation to land at the Kepler Block will be performed using sub-surface drip irrigation (SDI).

Map of Components of Scheme

Key Components

Component	Description
Method of Treatment	No change to the existing ponds, other than: • The inclusion of additional aeration (2017/18) • Raising of Pond 1 to provide 15,000m³ of emergency storage. Ponds fine for 'treatment – raising is for buffering, not treatment • **New membrane filtration process with backwash discharged to oxidation ponds with peak capacity of sized for 4,500 m³/day[1]**
Transfer to Disposal Site	• Pumped via a continuous full rising main 18k to the Kepler site at 300mm diameter.[2] • Activated carbon odour filters on rising main air valves
Disposal Site	• **Not included - Trickling filter nor oxidant dosing, for odour control, at Kepler site – no increased risk of odour expected due to subsurface disposal, and mitigating effect of membrane filtration.** • **Filtration of wastewater to remove solids prior to delivery to sub-surface drip irrigation over 74 Ha (use Aqualinc modelled area). Staged as 37Ha initially and other half after 10 years.** • Cut and carry operation to remove Nitrogen. Crop to be sold as baleage. **Foliage will not have contact with wastewater potentially resulting in a higher value crop.**
Option for Manapouri	• Retain existing oxidation pond and transfer to Kepler Block for disposal via 6-7km pipeline. • Would require consent change to include Manapouri WW

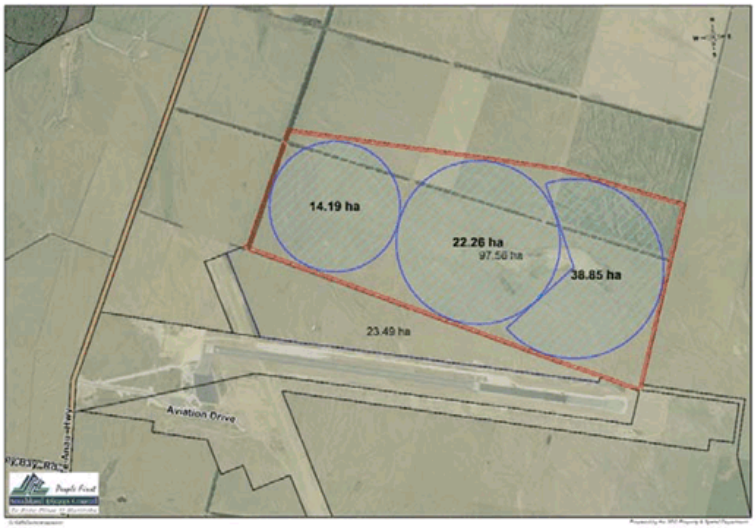


Figure 2: SDI area similar to that for Centre Pivots, but staging of layout still to be developed.

[1] Mr Riddell Will Say statement Section 12 included capacity of 3,600m3/day. Cost estimates are based on 4,500m3/day as MF infrastructure will have a longer life than initial consent, and increased flow does not proportionately increase costs.

[2] Mr Riddell statement was based on 250mm but decision made to future proof scheme by basing estimate of costs of 300mm. Whilst peak flow may be able to be reduced using SDI, this does not address the peak flow requirement resulting from rain on the ponds in major events.

The Scoring Guidelines for Evaluation Criteria SA1 cites a radius of 2km from the irrigation site being of particular emphasis for assessing effects on individuals. Figure 3, below indicates this radius for the Kepler site.

Figure 3: Indication of 2km radius – based on closest point to airport and road.

Design Flows (Loads assumed to increase in proportion)

	Summer (m3/day)	Winter (m3/day)
Initially installed*	2,250[3]	2,000
After upgrade in year 10	4,500	2,000

Note: In years 0-10 peak wet weather flows may exceed 2,250m^3/day, greater than the nominal capacity of the initial 37Ha of disposal field, and greater than the maximum consented depth of discharge per day (6.5mm summer, 2.9mm winter). A significant assumption is that a consent variation will be obtainable for this. These peak flows are expected to be diluted, keeping loads within limits. This staged implementation is proposed to manage initial capital cost, as disposal fields are expensive to install.

Status of Consents

Regional

a) Discharge to land for Kepler Block – granted, expires in 22 January 2040 **but variation required for the alternative of SDI– variation required)**

b) Discharge to water (WWTP) – granted, expires in 30 November 2020

[3] Proposed by P Riddell, section 6 of Will Say statement

c) Discharge to air (WWTP) – granted, expires in 30 June 2041, **but variation expected to be required to account for the effect of membrane filtration and the return of its waste stream to the ponds.**
d) Discharge to air (Kepler Block) – granted, expires in 30 June 2041. **Possibly not required for SDI assuming process units such as balance tank can be shown not to emit odour– to confirm**
e) Discharge to air (air valves) – permitted activity
f) Stream crossings and other construction consents for pipeline – to be sought

District

a) Designation for WWTP – in place
b) Designation for Kepler Block – in place
c) Pipeline – may be required

Assessment against Constraints

Constraints	Assessment	Pass/Fail
Must comply with consent limits under all flow and load fluctuations.	Membrane filtration step improves the quality of the discharge and hence will ensure that the loads defined in the current consent are complied with as flows increase. Mr Riddell states that on the basis of 7,500m^3 balancing available in the oxidation pond and his model of the flows, SDI will be able to cope with his predicted flow rates up to 2040. He also states that the area of 35Ha should be sufficient to ensure that nitrogen leaching is maintained to less than the required 32 kgN/ha/yr required by the current consents. Hydrus modelling by Aqualinc of nitrogen drainage to the aquifer from subsurface irrigation indicates that an area similar to the 74Ha for centre pivot irrigation will be required for year 2040 flows, although this modelling was not fully conclusive, and did not allow for benefit from unirrigated areas.	√
Implement before 30 November 2020.	Application method is different to current consent. If the change to MF and SDI instead of centre pivot can be treated as a variation to the existing consents rather than a new consent, this may be able to be granted such that the scheme can be commissioned by November 2020. Other consents are minor and expected to be obtained	√
No direct discharge to water	No direct discharge to Upukeroa River or Waiau River	√
Consentable term	25 year consent granted for main discharge to land consent. It is reasonable to assume that variation of consent to allow change to SDI from CPI would not result in a reduction in consent term.	√
For land disposal – require ability to purchase the land.	Kepler Block owned by SDC. Membrane filtration unit can be sited within the WWTP site on land owned by SDC.	√

Constraints	Assessment	Pass/Fail
Life of new infrastructure	Asset lives: • WWTP – Civil, 80 years. Mech/elec varies but normally in region of 25 years. • Membrane filter Civil, 50 years. Mech/elec varies, but normally in region of 25 years. • Pipeline: 80 years minimum • Kepler Block: soil capacity to accept WW for 25 years, noting site is 125Ha vs 74Ha required at 2040. • SDI has expected life of 20 years before full replacement required. Assume that install 37 Ha for first 10 years, then further 37Ha for remaining capacity, then replace at end of life every 10 years	√

Option 3 may not meet the timeframe constraint and consent compliance will need to be verified.

Cost

	Te Anau Scheme	Manapouri WWTP
Capex	$21.8M	$1.45M
Opex. Per annum/NPV	$467k/$6.0M	$29k/$370k
NPV (25yr, 6%)	**$29.6M**	**$1.8M**

A full cost estimate has been produced for Te Anau, major elements are:

Item	Cost (Millions)	Comment
Preliminary and General	$ 1.6	10% of contract amount
Pond development	$ 0.6	Pond development involves raising of pond for storage, additional pipework and telemetry. Includes 5% scope risk.
Membrane Filtration Plant	$ 3.5	Option based on installation of full 2040 capacity initially. Costs based on estimate from Masons with 15% scope risk.
Pipeline to Kepler, including pump station	$ 7.0	Design based on 300mm pipework. Cost based on recent contract rates from Tasman District Council contracts with scope risk of 5%
Kepler site preparation (no odour control)	$ 0.7	Site preparation includes power supply to site. Costs based on recent similar contracts with scope risk of 5%
Subsurface Drip irrigators	$ 3.8	Cost is based on rate from Ecogent Ltd. Assumes installation of 37Ha in first year and replacement in year 20, and install second 37Ha in year 10. Costs include scope risk of 20%
Construction contingency	$ 1.7	Allow 10% of contract total
Contract total	**$ 18.9**	
Non-contract costs	$ 2.9	Design, project management, further consenting, non construction costs. Allow 12% and minor Lump sum items
Total	**$ 21.8**	

The Manapouri WWTP costs relate to the expected need to upgrade this WWTP to enable its consent to be renewed by 2023. Costs are based on the current LTP budgets (sourced from the WW Strategy), $1.2M 2022-25 capex, on the unconfirmed assumption of connection to Kepler scheme. A further $250k is added to the capex for the consent process, budgeted in the LTP for 2020-22. Opex costs are based on a 12% pro-rata value of Manapouri/Te Anau usually resident population statistics from the 2013 census. (228 vs 1914).

Income from Baleage

The opex breakdown details assumptions regarding income from baleage. The total Kepler Block area is 125Ha. The area irrigated by the centre pivots will be up to 74Ha, noting that in early years there will not be enough wastewater to always irrigate the whole 74Ha. There is uncertainty regarding the reduction, if any, on sale price of baleage, due to the use of waste water.

The opex calculation is based on baleage from wastewater irrigated areas being worth half the value of other areas. The addition of membrane filtration and subsurface disposal is an advantage in reducing this risk, but difficult to quantify.

Assessment against Minimum Requirements

*Service Requirements	Basis of comparison	Min/Int/Max scope
**Total Nitrogen loss to ground or surface water (average values)	Discharge to aquifer underlying Kepler Block which will discharge to Waiau River **Addition of membrane filtration will reduce the nitrogen load to land by 30% [4] through reduction in particulate component.** Predicted annual Load to aquifer in 2040 **of 3,862 kgN/yr[5]** • Represents a reduction in nitrogen load of 50% from that in the discharge from the WWTP, and is same as consented scheme. • The concentrations in the plume from the irrigation block will comply with the DWSNZ for nitrate. • Effect on N concentrations in Waiau River are non-detectable.	Intermediate
Odour	WWTP: no complaints except in malfunction of ox pond or turnover. **Additional process unit on WWTP site not expected to result in increased odour from site. Effects on the oxidation pond can be managed appropriately.** Pipeline: filters on air valves should ensure minimal odour	Maximum

[4] Based on the relationship between average ammoniacal nitrogen and total nitrogen concentrations as given in Table 2-2 of the application and used by Peter Riddel of Ecogent in his evidence from Environment Court Conferencing.

[5] Based on the maximum consented limit of 32 kgN/ha/year for Option 1, which Mr Riddell indicates will be achieved by the MF plus SDI.

*Service Requirements	Basis of comparison	Min/Int/Max scope
	Kepler Block: odour not expected beyond boundary. **Risk of odour from irrigation activity reduced given that no irrigation above ground**.	
E.coli **(in ground water)**	Only water supply bores in ES database within 5km are down gradient. The groundwater assessment (in Appendix E of the consent application) concluded that due to the availability of a significant depth of unsaturated zone (between approximately 3 and 12 metres), the concentration of microbial contaminants entering the groundwater system is likely to be less than 40 cfu/100mL. The New Zealand Drinking Water Standards (<1/100mL) are likely to be met within a distance of 200 metres of the irrigation area. A detailed well search will be undertaken during the detailed design phase of the project to ensure no drinking water bores are affected. **No change to Option 1**	Maximum
E.coli **(at point of mixing with surface water)**	Plume in groundwater travels 2.5km before mixing with Waiau River. *E.coli* in plume will be <1/100mL at this point **No change to Option 1**	*Maximum*
Phosphorus (at point of mixing with surface water)	Section 7.3.3 of the consent application states: "half of this (P load to land) would be removed through the cut and carry operation leaving approximately 48 kg/ha/year accumulating in the soil. Within the soil, phosphorus is removed through the combination of adsorption onto clay minerals and precipitation in the unsaturated zone. … In the current situation where there is an extensive unsaturated zone, phosphorous removal will be significant and the leaching to groundwater is likely to be minimal." Therefore, discharge to surface water will be minimal (ie less than 0.5mg/l). **No change to Option 1**	Maximum

Key Risks – Option 3

A project risk register has been maintained during the project development and is appended to the BBC. Key risks relevant to the options assessment are:

Decision Criteria	Critical Success Factors Broad Description	Key Risks
Environmental E1	Ability of scheme to obtain long term consents.	• **Risk of obtaining consent variation for disposal field if initially only 37Ha of disposal field installed, as peak wet weather flows will require greater depth/day discharge than the presently consented maximum.** • **Risk of local affected party opposition to the MF plant, meaning odour, noise and visual effects will need to be well characterised, and mitigated, if needed.** • A variation of Option 1, which is consented, other than minor consents for pipeline stream crossings. • **Difficulty in producing reliable modelling results of nitrogen drainage to the aquifer will create a real difficulty in gaining acceptance of the AEE unless conservative results and irrigation areas are used.** •
E2	Adaptability of scheme to meet increased environmental standards	• **Addition of MF plant provides a higher standard than required by current consent, reducing risk of higher standards being required** • Low risk in feasibility of upgrade options. If a future upgrade were required, a further treatment step could be added at the existing ponds, and conventional options exist such as membranes (filtration or bioreactor). • **Straightforward to add additional area to the SDI disposal field**
E3	Adaptability of scheme to meet increased flows and loads.	• Main risk is that rising main pipeline is sized too small to allow increased flows over its whole life of 80-100 years. Presently sized at 300mm which gives good scope for increased flows. • **MF plant core infrastructure sizing insufficient for flows and loads beyond the first consent horizon.** • **Straightforward to add additional area to the SDI disposal field**
Iwi Acceptability IA1	Extent to which scheme meets the aspirations of Iwi.	• Low risk, as Iwi submitted in support.
Social Acceptability SA1	Extent to which scheme meets the social aspirations of the local community.	• **Removes issues relating to spray drift, odour, visual effects and visitor perception of irrigators at Kepler.** • **The above risk reduced further if community accepts the value of the mitigation provided by the MF plant.** • **Uncertain whether residual opposition will remain, but should be substantially reduced.**

Economic E$1	Capex	• **The full scope of work required to ensure an SDI disposal system is fully feasible has not yet been undertaken. This system is at least 10 times larger than anything installed to date in New Zealand. Significant risk remain with regard to what the full scope of work will be.** • **Significant uncertainty regarding installation cost due to the scale of the SDI disposal field being much larger than anything previously installed in NZ. Cost could be higher or lower, but needs to be reliably confirmed before project committed to.** • **The full scope of work required to ensure an MF plant is fully feasible has not yet been undertaken. Some risks, such as the potential for algae fouling yet to be properly understood.** • Uncertain influence of buoyant market and a location requiring imported workforce for some elements
E$2	NPV, Te Anau scheme plus Manapouri scheme. (25year period, 6% discount rate)	• The opex budget assumes an income from baleage. This may vary between seasons. Wastewater irrigation may affect the market value in the future. A discounted value incorporated.

Performance against Evaluation Criteria – Option 3

Key Values	Evaluation Criteria	Discussion	Individual Score (0-10)	Criteria Weighting	CSF Weighting	Weighted score
Environmental E1	Ability of scheme to obtain long term consents.	• **25 year term granted for Option 1 but variation to discharge to land consent required.** • **The addition of MF and SDI would be designed to balance out to give the same N loadings as Option 1, but some uncertainty in predictions which will complicate gaining consent and may result in shorter term consent.** • **SDI removes odour and spray drift stakeholder concerns.**	8	32.5%	40%	1.04
E2	Adaptability of scheme to meet increased environmental standards	• All components straightforward to use in upgrade and are expected to be of full practical value. Extra (vs upgraded) process element required to improve N upgrade. • Noted that ponds kept for flow balancing • **Benefit of MF removal of N counterbalanced by reducing size of SDI disposal field.** • The extra land at Kepler that is owned by SDC but not required for irrigation by treated wastewater could be used to offset nutrient load from other WWTPs in the Waiau River catchment, by retiring the area from production. This could be a cost effective solution to reducing nutrient loads in comparison to implementing nutrient based treatment upgrades at the other WWTPs in the catchment. The viability of this option would depend upon the manner in which Environment Southland implements the limit setting process, which is currently being developed. However, it represents an opportunity for SDC.	7	32.5%	30%	0.68

Key Values	Evaluation Criteria	Discussion	Individual Score (0-10)	Criteria Weighting	CSF Weighting	Weighted score
E3	Adaptability of scheme to meet increased flows and loads.	• A restriction is the sizing of the transfer pipeline. If it is sized for future flows then potential septicity issues at current flows. • Land area of Kepler Block allows good scope for extra flow, but ultimately may need some further N reduction to keep within the kg/Ha/yr limit. • **MF plant will have a limit on peak capacity, so will need to be configured to allow increased flow and load, with consideration beyond the term of the initial consent**	7	32.5%	30%	0.68
Iwi Acceptability IA1	Extent to which scheme meets the aspirations of Iwi.	• Direct discharge to land that received a submission in support for the resource consent • **SDI field sized to achieve similar nitrogen reduction as option 1.**	10	15%	100%	1.40
Social Acceptability SA1	Extent to which scheme meets the social aspirations of the local community.	• **SDI is likely to be more acceptable than CPI, as main concerns regarding spray drift, odour and visual effects are addressed.** • **Does not address the view of some that the Kepler site is inappropriate in any situation.** • **Addition of an MF plant may introduce concerns from community in vicinity of WWTP.**	7	20%	70%	0.98
Economic E$1	Capex	• Capex for Te Anau is $21.8M • Capex for Manapouri is $1.45M	0	32.5%	60%	0
E$2	NPV, Te Anau scheme plus Manapouri scheme. (25year period, 6% discount rate)	• Opex for Te Anau is $467k • Opex for Manapouri is $29K • Therefore NPV is $29.6M	1	32.5%	40%	0.13
					TOTAL	**5.29**

Item 7.3 Attachment A

Appendix 5: Cost Estimates and Basis

TE ANAU WASTEWATER SCHEME
COMMENTARY TO ACCOMPANY SEPTEMBER 2017 BUDGET ESTIMATES

Prepared by Paul Jacobson
Reviewed by Roger Oakley
Last updated: 9 October 2017

Refer also to s2.4.5 of the Business Case that discusses optimism bias with regard to the preparation of estimates. In the estimates, the 'scope risk contingency' has been separately identified for each section 1-14 of the estimates. This has allowed the bias and risk to be tailored to the level of certainty for each item.

Item	Description
1	**PRELIMINARY & GENERAL**
1.01	Quality, H&S, Environmental, Traffic Management Plans
	Preliminary and General is set at a common industry level of 10%. It includes allowance for such items as: • Project management • Preparation of Contractors compliance plans • Traffic Control (difficult / lengthy- in main carriageway) • Consent and Traffic Management Plan for State Highway. • Site establishment, huts, vehicles • Potholing for services clashes • Identification of existing services • Liaise with service providers 3 waters, telecom power, electrical • HAZOP (Hazards and Operability) workshops • As built drawings including Operating and Maintenance manuals • Condition survey including photos of surrounding surfaces and buildings • Public liaison and communication • Project signs • Commission overall system (assumes individual items pre-commissioned) • Maintenance of system for 1 year • Worker accommodation and travel • Overheads such as bonds and insurance • Head office costs.
2	**POND RAISING TO PROVIDE ADDITIONAL 15,000M³ CONTINGENCY STORAGE**
	Common to all options This contingency storage is a Consent requirement under Discharge Permit No 302625-01 condition 6(c) and 13(a) viii to enable storage of wastewater during periods of high rainfall, or high soil moisture and high winds at the Kepler site.

	There is a separate spreadsheet detailing the breakdown of this section of the estimates, with comments on how values were derived,
2.1	Refer estimate from separate spreadsheet.
	There is some potential to have less storage for SDI option as it is possible to irrigate under wetter and extreme wind conditions. However this requires a consent change and proof by modelling of inflows, storage and irrigation/rainfall and wind. The maximum saving on capex might be in the order of 25%, as a rough order, pro-rata estimate of reducing the increased bunding height from 400mm to 300mm.
2.2	Scope Risk Contingency
	Common to options-have allowed 5%
3	**POND PIPEWORK TO ALLOW STORAGE IN POND 1**
3.1	Outlet arrangement from Pond 1
3.2	Actuated valve and flowmeter, via SCADA, to control flow from Pond 1
3.3	Pipework from Pond 1 to 3. (Assume flow goes 1-3-2 and pump from 2).
3.4	Level sensors to control all pond levels, and cable through to switchboard
3.5	Scope Risk Contingency
	Common to all options-this provides for outlet controls, level probes and pipework to provide contingency storage during wet weather in Pond 1. Noted that pond 3 is slightly lower than pond 2. Desirable to pump from Pond 2 to avoid the river flood risk area nearer Pond 3 for the PS and MF plant.
4	**TELEMETRY AND SCADA FOR WWTP SITE**
4.1	Connection of individual WWTP site elements and data to SCADA/telemetry, including programming, and supply of telemetry
4.2	Scope Risk Contingency
	Common to all options-telemetry and SCADA outlet controls for the WWTP and linkage/integration with Kepler Block irrigation controls. Based on pricing for Eastern Bush WTP which is similar in scope. Design will be for an automated system with backup to minimise operator input and increase response during a fault or emergency. This item excludes the SCADA for individual components, eg the MF plant and pumpstation, but allows for the work to combine them.
5A	**MEMBRANE FILTRATION AT PONDS – BASE FLOW**
	Only for option 2A. This option is based on a MF plant that can treat almost all the flow, almost all of the time, but would not be sized for peak flow, which can double to the plant flow. This provides cost savings, in that a lot of cost is embedded in an option that needs to allow for peak capacity, whether it is commonly used, or not. This approach is acceptable for centre pivot irrigation, which has a consent that does not require an MF plant. Not suitable for subsurface drip irrigation where all flow must pass through a MF plant to ensure irrigation drippers are not blocked. This MF plant capacity will be in the order of 2,200m^3/day. Its actual size will be influenced by available module sizes, as sizing/pricing tends to be in bands. The

	logic of the sizing is that it at this level it can presently cope for all flows over summer, except for when significant rain occurs, refer 5.03B. A compromise inherent in this estimate is that limited provision will be made for a future upgrade, other than positioning the building for easy extension. This allows a smaller, cheaper, plant. But does mean that an upgrade will be significantly more expensive, with a new full flow intake screen, building extensions and additional filter modules. The principal environmental advantage is that nitrogen bound up in algae would be removed, a 30% improvement, and on an annual cumulative basis. These figures are based on the Mason email 9 October 2017.
5.01A	Inlet screen (to protect membrane) and pipe to MF building
	Provides 500 micron screen prior to MF units as advised by Masons (email date 901917) based on Amiad screen sized for 2,200m³/day flow rates from the ponds
5.02A	Additional algae removal re membrane fouling. BUDGET ALLOWANCE
	Masons have stated this not required but until effluent algae testing is completed this is clearly identifiable risk to the project and Stantec advice is to leave this in the estimate until it is proven this is not required. See 5.02B also.
5.03A	Membrane filter unit with feed pumps, CIP (sealed pressure unit)
	Sized as per the notes above
5.04A	Basic shed for MF unit
	Sized with little ability for upgrading capacity. But the building could be extended for doubling the additional MF modules. Does not allow for acoustic treatment.
5.05A	Backwash pump station. 7m3 underground tank and pump set
	Potable water supply for backwashing of MF required, as proposed by Masons.
5.06A	Electrical and controls and basic SCADA
5.07A	Upgrade basic MF package with full SCADA
5.08A	Commissioning
5.09A	Civil works to service the site. Eg roads, stormwater, building platform
5.10A	Head contractor margin at 12% on MF and Mech/Elec/Commissioning
5.11A	Balance tank and pipes after MF plant to PS and rising main
5.12A	Excess Flow bypass of MF.
	In the event the 2,200m³/day baseflow of the MF plant capacity is exceeded. a pumpset, with redundancy, will be required to pump the excess flow to the balance tank, including iterconnecting pipework and a high degree of flow control, over a wide range of flows will be necessary.
5.13A	Scope Risk Contingency
5B	**MEMBRANE FILTRATION AT PONDS – PEAK FLOW**
	Only for MF Options 2b & 3. The capex based compared to a similar MF schemes at Motueka WWTP $3m (Juliet Westbury, TDC email 290917).

5.01B	**Inlet screen (to protect membrane) and pipe to MF building**
	Provides 500 micron screen prior to MF units as advised by Masons (email date 250917) based on similar screen and flow rates from the ponds at the current (2017) Motueka WWTP project.
5.02B	**Additional algae removal re membrane fouling - BUDGET ALLOWANCE**
	Budget provision for an additional treatment unit prior to the membranes is recommended to remove algae which can clog membranes and require frequent cleaning shortening the life of the membranes. To be confirmed through trials and testing. Typical options include DAF, Actiflo or pond covering. Anecdotal evidence that this was a concern at the Motueka plant, and is a general concern when directly filtering pond wastewater.
5.03B	**Membrane filter unit with feed pumps, CIP (sealed pressure unit)**
	Peak design flow is 4,500m^3/day in summer, and 2,000m^3/day in winter which allows for growth over the 25 year consent term. The peak period of inflow into the ponds recorded to date was in May 2016 and associated with extended rainfall. At this time the peak day was 2,614m^3, and inflow of this order continued for 10 days, with added rainfall directly onto the ponds to also be disposed of. This. Budget pricing is from Masons, email 22 Sept 2017. Pricing based on similar plants currently underway at Motueka and Cromwell. In the costing Masons have allowed for 6,000m^3/day, so pricing is conservative in this respect, but allows for some growth in flows beyond the period of the initial consent. Staging the plant to provide and initial 50% capacity may decrease the initial costs to 75%. The practicality of this needs to be confirmed, after analysis of peak flows, from wet weather especially. It is important that core infrastructure items of a membrane plant (eg pipe sizing, building footprint) are sized for ultimate capacity, as it is difficult to increase these later. Sizing of plant would be considered in much greater detail in the design phase. Proposed membrane cartridge warranty is for 5 years but assumed 7 year life average replacements in the opex estimate. The combination of an MF plant with centre pivot irrigation offers more scope to consider a smaller MF plant, as it is reasonable to consider a bypass flow arrangement at peak times. There are no subsurface drippers to protect.
5.04B	**Basic shed for MF unit**
	Potentially, the shed area could be reduced by 50m^2 by minimising working and amenity areas. Not reduced because this limits future flexibility, noting that the building has a 50 year life minimum, and therefore flows beyond a 25 year consent period need to be taken into account.

	No acoustic treatment allowed for. The floor area of 230m^2 is based on the plans for the Cromwell plant (information from Masons, 22 Sept 2017).
5.05B	**Backwash pump station. 7m^3 Tank and pump set**
	Potable water supply for backwashing of MF required, as proposed by Masons.
5.06B	Electrical and controls and basic SCADA
5.07B	Upgrade basic MF package with full SCADA
5.08B	Commissioning
5.09B	Civil works to service the site. Eg roads, stormwater, building platform
5.10B	Head contractor margin at 12% on MF and Mech/Elec/Commissioning
5.11B	Balance tank and pipes after MF plant to PS and rising main
	It is not possible to pump from the ponds directly through the membranes to the Kepler site. This would over pressurise the membranes.
5.12B	Scope Risk Contingency
	The above items are based on Mason email 220917, plant with a contingency of 15 % due to lack of information on MF treatability/testing of the pond effluent and limited NZ experience with MF directly from oxidation ponds. A risk contingency of 15% is proposed for the above reasons. This would normally be higher but tempered due to recent experience and costings for Motueaka and Cromwell which are slightly larger plants.
6	**RISING MAIN PUMP STATION**
	Common to all options
6.01	Intake structure
6.02	Inlet pipe to pumpstation
6.04	PS building, at 2m below ground level, basement walls extending above flood level
6.05	PS mechanical, electrical fit out, and dry mount pumps
6.06	MEICA within pumpstation.
6.07	Surge Control Vessels and controls
6.08	General Site Works
6.09	Back up generator
6.10	Landscaping
	Allowance for recontouring and planting land around the WWTP resulting from construction works.
6.11	Power Supply Upgrade to site
	Need to check power supply capacity for all options. An MF plant may require a larger transformer.
6.12	Scope Risk Contingency
	Allowed for 5% contingency
7	**CONSTRUCTION OF RISING MAIN - BASED ON PVC 300mm NB**

	Common to all options. The unit rates for pipework was compared to those used for estimating purposes in Tasman District and Eastern Access Road Queenstown and increased from previous estimates by 16% after discounting for the scale of work. There is 12.7km of the pipework within the road reserve, assumed to be in the cheaper location of the berm, and not within the road pavement zone or verge. Also assumed is that the excavated material (other than bedding and surround) is recompacted excavated material. An allowance is made for replacing 2.5km of unsuitable excavated material of the total 18km pipeline length. The above assumptions to be confirmed during design and survey of conflicts with other services.
7.1	**Excavation (depth up to 1.4m)**
7.2	**Pipeline - supply and lay**
7.3	**Backfilling**
7.4	**Reinstatement**
7.5	**Associated Work**
7.5.01	*Stormwater Culvert Crossing. Allowance to deviate over or under a culvert.*
7.5.02	*Bridge Crossings*
7.5.03	*Compaction testing (refer to Spec 1112 Clause 3.11.2)*
7.5.04	*Hydrostatic pressure testing of DN300 reticulation main in five sections*
7.6	**Ancillaries - Supply and Install**
7.6.01	*DN 300 horizontal 11.25° bend including thrust block*
7.6.02	*DN 300 horizontal 22.5° bend including thrust block*
7.6.03	*DN 300 horizontal 45° bend including thrust block*
7.6.04	*Air valves*
7.6.05	*In Line valves*
7.6.06	*Spindle extension for sluice valve - Provisional*
7.6.07	*Sluice Valve*
7.7	**Rising Main Stream Crossings and Scours**
7.7.1	Allowance for 2 thrust bored crossings
	This is for two stream crossings along SH95 (refer Stantec report Sept 2017) that would otherwise require resource consents.
7.7.2	Allowance for supporting side of trench at two crossings
	This is for two stream crossings along SH95 (refer Stantec report Sept 2017).
7.7.3	Allowance for flow control at Kepler to keep rising main full during pump off cycles

	To prevent the pipeline draining between pumping cycles. This simplifies restarting the pumping and greatly mitigates the extent of odour control required at the air valves on the rising main.
7.7.4	Branches to pump-out chambers at line valves
	To enable isolation and drainage of a section of pipeline for critical repairs and maintenance.
7.8	**Odour Control on Airvalves**
7.8.1	Carbon filters added to air valves
	Activated carbon control units at each air valve are proposed. Note this is separate to the allowance of item 7.6.04 for the installation of the air valves.
7.9	**Pipework Contingency to allow for Work not yet identified**
7.9.1	Scope Risk Contingency
	Allowed for 5% scope contingency.
8	**KEPLER ENABLING WORKS-Wastewater Reuse**
8.1	Power supply to site
	Distance to power supply to be confirmed.
8.2	Power supply to CP irrigators - based on share trench with pipeline (km)
8.3	Switch Building - kiosk
	A building to put the electrical panels and equipment in.
8.4	Control including SCADA connection - entire Kepler site
	One master SCADA system that monitors and controls all the individual components as integrated system. Combines with the SCADA for the WWTP site, trickling filter and irrigation.
8.5	EMP monitoring soil (6), 1 climate station, runoff detection(2)
	The Environmental management plan requirements to monitor the soil moisture at three levels, climate station and runoff detection to demonstrate compliance with Consent Conditions.
8.6	Scope Risk Contingency
	Allowed for 5% scope contingency.
9	**ODOUR CONTROL - Trickling filter, biofilter and chemical dosing.**
9.1	Refer estimate from separate spreadsheet.
	This allows for trickling 13m dia 4m high trickling filter with wastewater recirculation, forced air extraction to a constructed above ground soil filter, chemical dosing with an oxidant during initial startup and pump station to the CPs. This has been extensively modelled, with results presented at the consent hearing. The purpose is to control odour due to septicity in the rising main, which is particularly important because of spray irrigation. There is a separate spreadsheet detailing the breakdown of this section of the estimates, with comments on how values were derived, which includes comparable

	projects, first principle breakdowns, and supplier estimates (eg for the trickling filter tanks, and distributor arm).
9.2	Scope Risk Contingency
	Allowed for 5% scope contingency.
10	**SITE PREPARATION**
10.01	Paddock Development, change grass/crop
10.02	Remove centre shelter belts
	Halved from earlier estimates, as southern belt will now be retained.
10.03	Remove stumps at irrigator wheel tracks
10.04	Remove all remaining tree stumps for ease of pasture management
	Consider remove all stumps during site clearance to provide greater flexibility of cropping albeit at a small cost.
10.05	Tracks for Pivot drive wheels - allowance
	Would only be undertaken if operation proves need. This is a conventional approach.
10.06	300mm Pipeline from boundary to CP 1
10.07	200mm Pipeline from CP1 to CP 2 and CP3
10.08	Peat Bog development, planting, earthworks, piled bridges.
10.09	6 bores for ongoing monitoring
	4 Groundwater monitoring down and side gradient plus an allowance of 2 bores to monitor groundwater mounding.
10.1	Plant new northern shelter belt & maintain 1yr
	say three tiers of radiata pine 10m deep
10.11	Enhance western and eastern shelterbelt
	Assume an additional two rows of radiata pine
10.12	Fencing for one side of northern shelter belt.
	Using netting and windbreak cloth
10.13	Allowance for gateways, tracks, culverts etc.
10.14	Site signage as required by consent conditions
10.15	Downstream swale and sensor for runoff early warning
	The lower side of the site could be monitored for runoff of rainfall by a small constructed swale and moisture sensor. While not strictly required by the consent would useful monitoring feature. To be considered for EMP.
10.16	Scope Risk Contingency
	Allowed for 5% scope contingency.
11	**IRRIGATION**
11.1	**Centre Pivot (CP) Irrigators**

	SDC propose 3 CPs (425m, 532m & 576m diameters). One of these could be deferred 10-15 years until required by demand, which would offer a saving in the order of $140k. Refer sketch in BBC options assessment.
11.2	Supply and install CPs, including freight to site (WaterForce Sept 2017)
11.3	Allowance for effluent vs water - screening and corrosion
11.4	Water supply for flushing the CPs, and pumpset in shed
11.5	Upgrade CPs to vary flow rate by isolating nozzles
11.6	Upgrade CPs for boon backs for outer spans
11.7	Scope Risk Contingency
	Costs for CPs have not increased significantly in recent years. Allow 5% contingency. In the Opex budget the return on crop from treated wastewater area is assumed to be 50% of the value from non-treated wastewater irrigated areas. This is to address a significant project risk as Fonterra have rejected dairying on sludge/wastewater irrigated land and this may extend one day to other types of farming for perception reasons. The addition of MF barrier under Options 2A and 2B may reduce the perceived risk to humans and stock feed. Refer Davoren email 13 Jan 2015 and Travis Leslie (Landcorp Kepler manager) on crop value at $42/tonne of dry matter.
12	**SUBSURFACE DRIP IRRIGATION**
	No allowance for odour treatment at Kepler (unlike CPs) as the soil around the drippers will control odour. Also there is no spraying of the treated wastewater above ground and associated potential for odour release. No allowance has been made for odour control at the PS prior to the SDI. SDI – email P Riddell (and Will Say evidence), is less susceptible to rain events and therefore potential to have less irrigated area but will need to change Consent from CP to SDI and agree suitable conditions. Installation of the SDI disposal fields can be staged over time as demand increases. SDI benefits from lower air borne risk to humans, and stock from pathogens, from the wastewater due to the below ground irrigation.
12.1	First 37Ha in year 0. All-in rate to include back flushing
	Rate/Ha advised by T Davoren, based on Ecogent 2016 figures Different irrigation specialist have advise different areas for SDI. Further work is required define irrigation areas, life and SDI type. The rate per hectare is less certain, and could vary considerably, either up or down. This is because there a few examples to draw upon in NZ, and the scale of this project is much larger than anything done in NZ. It is a significant project risk to refine this estimated figure if the SDI option is to proceed.

12.2	Second 37Ha in year 10. NPV at 6% discount rate
12.3	Replace first 37Ha in year 20. NPV at 6% discount rate
12.4	Replace second 37Ha in year 30. NPV at 6% discount rate
12.5	Arrival balance tank. 2hr peak capacity = 200m3. Glass coated steel
	Sealed, for odour. Assume half the cost of the trickling filter tank.
12.6	Rising Main filter to protecting drippers from sloughing off pipeline.
	A prefilter is required to remove any biofilm that sloughs off the raising main. Amiad 400m³/hr basket filter. Refer Mason email of 22 Sept 2017. This method of filtering has not been confirmed as an acceptable, or best solution. It is a budget allowance for a filter system of an appropriate flow rate.
12.7	Holding tank to accept backwash from backwash from filters prior to irrigation
	It is assumed that backwash water in this tank would be pumped out and transported back to the WWTP ponds. Price estimate is a budget allowance only, as tank not sized or scoped.
12.8	Pump set to feed SDI system
	Minimum of two pumps, to provide backup. It is uncertain what is allowed in the per Hectare rate, but this figure will need to increase significantly if it is provide all of the pumping requirements to the SDI disposal field. Should be regarded as a placeholder figure.
12.9	Scope Risk Contingency
	The SDI option using treated wastewater with residual organic content is at greater risk of clogging of dippers than for example pumped groundwater. The life of drippers (and their fouling) cannot be reliably predicted beyond 20 years, and it is common to assume a 20 year life. The key risks for subsurface irrigation are the area required, life and special flushing requirements. For this reason the contingency is 20% allowed for this item.
13	**ALLOWANCES**
13.1	Construction Contingency (post Contract award)
13.2	Market Risk - competiveness/volatility
	Market risk to cover exchange fluctuations, inflation and other market forces that may result in higher rates when we actually build something. A strong economy tends to push prices higher.
13.3	Unknown items - identified per category, see above
13.4	Remote location - relocate workforce
	No allowance is made for the location other that higher establish costs already allowed for under P&G. This allowance is for the risk that a considerable portion of the construction workforce is brought into the area, with travel and accommodation costs resulting.
14	**EXTERNAL TO CONSTRUCTION CONTRACT**
14.1	Additional consenting

	Additional consents will be required for the pipeline under all options. Under Options 2A, 2B & 3 -Revise Outline Plan required under WWTP Designation to include for PS and MF. Also, the air discharge consent will require amendment. Under Option 3 SDI- A Variation to the land discharge consent will be required to change from CP to SDI.
14.2	Engineering
	Allowed for 10% of capex costs
14.3	Design Contingency. Further design to develop/prove concept
	Option1 $0 Option2 $100k Option 3 $300k for additional design to prove/develop the concept for high risk items. This is dependant on the option selected.
14.4	SDC Project Management
	Allow 2% for SDC staff for project management, or engagement of an external provider to provide and SDC interface with the project team.
14.5	Environmental Management Plan including OMP/Mitigation measures
	The consent requires a detailed EMP/OM/ Odour Plans and consultation on these refer condition 13 Discharge Consent 20157779-01
14.6	Other Costs (SDC to advise)

TEANAU SEWERAGE - KEPLER PROPOSAL
Updated Estimate

10 October 2017

Previous Estimate - Refer MWH Report of Sept 2015
Updated by Roger Oakley and Paul Jacobson, numerical check by L Boyd
Reviewed by Roger Oakley and Paul Jacobson

Last Updated 9 October 2017

Opex estimate is updated Oct 2017

Item	Description	Unit	Quantity	Rate	OPTION ONE CONSENTED OPTION Amount	OPTION 2A CONSENTED OPTION + BASE FLOW MF + CPI Amount	OPTION 2B CONSENTED OPTION + PEAK FLOW MF + CPI Amount	OPTION THREE MF + SDI Amount
1	**PRELIMINARY & GENERAL**							
1.01	Conventional allowance of 10% (of items 1 - 12)	%	10%		1,050,498.63	1,254,149	1,403,549	1,564,025
				Subtotal 1	**1,050,499**	**1,254,149**	**1,403,549**	**1,564,025**
2	**POND RAISING TO PROVIDE ADDITIONAL 15,000M3 STORAGE**							
2.1	Refer estimate from separate spreadsheet.	LS	1	$ 353,356.00	353,356	353,356	353,356	353,356
2.2	Scope Risk Contingency	%	5%	$ 353,356.00	17,668	17,668	17,668	17,668
				Subtotal 2	**371,024**	**371,024**	**371,024**	**371,024**
3	**POND PIPEWORK TO ALLOW STORAGE IN POND 1**							
3.1	Outlet arrangement from Pond 1	LS	1	$ 20,000.00	20,000	20,000	20,000	20,000
3.2	Actuated valve and flowmeter, via SCADA, to control flow from Pond 1	LS	1	$ 20,000.00	20,000	20,000	20,000	20,000
3.3	Pipework from Pond 1 to 3. (Assume flow goes 1-3-2 and pump from 2).	m	150	$ 400.00	60,000	60,000	60,000	60,000
3.4	Level sensors to control all pond levels, and cable through to switchboard	LS	1	$ 10,000.00	10,000	10,000	10,000	10,000
3.5	Scope Risk Contingency	%	5%	$ 110,000.00	5,500	5,500	5,500	5,500
				Subtotal 3	**115,500**	**115,500**	**115,500**	**115,500**
4	**GENERAL WWTP SITE PROVISIONS**							
4.1	Connection of individual WWTP site elements and data to SCADA/telemetry, incl programming, and supply of telemetry	LS	1	$ 40,000.00	40,000	40,000	40,000	40,000
4.2	Power Supply Upgrade to site	LS	1	$ 18,000.00	18,000	18,000	18,000	18,000
4.3	Landscaping	LS	1	$ 14,000.00	14,000	14,000	14,000	14,000
4.4	Scope Risk Contingency	%	5%	$ 40,000.00	2,000	2,000	2,000	2,000
				Subtotal 4	**74,000**	**74,000**	**74,000**	**74,000**
5A	**MEMBRANE FILTRATION AT PONDS - BASE FLOW**							
	Refer Rising Main PS est for pond intake structure and pipe to inlet screen.							
5.01A	Inlet screen (to protect membrane) and pipe to MF building	LS	1	$ 150,000.00	N/A	150,000	N/A	N/A
5.02A	Additional algae removal re membrane fouling. BUDGET ALLOWANCE	LS	1	$ 200,000.00	N/A	200,000	N/A	N/A
5.03A	Membrane filter unit with feed pumps, CIP (sealed pressure unit)	Nr	1	$ 600,000.00	N/A	600,000	N/A	N/A
5.04A	Basic shed for MF unit	m2	120	$ 2,000.00	N/A	240,000	N/A	N/A
5.05A	Backwash pump station. 7m3 underground tank and pump set	LS	1	$ 50,000.00	N/A	50,000	N/A	N/A
5.06A	Electrical and controls and basic SCADA	LS	1	$ 180,000.00	N/A	180,000	N/A	N/A
5.07A	Upgrade basic MF package with full SCADA	LS	1	$ 20,000.00	N/A	20,000	N/A	N/A
5.08A	Commissioning	LS	1	$ 20,000.00	N/A	20,000	N/A	N/A
5.09A	Civil works to service the site. Eg roads, stormwater, building platform	LS	1	$ 50,000.00	N/A	50,000	N/A	N/A
5.10A	Head contractor margin at 12% on MF and Mech/Elec/Commissioning	LS	1	$ 130,000.00	N/A	130,000	N/A	N/A
5.11A	Balance tank and pipes after MF plant to PS and rising main, incl civils	LS	1	$ 70,000.00	N/A	70,000	N/A	N/A
5.12A	Peak flow line from ponds to balance tank. Pumps, pipes, valves, control	LS	1	$ 70,000.00	N/A	70,000	N/A	N/A
5.13A	Scope Risk Contingency	%	15%	$ -	N/A	256,500	N/A	N/A
				Subtotal 5	**-**	**2,036,500**	**-**	-
5B	**MEMBRANE FILTRATION AT PONDS - PEAK FLOW**							
5.01B	Refer Rising Main PS est for pond intake structure and pipe to inlet screen.	LS	1	$ -	N/A	N/A	-	-
5.01B	Inlet screen (to protect membrane) and pipe to MF building	LS	1	$ 250,000.00	N/A	N/A	250,000	250,000
5.02B	Additional algae removal re membrane fouling. BUDGET ALLOWANCE	LS	1	$ 300,000.00	N/A	N/A	300,000	300,000
5.03B	Membrane filter unit with feed pumps, CIP (sealed pressure unit)	Nr	1	$ 1,200,000.00	N/A	N/A	1,200,000	1,200,000
5.04B	Basic shed for MF unit	m2	230	$ 2,000.00	N/A	N/A	460,000	460,000
5.05B	Backwash pump station. 7m3 underground tank and pump set	LS	1	$ 100,000.00	N/A	N/A	100,000	100,000
5.06B	Electrical and controls and basic SCADA	LS	1	$ 350,000.00	N/A	N/A	350,000	350,000
5.07B	Upgrade basic MF package with full SCADA	LS	1	$ 30,000.00	N/A	N/A	30,000	30,000
5.08B	Commissioning	LS	1	$ 20,000.00	N/A	N/A	20,000	20,000
5.09B	Civil works to service the site. Eg roads, stormwater, building platform	LS	1	$ 60,000.00	N/A	N/A	60,000	60,000
5.10B	Head contractor margin at 12% on MF and Mech/Elec/Commissioning	LS	1	$ 230,000.00	N/A	N/A	230,000	230,000
5.11B	Balance tank and pipes after MF plant to PS and rising main	LS	1	$ 70,000.00	N/A	N/A	70,000	70,000
5.12B	Scope Risk Contingency	%	15%	$ -	-	N/A	460,500	460,500
				Subtotal 5	**-**	**-**	**3,530,500**	**3,530,500**
6	**RISING MAIN PUMP STATION**							
6.01	Pond intake structure	LS	1	$ 30,000.00	30,000	30,000	30,000	30,000
6.02	Inlet pipe to pumpstation	LS	1	$ 15,000.00	15,000	15,000	15,000	15,000
6.04	PS building, slab 2m below ground level, basement walls extending above flood leve	m2	50	$ 3,500.00	175,000	175,000	175,000	175,000
6.05	PS mech, elec fitout, and dry mount pumps	LS	1	$ 240,000.00	240,000	240,000	240,000	240,000
6.06	MEICA within pumpstation.	LS	1	$ 80,000.00	80,000	80,000	80,000	80,000
6.07	Surge Control Vessels and controls	LS	1	$ 80,000.00	80,000	80,000	80,000	80,000
6.08	General Site Works	LS	1	$ 30,000.00	30,000	30,000	30,000	30,000
6.09	Back up generator	LS	1	$ 56,000.00	excluded	excluded	excluded	excluded
6.12	Scope Risk Contingency	%	5%	$ 650,000.00	32,500	32,500	32,500	32,500
				Subtotal 6	**682,500**	**682,500**	**682,500**	**682,500**

7	CONSTRUCTION OF RISING MAIN - BASED ON PVC 300mm NB							
	Escalation 2014 - 2017 arising from P Jacobson review Sept 2017	factor		1.16	apply to all item 2			
7.1	Excavation (depth up to 1.4m)		Yellow highlight means figures used elsewhere, blue highlight means figure linked to yellow					
7.1.1	*In urban areas in road*	m	500	$ 75.40	37,700	37,700	37,700	37,700
7.1.2	*In urban areas in road verge*	m	1000	$ 63.80	63,800	63,800	63,800	63,800
7.1.3	*In road*	m	1500	$ 58.00	87,000	87,000	87,000	87,000
7.1.4	*In road verge*	m	1500	$ 46.40	69,600	69,600	69,600	69,600
7.1.5	*In road berm/paddock*	m	12700	$ 23.20	294,640	294,640	294,640	294,640
7.1.6	*In gravel road*	m	800	$ 29.00	23,200	23,200	23,200	23,200
7.1.7	*Extra over – Excavation to invert up from 1.4m to 2.0m and Type A timbering*	m	100	$ 29.00	2,900	2,900	2,900	2,900
7.2	Pipeline - supply and lay							
7.2.1	*Pipe supply, delivered to site*	m	18000	$ 116.00	2,088,000	2,088,000	2,088,000	2,088,000
7.2.2	*Cart and Laying in road bern/paddock*	m	12700	$ 13.92	176,784	176,784	176,784	176,784
7.2.3	*Cart and Laying in road verge*	m	1500	$ 16.24	24,360	24,360	24,360	24,360
7.2.4	*Cart and Laying in road*	m	1500	$ 18.56	27,840	27,840	27,840	27,840
7.2.5	*Cart and Laying in road verge in urban areas*	m	1000	$ 23.20	23,200	23,200	23,200	23,200
7.2.6	*Cart and Laying in road in urban area*	m	500	$ 26.68	13,340	13,340	13,340	13,340
7.2.7	*Cart and Laying in road in gravel road*	m	800	$ 12.76	10,208	10,208	10,208	10,208
7.2.8	*Bedding and Surround*	m	18000	$ 29.00	522,000	522,000	522,000	522,000
7.3	Backfilling							
7.3.1	*Backfilling and compaction of trench with excavated material*	m	13500	$ 69.60	939,600	939,600	939,600	939,600
7.3.2	*Backfilling compaction of trench with B40 for depth to pipe invert up to 1.4m*	m	4500	$ 87.00	391,500	391,500	391,500	391,500
7.3.3	*Extra over for depth 1.4 to 2.0m to invert*	m	100	$ 29.00	2,900	2,900	2,900	2,900
7.4	Reinstatement							
7.4.01	*Carriageway: including 200mm M4 AP40 , overcut, 50mm M10 mix 14 asphalt reinstatement and two coat texturising to match existing surface.*	m	2000	$ 110.20	220,400	220,400	220,400	220,400
7.4.02	*Road verge*	m	2500	$ 55.68	139,200	139,200	139,200	139,200
7.4.03	*Road bern/paddock*	m	12700	$ 16.24	206,248	206,248	206,248	206,248
7.4.04	*Gravel road*	m	800	$ 18.56	14,848	14,848	14,848	14,848
7.5	Associated Work							
7.5.01	*Stormwater Culvert Crossing. Allowance to deviate over or under a culvert.*	No	52	$ 1,218.00	63,336	63,336	63,336	63,336
7.5.02	*Bridge Crossings*	No	1	$ 2,900.00	2,900	2,900	2,900	2,900
7.5.03	*Compaction testing (refer to Spec 1112 Clause 3.11.2)*	LS	1	$ 11,600.00	11,600	11,600	11,600	11,600
7.5.04	*Hydrostatic pressure testing of DN300 reticulation main in five sections*	LS	5	$ 5,800.00	29,000	29,000	29,000	29,000
7.6	Ancillaries - Supply and Install							
7.6.01	*DN 300 horizontal 11.25 ° bend including thrust block*	Nr	10	$ 1,740.00	17,400	17,400	17,400	17,400
7.6.02	*DN 300 horizontal 22.5 ° bend including thrust block*	Nr	10	$ 1,740.00	17,400	17,400	17,400	17,400
7.6.03	*DN 300 horizontal 45 ° bend including thrust block*	Nr	9	$ 2,900.00	26,100	26,100	26,100	26,100
7.6.04	*Air valves*	Nr	18	$ 4,060.00	73,080	73,080	73,080	73,080
7.6.05	*In Line valves*	Nr	18	$ 3,712.00	66,816	66,816	66,816	66,816
7.6.06	*Spindle extension for sluice valve - Provisional*	Nr	5	$ 638.00	3,190	3,190	3,190	3,190
7.6.07	*Sluice Valve*	Nr	2	$ 5,800.00	11,600	11,600	11,600	11,600
7.7	Rising Main Stream Crossings and Scours							
7.7.1	Allowance for 2 thrustbored crossings	ea	2	$ 15,000.00	30,000	30,000	30,000	30,000
7.7.2	Allowance for supporting side of trench at two crossings	ea	2	$ 5,000.00	10,000	10,000	10,000	10,000
7.7.3	Allowance for flow control at Kepler to keep rising main full during on/off	LS	1	$ 30,000.00	30,000	30,000	30,000	30,000
7.7.4	Branches to pump-out chambers at line valves	ea	18	$ 10,000.00	180,000	180,000	180,000	180,000
7.8	Odour Control on Airvalves							
7.8.1	Carbon filters added to airvalves	ea	18	$ 6,000.00	108,000	108,000	108,000	108,000
7.9	Pipework Contingency to allow for Work not yet identified							
7.9.1	Scope Risk Contingency	%	5%	$ 6,059,690.00	302,985	302,985	302,985	302,985
				Subtotal 7	6,362,675	6,362,675	6,362,675	6,362,675
8	KEPLER ENABLING WORKS							
8.1	Power supply to site	LS	1	$ 70,000.00	70,000	70,000	70,000	70,000
8.2	Power supply to irrigators/SDI - based on share trench with pipeline (km)	m	1500	$ 35.00	52,500	52,500	52,500	52,500
8.3	Switch Bldg - kiosk	LS	1	$ 50,000.00	50,000	50,000	50,000	50,000
8.4	Control incl SCADA connection - entire Kepler site	LS	1.00	$ 42,000.00	42,000	42,000	42,000	42,000
8.5	EMP monitoring soil (6), 1 climate station, runoff detection(2)	LS	1	$ 32,000.00	32,000	32,000	32,000	32,000
8.6	Scope Risk Contingency	%	5%	$ 194,035.00	9,702	9,702	9,702	9,702
				Subtotal 8	256,202	256,202	256,202	256,202
9	ODOUR CONTROL - Trickling filter, biofilter and chem dosing.							
9.1	Refer estimate from separate spreadsheet.	LS	1	$ 1,432,260.00	1,432,260	1,432,260	1,432,260	N/A
9.2	Scope Risk Contingency	%	5%	$ 1,432,260.00	71,613	71,613	71,613	NA
				Subtotal 9	1,503,873	1,503,873	1,503,873	-

10	**SITE PREPARATION**							
10.01	Paddock Development, change grass/crop	Ha	140	$ 500.00	70,000	70,000	70,000	70,000
10.02	Remove shelter belts	m	1350	$ 50.00	67,500	67,500	67,500	67,500
10.03	Remove stumps at irrigator wheel tracks	Nr	11	$ 500.00	5,500	5,500	5,500	N/A
10.04	Remove all remaining tree stumps for ease of pasture management	LS	1	$ 8,000.00	excluded	excluded	excluded	excluded
10.05	Tracks for Pivot drive wheels - allowance	Nr	2	$ 5,000.00	10,000	10,000	10,000	N/A
10.06	300mm Pipeline from boundary to CP 1	m	900	$ 200.00	180,000	180,000	180,000	180,000
10.07	200mm Pipeline from CP1 to CP 2	m	780	$ 200.00	156,000	156,000	156,000	N/A
10.08	Peat Bog development, planting, earthworks, piled bridges.	Nr	1	$ 25,000.00	25,000	25,000	25,000	N/A
10.09	More bores etc for ongoing monitoring	Nr	6	$ 5,000.00	30,000	30,000	30,000	30,000
10.10	Plant new northern shelter belt & maintain 1yr	m	1500	$ 2.00	3,000	3,000	3,000	N/A
10.11	Enhance western and eastern shelterbelt	m	1150	$ 1.50	1,725	1,725	1,725	N/A
10.12	Fencing for one side of northern shelter belt.	m	1500	$ 15.00	22,500	22,500	22,500	N/A
10.13	Allowance for gateways, tracks, culverts etc.	Nr	1	$ 20,000.00	20,000	20,000	20,000	20,000
10.14	Site signage as required by consent conditions	LS	1	$ 8,000.00	8,000	8,000	8,000	8,000
10.15	Downstream swale and sensor for runoff early warning	LS	1	$ 8,000.00	excluded	excluded	excluded	N/A
10.16	Scope Risk Contingency	%	5%	$ 599,225.00	29,961	29,961	29,961	29,961
				Subtotal 10	**629,186**	**629,186**	**629,186**	**405,461**
11	**IRRIGATION**							
11.1	**Centre Pivot Irrigators**							
11.2	Supply and install CPs, incl frieght to site (WaterForce Sept 2017)	m	766	$ 390.00	298,740	298,740	298,740	N/A
11.3	Allowance for effluent vs water - screening and corrosion	Nr	2	$ 20,000.00	40,000	40,000	40,000	N/A
11.4	Water supply for flushing the CPs, and pumpset in shed	Nr	1	$ 25,000.00	25,000	25,000	25,000	N/A
11.5	Upgrade CPs to vary flow rate by isolating nozzles	Nr	2	$ 50,000.00	100,000	100,000	100,000	N/A
11.6	Upgrade CPs for boon backs for outer spans	Nr	2	$ 11,000.00	22,000	22,000	22,000	N/A
11.7	Scope Risk Contingency	%	5%	$ 485,740.00	24,287	24,287	24,287	N/A
				Subtotal 11	**510,027**	**510,027**	**510,027**	**-**
12	**SUBSURFACE DRIP IRRIGATION**							
12.1	First 37Ha in year 0. All-in rate to include backflushing	Ha	37	$ 41,143.00	N/A	N/A	N/A	1,522,291
12.2	Second 37Ha in year 10. NPV at 6% discount rate	Ha	37	$ 22,974.25	N/A	N/A	N/A	850,047
12.3	Replace first 37Ha in year 20. NPV at 6% discount rate	Ha	37	$ 12,828.39	N/A	N/A	N/A	474,650
12.4	Arrival balance tank. 2hr peak capacity = 200m3. Glass coated steel	LS	1	$ 175,000.00	N/A	N/A	N/A	175,000
12.5	Rising Main filter to protecting drippers from sloughing etc of pipeline.	LS	1	$ 120,000.00	N/A	N/A	N/A	120,000
12.6	Holding tank to accept backwash from rising main filters	LS	1	$ 20,000.00	N/A	N/A	N/A	20,000
12.7	Pump set to feed SDI system	LS	1	$ 40,000.00	N/A	N/A	N/A	40,000
12.8	Scope Risk Contingency	%	20%	$ 3,201,988.63	NA	NA	NA	640,398
				Subtotal 12	**-**	**-**	**-**	**3,842,386**
				SUBTOTAL 1- 12	**11,555,485**	**13,795,635**	**15,439,035**	**17,204,272**
13	**ALLOWANCES**							
13.1	Construction Contingency (post Contract award)	%	10%		1,155,548	1,379,563.49	1,543,903.49	1,720,427
13.2	Market Risk - competiveness/volatility	%	TBC		TBC	TBC	TBC	TBC
13.3	Unknown items - identified per category, see above	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13.4	Remote location - relocate workforce	%	TBC		TBC	TBC	TBC	TBC
				Subtotal 13	**1,155,548**	**1,379,563**	**1,543,903**	**1,720,427**
	TOTAL ESTIMATED CONSTRUCTION CONTRACT VALUE			**TOTAL 1-13**	**12,711,033**	**15,175,198**	**16,982,938**	**18,924,700**
14	**EXTERNAL TO CONSTRUCTION CONTRACT**							
14.1	Additional consenting	LS	1.00		15,000	25,000	25,000	100,000
14.2	Engineering	%	10%		1,271,103	1,517,520	1,698,294	1,892,470
14.3	Design Contingency. Further design to develop/prove concept	LS	1.00		-	100,000	100,000	300,000
14.4	SDC Project Management	%	2%		254,221	303,504	339,659	378,494
14.5	Environmental Management Plan including OMP/Mitigation measures	LS	1.00	$ 50,000.00	50,000	50,000	50,000	50,000
14.6	Other Costs (SDC to advise)	LS	1	$ 200,000.00	200,000	200,000	200,000	200,000
				SUBTOTAL 14	**1,790,324**	**2,196,024**	**2,412,953**	**2,920,964**
	TOTAL ESTIMATED CAPEX REQUIREMENT			**TOTAL**	**14,501,357**	**17,371,222**	**19,395,891**	**21,845,664**

TEANAU SEWERAGE - KEPLER PROPOSAL

Operational Cost Estimate (Based on daily average flow of 1,500m3 in 35yrs time).

2/11/2017 12:04

Depreciation is Excluded

Approx 2014 daily average flow is 900m3/day, approx 60% of 35yr flow in Flows report.

Last Updated 2-Nov-17

Prepared by Roger Oakley, Reviewed by P Jacobson. Numerical check by L Boyd

Updates reviewed in conjunction with input from Ecogent estimates, and Davoren Technical Memo 2/11/2017

Item	Description	Unit	Quantity	Rate	OPTION ONE BASE CASE Amount	OPTION 2A CONSENTED OPTION + BASE FLOW MF + CPI Amount	OPTION 2B CONSENTED OPTION + PEAK FLOW MF + CPI Amount	OPTION THREE MF + SDI Amount
1	**PRELIMINARY & GENERAL**							
1.1	Base operator input - TeAnau region. Includes personal overheads	Hrs pa	800	$ 80.00	$ 64,000	$ 64,000	$ 64,000	$ 64,000
1.2	Operator support, vehicle, laptop, tools etc	LS	1	$ 20,000.00	$ 20,000	$ 20,000	$ 20,000	$ 20,000
				Subtotal 1	**$ 84,000**	**$ 84,000**	**$ 84,000**	**$ 84,000**
2,3	**TE ANAU PONDS (capital items 2 & 3)**							
2.1	Inlet screens, as a percentage of capital value	%	1%	$ 100,000.00	$ 1,000	$ 1,000	$ 1,000	$ 1,000
2.2	Aerators, as a percentage of capital value	%	1%	$ 300,000.00	$ 3,000	$ 3,000	$ 3,000	$ 3,000
2.3	Civil Structures, as a % of capital value	%	0.5%	$ 100,000.00	$ 500	$ 500	$ 500	$ 500
2.4	Ground maintenance	Hrs pa	100	$ 60	$ 6,000	$ 6,000	$ 6,000	$ 6,000
2.5	Acces road maintenance	LS	1	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000
2.6	Disposal of screen debris	LS	1	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000
2.7	Annual desludging allowance - treat as separate capital project	tonne	0	$ 400	NA	N/A	N/A	NA
				Subtotal 2,3	**$ 13,500**	**$ 13,500**	**$ 13,500**	**$ 13,500**
4	**TELEMETRY AND SCADA FOR WWTP SITE**							
4.1	SCADA and PLC tech support	Hrs pa	40	$ 150	$ 6,000	$ 6,000	$ 6,000	$ 6,000
4.2	Control and instrumentation physical maintenance, as a % of capex	LS	$ 200,000	5%	$ 10,000	$ 10,000	$ 10,000	$ 10,000
				Subtotal 4	**$ 16,000**	**$ 16,000**	**$ 16,000**	**$ 16,000**
5	**MEMBRANE FILTRATION AT PONDS**							
5.1	Chemical usage	LS	1	$ 12,000	NA	$ 12,000	$ 12,000	$ 12,000
5.2	Membrane replacement (5yr guarantee, 7yr budget duration)	year	0.14	$ 179,200	NA	$ 12,800	$ 25,600	$ 25,600
5.3	Civil at 0.5% of capital	%	0.5%	$ 690,000	NA	$ 1,960	$ 3,450	$ 3,450
5.4	M&E at 1% of capital	%	1%	$ 1,580,000	NA	$ 8,000	$ 15,800	$ 15,800
5.5	Additional Operator input 20 hrs per week	hrs	80	$ 700	NA	$ 56,000	$ 56,000	$ 56,000
				Subtotal 5	**$ -**	**$ 90,760**	**$ 112,850**	**$ 112,850**
6	**RISING MAIN PUMPSTATION TO KEPLER**							
6.1	Pumpstation civil, as a percentage of capital value	m	0.5%	$ 300,000	$ 1,500.00	$ 1,500	$ 1,500	$ 1,500
6.1	Pumpstation M+E, as a percentage of capital value	m	1%	$ 500,000	$ 5,000.00	$ 5,000	$ 5,000	$ 5,000
				Subtotal 6	**$ 6,500.00**	**$ 6,500**	**$ 6,500**	**$ 6,500**
7	**RISING MAIN**							
	Odour control maintenance on pipeline, and carbon filters	LS	1		$ 6,000	$ 2,000	$ 3,000	$ 3,000
	Civil maintenance at 0.5% of capital	%	0.5%	$ 6,059,690	$ 30,298	$ 30,298	$ 30,298	$ 30,298
				Subtotal 7	**$ 36,298**	**$ 32,298**	**$ 33,298**	**$ 33,298**
8	**KEPLER ENABLING WORKS**							
	Civil at 0.5% of capital	%	0.5%	50,000	$ 250.00	$ 250	$ 250	$ 250.00
	M&E at 1% of capital	%	1%	196,500	$ 1,965.00	$ 1,965	$ 1,965	$ 1,965.00
	Tree maintenance	LS	1	$ 2,000	$ 2,000.00	$ 2,000	$ 2,000	$ 2,000.00
				Subtotal 8	**$ 4,215.00**	**$ 4,215**	**$ 4,215**	**$ 4,215.00**
9	**ODOUR CONTROL - Trickling filter, biofilter and chem dosing.**							
	Soil filter rehabilitation	LS	1	$ 2,000	$ 2,000.00	$ 2,000	$ 2,000	N/A
	Civil, as a percentage of capital value	LS	0.5%	$ 1,000,000	$ 5,000.00	$ 5,000	$ 5,000	N/A
	M+E, as a percentage of capital value	LS	1%	$ 600,000	$ 6,000.00	$ 6,000	$ 6,000	N/A
	Oxidant chemicals, 10% sodium hypochlorite.	IBCs	2	$ 3,000.00	$ 6,000.00	N/A	N/A	N/A
	Additional Operator input	hrs	260	$ 80.00	$ 20,800.00	$ 20,800	$ 20,800	N/A
				Subtotal 9	**$ 39,800.00**	**$ 33,800**	**$ 33,800**	**$ -**
10	**KEPLER SITE MAINTENANCE**							
	Fencing and gates	LS	1	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000
	Tracks, incl irrigator wheel tracks	LS	1	$ 2,000	$ 2,000	$ 2,000	$ 2,000	N/A
	Tree pruning	LS	1	$ 3,000	$ 3,000	$ 3,000	$ 3,000	$ 3,000
	Peat bog and 'bridges' over for irrigator	LS	1	$ 1,000	$ 1,000	$ 1,000	$ 1,000	N/A
	Ground maintenance in odour/SDI treatment compound	LS	1	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000
	Paddock Development, replant grass	Ha/yr	10	$ 500	$ 5,000	$ 5,000	$ 5,000	$ 5,000
				Subtotal 10	**$ 14,000**	**$ 14,000**	**$ 14,000**	**$ 11,000**
11	**CENTRE PIVOT IRRIGATION**							
11.1	Annual overhaul by specialist, plus any callouts.	LS	1	$ 4,000	$ 4,000	$ 4,000	$ 4,000	$ 4,000
11.2	CP Spray nozzle and filter maintenance	LS	1	$ 3,000	$ 3,000	$ 3,000	$ 3,000	N/A
11.3	CP Tyres, general parts replacement	LS	1	$ 3,000	$ 3,000	$ 3,000	$ 3,000	N/A
11.4	M+E, as a percentage of capital value	LS	1%	485,740	$ 4,857	$ 4,857	$ 4,857	N/A
				Subtotal 11	**$ 14,857**	**$ 14,857**	**$ 14,857**	**$ 4,000.00**
12	**SDI IRRIGATION**							
12.1	SDI backflushing chemicals	LS	1	$ 18,000	N/A	N/A	N/A	$ 18,000
12.2	Civil, as a percentage of capital value	LS	0.5%	$ 195,000	N/A	N/A	N/A	$ 975
12.1	M+E, as a percentage of capital value	LS	1%	$ 160,000	N/A	N/A	N/A	$ 1,600
				Subtotal 12	**$ -**	**$ -**	**$ -**	**$ 20,575.00**
13	**CONSENT MONITORING**							
13.1	6 Monitoring bores sampling	LS	24	$ 150	$ 3,600	$ 3,600	$ 3,600	$ 3,600
13.2	Monitoring, overseer, reporting, updating EMP to meet consent requirements	LS	1	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000
13.3	Maintaining and calibrating spray drift and soil moisture sensors	LS	1	$ 3,000	$ 3,000	$ 3,000	$ 3,000	$ 3,000
				Subtotal 13	**$ 31,600.00**	**$ 31,600**	**$ 31,600**	**$ 31,600.00**

14	**PASTURE OPERATION (see estimate below)**							
14.1	Operating costs	LS	1		$ 237,775	$ 237,775	$ 237,775	$ 237,775
14.2	Income from baleage	LS	1	-$ 247,240.00	-$ 247,240	-$ 247,240	-$ 247,240	-$ 247,240
				Subtotal 14	**-$9,465**	**-$9,465**	**-$9,465**	**-$9,465**
Power	**POWER- all items - see est on separate spreadsheet**							
P.1	Te Anau Pumpstation	KWh	158,601	$ 0.14	$ 22,204	$ 22,204	$ 22,204	$ 22,204
P.2	TF pumpstation	KWh	34,762	$ 0.14	$ 4,867	$ 4,867	$ 4,867	N/A
P.3	Centrepivot pumpstation	KWh	17,381	$ 0.14	$ 2,433	$ 2,433	$ 2,433	N/A
P.4	Pond inlet screen	KWh	6,570	$ 0.14	$ 920	$ 920	$ 920	$ 920
P.5	Aerators (6)	KWh	262,800	$ 0.14	$ 36,792	$ 36,792	$ 36,792	$ 36,792
P.6	Membrane inlet screen	KWh	6,570	$ 0.14	N/A	$ 920	$ 920	$ 920
P.7	Membrane Filtration plant	KWh	158,601	$ 0.14	N/A	$ 21,094	$ 22,204	$ 22,204
P.8	Irrigator wheel drive	KWh	35,040	$ 0.14	$ 4,906	$ 4,906	$ 4,906	N/A
P.9	SDI system, incl hydrochlorous acid generator	LS	1	$ 32,000.00	N/A	N/A	N/A	$ 32,000
P.10	Elec capacity charges at Ponds (250kVA transformer assumed)	LS	1	$ 16,000.00	$ 16,000	$ 16,000	$ 16,000	$ 16,000
P.11	Elec capacity charges at Kepler (100kVA transformer assumed)	LS	1	$ 8,000.00	$ 8,000	$ 8,000	$ 8,000	$ 8,000
				Subtotal power	**$ 96,122**	**$ 118,135**	**$ 119,246**	**$ 139,040**
	TOTAL ANNUAL OPEX COSTS			**TOTAL**	**$ 347,427**	**$ 450,201**	**$ 474,401**	**$ 467,113**
				check	$ 347,427	$ 450,201	$ 474,401	$ 467,113
	NET PRESENT VALUE AT 6%, 25 YEARS	factor	12.783		**$ 4,441,165**	**$ 5,754,922**	**$ 6,064,273**	**$ 5,971,110**
	Manapouri capex				$ 1,450,000.00	$ 1,450,000.00	$ 1,450,000.00	$ 1,450,000.00
	Manapouri opex				$ 29,000.00	$ 29,000.00	$ 29,000.00	$ 29,000.00
	MANAPOURI NET PRESENT VALUE AT 6%, 25 YEARS	factor	12.783		$ 370,707	$ 370,707	$ 370,707	$ 370,707
	Total NPV Te Anau and Manapouri				$ 20,763,229.10	$ 24,946,850.85	$ 27,280,870.92	$ 29,637,481.00

Excluded:

Depreciation
SDC head office staff time

Other references:

Opex estimate for options in MWH 2006 report 'Initial Consideration of Future Treatment and Disposal Options'
Pumping and headloss estimates in MWH Dec 2008 draft report 'Te Anau Sewerage - WWTW to Kepler Block Rising Main'

Notes:

Fixed line charges are potentially very high, highlighting the need for load management in peak times.

Estimate for Pasture Maintenance and Dry Matter Production last updated 28 Sept 2017
Note: Scope of estimate limited to the 125Ha North Kepler block.

Item	Description	Unit	Quantity	Rate	Least cost (optimistic) Amount	Mid range Amount	low range (conservative) Amount
1	**Farm Operating Costs**						
1.1	Pasture management by Landcorp	LS	1	$ 3,000.00	$ 3,000.00		
1.2	Fertiliser (probably need 2 spreads pa orf Urea, for N shortage)	per Ha/yr	125	$ 95.00	$ 11,875.00		
1.3	Cut of baleage, incl transportation of cut asap - irrigated land, 11.25t/Ha	per Ha/yr	40	$ 1,970.00	$ 78,800.00		
1.4	Cut of baleage, incl transportation of cut asap - unirrigated land, 9.5t/Ha	per Ha/yr	85	$ 1,660.00	$ 141,100.00		
1.5	Lab testing of baleage.	pa	1	$ 3,000.00	$ 3,000.00		
				Subtotal	**$ 237,775.00**	**$ 237,775.00**	**$ 237,775.00**
2	**INCOME per annum - optimistic**						
2.1	Irrigated land - with recovery of 10.4 tonne dry matter/Ha/yr. Use 40Ha for the 'irrigated' 75Ha, as irrigated area sized to cope with peak flows.	tonne DM	416	-$ 280.00	-$ 116,480.00		
2.2	Unirrigated land - based on recovery of 9t/Ha/yr on 75Ha	tonne DM	675	-$ 280.00	-$ 189,000.00		
3	**INCOME per annum - mid range**						
3.1	Irrigated land - with recovery of 10.4 tonne dry matter/Ha/yr. Use 40Ha for the 'irrigated' 75Ha, as irrigated area sized to cope with peak flows.	tonne DM	416	-$ 140.00		-$ 58,240.00	
3.2	Unirrigated land - based on recovery of 9t/Ha/yr on 75Ha	tonne DM	675	-$ 280.00		-$ 189,000.00	
4	**INCOME per annum - conservative**						
4.1	Irrigated land - with recovery of 10.4 tonne dry matter/Ha/yr. Use 40Ha for the 'irrigated' 75Ha, as irrigated area sized to cope with peak flows.	tonne DM	416	$ -			$ -
4.2	Unirrigated land - based on recovery of 9t/Ha/yr on 75Ha	tonne DM	675	-$ 280.00			-$ 189,000.00
				Subtotal	**-$ 305,480.00**	**-$ 247,240.00**	**-$ 189,000.00**
				Total	**-$ 67,705.00**	**-$ 9,465.00**	**$ 48,775.00**

Selected risk level for baleage income

Notes on Pasture costs:

1 Also refer to section E, from p57 of Hydroservices April 2013 Report 'Report on Kepler Farm Site Assessment....' that was submitted as part of the consent application.
2 Travis Leslie, Landcorp site manager, doesn't envisage anything. So small allowance only
3 Travis Leslie, Landcorp site manager: local cost is $45 -50/Ha/spread for urea, assuming a higher rateof $80kg/Ha
4 T Leslie, local costs to cut and remove baleage from site are $42/round bale with a 600kg wet weight and 40%DM. ie $42 for 240kgDry Matter.
5 Davoren, technical memo 2/11/2017 suggests a revised harvestable range of 8.0-12.75t/Ha/yr for irrigated land. - Use mid range estimate of 10.4 t/Ha/yr
6 Davoren, technical memo 2/11/2017 suggests a revised harvestable range of 6-12t/Ha/yr for unirrigated land - Used mid range estimate of 9t/Ha/yr
7 Davoren, technical memorandum 2/11/2017: Dean Carson suggest value of $280 / t DM based on 2016-2017 season

TEANAU SEWERAGE - KEPLER PROPOSAL - ODOUR CONTROL COMPONENT
Updated Estimate

10/10/2017 2:01

Previous Estimate - June 2014
Updated by Roger Oakley, numerical check by RO
Reviewed by Simon Todd, June 2014

Last Updated 12-Jun-15
Red font = changes since last est

Item	Description	Unit	Quantity	Rate	Amount
1	**PRELIMINARY & GENERAL**				See Item 8
1.1	Preliminary and General (10%)	LS	1		
1.2	Unscheduled items (tenderer to itemise)				
					$ -
2	**TRICKLING FILTER 13m dia, 4m media depth 6m wall height**				
2. 1	Earthworks, foundations and reinstatement	m3	100	$ 50.00	$ 5,000.00
2. 2	Pipework under the tank and valves/bends/flanges etc	LS	1	$ 20,000.00	$ 20,000.00
2. 3	Site concrete under floor	m2	140	$ 35.00	$ 4,900.00
2. 4	Tank floor - concrete 175mm thick, shaped	m3	23	$ 2,000.00	$ 46,000.00
2. 5	Tank floor - concrete ring beam 125mm extra, and discharge channel	m3	6	$ 2,000.00	$ 12,000.00
2. 6	Tank floor - sealants	m	60	$ 60.00	$ 3,600.00
2. 7	Central column - steel with flanges and conc lined	LS	1	$ 15,000.00	$ 15,000.00
2. 8	Central column - concrete surround and foundation	m3	6	$ 2,000.00	$ 12,000.00
2. 9	Distributor arm assembly	m	12.5	$ 12,000.00	$ 150,000.00
2. 10	Distributor arm delivery to site from UK	LS	1	$ 50,000.00	$ 50,000.00
2. 11	Air pipework within tank	m	30	$ 300.00	$ 9,000.00
2. 12	Plenum floor	m2	130	$ 80.00	$ 10,400.00
2. 13	Plastic media from DCC, 240m3	LS	1	$ 16,000.00	$ 16,000.00
2. 14	Plastic media, 260m3	m3	260	$ 325.00	$ 84,500.00
2. 15	Media repackaging, loading and unloading	hr	180	$ 30.00	$ 5,400.00
2. 16	Media cartage only - free from DCC. 60m3 per trip	trip	7	$ 2,800.00	$ 19,600.00
2. 17	Media loading into TF (500m3, 23t)	m3	500	$ 20.00	$ 10,000.00
2. 18	Tank roof with hatch and air vents (incl in Oceana Tanks price below)	m2	below	$ 500.00	
2. 19	Tank structure - glass coated steel, 13m diameter by 6m high. Oceania Tanks	LS	1	$ 250,000.00	$ 250,000.00
2. 20	Tank modifications from standard (eg flush vents, air outlets, lights)	LS	1	$ 10,000.00	$ 10,000.00
2. 21	Internal walkway	m	13	$ 2,000.00	$ 26,000.00
2. 22	Hopper	LS	1	$ 10,000.00	$ 10,000.00
2. 23	Fans on plinths feeding air to plenum at base	Nr	2	$ 15,000.00	$ 30,000.00
2. 24	Electrical and Control incl SCADA connection	LS	1	$ 40,000.00	in main est
					$ 799,400.00
3	**AIR SYSTEMS AND SOIL FILTER (2,300m3/hr, 30m2)**				
	Assume an above ground soil filter 1.5m deep and 6m x 5m				
3. 1	Foundations, strip topsoil etc	LS	1	$ 2,000.00	$ 2,000.00
3. 2	Site concrete under filter	m2	30	$ 35.00	$ 1,050.00
3. 3	Assume timber walls	m2	40	$ 200.00	$ 8,000.00
3. 4	Wall/floor lining and gravity drain to pump chamber	LS	1	$ 5,000.00	$ 5,000.00
3. 5	Above ground pipework from TF, say 400mm diameter	m	30	$ 500.00	$ 15,000.00
3. 6	Plenum chamber media and separation barrier to media	m3	26	$ 150.00	$ 3,900.00
3. 7	Plenum distribution pipework	LS	1	$ 10,000.00	$ 10,000.00
3. 8	Supply and install filter media	m3	26	$ 60.00	$ 1,560.00
3. 9	Media irrigation system	LS	1	$ 3,000.00	$ 3,000.00
3. 10	Fans	Nr	2	$ 10,000.00	$ 20,000.00
3. 11	Electrical and Control incl SCADA connection	LS	1	$ 20,000.00	in main est
3. 12	Smoke testing and commissioning	LS	1	$ 2,000.00	$ 2,000.00
				Subtotal	**$ 71,510.00**
4	**RECIRCULATION PUMPSTATION**				
	Assume 3 chamber. Internal 3.3m deep x 3m x8.1m. 4.5MLD design flow.				
4. 1	Excavation	m3	540	$ 12.00	$ 6,480.00
4. 2	Site concrete	m2	44	$ 35.00	$ 1,540.00
4. 3	Backfill and compaction with excavated material	m3	440	$ 20.00	$ 8,800.00
4. 4	Concrete structure (250mm walls - lined so not water retaining concrete design)	m3	24	$ 2,700.00	$ 64,800.00
4. 5	Internal weir, penstock and flap valve	LS	1	$ 12,000.00	$ 12,000.00
4. 6	PVC lining floors and walls	m2	79	$ 370.00	$ 29,230.00
4. 7	Top slab 200mm thick - precast	m3	6	$ 2,000.00	$ 12,000.00
4. 8	Aluminium lids - non trafficable	LS	1	$ 6,000.00	$ 6,000.00
4. 9	Internal pipework and (above ground) valve 'chamber'	LS	1	$ 60,000.00	$ 60,000.00
4. 11	Pipework to and from TF, say 30m steel at 300dia with bends etc	m	30	$ 600.00	$ 18,000.00
4. 12	Pipework branch to and from Te Anau to CP irrigators, incl valves, to PS's	LS	1	$ 12,000.00	$ 12,000.00
4. 13	Recirc pumps, 3.2MLD constant recirc rate = 37l/s. Duty/standby	Nr	2	$ 8,000.00	$ 16,000.00
4. 14	Irrigation pumps, installed, 0.5 - 3MLD (6- 35l/s) initially	Nr	3	$ 12,000.00	$ 36,000.00
4. 15	Electrical and Control incl SCADA connection	LS	1	$ 90,000.00	in main est
4. 16					$ -
				Subtotal	**$ 282,850.00**
5	**CHEMICAL DOSING**				
5.1	Lump sum allowance	LS	1	$ 200,000.00	$ 200,000.00
5.2					$ -
				Subtotal	**$ 200,000.00**
6	**MISCELLANEOUS ODOUR CONTROL WORKS**				
6.1	Carbon filters on air valves (quantity from main estimate)	Nr	18	$ 2,000.00	in main est
6.2	Tracks/hardstanding around Trickling Filter and pumpstations	LS	1	$ 4,000.00	$ 4,000.00
6.3	Fencing - low	m	100	$ 20.00	$ 2,000.00
6.4	Landscaping	LS	1	$ 2,000.00	$ 2,000.00
6.5	Upgrade of power supply to site from what is needed for CPs	LS	1	$ 5,000.00	$ 5,000.00
6.6	Spray drift sensors (detect horiz drift, sheltered from the rain).	ea	4	$ 7,000.00	$ 28,000.00
				Subtotal	**$ 41,000.00**
7	**COMMISSIONING**				
7.1	Contractor attendance	Hr	150	$ 90.00	$ 13,500.00
7.2	Extra capital items	LS	1	$ 20,000.00	$ 20,000.00
7.3	Disbursements	LS	1	$ 4,000.00	$ 4,000.00
				Subtotal	**$ 37,500.00**
				SUBTOTAL 1 - 7	**$ 1,432,260.00**
8	**ALLOWANCES**				
8.1	**Contingency and unscheduled items**	%	15%	$ 1,432,260.00	$ 215,000.00
8.2	**Preliminary and General**	%	10%	$ 1,432,260.00	$ 143,000.00
8.3	**Engineering**	%	10%	$ 1,432,260.00	$ 143,000.00
				SUBTOTAL 5	**$ 501,000.00**
				TOTAL	**$ 1,933,260.00**

TEANAU SEWERAGE - KEPLER PROPOSAL
Estimate for Raising the Te Anau Ponds

10/10/2017 2:01

Previous Estimate - n/a
Prepared by Roger Oakley, numerical check by Jonny Kemp
Reviewed by Tom Knewstubb, Lee Paterson

Last Updated 3-Feb-15
Red font = changes since last est (June 201

Item	Description	Unit	Quantity	Rate	Amount
1	**PRELIMINARY & GENERAL**				See Item 5
1.1	Preliminary and General (10%)	LS	1		
1.2	Contractor Accommodation	LS	1		
1.3	Liaison with utilities authorities, property owners and the general public	LS	1		
1.4	Occupational Health and Safety (OSH) Management	LS	1		
1.5	Recording of "As-Built" construction information	LS	1		
1.6	Traffic Plans and Traffic Management	LS	1		
1.7	Reinstatement of road markings	LS	1		
1.8	Conduct condition survey including photos of surrounding surfaces and buildings on or adjacent to the boundaries of the site and submission to Engineer (refer Spec 1000 Clause 3.1.2)	LS	1		
1.9	Project signs: preparation, installation, maintenance and removal	LS	1		
1.10	Unscheduled items (tenderer to itemise)				
					$ -
2	**POND 1 CONSTRUCTION OF EARTH BERMS - 400mm high**				
2.1	***Standard profile on flat land. 4m wide at base, 1:3 slopes, 1.6m wide at top***		400	assumed length	
2.1.1	Strip topsoil to stockpile or waste, 150mm deep, 4m wide	m3	240	$ 40.00	$ 9,600.00
2.1.2	Compacted selected fill 450mm thick, 1.26m3/m	m3	504	$ 80.00	$ 40,320.00
2.1.3	Geotextile liner, 1.5m wide strip on 1:3 slope plus 500mm lap	m2	800	$ 35.00	$ 28,000.00
2.1.4	Site concrete waveband, 1.5m wide on 1:3 slope, 50mm thick	m3	30	$ 700.00	$ 21,000.00
2.1.5	Topsoil 100mm thick, 3m wide	m3	120	$ 80.00	$ 9,600.00
2.2	***Concrete Kerb profile between Pond 2***		120	assumed length	
2.2.1	Strip topsoil to waste, 1.2m wide strip, 300mm deep	m3	43.2	$ 40.00	$ 1,728.00
2.2.2	Base for concrete kerb, 100mm thick	m3	14.4	$ 80.00	$ 1,152.00
2.2.3	Concrete kerb. Av cross section 400mm wide by 600mm high	m3	28.8	$ 1,600.00	$ 46,080.00
2.2.4	Puddle clay reinstatement in front of kerb 300mm wide by 200mm deep	m3	7.2	$ 100.00	$ 720.00
2.2.5	Site concrete waveband, 1.0m wide strip on nominal slope, 50mm thick	m3	6	$ 700.00	$ 4,200.00
2.2.6	Backfill behind kerb. 300mm x 200mm topsoil	m3	7.2	$ 80.00	$ 576.00
2.3	***Profile for narrower crest with backslope, 1:3 slopes, 1.6m wide at to. (Allowance for filling down the backslope)***		280	assumed length	
	Strip topsoil to stockpile or waste, 150mm deep, 6m wide	m3	252	$ 40.00	$ 10,080.00
	Compacted selected fill 450mm thick, 2m3/m	m3	560	$ 80.00	$ 44,800.00
	Geotextile liner, 1.5m wide strip on 1:3 slope plus 500mm lap	m2	560	$ 35.00	$ 19,600.00
	Site concrete waveband, 1.5m wide on 1:3 slope, 50mm thick	m3	21	$ 700.00	$ 14,700.00
	Topsoil 100mm thick, 5m wide	m3	140	$ 80.00	$ 11,200.00
					$ 263,356.00
3	**SITE TIDY UP ON COMPLETION**				
3. 1	Regrassing	m2	4000	$ 3.00	$ 12,000.00
3. 2	Replanting of bushes etc	LS	1	$ 3,000.00	$ 3,000.00
3. 3		Nr	1		$ -
					$ 15,000.00
4	**PIPEWORK**				
4. 1	Outlet structure from Pond 1	LS	1	$ 40,000.00	$ 40,000.00
4. 2	Pipework and valves	LS	1	$ 15,000.00	$ 15,000.00
4. 3	Automation and Control for outlet structure	LS	1	$ 20,000.00	$ 20,000.00
				Subtotal	**$ 75,000.00**
5	**SPARE**				
5. 1		LS			$ -
				Subtotal	**$ -**
				SUBTOTAL 1- 5	**$ 353,356.00**
5	**ALLOWANCES**				
5. 1	**Contingency and unscheduled items**	%	15%	$ 353,356.00	$ 53,000.00
5. 2	**Preliminary and General**	%	10%	$ 353,356.00	$ 35,000.00
5. 3	**Engineering**	%	10%	$ 353,356.00	$ 35,000.00
				SUBTOTAL 5	**$ 123,000.00**
				TOTAL	**$ 476,356.00**

Appendix 6: LGA, Significance Policy and Public Law Principles.

A more detailed summary of the specific provisions of the LGA, Council's Significance and Engagement policy and the associated public law principles, as they apply to this Business Case, is provided below.

Local Government Act 2002 Decision Making Requirements

The decision-making and public consultation provisions in Part 6 of the Local Government Act 2002, apply to the decisions that Council is being asked to make in considering this Business Case for approval.

The effect of these requirements is that Council's decision-making processes must:

- involve consideration of all reasonably practicable options, including the advantages and disadvantages of those options (section 77);
- involve consideration of the views and preferences of persons likely to be affected by or have an interest in the matters of the decision-making process (section 78);
- identify and explain any significant inconsistency between the decision and any policy or plan adopted by Council (section 78);
- provide opportunities for Maori to contribute to the processes (section 81) and if the matter involves a significant decision in relation to land or water then it must take into account the relationship of Maori and their culture and traditions with their ancestral land and water (section 77).

If the decision to be made is deemed to be a Significant Decision then the thresholds for determining compliance with the decision-making requirements of the Act are increased (section 76).

Section 79 of the Act gives Council the discretion to determine how it might best comply with the decision-making provisions including:

- the degree to which it identifies and assesses options in respect of each decision or matter
- the extent to which costs and benefits are identified;
- the extent and detail of any information to be considered;
- the extent and nature of any written record to be kept of the decision.

The degree of compliance should be proportional to the significance of the decision.

Council's obligations in respect of financial management are detailed in Part 6, sub-part 3 of the Local Government Act 2002. These provisions include a requirement to manage the local authority's assets and liabilities prudently and in a manner that promotes the current and future interests of the district.

Significance and Engagement Policy

Council's Significance and Engagement Policy provides that the significance of a decision will be assessed by having regard to the 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 performs its role, and the financial and other costs of doing so;
- the ownership or function of a strategic asset.

Wastewater schemes are also defined the in the Policy as being strategic assets.

Given the size of the proposed project and the importance of the Te Anau Wastewater scheme to this community a decision on whether to proceed with the upgrading of the Te Anau Wastewater Scheme as proposed in this business case is considered to be a significant decision. As a result Council must ensure that there is an appropriate level of compliance with the decision-making provisions.

Public Law Principles

All council decision-makers are subject to public law principles which are enforced by the High Court in judicial review proceedings. These principles require public decision-makers to act lawfully, fairly and reasonably.

The concept of acting lawfully includes:

- having the necessary power or delegation to make the decision
- acting in accordance with the purpose of the power being exercised, and within the scope of the discretion granted to the decision-maker
- taking into account all relevant considerations and ignoring any irrelevant considerations
- exercising independent judgement in making the decision.

The concept of acting fairly includes:

- ensuring a proper process is followed, including consulting where appropriate
- being unbiased and free from conflicts of interest
- fairly considering all relevant views put forward and not predetermining the decision
- complying with the legitimate expectations (e.g. keeping a promise to do something in a particular way that has been relied on)
- complying with any applicable principles of natural justice.

The concept of acting reasonably includes:

- ensuring the decision is rational, based on legitimate reasons and one that a reasonable decision-maker could make
- ensuring the decision is proportionate to the purpose being served by the decision.

Appendix 7 – Rate affordability by community

The table shows the rates affordability for each town for each option

Community	Average household income per 2013 census data	16-17 rate as a % of average household income (2013)	Option 1 as a % of average household income (2013)	Option 2a as a % of average household income (2013)	Option 2b as a % of average household income (2013)	Option 3 as a % of average household income (2013)
Balfour	$47,100	4.37%	4.65%	4.72%	4.75%	4.79%
Edendale	$69,000	3.71%	3.93%	3.98%	4.01%	4.04%
Gorge Road	$70,600	1.90%	2.02%	2.04%	2.06%	2.07%
Lumsden	$56,400	4.04%	4.33%	4.40%	4.44%	4.47%
Manapouri	$54,900	4.45%	4.74%	4.81%	4.85%	4.88%
Nightcaps	$39,900	5.26%	5.65%	5.75%	5.80%	5.84%
Ohai	$34,200	6.20%	6.66%	6.77%	6.83%	6.89%
Otautau	$55,700	4.09%	4.36%	4.42%	4.46%	4.49%
Riversdale	$67,200	2.60%	2.83%	2.88%	2.91%	2.94%
Riverton	$53,700	4.63%	4.90%	4.97%	5.01%	5.04%
Stewart Island	$64,700	2.94%	3.19%	3.25%	3.28%	3.31%
Te Anau	$62,800	4.13%	4.39%	4.45%	4.49%	4.52%
Tokanui & Waimahaka	$56,900	1.92%	2.06%	2.09%	2.11%	2.13%
Tuatapere	$49,000	4.13%	5.15%	5.23%	5.27%	5.31%
Wallacetown	$73,100	2.59%	2.79%	2.84%	2.86%	2.89%
Winton	$63,300	3.63%	3.86%	3.92%	3.95%	3.97%
Wyndham	$54,900	4.80%	5.08%	5.15%	5.19%	5.22%

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Please visit **www.stantec.com** to learn more about how Stantec design with community in mind.

Supporting Documentation to the 2018-2028 Long Term Plan

Record No: R/17/10/26223
Author: Anne Robson, Chief Financial Officer
Approved by: Steve Ruru, Chief Executive

☐ Decision ☒ Recommendation ☐ Information

Purpose

1 To consider and recommend to Council the endorsement of the draft Financial Strategy, the forecasting assumptions and accounting policies 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 Financial Strategy (Attachment A) has been built up from the Financial Strategy adopted as part of the 2015-2025 LTP and from the principles discussed at the Council workshop on 27 April 2017. In addition, discussions from other LTP workshops regarding the Infrastructure Strategy and Activity Management Plans over the past seven months have also fed into the thinking behind the Financial Strategy. It is still subject to review and refinement as the Investment Strategy, Activity Management plans and LTP are completed over the coming months and as such the committee's comments on its content is welcomed.

4 The Infrastructure Strategy is currently being finalised and will be presented to Council at its meeting on 23 November 2017 for consideration and endorsement.

5 The forecasting assumptions (Attachment B) set out the key assumptions which have been made by the Council in its planning for the 10 year period and the risks associated with these.

6 The accounting policies (Attachment C) set the basis on which the accounts are prepared and the financial information compiled.

Recommendation

That the Finance and Audit Committee:

a) Receives the report titled "Supporting Documentation to the 2018-2028 Long Term Plan" dated 10 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) Recommends that Council endorse the draft Financial 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.

e) Recommends that Council adopt the forecasting assumptions and accounting policies with any amendments from this meeting, to support the preparation of Councils 2018-2028 Long Term Plan.

Background

7 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.

8 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 documents discussed today form part of and inform the 2018-2028 LTP Consultation Document.

9 The LTP is subject to audit. The documents proposed today will form part of the buddle of documents that the auditors will review to ensure that Council has fairly represented the matters and impacts disclosed in the Consultation Document for effective public participation in the Council's decision making process.

10 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 has been discussed with the attached Financial Strategy a reflection of those discussions. The Financial Strategy sets out the key challenges facing the District and the approach Council will take in addressing these issues. It also sets limits in regards to rate increases and borrowing.

11 Underlying the LTP is a number of significant forecasting assumptions and accounting policies. These policies and assumptions create the building blocks on which the LTP is formed. The assumptions include a range of information that has been used to prepare the forecasts for the LTP, such as projected population levels, climate change forecasts and inflationary increases on costs.

12 In arriving at the assumptions proposed, Council staff have considered the methodology of prior LTP assumptions, guidance from SOLGM and the office of the auditor general along with discussions held with Council.

13 In arriving at the accounting policies proposed, Council staff have reviewed the policies used by Council in preparation of the Annual Report 2016/2017 and checked for any changes needed including any additional policies needed around the preparation of forecasted information.

Issues

Financial Strategy (Attachment A)

14 The Financial Strategy is a summary of the financial implications and constraints of Council's policy and service delivery decisions, and sets the direction for the way in which these will be managed. The Financial Strategy attached outlines the financial goals of council, context and strategic issues faced by Council and its approach to these.

15 The key financial goals for Council over the coming 10 years are to:

- review and maximise non-rating income opportunities including those which might be available through commercial opportunities, fees and charges and income on assets held
- review the way Council rates to gain efficiencies where possible (as part of looking at the sustainability and affordability of rates)
- ensure the costs associated with using services are shared fairly across the users of today and in the future
- use debt appropriately
- comply with all legislative and statutory requirements
- ensure ratepayers money is invested and spent wisely and sustainably
- allow capacity within the budgets to respond to unexpected events as appropriate.

16 The key contextual and strategic issue relate to how Council can remain viable, sustainable and affordable when:

- the costs of our services are higher because we are a widely spread, thinly populated district that does not get the benefits of scale because we have so many towns with the same needs but which have to be supplied independently
- our resident population is only projected to increase by 3,000 over 10 years but that the makeup of the population will age significantly
- increasing statutory and regulatory obligations add to the overall costs of delivery
- our customers want more and most often varying levels of services but for the same cost.

17 The key strategies are to:

- set some limits:
  - rates limited to Local Government Cost Index (LGCI) plus 2%
  - limiting the total amount of rates collected to 70% of total income, up from the current 66.67%
  - external debt limited to 100% of income.
- continue to fund water and wastewater on a district wide basis and use the updated 2015 road rating model
- continue to move towards fully funding depreciation so that we can ensure that Council has the ability to maintain service delivery capacity in the long term
- make an allowance for the insurance of Councils underground assets, pending further investigation, to reduce the level of risk we are carrying in relation to an adverse event damaging these assets
- enable external borrowing to occur when appropriate
- hold reserves where there is a strategic or legislative requirement
- undertake a number of other pieces of work over the plan period, including:
  - more research around affordability and what this means in Southland district and for the decisions of Council
  - considering the financial sustainability of Council to ensure that the decisions now are not limiting the choices of future generations
  - assessing the knowledge we have on our assets in conjunction with asset managers and understanding the impact that this information has on the amount of annual depreciation that each generation is paying towards the replacement of these assets
  - reviewing the property assets held by Council and ensuring that they are being held for a strategic benefit and that the return on these are acceptable for the purpose they are being retained
  - reviewing the way Council rates to ensure that it is appropriate and efficient.

18 The Financial Strategy is still subject to review and refinement as the LTP is completed. The Infrastructure Strategy is currently being finalised. When this is complete, the two documents will be reviewed to ensure that they are in alignment. Although the final Financial Strategy is not adopted until June 2018, the draft Financial Strategy as proposed by Council is adopted as part of the supporting documentation for the LTP Consultation Document.

Assumptions (Attachment B)

19 The assumptions have largely been based on those prepared for the 2015-2025 LTP and updated where necessary. The assumptions are principally non-financial and financial in nature.

20 Where the assumptions are financial, the approach has been to keep the methodology as consistent as possible with the previous LTP to ensure a level of consistency. While the majority of the financial assumptions are unchanged, staff are suggesting a change to the way interest rates have been calculated. Currently, the bank housing loan rates are used to calculate the interest rate

on internal loans. If this methodology is used for the 2018-2028 LTP interest charged on internal loans would be 5.59%. This is significantly higher than the interest rates the Council could borrow at. The new methodology is based on the rate Council is able to borrow at with a margin of 1%. Using this methodology the interest rate charged on internal loans is 4.65%.

21 Where a financial assumption has a high level of uncertainty, information will be included in the table to quantify the financial impact of this once the LTP financial information has been finalised for the Consultation Document.

22 With population and land-use assumptions, these continue to be based on information from Infometrics Ltd which was prepared for the 2015-20-25 LTP. A summary of the key projections are included at the end of Attachment B. Infometrics Ltd used 2013 census data as a baseline and projected this forward from 2013 to 2043 based on low, medium and high growth scenarios. For the 2018 plans, staff are suggesting that these projections be retained given that the expectations of the future remain largely in-line with the approach taken for the 2015 LTP. While the forecasts do not cover the full 30 year period through to 2048, no major shifts/changes in general trends from the 2043 projections are expected that would require a fundamentally different approach to planning from Council. The projection data will be fully reviewed as part a larger project around community futures that the Council is carrying out over the next three years.

23 The projections and assumptions around the change in rating units will be added once the supporting financial information and funding impact statement have been finalised for the Consultation Document. These projections are expected to be in line with similar changes in landuse and dwellings detailed in the table.

24 Accounting Policies (Attachment C)

25 The accounting policies are based on those used by Council in preparation of the Annual Report 2016/2017. They have been updated and reflect the additional policies needed for the preparation of forecasted information.

26 During the audit of the annual report Audit New Zealand suggested that the method of accounting for joint ventures in the financial statements could be changed to equity accounting. For the LTP the accounting policy has been changed so joint ventures are accounted for by the equity method rather than a proportionate consolidation of the financial statements. There are no other changes to the policies from the Annual Report.

Factors to Consider

Legal and Statutory Requirements

27 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.

28 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 Financial Strategy and significant forecasting assumptions.

29 Section 101A outlines that:

(1) A local authority must, as part of its long-term plan, prepare and adopt a financial strategy for all of the consecutive financial years covered by the long-term plan.

(2) The purpose of the financial strategy is to—

a. facilitate prudent financial management by the local authority by providing a guide for the local authority to consider proposals for funding and expenditure against; and

b. provide a context for consultation on the local authority's proposals for funding and expenditure by making transparent the overall effects of those proposals on the local authority's services, rates, debt, and investments.

(3) The financial strategy must—

(a) include a statement of the factors that are expected to have a significant impact on the local authority during the consecutive financial years covered by the strategy, including—

(i) the expected changes in population and the use of land in the district or region, and the capital and operating costs of providing for those changes; and

(ii) the expected capital expenditure on network infrastructure, flood protection, and flood control works that is required to maintain existing levels of service currently provided by the local authority; and

(iii) other significant factors affecting the local authority's ability to maintain existing levels of service and to meet additional demands for services; and

(b) include a statement of the local authority's—

(i) quantified limits on rates, rate increases, and borrowing; and

(ii) assessment of its ability to provide and maintain existing levels of service and to meet additional demands for services within those limits; and

(c) specify the local authority's policy on the giving of securities for its borrowing; and

(d) specify the local authority's objectives for holding and managing financial investments and equity securities and its quantified targets for returns on those investments and equity securities.

30 Section 17 of Schedule 10 Part One states in regards to significant forecasting assumptions that a long-term plan must clearly identify:

(a) all the significant forecasting assumptions and risks underlying the financial estimates:

(b) without limiting the generality of paragraph (a), the following assumptions on which the financial estimates are based:

(i) the assumptions of the local authority concerning the life cycle of significant assets; and

(ii) the assumptions of the local authority concerning sources of funds for the future replacement of significant assets:

(c) in any case where significant forecasting assumptions involve a high level of uncertainty,—

(i) the fact of that uncertainty; and

(ii) an estimate of the potential effects of that uncertainty on the financial estimates provided.

Community Views

31 The supporting information (including the Financial Strategy and forecasting assumptions) will be publicly available on Council's website during the LTP public consultation period. 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

32 There are no direct cost or funding considerations related to the development of the Financial Strategy, assumptions or accounting policies.

Policy Implications

33 The Financial Strategy sets the framework that needs to be achieved and other policies and plans should give consideration eg: Revenue and Financing Policy, AMPs and procurement policy etc.

Analysis

Options Considered

34 Analysis of Options

Option 1 – Recommend to Council to endorse the draft Financial Strategy, forecasting assumptions and accounting policies as presented, amended for any changes agreed at the meeting.

Advantages	*Disadvantages*
• The documents can proceed to Council for endorsement and adoption and meet the auditing requirements.	• The committee 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 recommending to Council to endorse the draft Financial Strategy, forecasting assumptions and accounting policies as presented, or parts thereof.

Advantages	*Disadvantages*
• The committee would get the additional information it needed before endorsing.	• The auditing process may be held up depending on the time needed to provide the necessary information.

Option 3 – Do not recommend to Council the endorsement of the draft Financial Strategy, forecasting assumptions and accounting policies as presented.

Advantages	*Disadvantages*
• None identified	• The Council would consider te

Assessment of Significance

35 In terms of Councils 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

36 Option One - Endorse the draft Financial Strategy, forecasting assumptions and accounting policies as presented, amended for any changes agreed at the meeting.

Next Steps

37 If recommended the draft Financial Strategy (incorporating any changes form the meeting), will be forwarded to Council for further comment and endorsement. Staff will also review the strategy to ensure that it is consistent with the draft Infrastructure Strategy that is currently being finalised (this is expected to be considered by Council at its November meeting).

38 From here, the draft Financial Strategy (and draft Infrastructure Strategy) will be reviewed by Audit New Zealand as part of their audit of the LTP Consultation Document in late November 2017.

39 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 Financial Strategy, incorporating any changes as a result of consultation, will be adopted in June 2018.

40 The forecasting assumptions and accounting policies will also be forwarded to Council for adoption.

Attachments

A Draft 2018-2028 Financial Strategy ⇩
B Significant Forecasting Assumptions for 2018 2028 Long Term Plan (LTP) ⇩
C 2018-2028 Long Term Plan Accounting Policies ⇩

SOUTHLAND DISTRICT COUNCIL

Draft 2018-2028 Financial Strategy

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Document Revision

Date	Amendment	Amended by	Approved by	Approval date

1. Executive Summary

This financial strategy sets the overall direction for the management of Council's finances over the next 10 years.

The overall aim of Council is to continue to deliver its services in a financially sustainable manner that ensures that our communities continue to receive the services Council provides while recognising the need for rates to remain affordable.

At the 30 June 2017, Council had a strong financial position with $1.5 billion of assets, made up of $1.3 million of roading assets, $78 million of wastewater assets, $54 million of water assets, $18 million of stormwater assets and $20 million in cash and no external debt.

This strategy discusses the challenges Council faces including those which come with having to provide infrastructural services to a number of small to medium sized communities spread over a large geographical area. Our future population projections show that in the future while our overall population will experience modest growth a number of our communities will experience a decline. These declines, when combined with an overall aging of the population will create a number of affordability challenges in the future.

Against this is the challenge of Council incurring increased costs as a result of increasing compliance and environmental standards to maintain current levels of service whilst ensuring equity between current and future users of Councils services. The result is pressure on the level of rates to keep them sustainable, thereby not affecting the choices of the future generations whilst ensuring that they remain affordable for now and into the future.

What is affordable can be a highly subjective judgement as the wealth and income of our residents will always vary. Council see it as important however, that we continue to consider the implications of the decisions we make on the affordability and sustainability of rates. Council has started to undertake some work to inform the affordability discussion it needs to undertake with its ratepayers. This work, outlined further below, indicates that in terms of the affordability indicator outlined in the 2007 Independent Inquiry into Local Government Rates that council rates, before including the regional councils rates, for many of our townships are nearing the five percent of total household income indicator and in two of our communities they are over. This means that going forward, Council alongside the community will need to make some tough decisions on future needs and wants and the levels to which services are provided.

Financially, this strategy is generally one of a holding position, with a number of pieces of work to be completed in the coming three years in anticipation of the 2021-2031 long term plan. An important element is a continuation of the decision we made in 2015 to increase the level of depreciation that we are funding by 10% annually until 100% is achieved in 2024-25. By doing this we are recognising that each generation needs to contribute towards the cost of providing and maintaining the assets that are used in the delivery of services to our communities. The infrastructure strategy indicates no significant new infrastructure projects or renewals unless they are required to be undertaken to meet regulatory requirements or where the works will minimise the ongoing operational costs. It is expected that if the planned projects are undertaken that external borrowings will need to occur which will be undertaken in line with Council's Investment and Liability Policy.

The key mandatory measures are as follows and outline Councils key goals of:

- Limiting rates increases to no more than the Local Government cost index plus 2% (in 2017/18 this was 4.61% with the actual rates increase being 3.63%)

- Rates representing no more than 70% of total revenue an increase from the current benchmark of 66.67%.
- External debt being limited to 100% of total revenue.

The goals and limits in this strategy have helped in developing the financial decisions in the Long Term Plan 2018-2028.

2. Financial Goals

The key financial goals for Council over the coming 10 years are to:

- review and maximise non-rating income opportunities, through advocation to Government, commercial opportunities, fees and charges and income on assets held.
- review the way Council rates to gain efficiencies where possible (as part of looking at the sustainability and affordability of rates).
- ensure the costs associated with using services are shared fairly across the users of today and in the future.
- use debt appropriately.
- comply with all legislative and statutory requirements.
- ensure ratepayers money is invested and spent wisely and sustainably.
- allow capacity within the budgets to respond to events as appropriate.

3. Context and Strategic Issues

In preparing a financial strategy, Council faces the challenge of balancing the known with the unknown. Increasingly, it faces added pressure financially, geographically and politically. It is against these challenges that it sets its financial strategy and one in which it must incorporate some of the significant challenges it faces which include:

Our communities are changing

- The makeup of our communities is changing. The modelling undertaken is showing that the number of people in our community will increase by 3,379 over the coming 10 years so that we will a total population of 32,992 in 2028. The average age of our resident population is also expected to rise following the current trend. Currently the 55 to 75 year olds make up 25.4% of Southland's employed workforce compared to 12.2% in 1996. An older population has the potential to require Council to provide different services, but with potentially less disposable incomes from which to pay for the services.
- It is expected that the amount of land used for dairy farming will rise from 5.7% currently to 6.6% in 2028 (an additional 26 thousand hectares). This land will come from current pastoral properties. At the same time land used for forestry is also expected to rise gradually. Given that the population is not significantly changing only minor increases in residential, lifestyle and commercial/industrial land is expected.

Widely Spread Communities Infrastructure needs

- Council has 28 townships spread over its district, each with its own infrastructure. Due to the small size of these communities the cost of creating and maintaining the infrastructure is higher per person than if there were fewer communities or greater populations in each. Going forward

some small communities may need to consider alternative methods for water and sewerage to ensure the services remain affordable.

Funding of Roads

- Currently we receive a contribution of 52% from the NZ Transport Agency (NZTA) to assist with the maintenance of our roading network. The NZTA's contribution is set to decrease a further 1% to 51% in 2018/19. Council has assumed for this plan that funding will remain at that level. Overall NZTA income makes up 21% of Council's overall income but is conditional on the planned roading programme meeting the criteria of NZTA. Changes in the criteria and/or the level of funding exposes ratepayers to contributing more towards the overall financial cost or potentially reducing the roading programme which will affect the quality or quantity of the roads.

Infrastructure Issues over the next 30 years

- The Infrastructure strategy identifies a number of significant issues and approaches over the next 30 years
  - Stormwater network - The stormwater network across the district is aging. A mixture of a lack of good quality asset data, no structured renewals plan and the potential of changes in consent discharge conditions as part of Environment Southlands Land and Water Plan has the potential to add significant cost.
  - Roading – Council is continuing to push the life of the roading network for longer than its design life. The 80/20 policy introduced by Council is still in the early years and Council will understand more fully the implications of this policy as time goes by. The key is to invest at the correct time and not complete work early in the asset cycle life. A project is planned to get a greater understanding of when SDC roads will need rehabilitiation.
  - Levels of services - the infrastructure strategy plans to maintain the minimum levels of service across its activities for the 10 years of the plan.

Infrastructure Information

- Council has $1.45 billion of infrastructure assets, including the largest roading network in New Zealand. In order for Council to manage its infrastructure it needs to ensure it holds accurate information on what assets it has, where these are, how long they have been there and their expected lives. It needs this information in order to plan maintenance, undertake renewals and to calculate the annual consumption of the asset through use by residents and ratepayers. Not having the correct information impacts on the work programmes undertaken and ultimately the rates needed to pay for the overall infrastructure programme. Council has assessed that it has some improvements to be made to its data and has initiated some projects to start that process. In the meantime it believes that the current phased approach to funding of depreciation is a prudent approach.

Rates Affordability

- Maintaining rates affordability where there are variations in the income and wealth of those within our communities is an ongoing issue. Rates generally need to be affordable. Council is not able to contribute to the wellbeing of its community if the cost of its services exceeds the ability of its community to pay. It is an issue that Council is going to undertake further investigative work to inform it and the community further in the coming three years.

  The start of the project has been work around comparing the 2016-17 rates against the proposed affordable level of rates indicator identified in the local government rates enquiry commissioned by central government in 2007 which is that rates are less than 5% of total household income. The below table outlines the result:

Average Residential Rate by Community					
Community	SDC Average Rate 16-17 (GST incl) for residential houses	Average 2013 Census Income - Total Households	5% of Average Income - Total Household	Difference between 5% of Average Household Income to SDC Average Rate	9. Average Rate (GST incl) as % of Average Income - Total Households
Ohai	2,119	34,200	1,710	- 409	6.20%
Nightcaps	2,100	39,900	1,995	- 105	5.26%
Tuatapere	2,365	49,000	2,450	85	4.83%
Wyndham	2,637	54,900	2,745	108	4.80%
Riverton	2,485	53,700	2,685	200	4.63%
Manapouri	2,443	54,900	2,745	302	4.45%
Balfour	2,057	47,100	2,355	298	4.37%
Te Anau	2,596	62,800	3,140	544	4.13%
Otautau	2,281	55,700	2,785	504	4.09%
Lumsden	2,280	56,400	2,820	540	4.04%
Edendale	2,559	69,000	3,450	891	3.71%
Winton	2,297	63,300	3,165	868	3.63%
Athol	1,255	39,600	1,980	725	3.17%
Garston	1,580	52,600	2,630	1,050	3.00%
Stewart Island	1,904	64,700	3,235	1,331	2.94%
Mossburn	1,803	68,700	3,435	1,633	2.62%
Riversdale	1,748	67,200	3,360	1,612	2.60%
Wallacetown	1,890	73,100	3,655	1,765	2.59%
Waikaia Town	1,206	56,400	2,820	1,614	2.14%
Gorge Road	1,344	70,600	3,530	2,186	1.90%
Woodlands	1,171	70,800	3,540	2,369	1.65%

For this Council the question of affordability is also complicated by the varying services amongst its communities such as connection to water or sewerage schemes.

Council will continue to expand on this work in an attempt to understand and inform its communities of the implications of decisions made. Given the findings and currently excluding the Environment southlands rates the ability to continue to significantly increase rates is limited. Set against this rising costs and increasing compliance requirements and changes in the demographics of our community, the challenge to ensure rates remain sustainable is even harder.

Rates Sustainability

- Rates made up 59% of Council's income at $41m (30 June 2015) this is paid by 19,047 properties of which 48% are residential, 24% are dairy and farming non-dairy and 17% are lifestyle with the balance being commercial, industrial and other. Current research is predicting that the population in the Southland district will have varying growth in our communities and that there will be more elderly than ever before. This is likely to mean that the types of services needed will alter and that more will migrate to larger towns where medical services etc are available. These changes along with typically lower levels of disposable income means that it is even more important to ensure that rates are sustainable.

Changes in regulations/legislation

- Council is bound by various regulations and legislation. Central Government continues to add additional responsibilities and standards on local councils. A revision of the Freshwater National Policy Statement is a recent example. These regulations and legislation are enacted to protect people, property and environment Stipulations around the quality of our drinking water, the level of discharge and where that discharge of wastewater can go along with health and safety requirements have all added additional costs to Council delivering its services to our community. Council is not saying that anything is wrong with these however it is important that residents and ratepayers understand that often these costs add considerably to the overall rate increases.

  The potential impact of the regional councils land and water plan has been estimated in this plan and has added significantly to the costs of the stormwater networks of our communities.

Natural Disasters

- The Southland District, is widely dispersed. Areas are subject flooding, storm damage and earthquakes. Any form of natural disaster can cause significant unbudgeted costs. These costs will be met from two main sources being Council ratepayers and Central Government. Currently the Government funds 60% of Councils costs. This approach is being reviewed and may well see Council funding a bigger share. Council will fund its share from three sources, its insurance policies, borrowings and reserves. Currently Council insures all of its above ground assets for replacement cost but "self-insures" for its underground assets. The decision to self-insure is being reviewed by Council with an allowance in these 10 years for insurance of underground assets should Council decide to do this. To fund this "self-insurance" Council had set aside $1 million in reserves with the balance to come from external borrowings, repayable by rates.

Climate Change

- We still need to understand the impacts of climate change fully on our district. The assumptions sections outlines the potential impacts. Council will need to make decisions where climate change occurs on a case by case basis. Climate change has the potential to add additional cost. Council's key approach is to ensure it has appropriate insurance coverage, and capacity within its borrowing programme to fund potential works where it deems it appropriate.

External Factors

- This financial strategy is developed on a number of assumptions around economic, political and environmental. Any changes to these, such as an increase in interest rates on external debt and changes to bitumen changes can impact on Council's Long Term Plan and the financing of such. Council needs to allow capacity in its finances to allow it to respond appropriately and yet ensure the ongoing sustainability of its rates, the level to which this is provided will form part of the work around the affordability of rates.

Varying service level requirements

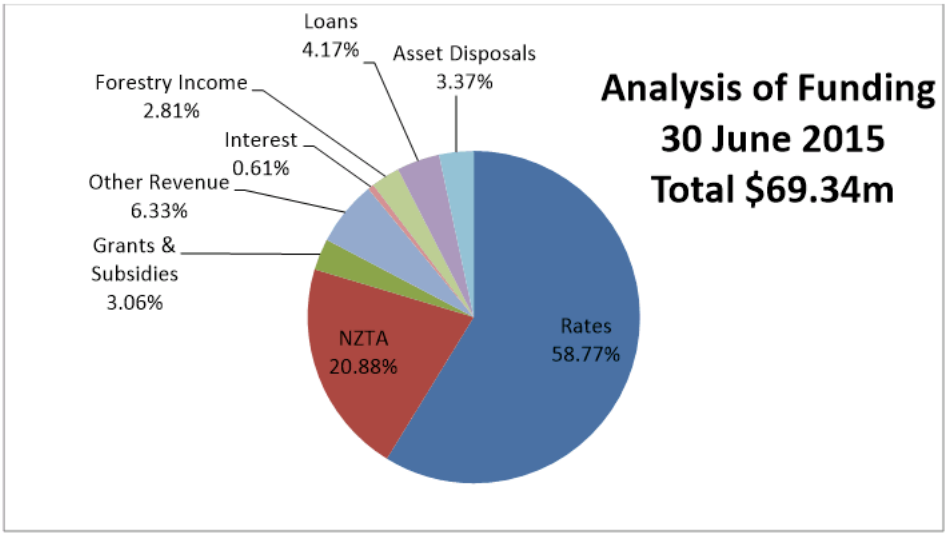
- Communities and individuals in communities all want different things. These differences are both in the quality and quantity of services provided as well as additional services wanted or needed. All add to the overall cost of Councils services.

4. Our Strategy

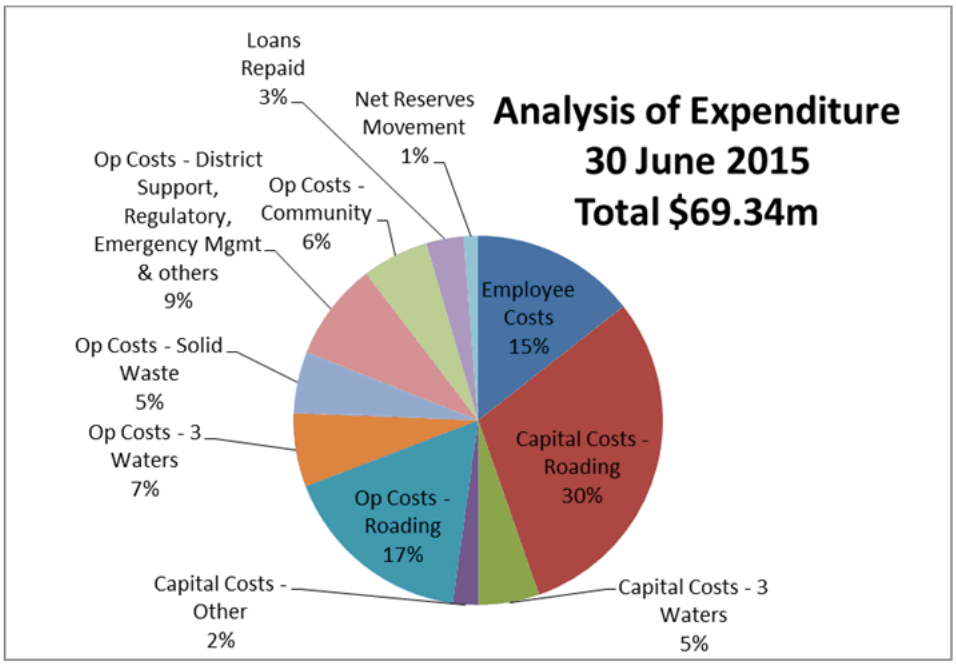
The following is the financial strategy of Council in regards to how it will achieve the goals above whilst considering and including the impacts of the challenges and strategic issues it faces.

The below tables outline the sources of funding and the key costs, excluding depreciation of Council over the 10 years of the plan.

The below table outlines the key sources of income for Council as at 30 June 2015 for information but it is planned to replace this with a table of income sources over the 10 years by % of contribution to total income.

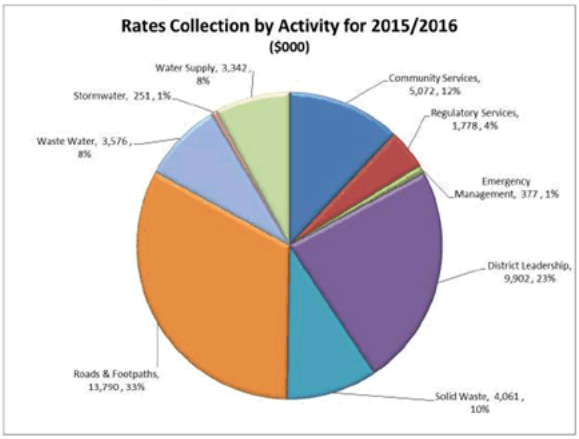


Funding of expenditure is from any of the funding sources shown in the income graph above. The exception being that NZTA income is only for roading activities.*Insert line graph of expenditure for 10 years*



Rates Funding

Council will continue to receive the majority of its income from rates. The following table outlines the activities that rates have been collected for over the 10 year period of the Long Term Plan *(update with 10 year graph of rates collected for the activities)*



As part of its strategy, Council has set the following rates limits:

- Limit rates increases to the LGCI (Long Government Cost Index) plus 2%
- total rates are no more than 70% of income

Council is still not certain what the changes in population and land use will do to our communities however it will continue to mean that the cost increases will be principally borne by current ratepayers as it is not anticipated that there will be a significant increase in our rating base. The change in these projections however will mean that Council needs to have some hard conversations with the community over the levels of service it needs versus what it wants. This plan is based on maintaining the current levels of services, replacing assets where the long term cost of replacement is better than incurring maintenance costs. Other opportunities for risk adverse investment will be considered during the term of this plan but currently the strategy is to only estimate funding where investments are currently held.

Council will continue to use rating as a last source of revenue. Although Council will continue to seek funding from other sources wherever it can, apart from NZTA funding for roads, the other income that Council receives only makes up a small percentage of its revenue. Rates will continue to make up the largest percentage of funding of its services. Where Grants and subsidies are used as a source of funding but is not received the project may not be completed or deferred while other funding sources are sought. Fees and charges will continue to be set where there is a private benefit from the service being provided. Council will continue to recognise that for some services there is a public good component in this service and contribute an element of rate funding to offset the overall cost eg; 20% of the building regulation department costs are funded from rates. Council wants to actively promote growth in our communities and as such has left the development contributions policy in remission. It is continuing to collect financial contributions for roading and reserves however these will cease in 2022 when the legislation is repealed.

In 2018/19, Council will collect from rates 40% of the annual cost of assets wearing out. Many of Council's assets provide benefits now and into the future. The annual cost of these assets needs to be shared by those who use the services that these assets help deliver. In ensuring that the burden of replacing these assets is not on future generations, the strategy is to put aside money every year to fund the replacement. The amount of money to be put aside is based on the average lifespan of the asset. Council considered the affordability of this change in policy in the 2015/25 plan and rather than ratepayers having a major increase in rates to meet this cost it has spread the increase over 10 years. This means that in

2024/25 100% will be collected. At this stage this policy only covers roading water, wastewater, solid waste, computers and vehicles. Council will consider the potential funding of depreciation for local assets such as stormwater, playgrounds as part of the lead up to the 2021 long term plan.

The funding taken for depreciation will be used to fund any capital work planned for these assets and repay the principal of any loan taken out in relation to these assets. Additionally in 2018 the use of these funds has been extended to include the repayment of interest on these loans.

Funding of the roading programme with be from NZTA funding and rates. It is assumed that the level of funding from NZTA at 51% will remain for the term of the plan. Generally the roading programme is smoothed to reflect the work needed but also the level of work that can be completed by qualified contractors in a year. Where the programme does have a higher or lower level of rates needed than usual the rates required will be smoothed. This smoothing will either be done from loans or if the change is less significant from transferring money to reserves and drawing down from these reserves in future years.

Council will continue to fund the balance of its operational expenditure from rates. The increasing costs of compliance and maintaining the current levels of service across the plan will result in an increase in rates. During the course of the plan it is expected that Council will have other requirements placed on it that it needs to meet, any operational costs that arise from this will result in an additional increase in rates through future plans.

Council intends to ensure a level of fairness and equity in how those rates are spread across ratepayers but also ensure some efficiency in the way it rates. Currently Council has 171 rate types, in considering the type and collection method it is attempting to acknowledge those who benefit from the provision of the service, those who contribute to the cost of providing the service and the overall affordability of rates to everyone in its community. Overall the total amount required does not change, just who pays what.

Council wants to balance fairness and equity with the resources needed to manage the current rating system. It also wants to ask the larger question of its community around the sustainability of rating in communities where there is changes that could make rates unaffordable. To do this Council will over the coming three years undertake the following

- Undertake a full review of the rating mechanisms it uses to ensure the cost/benefit or administering and the purpose is appropriate.
- Undertake a number of community conversations around the issues of rating policy, rating sustainability and potential rating models

Debt

Debt will be used by Council where it is appropriate to do so. At 30 June 2017, Council had internally borrowed $20.2 million. At the 30 June 2017 Council had no external debt.

As part of its strategy Council is continuing to limit external debt to 100% of total income, for 2016-17, this is equivalent to $70 million.

Debt will be used to fund long term infrastructure where rates collected for the replacement of assets is not sufficient. It will also be used where Council has to meet the costs of any unplanned capital works. Unplanned capital works may result from the potential change in land use eg: a road now used by heavy traffic requires capital replacement before it was planned, natural disasters or from Councils policies to get the most from an asset resulting in work undertaken before it is planned.

The infrastructure strategy is planning on $xx of capital renewal works during the 10 years. With the largest being roading $, wastewater $, water $, stormwater $.

The infrastructure strategy outlines a holding strategy. This means that there is no significant new infrastructure projects and renewals unless they are required to be undertaken to meet regulatory requirements or where the works will minimise the ongoing operational costs. Where major renewals are planned, the long term plan reflects the work required however these works will only be completed if the long term business case stacks up. In considering the business case, Council will be looking at multiple alternatives for delivering the service in the most economical way to ensure that the long term benefits still exist. At times these conversations are going to be hard and the outcome may not suit everyone however they may need to occur to ensure the long term sustainability of services.

In the meantime Council will continue to internally loan to fund capital works necessary, in 20xx/xx if all the planned works are carried out Council will need to externally borrow.

The debt facility sought will be on the most favourable terms to Council. In setting the limit Council has considered the effect of debt repayments at this limit on the overall rates. The impact on rates, if $70m was borrowed would be an increase of $4m at 4% interest, $4.5m at 5% interest over a term of 30 years or a 9.4% rate increase on 15-16 rates of $42.4m. The security for this borrowing will be by way of a charge over rates. This is in line with Council's Investment and Liability Policy.

As a result of this strategy, external and internal debt are projected as follows

(insert line graph of debt projects over 10 years)

Variance between capital and depreciation, are we maintaining our service level capacity?

Depreciation is often used as a 'surrogate' indicator of the level of funding that is likely to be required to maintain an infrastructural asset.

In an ideal world the level of capital expenditure in any year would exceed the depreciation on those assets. By doing so would clearly indicate that a suitable amount of replacement work is occurring and that the burden of future renewal costs is not on the future user. In this plan there is a number of years where a variance occurs with renewals being less than budget. In considering this Council has noted that

- Infrastructure assets have lives of up to 100 years, often there will be years particularly with water and wastewater where capital renewals are not planned, however Council is contributing to its depreciation funding reserve for when replacement is necessary. Where the funds saved are not sufficient to meet the replacement costs Council may still have to borrow and currently with the low levels of debt it has the ability to do this.
- The asset data held by Council is still being improved. During this plan period, Council will continue to improve the data it has on its assets to ensure that the annual cost is being calculated on the assets held.
- The number of years that an asset is expected to last may be wrong. Council currently uses NAMS (New Zealand Asset Management Support) assets lives to calculate the annual depreciation. This is recognised as industry standard however the actual live of an asset is dependent on many factors such as the environment it is in, the amount of use its gets and the maintenance undertaken on it.
- It still needs to consider the funding of all of its assets. Other than stormwater the remaining assets are such that a loan is generally used to fund the asset as that is generally the life of the asset eg: playgrounds.

Investments

Council continues to hold and manage a number of investments for strategic reasons where this is some community, social, physical or economic benefit accruing. Councils investment and liability policy outlines further the investments held, the reason for holding it, what council does with any revenue the investments generates and ways in which it mitigates its risks.

Significant Forecasting Assumptions

This section explains the significant assumptions and the risks associated with those assumptions which have been made by the Council in its forecasting for the 10 year period. The assumptions are based on the information available to Council in September 2016. While every effort has been made to ensure the forecasts are the Council's best estimates for the future, the actual results for each reporting period are likely to vary from the information presented, and the variations may be material. Where there is a high level of uncertainty about the assumptions, Council must state the reason for that level of uncertainty and assess the potential impact of this on the financial statements. Please note that this information has been prepared for the Council's budgeting and financial planning and it may not be appropriate to be used for any other purpose. The assumptions detailed here have been applied across the Council. Some activities have activity specific assumptions which are detailed in the relevant Activity Plan.

Assumption	Risk	Likelihood	Consequence		Level of uncertainty	Reason for Uncertainty and Impact of Risk
			General	Direct Fin. Materiality		
Population and Landuse Assumptions						
Population The plan assumes that the district will experience gradual population growth to 2028 with an increase of 3,379 people from 29,613 in 2013 to 32,992 in 2028. Infometrics forecasts for the following 20 years continue this trend seeing the population reach 37,021 by 2043. This growth is not expected to occur evenly in townships over the district. Winton is the only township predicted to have a high level of growth with other townships expected to have medium growth. Orepuki, Ohai, Nightcaps, Tokanui and Wyndham townships are expected to have a low level of growth. In terms of population change in townships over the period, Te Anau is expected to experience the greatest population increase (2% per year or 44 people per year), followed by Winton (1% per year or 18 people and Riverton (1% per year or 16 people). The low-growth townships are expected	Population growth occurs at a higher rate than projected, putting increased pressure on Council to provide additional infrastructure and services.	Possible (3)	Minor (10)	Minor (10)	MODERATE	Most of Council's current infrastructure and facilities have an element of available capacity which means they are able to cope with small increases in demand. Significant increases in population could place greater demands on some Council services and facilities (such as water, wastewater, solid waste, libraries and regulatory functions). This could raise operating expenditure requirements and/or capital expenditure requirements, particularly if Council has to provide additional infrastructure capacity to meet the increased demand (for example new water pumps and pipes for demand from new housing developments or new/increased commercial/industrial businesses). Council will need to find ways of raising additional extra revenue (e.g. financial/development contributions/loans) required to meet the increase level of service due to growth or consider lower levels of service or introducing user charges to support/manage demand. Higher than expected population growth is also likely to mean that Council's rating base will increase allowing Council to collect more rates.

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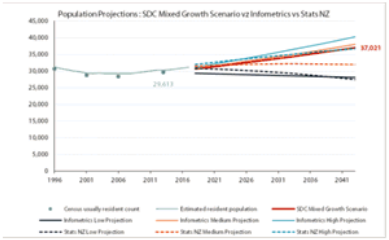
Assumption	Risk	Likelihood	Consequence		Level of uncertainty	Reason for Uncertainty and Impact of Risk
			General	Direct Fin. Materiality		
to have a population decrease of around 1% per year (or between 1-2 people). Council has adopted the medium scenario outlined in modelling from Infometrics Ltd which assumes that Southland District will account for the same proportion of national population growth in the future as it did between the 2006 and 2013 censuses.  Infometrics Ltd predict a higher steadily increasing population which is in line with the Southland Regional Development Strategy (SoRDS) which seeks to attract 10,000 more people to the region by 2025, some of whom are expected to settle in Southland district. This is compared to the Statistics New Zealand medium forecasts which predict a slight increase in population through to 2033 with slow decline to follow.	Population growth occurs at a lower rate than projected (or population decline occurs), putting increased pressure on remaining ratepayers and Council to maintain existing infrastructure and services.	Possible (3)	Medium (40)	Medium (40)	HIGH	A significant decrease in population is likely to mean fewer ratepayers to cover the cost of infrastructure and services. As a result Council may reduce the levels of service provided in order to maintain rates at an affordable level or look at changes to the rates system (general or targeted) to change how the costs are apportioned. Council, as part of the SoRDs initiative, will be working with other organisations and partners on a range of initiatives to help bring businesses and people into the district. Over the next three years the Council is planning to carry out more detailed modelling to better predict population and demographic change that is likely in Southland. This information will assist future planning for infrastructure and services.
Seasonal Population Fluctuations Southland has a number of communities (Stewart Island, Te Anau/Milford, Riverton, Manapouri, Waikaia and Waikawa/Curio Bay) which have higher peak populations at certain times of the year (generally December – February), either due to visitor and tourist activity (domestic and international) or because of summer holidays. The expected peak population of these townships is around 3 to 4 times the usually resident population. The peak population is projected to grow; driven by an increase in the number of domestic and international visitors over the life of the plan. Infometrics Ltd visitor data indicates that annual international and domestic visitors to Southland	Seasonal population fluctuations become more or less severe over time, or the period of peak population lengthens.	Likely (4)	Minor (10)	Minor (10)	MODERATE	Council takes into account peak population in its current infrastructure and services. However, changes in the economic climate and tourism industry may affect the number of people who have second homes in Southland, or the number of people visiting Southland. Conversely Southland continues to be an affordable area of New Zealand for property and contains a number of iconic and internationally renowned tourist attractions which may mean that peak population will remain steady in these areas. Additional pressures may affect procedures for certain services such as increased/seasonal variations in solid waste collections, altered operation of water supply and wastewater disposal systems, public conveniences (number and location) as well as changes to operating expenditure to service additional demand during these times.

Assumption	Risk	Likelihood	Consequence		Level of uncertainty	Reason for Uncertainty and Impact of Risk
			General	Direct Fin. Materiality		
are around 75 times the number of the usually resident population (2.3M). Infometrics Ltd analysed the seasonality of visitor numbers and determined that 43% of visitors to Fiordland travelled in summer months (December to February inclusive). The rest of the Southland Region was less impacted by seasonal trends, with only 33% of visitors travelling during summer.						Any significant change in peak population would require funding mechanisms to be reviewed.
Age Demographics The average age of the population of the District will continue to increase over the long-term impacting the way Council delivers services. In 2013 people aged 65 and over made up around 14% of the total population; by 2043, this is expected to reach 24% (7,600 people). This signals a decrease in the proportions of other age brackets, in particular middle aged (40-65) making up around 29% (6% decrease over 30 years). A major increase in older people is likely to change the type of services demanded from Council, and the ability to pay for those services. This is unlikely to result in new activities, but rather the types of services and facilities. The specifications of Council services (e.g. footpaths, recreation, library services) may change but overall this is unlikely to result in significantly higher costs.	Proportion of the population over 65 of age varies from the prediction. Population of young and young family age groups rise significantly as a proportion of resident population.	Possible (3)	Minor (10)	Minor (10)	MODERATE	The range of Council services utilised by older people is not significantly different from younger people. While the need for organised active team sports as traditionally catered for may decline there will still be a demand for open spaces, walkways, pools, halls etc. If the Council directs spending to meet a given population age profile on services such as footpaths, parks and reserves, libraries, and halls, any significant variation to that age profile may result in the investment being mis-targeted and certain sectors of the community could experience lower than expected levels of service. As a result Council may need to redirect funding to particular activities for a younger population, eg, cycleways, playgrounds, skate parks. If initiatives to attract new residents to Southland are successful, the proportion of the population that is over 65 years may not grow as quickly as forecast. In addition, people aged 65 and over may look to move to larger urban service centres in anticipation of the need for services.
Cultural Diversity An increase in ethnic diversity is expected over the next 30 years as it is predicted that migrants will continue to come to the region for work in the dairy and agriculture industries. New residents of Asian descent are likely to particularly increase during this period. In the 2013 Census, around 90% of respondents in the Southland District identified themselves as being either European or New Zealander. Māori residents comprised 10% of the District's population with those of Asian.	Southland's cultural diversity either remains unchanged or changes more rapidly than predicted with a diverse population putting pressure on the way Council provides services and communicates.	Unlikely (2)	Minor (10)	Minor (10)	LOW	With the projections assuming Southland will attract more migrants to the region (particularly for dairying), it is expected that there will be a slight increase in the number of residents of Asian descent to support this industry development. If other scenarios of economic development are realised it is likely that there will be an increase of other overseas migrants to support these industries which may affect the cultural mix of the District either in the short term or longer term. If the Council directs spending to meet a given ethnicity profile on services such as communication and libraries, any significant variation to that profile may result in certain sectors of the community experiencing lower than expected levels of service. As a result, Council may need to re-assess its communications strategies and funding priorities to activities which support any significant change in cultural mix.

Assumption	Risk	Likelihood	Consequence		Level of uncertainty	Reason for Uncertainty and Impact of Risk
			General	Direct Fin. Materiality		
Volunteer Community Several of Council's activities (cemeteries, halls, parks, representation) rely on the volunteer sector. This includes volunteer labour for maintenance work, operation of local halls or fundraising. It is assumed that volunteers will continue to make themselves available to support these activities as they have done in the past.	Volunteers no longer provide their assistance or significantly reduce the amount of assistance.	Possible (3)	Minor (10)	Minor (10)	MODERATE	Southland communities, because of the geographic spread and local nature, tend to have a strong volunteer ethic. However, volunteer numbers are declining and some individuals fill many volunteer roles. With the ageing population, there may be some attrition in volunteer numbers. If the volunteers reduced or were not available, Council would have to provide rate funding to undertake the activities that local volunteers have provided. These costs are not expected to be significant overall as the voluntary work is used in certain activities and any impact is more likely to be noticed at the local community level.
Dwelling Growth The plan assumes that the number of dwellings will increase by around 4% per annum to 16,650 in 2028 up from 14,835 in 2013. The forecasts are based on the Infometrics Ltd projections. Around 80% of these dwellings are occupied with the remainder unoccupied. Forecasts for the following 20 years continue this trend seeing the number of dwellings increase by 26% to reach 18,640 by 2043. The increase in dwellings is not expected to occur evenly in townships over the district. Townships of Ohai, Nightcaps, Edendale and Wyndham are expected to have a slight decline in the number of dwellings mainly as the result of reducing population trends. The household occupancy rate (number of people per household) is predicted to remain stable at around 2.5.	Dwelling growth across the District and townships occurs at higher or lower rates than assumed. Dwelling growth is stronger in urban than rural areas.	Possible (3)	Medium (40)	Medium (40)	HIGH	Economic conditions and the changing nature of the housing market could cause variations from year to year or the number of people per dwelling could reduce. Council monitors dwelling growth rates based upon infrastructure capacity and is mindful of ensuring that infrastructure can cope with future growth. Projections for townships are more sensitive to variation where individual developments can influence overall forecasts. If Council directs funding accordingly and dwelling growth rates differ from those assumed, it will find that the levels of service needs are different in each area. In addition, if dwelling growth is lower than expected, revenues through rates and financial/development contributions for major infrastructure may not materialise. In these instances Council may find itself funding growth related expenditure in townships or deciding not to proceed with growth related capital works or funding capital and operating expenditure for the unused capacity. Generally, Council allows for some additional capacity in its infrastructure developments for cost efficiency reasons. In addition, Council is able to make adjustments to its infrastructure programme as a result of changing trends in dwelling numbers.
Rating Unit Change *To be added once financial information complete.*						
Land Use Change The plan assumes that land use will change in line with projections by Infometrics Ltd. The amount of	Land use changes differ from those predicted and/or unforeseen land use occurs	Unlikely (2)	Medium (40)	Medium (40)	HIGH	Land use is not largely within the Council's control. While it has some effect under District Plan rules, the global economic situation is the main driver of land use change. Lending costs and commodity prices will influence the

Assumption	Risk	Likelihood	Consequence		Level of uncertainty	Reason for Uncertainty and Impact of Risk
			General	Direct Fin. Materiality		
land used for dairy farming is projected to rise from 5.7% of the total land (164,000 hectares) to 6.6% in 2028 (190,000 hectares), increasing to 7.5% (215,000 hectares) in 2043. This is expected to be driven by the higher profit per hectare on average caused by overseas demand and economic growth, in particular from Asia. The growth in dairy farm land will occur largely at the expense of pastoral land with this projected to decrease from around 27% of total land to 25.6% by 2028 and 23.5% by 2043. The amount of land used for forestry is projected to increase gradually at around 2% per year. At this stage land used for mining purposes is projected to remain unchanged with minor increases in residential, lifestyle and commercial/industrial land.	that has potential significant effects.					continuing rate of dairy conversion. In addition, whilst demand for dairy conversion may change over time, it is expected that the economy may see other land use changes occur which will offset the effects of a drop-off in dairy conversion. Where possible, where the change has impacts on demand for services, Council has some ability to charge financial contributions for the development or fees for works related to the land use change. As such, changes in land use may affect Council's user charges, rates revenue and development/financial contributions.
Tourist and Visitor Growth The plan assumes that tourist and visitor growth will continue and Council will be able to meet additional demand for services and Infrastucture from existing budgets. Infometrics Ltd forecasts indicate that the number of visitors will increase from 2.3 million in 2013 to 2.9 million visitors by 2028 (reaching 3.9 million by 2043). Visitors to Fiordland are expected to continue to make up between 43%-47% of the total figure with Fiordland National Park continuing to be a key destination for international and domestic visitors (with 955,000 visits in 2013 increasing to 1.3 million in 2028 and 1.9 million in 2031). It is assumed that the combined Council's alongside industry investment will continue to fund regional initiatives to increase tourism in Southland and that this will support the development of the tourism industry and associated growth in tourism numbers over the period of the plan.	Tourist and visitor numbers reach high levels and facilities they use cannot cope and pressures on the environment increase. Visitor numbers fall to levels that undermine the local economy.	Possible (3)	Medium (40)	Medium (40)	HIGH	High visitor numbers may increase demand on infrastructure and services such as water supply (restrictions at peak periods), wastewater, solid waste, parking, public toilets, parks, harbours/jetties and roading. Ongoing increases in demand may also impact the timing of upgrades and renewals. Increased levels of service would be required with increasing rates requirements. Environmental implications from increased visitor numbers will also be a factor that may need to be considered. Falling visitor numbers may also affect Council indirectly through the economy in terms of businesses and facilities which service visitors. This could impact their ability to contribute to the cost of funding Council's services and infrastructure and also see a loss in employment opportunities and population. This may affect Council revenue form user charges, rates and financial/development contributions. The Infometrics Ltd forecasts draw on MBIE historical data with projections of regional domestic and international visitors apportioned on the basis of overnight and day visit trends as a portion of the national data. Changing economic conditions have an impact on domestic and international visitor trends making it difficult to predict future visitor trends. A process is being undertaken involving consultation for the establishment of the Southland Regional Development

Assumption	Risk	Likelihood	Consequence		Level of uncertainty	Reason for Uncertainty and Impact of Risk
			General	Direct Fin. Materiality		
						Agency (to be established as a Council Controlled Organisation) which may undertake all or some of this work once established.
General Assumptions						
Climate Change The plan assumes that there will be no significant climate impacts occurring within the 10 Year Plan period and that the rate of climate change will be gradual, allowing Council time to plan and prepare its response options around services, infrastructure and district planning rules. Medium to long term predictions indicate that climate change will affect Southland with increases in temperature (between 0.6°C to 2.8°C by 2090) and rainfall (between 2% to 7% by 2090), with more extreme rainfall events and sea level rise of between 0.5m to 0.8m by 2090. Southland may also experience decreased frost risk, higher snow lines, possible reduced snow coverage, increased wind and intensity and duration of droughts in drought-prone parts of the District. The climate change impacts expected in Southland include: Flooding – Increases risk of flooding, landslides and erosion in Southland. The capacity of stormwater systems may be exceeded more frequently due to heavy rainfall events which could lead to surface flooding, damage to infrastructure and road closures. Water availability – Water security is most likely to be an issue in parts of Southland where drought is already a major constraint. Droughts are likely to increase in both intensity and duration over time. In other areas, such as around Invercargill, drought severity and irrigation demand may decrease slightly as average annual rainfall increases. Coastal hazards – There is likely to be increased risk to coastal roads and infrastructure from coastal erosion and inundation, increased storminess and sea-level rise. Biosecurity – Warmer temperatures, particularly with milder winters, could increase the spread of pests and weeds.	Climate change related impacts occur sooner or later than expected and/or the effects are greater or less than what was projected. Landowners and communities may assume that Council will protect their property against natural hazards, in particular against flooding and coastal erosion.	Very Unlikely (1)	Medium (40)	Medium (40)	MODERATE	Council's ability to deliver the level of service to the community may be impacted if climate change occurs faster than expected or to a greater extent. If this occurs it may require unbudgeted emergency work to be carried out and/or create additional costs to mitigate impacts, such as improving protection of critical infrastructure or increasing maintenance. For example, if extreme rainfall events increase significantly then Council's stormwater pipes and roadside drains may be under sized. As a result, the levels of service may not be achieved and the investment in stormwater pipes may need to increase. The Southland District Plan and Southland Regional Coastal Plan identifies coastal hazards and other location specific climate hazards and extremes. The building code also plays an important role in mitigating climate change (e.g. through setting minimum floor levels). In addition, the Council's low level of debt allows the Council greater flexibility to respond to any unexpected climate movements through borrowing for emergency works if required. In addition the Council is planning to insure underground infrastructure which will provide a level of protection against flooding. In the short term Council will ensure that future assets are of sufficient capacity/standard to cater for predicted climate change, including rainfall, sea level rise and wind. Council is planning to carry out more detailed modelling around climate change impacts on Southland District over the next three years which will assist planning for infrastructural and community resilience. Once this modelling is complete, the Council expects to have more detailed information from which to consider different response options in the various parts of the District. This may include relocation of assets if they are at risk, abandoning assets or pursuing alternative infrastructure options. The Council may also consider changing where and how development is permitted within the District (via the District Plan).

Assumption	Risk	Likelihood	Consequence		Level of uncertainty	Reason for Uncertainty and Impact of Risk
			General	Direct Fin. Materiality		
Agriculture – Warmer temperatures, a longer growing season and significantly fewer frosts could provide opportunities to grow new crops. Farmers might benefit from faster growth of pasture and better growing conditions. However, these benefits may be limited by negative effects of climate change such as increased flood risk or greater frequency and intensity of storms.						The Council will continue to monitor climate change science and the response of central government and adapt its response where required. However, the impacts of climate change are expected to felt over the longer term (50-100 years) and are unlikely to have a significant immediate impact during the plan period.
Natural Disasters The plan assumes that Council and the community will be prepared to respond to any natural hazards including floods, storm and earthquakes that occur during the life of the plan. It is assumed that there will be no natural disasters disaster requiring emergency work that cannot be funded out of existing budgets, reserves or Council's insurance policies or central government assistance.	Council may not be adequately prepared or resourced to respond to a major natural disaster, or to a succession of natural disaster and this requires significant unbudgeted expenditure and financing.	Unlikely (2)	Major (70)	Medium (40)	HIGH	The timing and scope of natural disasters cannot be predicted. An increasing number of natural disasters including earthquakes, floods and storm surges have occurred in New Zealand in the last decade. Natural disasters can cause significant damage to infrastructure and disruption of service. A major natural event would impact on council by demanding immediate funding and, depending on the scale, duration and location of the event, there could be significant unforeseen costs in terms of destruction or damage to Council's assets. Depending on the severity or timing of disasters, Council may not have enough staff to rapidly manage recovery and response. The lives of residents and continuity of businesses could also be affected in the event of a major natural event as Council services including water (treatment), the road network and wastewater networks and treatment could be disrupted for considerable periods. The risk is somewhat mitigated in Southland because of its size and the number of widespread rural townships reducing the likelihood of extensive damage across all critical infrastructure at the same time. Any major natural disaster that results in significant repair costs to Council is likely to be funded largely by insurance and/or government assistance. Any additional borrowing required may also impact on future rating levels.
Resource Consents It is assumed that conditions of resource consents currently held by Council will not be significantly altered. It is anticipated that there will be heightened level of controls on stormwater discharged (Environment Southland's Water and Land Plan). Consent for discharges in some areas have been applied for stormwater. As such, additional funding has been included in the plan	Conditions of consents are altered significantly or that work is not performed in accordance with consent conditions. That Council is required to undertake significant capital	Likely (4)	Medium (40)	Medium (40)	VERY HIGH	Council works closely with Environment Southland and other agencies to understand and stay abreast of changing standards. Council will use these standards when planning projects and undertaking monitoring. Compliance monitoring ensures that work is in accordance with conditions. Where requirements change or work is required for consent conditions Council would have to provide rate

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Assumption	Risk	Likelihood	Consequence		Level of uncertainty	Reason for Uncertainty and Impact of Risk
			General	Direct Fin. Materiality		
for likely monitoring costs and management fees of stormwater schemes in relation to these consents. Capital works have been included where it is anticipated it may be required to improve discharge.	works in relation to stormwater or wastewater discharge consents.					funding to meet the requirements or request a change of consent conditions.
Financial Assumptions						
Contracts There will be no significant variations in the price of re-tendering operating and maintenance contracts and service level agreements other than variations identified in Activity Management Plans.	There is a significant variation on price from re-tendering contracts and renewal of service level agreements above the level allowed for in price level changes (below).	Almost Certain (5)	Medium (40)	Medium (40)	VERY HIGH	If contract prices were to increase significantly, the Council would review the amount of work programmed and undertaken. This may have an effect on the level of service, in particular for roading, water, wastewater and stormwater activities. The financial impact of a 1% variation for contracts due for renewal between 2018/2019 and 2020/2021 is $xx per annum *(to be updated once budgets finalised).*
Capital Works Costs On average, costs of major capital works will not vary significantly from costs estimated in this plan.	That project costs are greater than estimates, resulting in increased debt levels. That Council is required to undertake significant capital works in relation to stormwater discharge consents.	Almost Certain (5)	Medium (40)	Medium (40)	VERY HIGH	Council has a higher level of confidence regarding capital project costs in the short term (1-2 years) but less certainty in the longer term due to possible fluctuations in the economy, growth patterns, consent conditions etc. Any increase in costs may result in higher debt levels and a possible increase in rates to cover repayments. This may have an effect on the level of service.
Price Level Changes Price level changes have been calculated using projections prepared by Business and Economic Research Limited (BERL). The following table depicts the annual price levels change as indicated by BERL which are based upon October 2017 values. A zero based budget has been used for the 2018/19 financial year. This has required managers and staff to consider all costs included during the budgeting process.	That actual inflation increases will vary from those used.	Almost Certain (5)	Medium (40)	Medium (40)	VERY HIGH	Inflation is affected by external economic factors. While individual cost indices will at times vary from what has been included in this plan the Council has relied on the Reserve Bank use of monetary controls to keep inflation within its target ban projected at 1-3% over the medium term (2-5 years). The result of any variation up, or down, will result in a higher or lower rates requirement which may also impact on the levels of service, in particular for roading, water, wastewater and stormwater activities. The financial impact of a 1% variation in inflation would result in a change in expenditure of $xx in 2018/2019 to $xx in 2020/2021 *(to be updated once budgets finalised).*

	Roading	Property	Water	Energy	Staff	Other
19/20	2.2%	2.2%	2.5%	2.2%	1.6%	2.2%
20/21	2.2%	2.2%	2.3%	2.2%	1.7%	2.2%
21/22	2.3%	2.2%	2.4%	2.2%	1.8%	2.2%
22/23	2.4%	2.3%	2.4%	2.3%	1.8%	2.3%
23/24	2.4%	2.4%	2.5%	2.3%	1.9%	2.4%

Assumption	Risk	Likelihood	Consequence		Level of uncertainty	Reason for Uncertainty and Impact of Risk
			General	Direct Fin. Materiality		
24/25 2.5% 2.4% 2.6% 2.4% 1.9% 2.5% 25/26 2.6% 2.5% 2.6% 2.5% 2.0% 2.6% 26/27 2.7% 2.6% 2.7% 2.5% 2.0% 2.6% 27/28 2.8% 2.7% 2.8% 2.6% 2.1% 2.7%						
Useful Lives of Significant Assets The useful lives of all assets will be in accordance with the depreciation rates as set out in the accounting policies of Council. Estimated remaining lives of assets are recorded in Activity Management Plans.	That some assets may wear out and fail sooner, or later, than estimated. Useful lives are used to calculate deprecation. Funding of depreciation is being phased in until fully funded in 2024/25. Where useful lives are incorrect the depreciation funded may be funded at the wrong level.	Likely (4)	Major (70)	Major (70)	VERY HIGH	There is no certainty that asset components will last exactly their design lives. Capital projects could be brought forward in the event of early deterioration of assets affecting interest costs. This may be partially offset by other assets lasting longer than estimated.
New Zealand Transport Agency (NZTA) Subsidies for Roading The co-investment for the first three is as follows: 2018/2019 - 51% (NZTA Contribution) 2019/2020 - 51% 2021/2022 - 51% For the remaining seven years the rate used is assumed at 51%. Income from NZTA will be aligned to the NZTA approved programmed budgets as per the LTP including some administrative/overhead costs. Council's new Funding Assistance Rates for 2018-19, 2019-20 and 2021-22 have been confirmed by NZTA.	There is some risk that the co-investment rate may change as per the schedule on the left. The new co-investment rates have yet to be confirmed by NZTA	Likely (4)	Medium (40)	Medium (40)	VERY HIGH	As roading makes up the major component of expenditure, any changes in subsidy rates will affect the amount of local funding required to fund the roading programme. If financial assistance is not available to the extent that has been indicated in this plan and when required, the Council will have to review the programme - and this may result in certain proposed works being either deferred or deleted, or a greater level of rate input being decided to offset the higher than projected cost increase. Conversely, the NZTA may offer a greater level of financial assistance to enable the Council to do more work - but only if there is a greater level of rate input as well. In those circumstances, the Council will have to decide whether to charge more rates or to decline the offer.
Revaluation of Infrastructure and Forestry Assets Revaluations of infrastructure and forestry assets have been included annually to reflect the projected change in asset valuations.	Actual price level changes vary to those stated. Infrastructure revaluations impact the depreciation calculation. Funding of depreciation is being phased in until fully funded in 2024/25. Where price levels	Likely (4)	Medium (40)	Medium (40)	VERY HIGH	If price level changes are greater or lesser, depreciation and the funding of depreciation, could be under or overstated.

Assumption	Risk	Likelihood	Consequence		Level of uncertainty	Reason for Uncertainty and Impact of Risk
			General	Direct Fin. Materiality		
	change the depreciation funded may be funded at the wrong level.					
Revaluation of Infrastructure Assets Revaluations take into account asset acquisitions included in the plan, vested assets and inflation.	Capital construction and/or harvesting/planting will not meet projected timeframes. Infrastructure acquisitions impact the depreciation calculation. Funding of depreciation is being phased in until fully funded in 2024/25. Where price levels change the depreciation funded may be funded at the wrong level.	Likely (4)	Minor (10)	Minor (10)	MODERATE	If capital construction falls behind, depreciation and the funding of depreciation may be overstated.
Revaluation of Infrastructure and Forestry Assets It is assumed for water, stormwater and wastewater that the renewal projects planned are replacing those assets indicated to be at the end of their economic life.	That water, wastewater and stormwater renewal projects are replacing assets other than those that are at the end of their economic lives. Water and wastewater renewal impact the depreciation calculation. Funding of depreciation is being phased in until fully funded in 2024/25. Where price levels change the depreciation funded may be funded at the wrong level.	Possible (3)	Minor (10)	Minor (10)	MODERATE	Depreciation on stormwater assets is not funded so the financial impact is minimal. The financial impact of a 0.1% change in water depreciation would result in a change in funded depreciation of $xx in 2018/2019 to $xx in 2027/2028 *(to be updated once budgets finalised).* The financial impact of a 0.1% change in wastewater depreciation would result in a change in funded depreciation of $xx in 2018/2019 to $xx in 2027/2028 *(to be updated once budgets finalised).*
Interest Rates on Investments Interest on financial investments has been calculated at 3.29% for funds invested externally and internally for the term of the plan. Interest on financial investments has been calculated at 3.29% for funds invested externally for the term of the plan.	Interest rates vary from those used in the calculations.	Almost Certain (5)	Minor (10)	Minor (10)	MODERATE	Council has calculated the average interest rate based upon a 12 month history of interest rates for six month bank deposits as recorded by the Reserve Bank. Interest rate forecasting is very uncertain and amounts to little more than guesswork. Council has control over the interest rate received on its investment in internal loans. Interest earned on $7 million of Council reserves is used to offset rates. Council has calculated the average interest rate on external investments based upon the 30-60 day term deposit rate from the BNZ. As Council's surplus cash available to invest fluctuates throughout the year, this period of time best

Assumption	Risk	Likelihood	Consequence		Level of uncertainty	Reason for Uncertainty and Impact of Risk
			General	Direct Fin. Materiality		
						reflects Council's views of investment returns over this plan. A decrease in investment interest rates may require Council to collect more rates to cover the shortfall of interest used to offset rates.
Interest Rates on Borrowing Interest on new and existing internal borrowings is allowed for at 4.65% per annum over the term of the borrowing. Interest on new external borrowings is allowed for at 3.65% per annum over the term of the borrowing.	The actual interest rates will vary over the 10 year period.	Almost Certain (5)	Medium (40)	Low (10)	MODERATE	Council has calculated the average interest rate based upon what third can provide finance to Council and Council then added 1% on for administration costs to the internal interest rate. An increase in interest rates would require Council to collect more rates to cover the additional interest repayments.
Depreciation Rates on Planned Asset Acquisitions Depreciation has been calculated on asset values at 30 June 2017, and any additions since, at cost. Asset additions purchased during any year will be depreciated for six months. Detailed component information for infrastructure is not always available on capital projects for budget purposes so global percentages are applied as follows: Asset / Depreciation Rate Roads 1.0% - 25.0% Stormwater 5.0% - 20.0% Wastewater 2.0% - 7.0% Water 1.0% - 20.0% Footpaths 1.6% - 8.4% Depreciation on non-infrastructure asset additions have been calculated on the following average depreciation rates: Asset / Depreciation Rate Improvements 8.33% - 10.0% SL Buildings 2.5% SL Furniture and Fittings 13.5% SL	Depreciation may be under or overstated. The method of calculation of depreciation on planned asset acquisitions differs from rates of depreciation in the accounting policies.	Almost Certain (5)	Medium (40)	Low (10)	VERY HIGH	Council has an Activity Management Plan and upgrade programme in place. Asset capacity and condition is monitored, with replacement works being planned in accordance with standard asset management and professional practices. Depreciation is calculated in accordance with normal accounting and asset management practices. The financial impact of a 0.1% change in depreciation would result in a change in depreciation of $xxx in 2018/2019 to $xxx in 2027/2028 *(to be updated once budgets finalised).* Depreciation on all vehicles is fully funded, with depreciation on Water, Wastewater, Council Buildings, Information technology, Waste Management, Wheelie Bins and Public Conveniences funded to 40% in 2018/2019 to 100% in 2024/2025 funded.

Assumption	Risk	Likelihood	Consequence		Level of uncertainty	Reason for Uncertainty and Impact of Risk
			General	Direct Fin. Materiality		
Office Equipment 10% - 13.5% SL Computer Hardware 18.0% SL Computer Software 40.0% SL Library Books 10.0% SL Vehicles 9.0% - 20.0% SL SCADA Equipment 18% SL Other Plant 6.67% - 33.33% SL						
Vested Assets The plan includes an estimate of no assets to be vested in Council.	That the value of vested assets will vary from that included in the plan.	Likely (4)	Medium (40)	Medium (40)	VERY HIGH	Council has not included any vested assets as a result of current trends. A strong property market in the future may result in further subdivisions and higher levels of vested assets. Overall any additional financial cost is considered minimal for the term of this plan although additional assets vested in Council would require more maintenance this is not deemed significant.
Exchange Rates The Council's Liability Management Policy states that borrowing in foreign currency is not permitted and this has not been included in this plan. Council also has no overseas investment.	Some components of works in the LTP have to be sourced from overseas. Foreign currency fluctuations affect prices/ interest rates.	Unlikely (2)	Minor (10)	Minor (10)	LOW	It is not possible to determine (until project tender stage) that certain inputs will need to be sourced from outside New Zealand and will be subject to currency fluctuations. The likelihood is that all components can be sourced locally. No provision is made to mitigate this risk.
Other Funding That user charges and fees are achievable.	That some user charges and fees are not realised as budgeted.	Almost Certain (5)	Minor (10)	Minor (10)	MODERATE	Most charges have been set at similar levels to those previously achieved. Where users charges are less than anticipated other sources of funding will be used such as reserves and/or rates.
Development and Financial Contributions It is assumed that no development and financial contributions will be collected during the plan. Development contributions policy is currently in remission and financial contributions can no longer be collected from 2022.	That the value of development and financial contributions collected will vary from that included in the plan.	Likely (4)	Minor (10)	Minor (10)	MODERATE	Council could bring the development contribution policy out of remission. A strong property market could result in additional subdivision and development contribution income. Historic amounts collected when these policy was active were minimal. The level of financial contributions received is minimal and it has been considered prudent to exclude any income from this source.
Level of Service Demand for Council services and customer expectations regarding levels of service will not significantly change and therefore there will be no	There are significant changes in customer expectations regarding demand for services or levels of service.	Possible (3)	Minor (10)	Minor (10)	MODERATE	The Council has well defined service levels for its planned activities which have been reviewed as part of the LTP process.

Assumption	Risk	Likelihood	Consequence		Level of uncertainty	Reason for Uncertainty and Impact of Risk
			General	Direct Fin. Materiality		
significant effect on asset requirements or operating expenditure.						Customer satisfaction surveys and other engagement strategies generally support this key assumption and therefore there are currently no areas of the Council's service that require significant modification.
Legislative changes It is assumed that there will be no major legislative changes or changes in government policy that will significantly impact Council. It is assumed that any change that is introduced can be complied with within current budgets.	New/amended legislation or government policy comes into force that has a significant impact on Council to respond or impact on cost to administer by Council; or results in a change to the services delivered by the Council.	Likely (4)	Medium (40)	Medium (40)	VERY HIGH	Council's work will continue to be influenced by national policy, strategy and legislative changes during the period of the plan. The role and function of local government is set out by law. The Council has responsibilities prescribed by many Acts and regulations (eg Local Government Act 2002, Resource Management Act 1991; Building Act 2004). There is a regular cycle of statute development, review and amendment that affects the Council. The recent change in government may also increase the likelihood of additional legislative/policy shifts. Legislative or government policy changes are expected to have a medium effect on Council's finances and/or levels of service given the new government.

Item 7.4 Attachment B

Comparison of projected BERL Price indices to actual increases

BERL Actual vs Budget Price Level Changes for the six years to 30 June 2014

Year	Roading Budget	Roading Actual	Property Budget	Property Actual	Water Budget	Water Actual	Energy Budget	Energy Actual[7]	Staff Budget	Staff Actual	Other Budget	Other Actual
11/12	2.5%	5.2%	3.2%	3.3%	4.3%	6.0%	5.6%	15.8%	2.8%	2.3%	3.8%	3.1%
12/13	3.3%	1.1%	3.0%	1.8%	4.2%	-2.8%	4.8%	-1.8%	2.5%	2.1%	2.4%	1.9%
13/14	3.2%	2.4%	2.2%	1.7%	3.4%	1.2%	2.6%	1.6%	1.8%	1.9%	2.4%	1.7%
14/15	2.6%	2.3%	2.2%	2.3%	1.9%	3.2%	3.3%	2.0%	2.2%	2.0%	2.3%	2.1%
15/16	1.2%	1.4%	2.2%	1.5%	5.2%	2.1%	3.5%	1.3%	1.1%	1.8%	2.3%	1.4%
16/17	1.4%	1.6%	1.4%	1.5%	1.0%	1.2%	1.4%	1.5%	0.6%	1.9%	1.4%	1.5%

Table 0-5: BERL Actual vs Budget Price Level Changes

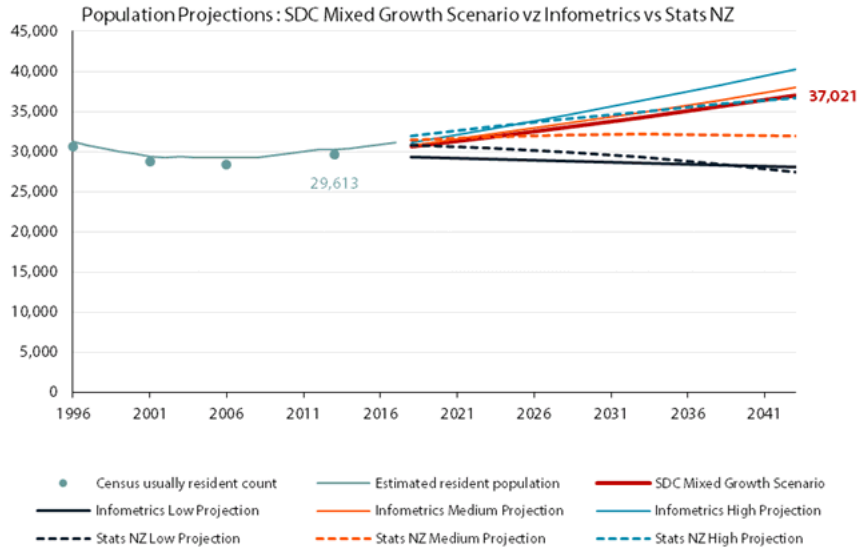
[7] *Please note the BERL adjustor for Energy specific is no longer available and the LGCI, annual average % change for OPEX is now being used.*

Assumptions - Population and Landuse Forecast Detail

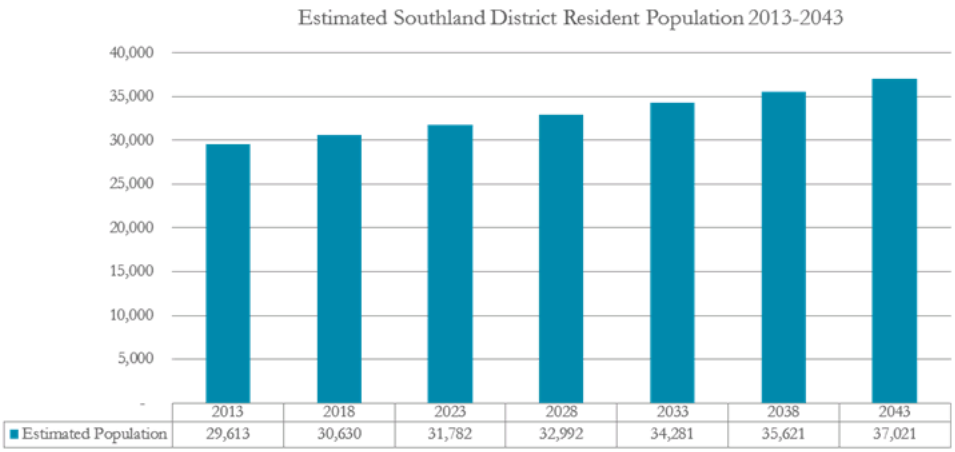
The District Overall

In the medium growth scenario presented by Infometrics Ltd, it is estimated that the usually resident population will be 37,997 in 2043. In this scenario, continued growth is predicted throughout the period. The low growth scenario predicts a population decline from 29,613 to 28,078 during the period from 2013 to 2043, while the high growth scenario predicts growth to 40,299 during the same period (Table 2).

However, Council estimates that individual communities will conform to different growth scenarios and predicts that the district population in 2043 will be 37,021.



	2018	2023	2028	2033	2038	2043
SDC Mixed Growth Scenario	30,630	31,782	32,992	34,281	35,621	37,021
Infometrics Low Projection	29,307	29,089	28,868	28,625	28,359	28,078
Infometrics Medium Projection	30,780	32,084	33,449	34,898	36,412	37,997
Infometrics High Projection	31,116	32,772	34,510	36,351	38,268	40,299
Stats NZ Low Projection	30,800	30,500	30,000	29,300	28,400	27,400
Stats NZ Medium Projection	31,400	31,800	32,100	32,200	32,100	32,000
Stats NZ High Projection	32,000	33,100	34,100	35,000	35,900	36,700



Peak Population

Southland has a number of communities (Stewart Island, Te Anau, Riverton, Manapouri, Waikaia and Waikawa/Curio Bay) which have higher peak populations at certain times of the year. Peak population is comprised of usually resident population and the likely visitor numbers on a peak day for each township.

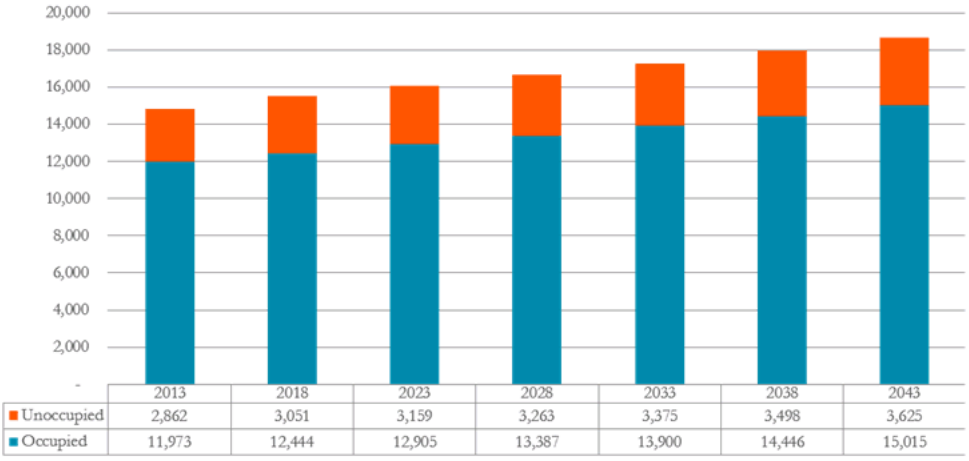
Estimated Peak Population	2013	2018	2023	2028	2033	2038	2043
Manapouri	684	836	915	990	1,077	1,182	1,298
Riverton	5,089	5,524	5,891	6,283	6,687	7,155	7,660
Stewart Island	1,095	1,165	1,190	1,211	1,233	1,262	1,282
Te Anau	6,732	7,472	8,266	9,114	10,066	11,022	12,088
Waikaia	2,312	2,490	2,683	2,890	3,114	3,356	3,617
Waikawa / Curio Bay	777	836	899	968	1,042	1,123	1,210

Occupied Dwellings

In the 2013 Census there were currently, 11,973 occupied dwellings. Infometrics Ltd projected scenarios based on high, medium and low growth. Using the growth scenarios selected for each area and community, Council estimates that there will be 15,015 occupied dwellings in the District in 2043.

Predictions are based on a correlation between growth in population and the number of dwellings. This means that the household occupancy rate (number of people per household) is predicted to remain stable across the period at around 2.5.

Dwelling projections Southland District 2013-2043
Source: Growth scenarios presented by Informetrics Ltd



	2013	2018	2023	2028	2033	2038	2043
Unoccupied	2,862	3,051	3,159	3,263	3,375	3,498	3,625
Occupied	11,973	12,444	12,905	13,387	13,900	14,446	15,015

Southland District's Townships

In 2013, just over half (53%) of the population lived in a rural environment, while the balance lived in an urban setting in one of the District's townships. The following table shows estimated population and dwellings for the various communities in the District until 2043.

These township projections are based on the meshblocks which spatially represent the District's townships as determined by GIS. Meshblocks used may differ from those used in previous township estimates by Statistics New Zealand, which may result in a slight difference in the number of usual residents.

Township	Ward	Census Usually Resident Actual			Usually Resident Projections					
		2001	2006	2013	2018	2023	2028	2033	2038	2043
Browns	Winton Wallacetown	141	123	141	142	150	158	166	174	181
Dipton		156	144	153	154	163	172	181	188	197
Limehills		141	162	165	167	176	185	195	203	212
Wallacetown		633	609	681	680	722	758	802	837	873
Winton		2256	2295	2436	2430	2506	2593	2671	2814	2963
Athol	Mararoa Waimea	51	75	87	91	94	98	102	106	111
Balfour		135	138	126	145	141	148	157	164	171
Garston		48	57	51	53	55	57	60	62	65
Lumsden		492	453	453	465	462	472	472	493	514
Manapouri		240	306	228	332	348	354	362	378	394
Mossburn		243	234	201	222	211	210	199	208	217
Riversdale		411	450	456	505	528	541	572	597	623
Te Anau		2283	2361	2628	2938	3162	3383	3627	3785	3952
Waikaia		138	141	162	169	176	182	189	197	206
Edendale	Waihopai Toetoes	591	513	558	491	502	505	509	532	555
Fortrose		39	48	48	49	51	52	54	56	59
Gorge Road		162	171	192	218	231	242	256	267	279
Tokanui		171	159	150	147	144	141	138	137	135
Waikawa / Curio Bay		66	69	60	62	63	65	67	70	73
Woodlands		264	243	246	213	213	223	225	235	245
Wyndham		627	576	594	555	544	546	537	560	585
Colac Bay	Waiau Aparima	192	174	186	184	188	193	200	208	217
Nightcaps		354	333	306	299	287	277	268	265	262
Ohai		399	351	303	307	286	276	257	255	252
Orepuki		81	72	54	51	50	48	47	47	47
Otautau		879	891	798	892	894	884	892	931	972
Riverton		1704	1572	1506	1655	1713	1770	1813	1892	1975
Thornbury		129	129	126	134	141	150	160	167	174
Tuatapere		684	576	561	557	560	565	561	585	611
Oban	Stewart Island/ Rakiura	381	390	378	434	444	450	457	470	474

Land Use Change

Infometrics Ltd predicts a change in land use over time. Southland District Council has used the Infometrics Ltd scenario which predicts growth in land use for forestry, dairy and residential purposes.

Projected land use 2013 - 2043	Hectares (000)	2013*	2018	2023	2028	2033	2038	2043
Dairy	Hectares	164	173	181	190	198	207	215
	%	5.70%	5.99%	6.29%	6.58%	6.88%	7.17%	7.47%
Pastoral farming	Hectares	791	774	757	738	720	700	679
	%	27.44%	26.86%	26.25%	25.62%	24.97%	24.28%	23.57%
Forestry	Hectares	70	76	83	90	97	105	114
	%	2.44%	2.64%	2.86%	3.11%	3.37%	3.65%	3.96%
Mining	Hectares	0.76	0.76	0.76	0.76	0.76	0.76	0.76
	%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%
Industrial commercial	Hectares	2	3	3	3	3	3	3
	%	0.09%	0.09%	0.10%	0.10%	0.11%	0.11%	0.12%
Residential	Hectares	30	31	33	35	36	38	40
	%	1.03%	1.08%	1.14%	1.20%	1.27%	1.33%	1.40%
Lifestyle	Hectares	13	14	14	15	16	17	18
	%	0.45%	0.47%	0.50%	0.53%	0.55%	0.58%	0.61%

Supporting Information – Draft Long Term Plan (LTP) 2018-2028

Accounting Policies

Reporting Entity

The Southland District Council (referred to as "SDC" or "Council") is a territorial local authority established under the Local Government Act 2002 (LGA) and is domiciled and operated in New Zealand. The relevant legislation governing the Council's operations includes the LGA and the Local Government (Rating) Act 2002. The primary objective of Council is to provide goods or services for the community or social benefit rather than making a financial profit. Accordingly, SDC has designated itself as a public benefit entity (PBE) for financial reporting purposes.

The financial statements represent the results of the Council's nine groups of activities (detailed on pages xx to xx) including the Stewart Island Electrical Supply Authority (SIESA). SIESA is a business unit of the Council, which generates and reticulates electricity to the majority of Stewart Island residents and industry.

Venture Southland is a joint venture with Invercargill City Council and Gore District Council, for the development and promotion of Southland in terms of enterprise, tourism and the people of the province.

The prospective financial information reflects the operations of Council. It does not include the consolidated results of Council controlled organisations.

The prospective financial statements of Council were authorised for consultation on xxx.

Basis of Preparation

The financial statements have been prepared on the going concern basis, and the accounting policies have been applied consistently to all periods presented in these financial statements.

The financial statements have been prepared in accordance with the requirements of the Local Government Act 2002 and the Local Government (Financial Reporting and Prudence) Regulations 2014 (LGFRP): Part 6, Section 98 and Part 3 of Schedule 10, which includes the requirement to comply with New Zealand Generally Accepted Accounting Practice (NZ GAAP).

These financial statements have been prepared in accordance with Tier 1 PBE accounting standards and comply with PBE standards.

Prospective Financial Information

The financial information contained within this Annual Plan is prospective financial information in terms of PBE FRS 42 'Prospective Financial Statements', the purpose for which is to enable ratepayers, residents and all other interested parties to obtain information about the expected future financial performance, position and cashflow of SDC.

The actual results achieved for any particular financial year is also likely to vary from the information presented and may vary materially depending on the circumstances that arise during the period.

No actual financial results have been incorporated within the prospective financial statements.

Measurement Base

The financial statements have been prepared on a historical cost basis, modified by the revaluation of heritage assets, certain infrastructural assets and biological assets.

Functional and Presentation Currency

The financial statements are presented in New Zealand dollars (the functional currency of the Southland District Council) and all values are rounded to the nearest dollar.

Associates

SDC accounts for investments in associates in the consolidated financial statements using the equity method. An associate is an entity over which Council has significant influence and that is neither a subsidiary nor an interest in a joint venture. The investment in an associate is initially recognised at cost and the carrying amount is increased or decreased to recognise Council's share of the surplus or deficit of the associate after the date of acquisition. SDC's share of the surplus or deficit of the associate is recognised in SDC's Statement of comprehensive revenue and expense. Distributions received from an associate reduce the carrying amount of the investment.

If SDC's share of deficits of an associate equals or exceeds its interest in the associate, SDC discontinues recognising its share of further deficits. After SDC's interest is reduced to zero, additional deficits are provided for, and a liability is recognised, only to the extent that SDC has incurred legal or constructive obligations or made payments on behalf of the associate.

If the associate subsequently reports surpluses, SDC will resume recognising its share of those surpluses only after its share of the surpluses equals the share of deficits not recognised.

Specific Accounting Policies

(a) Revenue

Rates are set annually by a resolution from Council and relate to the financial year. All ratepayers are invoiced within the financial year to which the rates have been set. Rates revenue is recognised when payable.

The specific accounting policies for significant revenue items are:

The following policies for rates have been applied:

- General rates, targeted rates (excluding water-by-meter) and uniform annual general charges are recognised at the start of the financial year to which the rates resolution relates. They are recognised at the amounts due. Council considers that the effect of payment of rates instalments is not sufficient to require discounting of rates receivables and subsequent recognition of interest revenue.
- Rates arising from late payment penalties are recognised as revenue when rates become due. ▪ Revenue from water-by-meter rates is recognised on an accrual basis based on usage. Unbilled usage, as a result of unread meters at year end, is accrued on an average usage basis.
- Rates remissions are recognised as a reduction in rates revenue when Council has received an application that satisfies its rates remission policy.

Revenue from the rendering of services is recognised by reference to the stage of completion of the transaction at balance date, based on the actual service provided as a percentage of the total services to be provided.

Revenue from electricity charges is recognised on an accrual basis based on usage. Unbilled usage as a result of unread meters at year end is accrued on an average usage basis.

Interest is recognised using the effective interest method.

Subsidies from NZTA and grants from other government agencies are recognised as revenue upon entitlement, which is when conditions pertaining to eligible expenditure have been fulfilled.

Other grants and bequests are recognised when they become receivable unless there is an obligation in substance to return the funds if conditions of the grant are not met. If there is such an obligation, the grants are initially recorded as grants received in advance and recognised as revenue when conditions of the grant are satisfied.

Fees for disposing of waste at Council's landfill are recognised as waste disposed by users.

Fees and charges for building and resource consent services are recognised on a percentage completion basis with reference to the recoverable costs incurred at balance date.

For assets received for no or nominal consideration, the asset is recognised at its fair value when Council obtains control of the asset. The fair value of the asset is recognised as revenue, unless there is a use or return condition attached to the asset.

The fair value of vested or donated assets is usually determined by reference to the cost of constructing the asset. For assets received from property developments, the fair value is based on construction price information provided by the property developer.

For long-lived assets that must be used for a specific use (e.g. land used as a recreation reserve), Council immediately recognises the fair value of the asset as revenue. A liability is recognised only if Council expects that it will need to return or pass the asset to another party.

Donated and bequeathed financial assets are recognised as revenue unless there are substantive use or return conditions. A liability is recorded if there are substantive use or return conditions and the liability released to revenue as the conditions are met (eg as the funds are spent for a nominate purpose).

Development and financial contributions are recognised at the later of the point when Council is ready to provide the service for which the contribution was levied, or the event that will give rise to a requirement for a development or financial contribution under the legislation. Otherwise, development and financial contributions are recognised as liabilities until such time as Council provides, or is able to provide, the service.

Dividends are recognised when the right to receive payment has been established.

(b) Borrowing Costs

Borrowing costs are recognised as an expense in the period in which they are incurred.

(c) Grant Expenditure

Non-discretionary grants are those grants that are awarded if the grant application meets the specified criteria and are recognised as expenditure when an application that meets the specified criteria for the grant has been received.

Discretionary grants are those grants where the Council has no obligation to award on receipt of the grant application and are recognised as expenditure when a successful applicant has been notified of SDC's decision.

(d) Foreign currency transactions

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions.

(e) Leases

Operating Leases

An operating lease is a lease that does not transfer substantially all the risks and rewards incidental to ownership of an asset.

Lease payments under an operating lease are recognised as an expense on a straight line basis over the lease term.

(f) Equity

Equity is the community's interest in the Council as measured by total assets less total liabilities. Equity is classified into a number of reserves to enable clearer identification of the specified uses that the Council makes of its accumulated surpluses. The components of equity are:

- Accumulated funds
- Council-created reserves (general reserve, separate account balances and rates appropriation balance)
- Special reserves (managed by Allocation Committees)
- Asset revaluation reserves
- Fair value through other comprehensive revenue and expense reserve.

Reserves represent a particular use to which various parts of equity have been assigned. Reserves may be legally restricted or created by the Council.

Council created reserves may be altered without reference to any third party or the courts. Transfers to and from these reserves are at the discretion of the Council.

Restricted reserves are subject to specific conditions accepted as binding by the Council, which may not be revised by the Council without reference to the courts or third party. Transfers from these reserves may be made only for specified purposes or when certain conditions are met.

(g) Cash and Cash Equivalents

Cash and cash equivalents includes cash in hand, deposits held at call with banks, other short term highly liquid investments with original maturities of three months or less and bank overdrafts.

Bank overdrafts are shown within borrowings in current liabilities in the Forecast Statement of Financial Position.

(h) Trade and Other Receivables

Trade and other receivables are initially measured at fair value and subsequently measured at amortised cost using the effective interest method, less any provision for impairment.

Loans, including loans to community organisations made by SDC at nil, or below-market interest rates are initially recognised at the present value of their expected future cashflows, discounted at the current market rate of return for a similar asset/investment. They are subsequently measured at amortised cost using the effective interest method. The difference between the face value and present value of expected future cashflows of the loan is recognised in the Forecast Statement of Comprehensive Income as a grant.

A provision for impairment of receivables is established when there is objective evidence that the Council will not be able to collect all amounts due according to the original terms of receivables. The amount of the provision is the difference between the asset's carrying amount and the present value of estimated future cashflows, discounted using the effective interest method.

(i) Inventories

Inventories (such as spare parts and other items) held for distribution or consumption in the provision of services that are not supplied on a

commercial basis are measured at the lower cost and current replacement cost.

The write down from cost to current replacement cost is recognised in the Forecast Statement of Comprehensive Income.

(j) Financial Assets

SDC classifies its financial assets into the following four categories: financial assets at fair value through profit or loss; held-to-maturity investments; loans and receivables and financial assets at fair value through equity. The classification depends on the purpose for which the investments were acquired. Management determines the classification of its investments at initial recognition and re-evaluates this designation at every reporting date.

Financial assets are initially measured at fair value plus transaction costs unless they are carried at fair value through profit or loss in which case the transaction costs are recognised in the Forecast Statement of Comprehensive Income. Purchases and sales of investments are recognised on trade-date, the date on which SDC commits to purchase or sell the asset. Financial assets are derecognised when the rights to receive cashflows from the financial assets have expired or have been transferred and the Council has transferred substantially all the risks and rewards of ownership.

The fair value of financial instruments traded in active markets is based on quoted market prices at the balance sheet date. The quoted market price used is the current bid price.

The fair value of financial instruments that are not traded in an active market is determined using valuation techniques. SDC uses a variety of methods and makes assumptions that are based on market conditions existing at each balance date. Quoted market prices or dealer quotes for similar instruments are used for long term debt instruments held. Other techniques, such as estimated discounted cashflows, are used to determine fair value for the remaining financial instruments.

The four categories of financial assets are:

- *Financial assets at fair value through profit or loss*

  This category has two sub-categories: Financial assets held for trading and those designated at fair value through profit or loss at inception. A financial asset is classified in this category if acquired principally for the purpose of selling in the short term or if so designated by management. Assets in this category are classified as current assets if they are either held for trading or are expected to be realised within 12 months of the balance sheet date.

  After initial recognition they are measured at their fair values. Gains or losses on re-measurement are recognised in the Forecast Statement of Comprehensive Income.

  Council's investments in this category include: Civic Assurance (formerly the New Zealand Local Government Insurance Corporation Limited) and Milford Sound Development Authority.

- *Loans and receivables*

  These are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market.

  After initial recognition they are measured at amortised cost using the effective interest method. Gains and losses when the asset is impaired or derecognised are recognised in the Forecast Statement of Comprehensive Income. Loans and receivables are classified as "trade and other receivables" in the Forecast Statement of Financial Position.

- *Held to maturity investments*

  Held to maturity investments are assets with fixed or determinable payments and fixed maturities that SDC has the positive intention and ability to hold to maturity.

  After initial recognition they are measured at amortised cost using the effective interest method. Gains and losses when the asset is impaired or derecognised are recognised in the Forecast Statement of Comprehensive Income.

- *Financial assets at fair value through equity*

  Financial assets at fair value through equity are those that are designated as fair value through equity or are not classified in any of the other categories above.

  After initial recognition these investments are measured at their fair value, unless fair value cannot be reliably measured, in which case, the investments are measured at historical cost.

  Gains and losses are recognised directly in equity except for impairment losses, which are recognised in the Forecast Statement of Comprehensive Income. In the event of impairment, any cumulative losses previously recognised in equity will be removed from equity and recognised in the Forecast Statement of Comprehensive Income even though the asset has not been de-recognised.

  On de-recognition the cumulative gain or loss previously recognised in equity is recognised in the Forecast Statement of Comprehensive Income.

(k) Impairment of Financial Assets

At each balance sheet date, SDC assesses whether there is any objective evidence that a financial asset or group of financial assets is impaired. Any impairment losses are recognised in the Forecast Statement of Comprehensive Income.

(l) Non-current Assets Held For Sale

Non-current assets held for sale are classified as held for sale if their carrying amount will be recovered principally through a sale transaction, not through continuing use.

Non-current assets held for sale are measured at the lower of their carrying amount and fair value less disposal costs.

Any impairment losses for write-downs of non-current assets held for sale are recognised in the Forecast Statement of Comprehensive Income.

Any increases in fair value (less costs to sell) are recognised up to the level of any impairment losses that have been previously recognised.

Non-current assets (including those that are part of a disposal group) are not depreciated or amortised while they are classified as held for sale. Interest and other expenses attributable to the liabilities of a disposal group classified as held for sale continue to be recognised.

(m) Goods and Services Tax (GST)

The forecast financial statements have been prepared exclusive of GST with the exception of receivables and payables, which are stated inclusive of GST. When GST is not recoverable as an input tax, it is recognised as part of the related asset or expense.

The net amount of GST recoverable from, or payable to, the Inland Revenue Department (IRD) is included as part of receivables or payables in the Forecast Statement of Financial Position.

The net GST paid to, or received from the IRD, including the GST relating to investing and financing activities, is classified as an operating cashflow in the Forecast Statement of Cashflows.

Commitments and contingencies are disclosed exclusive of GST.

(n) Property, Plant and Equipment

Property, plant and equipment consist of:

Infrastructure Assets

Infrastructure assets are those systems taken as a whole that are intended to be maintained indefinitely. These assets include the Council's roading and bridge networks and the fixed utility systems owned by the Council. Each asset type includes all items that are required for the network to function. For example, sewerage reticulation includes reticulation piping and sewer pump stations.

Operational Assets

These include land, buildings, improvements, library books, plant and equipment and motor vehicles.

Restricted Assets

Restricted assets are parks and reserves owned by the Council, which cannot be disposed of because of legal or other restrictions and provide a benefit or service to the community.

Property, plant and equipment is shown at cost or valuation, less accumulated depreciation and impairment losses.

Additions

The cost of an item of property, plant and equipment is recognised as an asset if, and only if, it is probable that future economic benefits or service potential associated with the item will flow to SDC and the cost of the item can be measured reliably.

In most instances, an item of property, plant and equipment is recognised at its cost. Where an asset is acquired at no cost, or for a nominal cost, it is recognised at fair value as at the date of acquisition.

Disposals

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount of the asset. Gains and losses on disposals are included in the Forecast Statement of Comprehensive Income. When revalued assets are sold, the amounts included in asset revaluation reserves in respect of those assets are transferred to retained earnings.

Subsequent Costs

Costs incurred subsequent to initial acquisition are capitalised only when it is probable that future economic benefits or service potential associated with the item will flow to SDC and the cost of the item can be measured reliably.

Depreciation

Depreciation is provided on a straight line basis on all property, plant and equipment except land and heritage assets, at rates which will write off the cost (or valuation) of the assets to their estimated residual values over their useful lives. The useful lives and associated depreciation rates of major classes of assets have been estimated as follows:

Estimated Economic Life		Depreciation	
Asset Category	**(years)**	**Percent**	**Method**
Operational Assets			
Improvements	10-12	8.33% - 10.00%	SL
Buildings	40	2.50%	SL
Light Vehicles	5-11	9.00% - 20.00%	SL
Other Plant	3-11	6.67% - 33.33%	SL
Furniture and Fittings	7-8	13.50% - 8.00%	SL
Office Equipment	7-10	10.00% - 13.50%	SL
Computer Equipment	2-6	18.00% - 40.00%	SL
SCADA Equipment	6	13.50% - 18.00%	SL
Other Equipment	6-8	13.50% - 18.00%	SL
Library Books	10	10.00%	SL

Estimated Economic Life		Depreciation	
Asset Category	(years)	Percent	Method
Infrastructural Assets			
Electrical Generation Plant	10-100	1.00% - 10.00%	SL or DV
Sealed Roads	40-99	1.00% - 2.00%	SL
Unsealed Roads	4-8	12.50% - 25.00%	SL
Bridges	45-120	0.83% - 2.00%	SL
Footpaths	12-60	1.67% - 8.33%	SL
Streetlighting	20-40	2.50% - 5.00%	SL
Sewerage Schemes	5-100	2.06% - 7.02%	SL
Stormwater Schemes	20-100	5.00% - 20.00%	SL
Water Supply Schemes	5-100	1.00% - 20.00%	SL
Marine Assets	5-50	2.00% - 20.00%	SL
Transfer Stations	10	10.00%	SL
Landfill Sites	10-40	2.50% - 10.00%	SL

SIESA assets have the following useful lives and associated depreciation rates of major classes of assets for accounting purposes.

Estimated Economic Life		Depreciation	
Asset Category	(years)	Percent	Method
Plant	1-25	4.00% - 60.00%	SL or DV
Vehicles	5-8	12.00% - 21.60%	DV
Buildings	25-76	1.00% - 4.00%	SL or DV

The residual value and useful life of an asset is reviewed and adjusted, if applicable, at each financial year-end.

Revaluations

Roads, water reticulation, sewerage reticulation and stormwater systems are revalued on an annual basis. Heritage assets are valued on a three yearly valuation cycle. All other asset classes are carried at depreciated historical cost. The carrying values of revalued items are reviewed each balance date to ensure that those values are not materially different to fair value. The valuation basis for the different asset categories are described in more detail below.

Land and Buildings

The deemed cost of land and buildings were established by registered valuers from Quotable Value in accordance with the requirements of the Institute of Chartered Accountants of New Zealand Standards, as at 30 June 1993. Purchases made since 30 June 1993 are recorded at cost.

Endowment lands are vested in Council for specific purposes for the benefit of various communities. These vestings have been made under various pieces of legislation which restrict both the use of any revenue and any possible dispositions.

Infrastructural Assets

Appropriately qualified personnel from Waugh Infrastructure Limited have completed a revaluation of District roading, footpaths and bridge asset networks as at 30 June 2013. Data from this revaluation was used in the calculation of the roading infrastructural assets and extrapolated using BERL forecast inflation rates for the 2014/2015 year.

Appropriately qualified personnel from Waugh Infrastructure Limited have completed a revaluation as at 30 June 2013 of the water supply, sewerage scheme and stormwater assets. This revaluation established a depreciated replacement cost at component level for those infrastructural assets as at 30 June 2013. Data from these revaluations are used in the calculation of the water, sewerage and stormwater infrastructural assets and extrapolated using BERL forecast inflation rates for the 2014/2015 year.

Revaluations of roading, water, sewerage and stormwater assets are carried out annually.

All other infrastructural assets (electrical generation plant, streetlighting and marine assets) are valued at their deemed cost,

based on a revaluation of assets undertaken by appropriately qualified personnel from Royds Garden Limited in 1993.

- *Plant and Vehicles (including Electrical Generation Plant)*

  Items are shown at historical cost less provision for depreciation.

- *Library Books*

  Books have been valued by SDC staff on a depreciated replacement cost basis, using New Zealand Library Association guidelines, as at 30 June 1993 representing deemed cost. Additions to library book stocks since 30 June 1993 are recorded at cost.

- *Other Assets*

  Other assets are shown at historic cost or depreciated replacement cost, less a provision for depreciation. Additions and deletions to other assets since 30 June 1993 are recorded at cost.

- *Accounting for Revaluations*

  SDC accounts for revaluations of property, plant and equipment on a class of asset basis.

  The results of revaluing are credited or debited to other comprehensive revenue and expense and are accumulated to an asset revaluation reserve in equity for that class of asset. Where this results in a debit balance in the asset revaluation reserve, this balance is not recognised in other comprehensive revenue and expense but is recognised in the surplus or deficit. Any subsequent increase on revaluation that off-sets a previous decrease in value recognised in the surplus or deficit will be recognised first in the surplus or deficit up to the amount previously expensed, and then recognised in other comprehensive revenue and expense.

(o) Work in Progress

Assets under construction are not depreciated. The total cost of a project is transferred to the relevant asset class on its completion and then depreciated.

(p) Intangible Assets

Software acquisition and development

Acquired computer software licences are capitalised on the basis of the costs incurred to acquire and bring to use the specific software. Costs associated with maintaining computer software are recognised as an expense when incurred. Costs that are directly associated with the development of software for internal use by the Council are recognised as an intangible asset. Direct costs include the software development employee costs and an appropriate portion of relevant overheads.

Amortisation

The carrying value of an intangible asset with a finite life is amortised on a straight line basis over its useful life. The useful lives and associated amortisation rates of major classes of intangible assets have been estimated as follows:

Estimated Economic Life			Depreciation	
Asset Category	**(years)**		**Percent**	**Method**
Computer software	2-10		10.00% - 50.00%	SL

Emissions Trading Scheme

Council has approximately 1,384 hectares of pre-1990 forest land. This land is subject to the provisions of the New Zealand Emissions Trading Scheme ('ETS'). The implication of this for the financial accounts is twofold:

Should the land be deforested (ie the land is changed from forestry to some other purpose), a deforestation penalty will arise.

Given the deforestation restriction, compensation units are being provided from the government.

The deforestation contingency is not recognised as a liability on the statement of financial position as there is no current intention of changing the land use subject to the ETS.

(q) Forestry Assets

Forestry assets are revalued annually at fair value, less estimated point of sale costs. Appropriately qualified personnel from Woodlands Pacific Consulting Limited have completed a revaluation of the forestry assets as at 30 June 2017. This is peer reviewed by an independent valuer using standard forest valuation methodology. Fair value is determined based on the present value of expected net cashflows discounted at a current market determined pre-tax rate. A consistent methodology was used in the calculation of the forestry assets and extrapolated using BERL forecast inflation rates for the 2014/2015 year.

Gains or losses arising on initial recognition of forestry assets at fair value less estimated point of sale costs and from a change in fair value less estimated point of sale costs are recognised in the Forecast Statement of Comprehensive Income.

The costs to maintain the forestry assets are included in the Forecast Statement of Comprehensive Income.

(r) Impairment of property, plant and equipment and intangible assets

Intangible assets subsequently measured at cost that have an indefinite useful life, or are not yet available for use, are not subject to amortization and are tested annually for impairment.

Property, plant and equipment and intangible assets subsequently measured at cost that have a finite useful life are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable.

An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use.

If an asset's carrying amount exceeds its recoverable amount, the asset is regarded as impaired and the carrying amount is written down to the recoverable amount. The total impairment loss is recognised in the surplus or deficit. The reversal of an impairment loss is recognised in the surplus or deficit.

Value in use for non-cash generating assets

Non-cash generating assets are those assets that are not held with the primary objective of generating a commercial return. For non-cash generating assets, value in use is determined using an approach based on either a depreciated replacement cost approach, or a service unit approach. The most appropriate approach used to measure the value in use depends on the nature and impairment and availability of information.

Value in use for cash generating assets

Cash generating assets are those assets that are held with the primary objective of generating a commercial return.

The value in use for cash generating assets and cash generating units is the present value of expected future cashflows.

(s) Employee Benefits

Short term benefits

Employee benefits that the SDC expects to be settled within 12 months of the balance date are measured at nominal values based on accrued entitlements at current rates of pay. These include salaries

and wages accrued up to balance date, annual leave earned (but not yet taken) at balance date, retiring and long service leave entitlements expected to be settled within 12 months.

Long term benefits

Long service leave and retirement leave.

Entitlements that are payable beyond 12 months, such as long service leave and retiring leave have been calculated by in-house staff. The calculations are based on:

- Likely future entitlements accruing to staff, based on years of service, years to entitlement, the likelihood that staff will reach the point of entitlement and contractual entitlements information; and
- The present value of the estimated future cashflows. A discount rate of 7% and an inflation factor of 3% were used.

Superannuation schemes

Defined contribution schemes - Obligations for contributions to defined contribution superannuation schemes are recognised as an expense in the Forecast Statement of Comprehensive Income as incurred.

Presentation of employee entitlements

Annual leave and vested long service leave are classified as a current liability. Non-vested long service leave and retirement gratuities expected to be settled within 12 months of balance date are classified as a current liability. All other employee entitlements are classified as a non-current liability.

(t) Trade and other payables

Trade and other payables are initially measured at fair value and subsequently measured at amortised cost using the effective interest method, less any provision for impairment

(u) Provisions

SDC recognises a provision for future expenditure of uncertain amount or timing when there is a present obligation (either legal or constructive) as a result of a past event. It is probable that expenditures will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

Provisions are not recognised for future operating losses.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The change in the provision due to the passage of time is recognised in the Forecast Statement of Comprehensive Income.

Financial Guarantee Contracts

A financial guarantee contract is a contract that requires SDC to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due.

Financial guarantee contracts are initially recognised at fair value. If a financial guarantee contract was issued in a standalone arm's length transaction to an unrelated party, its fair value at inception is equal to the consideration received. When no consideration is received a provision is recognised based on the probability the Council will be required to reimburse a holder for a loss incurred discounted to present value. The portion of the guarantee that remains unrecognised, prior to discounting to fair value, is disclosed as a contingent liability.

Financial guarantees are subsequently measured at the initial recognition amount less any amortisation; however, if SDC assesses that it is probable that expenditure will be required to settle a

guarantee, then the provision for the guarantee is measured at the present value of the future expenditure.

Landfill Post-Closure Costs

The Council, as operator, has a legal obligation under its resource consent to provide ongoing maintenance and monitoring services at their landfill sites after closure. A provision for post-closure costs is recognised as a liability when the obligation for post-closure costs arises.

The provision is measured based on the present value of future cashflows expected to be incurred, taking into account future events including new legal requirements and known improvements in technology. The provision includes all costs associated with landfill post-closure.

Amounts provided for landfill post-closure are capitalised to the landfill asset where they gives rise to future economic benefits to be obtained. Components of the capitalised landfill asset are depreciated over their useful lives.

The discount rate used is a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the Council.

(v) Internal Borrowings

Information about internal borrowings are provided on page xxx. Internal borrowings are eliminated on consolidation of activities in the Council's financial statements

(w) Borrowings

Borrowings are initially recognised at their fair value. After initial recognition, all borrowings are measured at amortised cost using the effective interest method.

Repayments

Most borrowings are repaid on a table basis (ie each repayment instalment consists of a mixture of both principal and interest). The one exception is the roading business unit loans, which are interest payments only.

(x) Cost Allocation

SDC has derived the cost of service for each significant activity of Council using the cost allocation system outlined below.

Direct costs are those costs directly attributable to a significant activity. Indirect costs are those costs which cannot be identified in an economically feasible manner, with a specific significant activity.

Direct costs are charged directly to significant activities. Indirect costs have been allocated to all significant activities in two ways. Where appropriate, indirect costs are directly apportioned to activities. The remaining indirect costs are allocated either on a gross cost or activity/usage basis.

(y) Critical Accounting Estimates and Assumptions

In preparing these forecast financial statements, SDC has made estimates and assumptions concerning the future. These estimates and assumptions may differ from the subsequent actual results. Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations or future events that are believed to be reasonable under the circumstances. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below:

Infrastructural assets

There are a number of assumptions and estimates used when performing Depreciated Replacement Cost (DRC) valuations over infrastructural assets. These include:

- The physical deterioration and condition of an asset, for example the Council could be carrying an asset at an amount that does not reflect its actual condition. This is particularly so for those assets, which are not visible, for example stormwater, sewerage and water supply pipes that are underground. This risk is minimised by Council performing a combination of physical inspections and condition assessments of underground assets;
- Estimating any obsolescence or surplus capacity of an asset;
- Estimates are made when determining the remaining useful lives over which the asset will be depreciated. These estimates can be impacted by the local conditions, for example weather patterns and traffic growth. If useful lives do not reflect the actual consumption of the benefits of the asset, then SDC could be over or under estimating the annual depreciation charge recognised as an expense in the Forecast Statement of Comprehensive Income. To minimise this risk SDC's infrastructural asset useful lives have been determined with reference to the NZ Infrastructural Asset Valuation and Depreciation Guidelines published by the National Asset Management Steering Group and have been adjusted for local conditions based on past experience.

Asset inspections, deterioration and condition modelling are also carried out regularly as part of the SDC's asset management planning activities, which gives the Council further assurance over its useful life estimates.

Experienced independent valuers perform the Council's infrastructural asset revaluations.

(z) Critical Judgements in Applying SDC's Accounting Policies

Management has exercised the following critical judgements in applying the Council's accounting policies to the prospective financial statements.

Classification of property

SDC owns a number of properties which are maintained primarily to provide housing to pensioners. The receipt of rental income from these properties is incidental to holding these properties. These properties are held for service delivery objectives as part of the Council's social housing policy. These properties are accounted for as property, plant and equipment.

(aa) Statement of Cashflows

Operating activities include cash and cash equivalents (as defined in (f) above) received from all the Council's income sources and record the cash payments made for the supply of goods and services.

Investing activities are those activities relating to the acquisition and disposal of non-current assets.

Financing activities comprise the change in equity and debt capital structure of the Council.

(bb) Rounding

Some rounding variances may occur in the financial statements due to the use of decimal places in the underlying financial data.

Changes in Accounting Policies

Council now accounts for Venture Southland, its joint venture with GDC and ICC, on an equity method rather than consolidating the financial statements.

Financial Report for the month ended 30 September 2017

Record No: R/17/11/26846
Author: Robert Tweedie, Management Accountant
Approved by: Anne Robson, Chief Financial Officer

☐ Decision ☐ Recommendation ☒ Information

Background

1. This report outlines the financial results for the three months to the 30 September 2017 or 25% of the financial year.

2. The Monthly and YTD Actual results are compared to the Full Year Budget (Projection) in the attached Summary Monthly Financial Report. The projection values include any 2016/2017 carried forward items approved by Council in September 2017 and October forecast changes which have been loaded as a result of preparing the opening balances for the Long Term Plan. These have yet to be approved by Council on 13 December. Any changes will be made and replaced in the December Financial Report. The 2017/2018 Annual Plan budget is shown in the Reports as the Full Year Budget (Budget).

Overview

3. The Summary Monthly Financial Report consolidates the business units within each of the key areas of the Executive Leadership Team (ELT) responsibility. The following commentary focuses on the year to date (YTD) results excluding GST.

4. The Detailed Monthly Financial Report includes more detailed explanations and commentary on variances by the Executive Leadership Team. Commentary generally focuses on the year to date (YTD) results and, where specified, monthly results.

5. In the Council Summary and Detailed Reports, the values in the columns for:

   - The Monthly Budget is phased, where appropriate, and includes forecasting.
   - The YTD Budget is the Annual Plan, carry forwards and forecasting year to date.
   - The Full Year Budget is the LTP budget for the year.
   - The Full Year Projection is the forecasted year end result

6. Phasing of budgets occurs in the first 2 months of the financial year, at forecasting and when one-off costs have actually occurred. This should reduce the number of variance explanations due to timing.

7. Where phasing of budgets has not occurred, one twelfth of annual budgeted cost is used to calculate the monthly budget.

8. Council staff will continue to refine the format of this report to enhance the financial information reported. We welcome any feedback or suggestions on further improvements that could be made to this report.

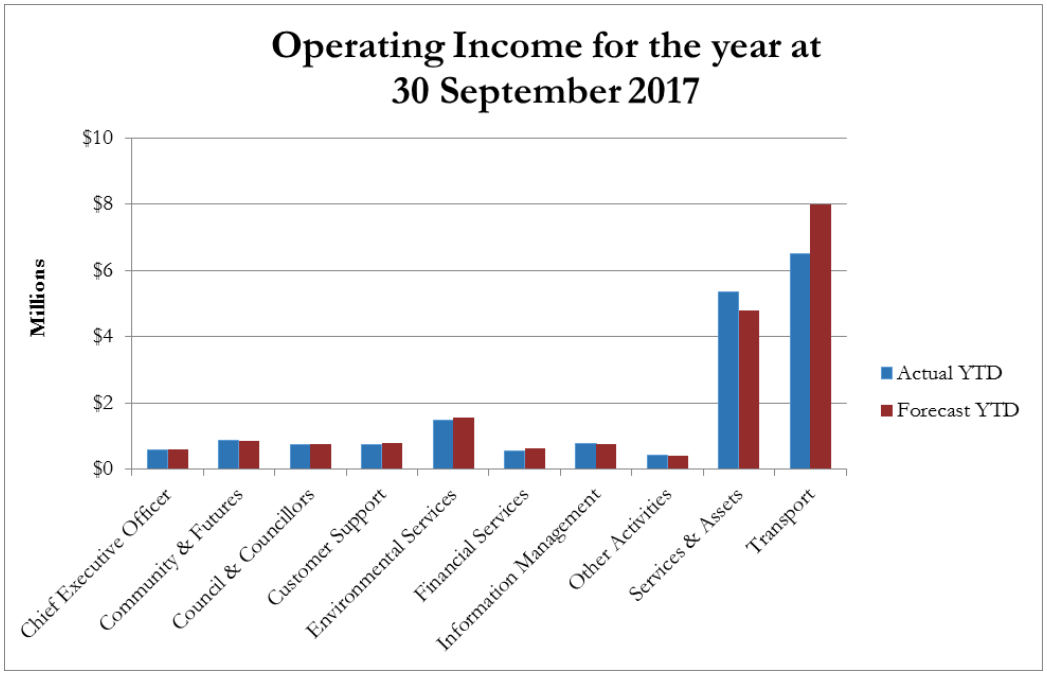
9. The Council Summary Report (actuals vs *phased and forecast* budget) year to date are as follows:

YEAR TO DATE	Actual	Budget	Variance	Act to Bgt
INCOME	$ 18.0M	$ 19.2M	($1.2M)	(6%)
OPERATING EXPENDITURE	$ 17.6M	$ 18.0M	$0.4M	2%
NET SURPLUS / (DEFICIT)	$ 0.3M	$ 1.1M	($0.8M)	(69%)

YEAR TO DATE	Actual	Budget	Variance	Act to Bgt
CAPITAL EXPENDITURE	$ 3.9M	$ 8.9M	($5.0M)	(56%)

Income

10. Operating Income is $1.2 million (6%) under budget year to date ($18 million actual vs $19.2 million budget).



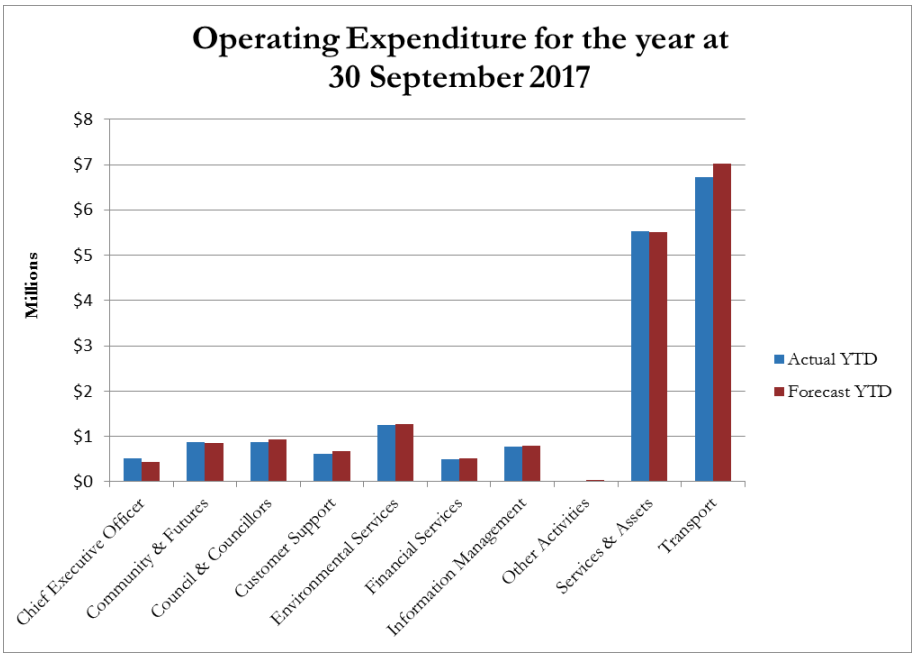
11. Environmental Services is $100 thousand or 6% below budget. This is mainly due to the development activity in the Southland District being relatively subdued.

12. Services and Assets is $538 thousand above budget due to continued forest harvesting at Dipton during July and August which was not budgeted.

13. Transport and Roading income is $1.5 million below budget year to date. This is due to the timing of the capital works programme and seasonality of programmed work which is behind the planned schedule and directly affects the level of income from NZTA.

Operating Expenditure

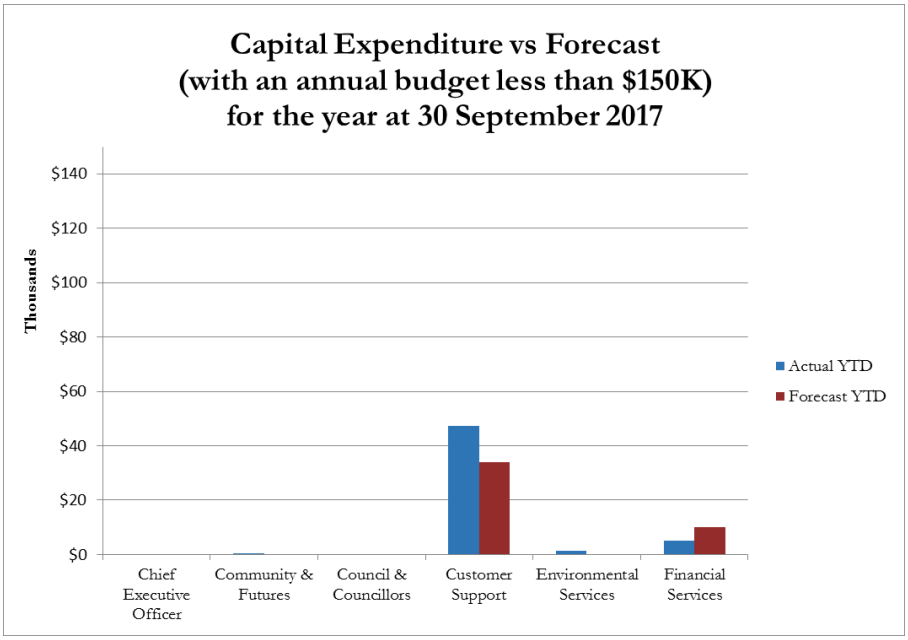
14. Operating Expenditure is $0.4 million (2%) under budget for the year to date ($17.6 million actual vs $18 million budget).



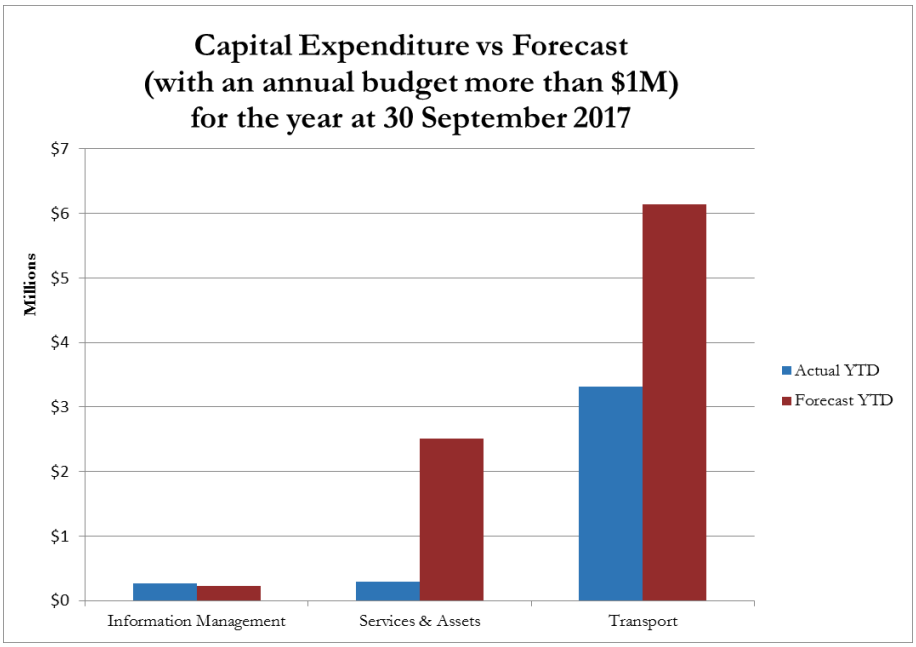
15. Transport (Roading) costs are currently under budget which relates to the timing of various works being weather dependant.

Capital Expenditure

16. Capital Expenditure is $5 million (56%) under budget year to date ($3.9 million actual v $8.9 million budget).



17. Customer support is over budget due to the purchase of library books.



18. Capital expenditure for Services and Assets is significantly under budget and has not been phased.

- Limited construction has occurred in District Sewerage to the end of September.
- Tenders on the Winton Water Main replacement was awarded by the Services and Assets subcommittee during September and Te Anau lateral replacements will commence at the end of October.
- Tender requests for the work on the treatment upgrade at Eastern Bush will be requested early in 2018, to ensure that the intended design meets any requirements from the Havelock North inquiry (expected in December). The majority of construction that was originally expected to occur in 2017/18 will be deferred to 2018/19 and 2019/20.
- Winton desludging and Te Anau oxidation pond improvement projects will take place if the contractor is able to re-establish this year after machinery issues in 2016/17. In addition, deposits have been paid for the Winton and Te Anau waste water pond aerators, these have yet to arrive to undertake the capital works.

19. Overall roading capital expenditure is $2.82 million less than budgeted for the year to date due to seasonality of the programmed works. The roading team have $8 million already tendered with a major focus on planning and designing the capital works for 2017/2018 financial year. The NZTA contract runs over a 3 year period ending June 2018. At this stage strategic roading is still on track to achieve budget. Work on the Southern Scenic Route has continued into the new financial year and is expected to be on target by year end. However, if this project is not complete at year end the funding can still be carried forward.

Balance Sheet

20. Council's financial position as at 30 September 2017 is detailed below and is for the activities of Council only. The balance sheet as at 30 June 2016 represents the audited balance sheet for activities of Council only.

21. Current Assets (Other Financial Assets) at 30 June 2017 includes an additional amount of

    $8 million in term deposits was disclosed under Other Financial Assets. This is in line with reporting standards for deposits with a term of 90 days or more at year end.

22. At 30 September 2017, Council had $17 million invested in seven term deposits ranging from three to six month maturities as follows:

Bank	Amount	Interest Rate	Date Invested	Maturity Date
ANZ	$ 2,000,000	3.24%	17-Aug-17	18-Dec-17
ASB	$ 5,000,000	3.61%	30-May-17	30-Nov-17
BNZ	$ 2,000,000	2.06%	29-Aug-17	19-Oct-17
BNZ	$ 3,000,000	2.59%	29-Aug-17	17-Nov-17
Westpac	$ 3,000,000	3.15%	28-Aug-17	18-Jan-18
Westpac	$ 2,000,000	3.15%	29-Aug-17	19-Feb-18

23. Funds on call are :

Balance at 30 September 2017	Bank	Interest Rate
$ 2,907,295	BNZ	0.46%

24. The principal movement in Property, Plant and Equipment is the year to date budgeted depreciation.

25. The increase in Non-Current Assets (Intangible Assets) is the continued acquisition costs of Council's digitisation software.

SOUTHLAND DISTRICT COUNCIL
STATEMENT OF FINANCIAL POSITION
30 September 2017

	Actual 30-Sep-17	Actual 30-Jun-17
Equity		
Retained Earnings	721,861,807	721,594,887
Asset Revaluation Reserves	723,523,369	723,523,369
Other Reserves	33,933,148	33,933,148
Share Revaluation	1,916,029	1,916,029
	1,481,234,353	**1,480,967,433**
Represented by:		
Current Assets		
Cash and Cash Equivalents	9,078,846	12,199,656
Trade and Other Receivables	7,515,826	3,093,356
Inventories	85,148	85,148
Other Financial Assets	8,426,212	8,424,179
	25,106,032	**23,802,340**
Non-Current Assets		
Property, Plant and Equipment	1,448,916,139	1,447,412,138
Intangible Assets	2,178,648	2,341,213
Forestry Assets	13,724,000	13,724,000
Internal Loans	20,204,077	17,930,827
Work in Progress	1,735,280	1,735,280
Other Financial Assets	3,542	3,431
	1,486,761,685	**1,483,146,888**
TOTAL ASSETS	**1,511,867,716**	**1,506,949,228**
Current Liabilities		
Trade and Other Payables	6,362,991	3,989,547
Contract Rententions and Deposits	382,615	374,777
Employee Benefit Liabilities	1,416,889	1,416,897
Development and Financial Contributions	2,169,083	2,172,038
Provisions	14,000	14,000
	10,345,578	**7,967,259**
Non-Current Liabilities		
Employment Benefit Liabilities	63,949	63,949
Provisions	19,759	19,759
Internal Loans - Liability	20,204,077	17,930,827
	20,287,785	**18,014,536**
TOTAL LIABILITIES	**30,633,363**	**25,981,795**
NET ASSETS	**1,481,234,353**	**1,480,967,433**

Recommendation

That the Finance and Audit Committee:

a) Receives the report titled "Financial Report for the month ended 30 September 2017" dated 9 November 2017.

Attachments

A Council s District Activities Summary Monthly Financial Report - 30 September 2017 ⇩
B Council s District Activities Detailed Monthly Financial Report - 30 September 2017 ⇩

SOUTHLAND
DISTRICT COUNCIL

DISTRICT COUNCIL ACTIVITIES

(ATTACHMENT TO THE REPORT TO COUNCIL)

SUMMARY MONTHLY FINANCIAL REPORT FOR SEPTEMBER 2017

Key Financial Indicators

Indicator	*Actual*	*Target**	*Variance*	*Compliance*
External Funding: Non rateable income/Total income	39%	≥ 42%	0%	⊘
Working Capital: Current Assets/Current Liabilities	2.43	≥0.77	1.66	√
Debt Ratio:** Total Liabilities/Total Assets	0.70%	≤0.76%	-0.06%	√
Debt To Equity Ratio: Total Debt/Total Equity	0.00%	≤0.00%	0.00%	⊘

* *All target indicators have been calculated using the 2017/18 Annual Plan figures.*
** *Excludes internal loans.*

Financial Ratios Calculations:

External Funding:

$$\frac{\text{Non Rateable Income}}{\text{Total Income}}$$

This ratio indicates the percentage of revenue received outside of rates. The higher the proportion of revenue that the Council has from these sources the less reliance it has on rates income to fund its costs. This is a financial prudence benchmark on Rates Income affordability set by Council. Income from Forestry and Dog and Animal Control has declined significantly in September reducing the external income to below 42% of total income.

Working Capital:

$$\frac{\text{Current Assets}}{\text{Current Liabilities}}$$

This ratio indicates the amount by which short-term assets exceed short term obligations. The higher the ratio the more comfortable the Council can fund its short term liabilities.

Debt Ratio:

$$\frac{\text{Total Liabilities}}{\text{Total Assets}}$$

This ratio indicates the capacity of which the Council can borrow funds. This ratio is generally used by lending institutions to assess entities financial leverage. Generally the lower the ratio the more capacity to borrow.

Debt to Equity Ratio:

$$\frac{\text{Total Debt}}{\text{Total Equity}}$$

It indicates what proportion of equity and debt the Council is using to finance its assets.

Item 8.1 Attachment A

For the period ending September 2017

Council Summary Report

SOUTHLAND DISTRICT COUNCIL

	Monthly				YTD				Full Year Budget			
Income	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Chief Executive Officer	216,798	180,423	36,375	20%	572,603	610,777	(38,174)	(6%)	2,014,908	2,014,908	-	-
Community & Futures	341,630	286,289	55,342	19%	867,963	858,866	9,097	1%	3,435,463	3,435,463	-	-
Council & Councillors	250,030	247,938	2,092	1%	748,173	751,192	(3,020)	(0%)	2,983,875	2,983,875	-	-
Customer Support	248,737	264,672	(15,935)	(6%)	748,076	794,017	(45,940)	(6%)	3,176,066	3,176,066	-	-
Environmental Services	403,557	391,848	11,709	3%	1,471,176	1,569,388	(98,212)	(6%)	5,010,641	5,028,485	17,844	0%
Financial Services	201,159	208,708	(7,549)	(4%)	565,499	626,125	(60,626)	(10%)	2,570,541	2,570,541	-	-
Information Management	183,660	251,969	(68,310)	(27%)	760,093	743,247	16,847	2%	3,023,693	3,023,693	-	-
Other Activities	153,647	130,070	23,577	18%	428,710	401,043	27,667	7%	1,407,056	1,407,056	-	-
Services & Assets	1,170,469	1,514,256	(343,787)	(23%)	5,342,062	4,803,083	538,979	11%	21,634,842	21,668,697	33,855	0%
Transport	2,306,890	2,667,576	(360,686)	(14%)	6,486,187	8,002,727	(1,516,540)	(19%)	31,428,724	32,151,477	722,752	2%
Total	**5,476,577**	**6,143,750**	**(667,173)**	**(11%)**	**17,990,542**	**19,160,465**	**(1,169,923)**	**(6%)**	**76,685,810**	**77,460,261**	**774,451**	**1%**

	Monthly				YTD				Full Year Budget			
Operating Expenditure	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Chief Executive Officer	157,549	124,710	(32,838)	(26%)	522,925	438,722	(84,203)	(19%)	1,951,044	1,951,044	-	-
Community & Futures	341,921	287,880	(54,041)	(19%)	867,963	862,347	(5,616)	(1%)	3,593,200	3,593,200	-	-
Council & Councillors	98,431	93,286	(5,145)	(6%)	869,323	925,583	56,260	6%	2,991,554	2,991,554	-	-
Customer Support	203,647	219,638	15,991	7%	613,189	666,477	53,288	8%	2,761,761	2,761,761	-	-
Environmental Services	455,384	449,960	(5,424)	(1%)	1,251,994	1,272,780	20,786	2%	5,124,893	5,204,775	(79,883)	(2%)
Financial Services	184,873	148,184	(36,689)	(25%)	497,380	519,547	22,166	4%	2,284,124	2,284,124	-	-
Information Management	236,312	239,888	3,576	1%	772,731	787,448	14,717	2%	2,992,876	3,064,681	(71,805)	(2%)
Other Activities	(87,635)	14,143	101,779	720%	14,081	36,121	22,040	61%	1,355,611	1,355,611	-	-
Services & Assets	1,643,105	1,611,108	(31,996)	(2%)	5,522,497	5,512,754	(9,743)	(0%)	20,088,332	20,145,221	(56,889)	(0%)
Transport	2,132,065	2,332,211	200,147	9%	6,714,476	7,014,463	299,987	4%	20,790,741	20,790,741	-	-
Total	**5,365,651**	**5,521,009**	**155,358**	**3%**	**17,646,559**	**18,036,241**	**389,681**	**2%**	**63,934,134**	**64,142,711**	**(208,577)**	**(0%)**

	Monthly				YTD				Full Year Budget			
	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Net Surplus/(Deficit)	**110,926**	**622,741**	**(511,815)**	**(82%)**	**343,983**	**1,124,224**	**(780,242)**	**(69%)**	**12,751,676**	**13,317,550**	**565,874**	**4%**

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For the period ending September 2017

Council Summary Report

SOUTHLAND DISTRICT COUNCIL

	Monthly				YTD				Full Year Budget			
Capital Expenditure	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Chief Executive Officer	-	-	-	-	-	-	-	-	59,366	59,366	-	-
Community & Futures	-	-	-	-	112	-	(112)	-	31,296	31,296	-	-
Council & Councillors	-	-	-	-	-	-	-	-	-	-	-	-
Customer Support	22,771	11,337	(11,434)	(101%)	47,156	34,012	(13,144)	(39%)	127,860	136,049	(8,189)	(6%)
Environmental Services	-	-	-	-	1,528	-	(1,528)	-	34,140	34,140	-	-
Financial Services	-	3,398	3,398	100%	5,000	10,195	5,195	51%	-	40,780	(40,780)	-
Information Management	112,089	112,083	(6)	(0%)	271,200	229,750	(41,450)	(18%)	1,995,758	2,516,959	(521,201)	(26%)
Services & Assets	250,655	835,421	584,766	70%	288,220	2,506,262	2,218,043	89%	8,142,405	10,106,604	(1,964,199)	(24%)
Transport	1,167,667	2,045,044	877,377	43%	3,315,819	6,135,132	2,819,313	46%	22,033,509	24,614,043	(2,580,534)	(12%)
Total	**1,553,182**	**3,007,284**	**1,454,102**	**48%**	**3,929,034**	**8,915,352**	**4,986,318**	**56%**	**32,424,334**	**37,539,237**	**(5,114,903)**	**(16%)**

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SOUTHLAND DISTRICT COUNCIL

DISTRICT COUNCIL ACTIVITIES

(ATTACHMENT TO THE REPORT TO COUNCIL)

DETAILED MONTHLY FINANCIAL REPORT FOR SEPTEMBER 2017

SOUTHLAND DISTRICT COUNCIL

For the period ending September 2017

Council Detail Report

	Chief Executive Officer											
	Monthly				YTD				Full Year Budget			
Income	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Chief Executive	91,212	87,626	3,585	4%	280,945	288,959	(8,014)	(3%)	738,939	738,939	-	-
Civil Defence	21,451	21,414	37	-	64,349	64,243	106	-	256,972	256,972	-	-
Community Outcomes	3,750	3,750	-	-	11,250	11,250	-	-	45,000	45,000	-	-
Council Elections	3,577	3,571	6	-	10,731	10,714	18	-	42,855	42,855	-	-
People and Capability	44,464	60,493	(16,029)	(26%)	146,596	181,480	(34,884)	(19%)	725,919	725,919	-	-
Rural Fire Control	835	833	1	-	2,504	2,500	4	-	10,000	10,000	-	-
Shared Services Forum	41,775	-	41,775	-	41,775	43,429	(1,654)	(4%)	57,906	57,906	-	-
SI Visitor Levy	9,734	2,734	6,999	256%	14,453	8,203	6,250	76%	137,317	137,317	-	-
Total	**216,798**	**180,423**	**36,375**	**20%**	**572,603**	**610,777**	**(38,174)**	**(6%)**	**2,014,908**	**2,014,908**	-	-
	Monthly				YTD				Full Year Budget			
Operating Expenditure	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Chief Executive	162,493	56,884	(105,609)	(186%)	284,011	171,116	(112,896)	(66%)	717,963	717,963	-	-
Civil Defence	20	-	(20)	-	64,303	64,243	(60)	-	256,972	256,972	-	-
Community Outcomes	-	3,750	3,750	100%	25,000	11,250	(13,750)	(122%)	45,000	45,000	-	-
Council Elections	-	-	-	-	-	-	-	-	-	-	-	-
People and Capability	44,464	58,370	13,906	24%	146,596	174,994	28,399	16%	725,919	725,919	-	-
Rural Fire Control	-	833	833	100%	-	2,500	2,500	100%	10,000	10,000	-	-
Shared Services Forum	525	4,826	4,301	89%	2,873	14,477	11,603	80%	57,906	57,906	-	-
SI Visitor Levy	(49,953)	47	50,000	105441%	142	142	-	-	137,284	137,284	-	-
Total	**157,549**	**124,710**	**(32,838)**	**(26%)**	**522,925**	**438,722**	**(84,203)**	**(19%)**	**1,951,044**	**1,951,044**	-	-
	Monthly				YTD				Full Year Budget			
	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Net Surplus/(Deficit)	**59,249**	**55,713**	**3,537**	**6%**	**49,678**	**172,055**	**(122,377)**	**(71%)**	**63,864**	**63,864**	-	-
	Monthly				YTD				Full Year Budget			
Capital Expenditure	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Chief Executive	-	-	-	-	-	-	-	-	59,366	59,366	-	-
Civil Defence	-	-	-	-	-	-	-	-	-	-	-	-
People and Capability	-	-	-	-	-	-	-	-	-	-	-	-
SI Visitor Levy	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	59,366	59,366	-	-

CHIEF EXECUTIVE COMMENTARY

Chief Executive

Income in this business unit is 3% ($8K) under budget year to date.

Expenditure year to date is 66% ($113K) over budget for the first 3 months. Membership and subscriptions included the annual fee to the SOLGM Work Programme and LGNZ Membership amounting to $40k, Training costs of $9.9k to Harvard studies for the Group Manager Community and Futures and staff training, travel and conference were the main reasons for being $11k over budget. Travel Costs are $16k over budget which includes CE travel costs in August of $14k. Consultant Fees $40k over budget for the Stewart Island Community planning project. These costs are expected to be on budget by year end.

Civil Defence

Income and expenditure are on budget.
Rates collected are paid as a grant to Environment Southland for emergency management.

Community Outcomes

Income is on target year to date. This activity is internally funded.

The year to date overspend is as a result of $25K being paid as part of the agreed SDC allocation to the SORDS project transition to the Southland Regional Development Agency. The budget is $45K budget for the year.

Council Elections

Income and expenditure is on budget. This activity is partly funded from rates and nomination deposits.

People and Capability

Income year to date is 19% ($35K) under budget. This activity is internally funded and higher expenditure directly impacts on income allocated to this activity.

Expenditure year to date is 28% ($16K) under budget year to date. This is mainly due under spends in OSH expenses, no Survey Costs, Staff Uniforms and Training not being spent yet.

The reduced expenditure impacts directly on the income allocated to this business unit.

Rural Fire Control

Income is on budget.

There has been no expenditure against the budget and all costs should be on charged for this year as this activity will be managed by FENZ from 1 July 2017.

Shared Services Forum

Income is 4% ($2k) under budget year to date. The full amount for the year was invoiced in September to Gore District Council, Invercargill City Council and Environment Southland.

Expenditure is well below budget although consultant fees are expected for the establishment of SORDS.

Stewart Island Visitor Levy

Income is 76% ($6k) over budget for the year. Levy collections from visitors are phased to the summer months.

Levies collected for this month was $10K ($7K over budget).

Last year, the bulk of the levies were collected over the summer months from December through to the end of May.

Item 8.1 Attachment B

For the period ending September 2017

Council Detail Report

	Community & Futures											
	Monthly				YTD				Full Year Budget			
Income	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Communications and Engagement	120,941	102,606	18,336	18%	305,166	307,817	(2,651)	(1%)	1,231,266	1,231,266	-	-
Community Leadership	59,887	54,501	5,385	10%	160,416	163,504	(3,088)	(2%)	654,015	654,015	-	-
Governance	51,519	54,223	(2,704)	(5%)	147,442	162,669	(15,227)	(9%)	650,675	650,675	-	-
Strategy & Policy	109,283	74,959	34,324	46%	254,939	224,877	30,062	13%	899,508	899,508	-	-
Total	**341,630**	**286,289**	**55,342**	**19%**	**867,963**	**858,866**	**9,097**	**1%**	**3,435,463**	**3,435,463**	-	-
	Monthly				**YTD**				**Full Year Budget**			
Operating Expenditure	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Communications and Engagement	120,768	113,407	(7,361)	(6%)	305,166	339,977	34,811	10%	1,398,084	1,398,084	-	-
Community Leadership	60,365	50,332	(10,032)	(20%)	160,416	152,529	(7,887)	(5%)	644,869	644,869	-	-
Governance	51,510	51,251	(259)	(1%)	147,442	152,038	4,597	3%	650,729	650,729	-	-
Strategy & Policy	109,279	72,890	(36,389)	(50%)	254,939	217,803	(37,136)	(17%)	899,518	899,518	-	-
Total	**341,921**	**287,880**	**(54,041)**	**(19%)**	**867,963**	**862,347**	**(5,616)**	**(1%)**	**3,593,200**	**3,593,200**	-	-
	Monthly				**YTD**				**Full Year Budget**			
	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Net Surplus/(Deficit)	**(291)**	**(1,592)**	**1,301**	**(82%)**	**-**	**(3,481)**	**3,481**	**(100%)**	**(157,736)**	**(157,736)**	-	-
	Monthly				**YTD**				**Full Year Budget**			
Capital Expenditure	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Communications and Engagement	-	-	-	-	-	-	-	-	-	-	-	-
Community Leadership	-	-	-	-	112	-	(112)	-	31,296	31,296	-	-
Governance	-	-	-	-	-	-	-	-	-	-	-	-
Strategy & Policy	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	**112**	-	**(112)**	-	**31,296**	**31,296**	-	-

COMMUNITY AND FUTURES COMMENTARY

This group's Income is 1% ($9K) over budget and expenditure is over budget 1% ($5.6K) for YTD.

Communications and Engagement

The level of recoveries is 1% ($2.6K) less than budgeted.
The level of expenditure directly impacts on the income recoveries.

Expenditure is 16% ($37K) below budget, YTD, with 4% ($3K) over budget for September. The over budget expenditure is related to the branding project, with signage costs reporting in September.

Community Leadership

Income is 2% ($3K) under budget and expenditure is 4% ($6.2K) over budget YTD. This is due to the timing of $9.9K of professional development costs incurred during the month.

As this activity is internally funded the expenditure impacts directly on income allocation

Governance

Income is 9% ($15K) under budget and expenditure is 4% ($4.7K) under budget YTD. The under budgeted expenditure is related to less costs incurred with conferences and courses.

As this activity is internally funded the expenditure impacts directly on income allocation.

Strategy and Policy

Income is 13% ($30K) over budget YTD, with expenditure 33% ($40K) over budget for the same period.

The increase in expenditure is due to additional consultancy costs related to the Long Term Plan and Community and Futures project.

Item 8.1 Attachment B

SOUTHLAND DISTRICT COUNCIL

For the period ending September 2017

Council Detail Report

	Council & Councillors											
	Monthly				YTD				Full Year Budget			
Income	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Council and Councillors	71,006	69,217	1,788	3%	211,136	215,030	(3,894)	(2%)	837,987	837,987	-	-
Council Contributions/Gran	31,563	31,508	54	-	94,681	94,525	156	-	378,101	378,101	-	-
International Relations Commit	947	946	2	-	2,842	2,837	5	-	12,588	12,588	-	-
Venture Southland	146,514	146,267	248	-	439,514	438,800	714	-	1,755,199	1,755,199	-	-
Total	**250,030**	**247,938**	**2,092**	**1%**	**748,173**	**751,192**	**(3,020)**	-	**2,983,875**	**2,983,875**	-	-
	Monthly				**YTD**				**Full Year Budget**			
Operating Expenditure	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Council and Councillors	53,509	63,232	9,723	15%	165,133	233,283	68,150	29%	839,866	839,866	-	-
Council Contributions/Gran	44,922	29,005	(15,917)	(55%)	261,990	250,353	(11,637)	(5%)	383,901	383,901	-	-
International Relations Commit	-	1,049	1,049	100%	-	3,147	3,147	100%	12,588	12,588	-	-
Venture Southland	-	-	-	-	442,200	438,800	(3,400)	(1%)	1,755,199	1,755,199	-	-
Total	**98,431**	**93,286**	**(5,145)**	**(6%)**	**869,323**	**925,583**	**56,260**	**6%**	**2,991,554**	**2,991,554**	-	-
	Monthly				**YTD**				**Full Year Budget**			
	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Net Surplus/(Deficit)	**151,598**	**154,652**	**(3,053)**	**(2%)**	**(121,150)**	**(174,391)**	**53,240**	**(31%)**	**(7,679)**	**(7,679)**	-	-
	Monthly				**YTD**				**Full Year Budget**			
Capital Expenditure	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Council and Councillors	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-

COUNCIL AND COUNCILLORS' COMMENTARY

This group's total income is on target and total expenditure 6% below budget YTD.

Council and Councillors

For September expenditure is under budget due to less spent professional services, staff costs, conferences and courses.

Council Contributions / Grants

The level of income is as budgeted, expenditure is 5% ($11.6K) over budget YTD. This is due to the timing of grants issued.

Venture Southland

Income and expenditure is on target year to date. This business unit consists of rates collected and the grant paid to Venture Southland.

Item 8.1 Attachment B

For the period ending September 2017

Council Detail Report

	Customer Support											
	Monthly				YTD				Full Year Budget			
Income	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Area Offices	48,264	46,568	1,697	4%	151,178	139,704	11,475	8%	558,814	558,814	-	-
Customer Services	105,342	122,133	(16,791)	(14%)	311,210	366,398	(55,188)	(15%)	1,465,594	1,465,594	-	-
District Library	95,131	95,972	(841)	(1%)	285,688	287,915	(2,227)	(1%)	1,151,658	1,151,658	-	-
Total	**248,737**	**264,672**	**(15,935)**	**(6%)**	**748,076**	**794,017**	**(45,940)**	**(6%)**	**3,176,066**	**3,176,066**	**-**	**-**
	Monthly				**YTD**				**Full Year Budget**			
Operating Expenditure	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Area Offices	27,811	19,654	(8,158)	(42%)	71,809	59,592	(12,217)	(21%)	236,478	236,478	-	-
Customer Services	105,304	118,458	13,154	11%	311,210	354,019	42,809	12%	1,495,821	1,495,821	-	-
District Library	70,532	81,525	10,994	13%	230,170	252,866	22,697	9%	1,029,462	1,029,462	-	-
Total	**203,647**	**219,638**	**15,991**	**7%**	**613,189**	**666,477**	**53,288**	**8%**	**2,761,761**	**2,761,761**	**-**	**-**
	Monthly				**YTD**				**Full Year Budget**			
	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Net Surplus/(Deficit)	**45,090**	**45,034**	**55**	**-**	**134,887**	**127,540**	**7,348**	**6%**	**414,305**	**414,305**	**-**	**-**
	Monthly				**YTD**				**Full Year Budget**			
Capital Expenditure	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Area Offices	-	-	-	-	-	-	-	-	-	-	-	-
Customer Services	87	333	246	74%	87	1,000	913	91%	4,000	4,000	-	-
District Library	22,684	11,004	(11,680)	(106%)	47,069	33,012	(14,057)	(43%)	123,860	132,049	(8,189)	(7%)
Total	**22,771**	**11,337**	**(11,434)**	**(101%)**	**47,156**	**34,012**	**(13,144)**	**(39%)**	**127,860**	**136,049**	**(8,189)**	**(6%)**

CUSTOMER SUPPORT

Overall, Customer Support income is down by 7% YTD, operational expenditure is 8% YTD under budget. Capital expenditure is 101% over budget for September due to library book purchases for releases near Christmas as this is a high release period compared to the rest of the year. This will correct over the coming months.

Area Offices

Income is above the forecast amount due to cemetery internment fees being applied to the Area Offices rather than Customer Services, this will corrected by finance.

Operational expenditure is higher than forecast for the month due to ordinary time being applied to the Winton office as opposed to our central budget. Approved unbudgeted maintenance of the Winton Library windows was approved by the Chief Executive Officer to put UV tint on the windows to protect books from UV damage. This cost was just over $3.5K. Cleaning costs for Otautau and Winton exceeded budget however the cost is spread across Library and Area Office so overall this balances out.

Customer Services

Customer Support's income line is predominantly lower due to less internal overheads received compared to what was budgeted - $55K less YTD.

Operating Expenditure is within budget even with ordinary time being charged to the Winton Area Office in error.

Capital expenditure is below forecast as the project costs for customer kiosks to view property files has not been incurred at this time.

Libraries

Income is below the budgeted level as recoveries fall below the anticipated level.

Operational costs are within budget.

As explained above, Capital expenditure is above forecast due to purchases of books released near Christmas. This will reduce over the coming months as less books are released by publishers.

Item 8.1 Attachment B

For the period ending September 2017

Council Detail Report

	Environmental Services											
	Monthly				YTD				Full Year Budget			
Income	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Alcohol Licensing	26,266	19,684	6,582	33%	61,876	59,051	2,826	5%	236,677	236,677	-	-
Animal Control	30,798	37,563	(6,765)	(18%)	390,154	479,190	(89,035)	(19%)	636,957	636,957	-	-
Building Regulations	144,634	142,551	2,083	1%	443,644	427,652	15,991	4%	1,718,287	1,727,443	9,156	1%
Enviro & Com Dev Admin	17,219	20,125	(2,906)	(14%)	53,328	60,376	(7,048)	(12%)	232,814	241,502	8,688	4%
Environmental Health	20,531	9,417	11,115	118%	38,433	55,593	(17,160)	(31%)	149,283	149,283	-	-
Health Licensing	976	3,287	(2,311)	(70%)	1,103	9,860	(8,757)	(89%)	125,954	125,954	-	-
Museum	48,437	48,118	319	1%	160,379	144,354	16,025	11%	577,417	577,417	-	-
Regulatory - Non Recoverab	9,357	9,341	16	-	28,070	28,024	46	-	112,094	112,094	-	-
Resource Consent Processin	81,631	78,096	3,535	5%	223,072	234,288	(11,216)	(5%)	937,153	937,153	-	-
Resource Planning/Policy	23,708	23,667	41	-	71,119	71,001	117	-	284,005	284,005	-	-
Total	403,557	391,848	11,709	3%	1,471,176	1,569,388	(98,212)	(6%)	5,010,641	5,028,485	17,844	-
	Monthly				YTD				Full Year Budget			
Operating Expenditure	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Alcohol Licensing	16,934	18,024	1,089	6%	48,351	54,353	6,002	11%	229,145	229,145	-	-
Animal Control	121,576	47,666	(73,910)	(155%)	230,677	153,002	(77,675)	(51%)	610,820	610,820	-	-
Building Regulations	154,325	130,565	(23,760)	(18%)	338,316	393,546	55,230	14%	1,641,730	1,641,730	-	-
Enviro & Com Dev Admin	17,219	18,034	815	5%	53,328	54,325	997	2%	232,814	232,814	-	-
Environmental Health	34,278	11,214	(23,064)	(206%)	53,447	34,028	(19,419)	(57%)	149,862	159,862	(10,000)	(7%)
Health Licensing	9,603	9,926	323	3%	26,492	30,109	3,617	12%	125,954	125,954	-	-
Museum	7,014	53,298	46,284	87%	207,392	159,928	(47,463)	(30%)	644,816	644,816	-	-
Regulatory - Non Recoverab	-	44,838	44,838	100%	29,026	44,838	15,811	35%	112,094	112,094	-	-
Resource Consent Processin	79,119	74,672	(4,447)	(6%)	193,983	223,476	29,493	13%	937,153	937,153	-	-
Resource Planning/Policy	15,315	41,725	26,410	63%	70,983	125,175	54,192	43%	440,505	510,388	(69,883)	(16%)
Total	455,384	449,960	(5,424)	(1%)	1,251,994	1,272,780	20,786	2%	5,124,893	5,204,775	(79,883)	(2%)
	Monthly				YTD				Full Year Budget			
	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Net Surplus/(Deficit)	(51,827)	(58,111)	6,284	(11%)	219,182	296,608	(77,426)	(26%)	(114,251)	(176,290)	(62,039)	54%
	Monthly				YTD				Full Year Budget			
Capital Expenditure	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Animal Control	-	-	-	-	1,528	-	(1,528)	-	-	-	-	-
Building Regulations	-	-	-	-	-	-	-	-	34,140	34,140	-	-
Enviro & Com Dev Admin	-	-	-	-	-	-	-	-	-	-	-	-
Environmental Health	-	-	-	-	-	-	-	-	-	-	-	-
Health Licensing	-	-	-	-	-	-	-	-	-	-	-	-
Museum	-	-	-	-	-	-	-	-	-	-	-	-
Resource Consent Processin	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	1,528	-	(1,528)	-	34,140	34,140	-	-

For the period ending August 2017

Council Detail Report

	Environmental Services											
	Monthly				YTD				Full Year Budget			
Income	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Alcohol Licensing	15,220	19,684	(4,463)	(23%)	35,610	39,367	(3,757)	(10%)	236,677	236,677	-	-
Animal Control	73,568	59,122	14,446	24%	359,356	441,627	(82,270)	(19%)	636,957	636,957	-	-
Building Regulations	152,010	142,551	9,459	7%	299,010	285,102	13,908	5%	1,718,287	1,727,443	9,156	1%
Enviro & Com Dev Admin	20,766	20,125	641	3%	36,108	40,250	(4,142)	(10%)	232,814	241,502	8,688	4%
Environmental Health	10,734	9,417	1,318	14%	17,901	46,176	(28,275)	(61%)	149,283	149,283	-	-
Health Licensing	127	3,287	(3,160)	(96%)	127	6,573	(6,446)	(98%)	125,954	125,954	-	-
Museum	50,770	48,118	2,652	6%	111,942	96,236	15,706	16%	577,417	577,417	-	-
Regulatory - Non Recoverab	9,354	9,341	13	-	18,713	18,682	30	-	112,094	112,094	-	-
Resource Consent Processin	74,648	78,096	(3,448)	(4%)	141,441	156,192	(14,751)	(9%)	937,153	937,153	-	-
Resource Planning/Policy	23,701	23,667	33	-	47,411	47,334	77	-	284,005	284,005	-	-
Total	**430,899**	**413,407**	**17,492**	**4%**	**1,067,619**	**1,177,540**	**(109,920)**	**(9%)**	**5,010,641**	**5,028,485**	**17,844**	**-**
	Monthly				**YTD**				**Full Year Budget**			
Operating Expenditure	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Alcohol Licensing	19,451	20,895	1,445	7%	31,417	38,995	7,578	19%	229,145	229,145	-	-
Animal Control	77,643	63,162	(14,480)	(23%)	109,101	110,625	1,524	1%	610,820	610,820	-	-
Building Regulations	123,523	150,146	26,623	18%	183,991	279,346	95,355	34%	1,641,730	1,641,730	-	-
Enviro & Com Dev Admin	20,766	21,934	1,168	5%	36,108	39,920	3,811	10%	232,814	232,814	-	-
Environmental Health	9,602	11,693	2,091	18%	19,169	22,907	3,738	16%	149,862	159,862	(10,000)	(7%)
Health Licensing	11,115	11,475	360	3%	16,889	21,343	4,454	21%	125,954	125,954	-	-
Museum	89,270	54,638	(34,631)	(63%)	200,378	107,931	(92,447)	(86%)	644,816	644,816	-	-
Regulatory - Non Recoverab	29,026	-	(29,026)	-	29,026	-	(29,026)	-	112,094	112,094	-	-
Resource Consent Processin	69,441	78,094	8,653	11%	114,864	155,649	40,785	26%	937,153	937,153	-	-
Resource Planning/Policy	43,714	44,147	433	1%	55,667	85,872	30,205	35%	440,505	510,388	(69,883)	(16%)
Total	**493,550**	**456,185**	**(37,366)**	**(8%)**	**796,610**	**862,588**	**65,977**	**8%**	**5,124,892**	**5,204,775**	**(79,883)**	**(2%)**
	Monthly				**YTD**				**Full Year Budget**			
	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Net Surplus/(Deficit)	**(62,651)**	**(42,778)**	**(19,873)**	**46%**	**271,009**	**314,952**	**(43,943)**	**(14%)**	**(114,251)**	**(176,290)**	**(62,039)**	**54%**
	Monthly				**YTD**				**Full Year Budget**			
Capital Expenditure	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Animal Control	-	-	-	-	1,528	-	(1,528)	-	-	-	-	-
Building Regulations	-	-	-	-	-	-	-	-	34,140	34,140	-	-
Enviro & Com Dev Admin	-	-	-	-	-	-	-	-	-	-	-	-
Environmental Health	-	-	-	-	-	-	-	-	-	-	-	-
Health Licensing	-	-	-	-	-	-	-	-	-	-	-	-
Museum	-	-	-	-	-	-	-	-	-	-	-	-
Resource Consent Processin	-	-	-	-	-	-	-	-	-	-	-	-
Total	**-**	**-**	**-**	**-**	**1,528**	**-**	**(1,528)**	**-**	**34,140**	**34,140**	**-**	**-**

ENVIRONMENTAL SERVICES COMMENTARY

Overall September 2017 monthly income for the Environmental Services Group was 4% ($17,492) ahead of budget at $30,889 actual versus $413,407 budget.

Key features of this month's income were that most departments were ahead of budgeted income, most notably the two key income areas of Building Control which was 24% ahead of budget respectively.

Environmental Health income was also well ahead of budget (14%), but this is somewhat artificial as it reflects the timing of annual licensing processes.

Overall September 2017 monthly expenditure for the Environmental Services Group was 8% ($37,366) ahead of budget at $493,550 actual v $456,185 budget.

There have been a number of one-off factors which have led to expenditure being more than budgeted in this month; as follows:

- In the Animal Control area there have been one-off costs for the construction of a new shed for the Riverton pound
- Also in the Animal Control area, contractor costs of dogs and livestock were all created in September, giving a one-off expenditure "blip". However, these costs were all within overall annual budgets for these items
- Building Control incurred a number of one-off staff training costs for technical training during September, Such training is a necessary component for IANZ reaccreditation
- In the Environmental Health area, the annual invoice for Freedom Camping contractor costs was received in this month.

Overall Group YTD Summary as at end of September 2017 of the 2017/2018 financial year:

Overall Group YTD Income at the end of September 2017 for the 2017/2018 financial year is 9% ($109,920) below budget, at $1,067,619 actual versus $1,177,540 budget.

This is quite a significant amount below YTD income budget for the first quarter of the 2017/2018 financial year. It will be very important to closely monitor this trend moving forward for the rest of the 2017/2018 financial year.

This is largely a reflection of the current development climate in the Southland District where development activity, particularly larger scale activity, has been relatively subdued.

Overall Group YTD Expenditure at the end of September 2017 of the 2017/2018 financial year is 8% ($65,977) below budget at $796,610 actual versus $862,588 budget.

Hence, while Group YTD income has been well below budgeted YTD, reflecting current generally subdued development activity levels within the District; Group YTD expenditure is also under budget.

There is outstanding capital expenditure within the Group from the 2016/2017 financial year which has been carried forward to 2017/2018 relating to overdue vehicle renewals.

For the period ending September 2017

Council Detail Report

	Financial Services											
	Monthly				YTD				Full Year Budget			
Income	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Financial Services	201,159	208,708	(7,549)	(4%)	565,499	626,125	(60,626)	(10%)	2,570,541	2,570,541	-	-
Total	201,159	208,708	(7,549)	(4%)	565,499	626,125	(60,626)	(10%)	2,570,541	2,570,541	-	-
	Monthly				YTD				Full Year Budget			
Operating Expenditure	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Financial Services	184,873	148,184	(36,689)	(25%)	497,380	519,547	22,166	4%	2,284,124	2,284,124	-	-
Total	184,873	148,184	(36,689)	(25%)	497,380	519,547	22,166	4%	2,284,124	2,284,124	-	-
	Monthly				YTD				Full Year Budget			
	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Net Surplus/(Deficit)	16,287	60,525	(44,238)	(73%)	68,119	106,579	(38,460)	(36%)	286,417	286,417	-	-
	Monthly				YTD				Full Year Budget			
Capital Expenditure	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Financial Services	-	3,398	3,398	100%	5,000	10,195	5,195	51%	-	40,780	(40,780)	-
Total	-	3,398	3,398	100%	5,000	10,195	5,195	51%	-	40,780	(40,780)	-

FINANCIAL SERVICES COMMENTARY

Operating expenditure is 4% under budget for the year to date mainly due to timing and accrual discrepancies.

Insurance and valuation roll maintenance are over budget due to phasing of the budgets needing to be altered to reflect actual results ($73K). The correction to phasing will be completed for the October report. Audit fees were accrued at year end in relation to the audit to 30 June 2017. These have subsequently been reversed. However, the final audit account has not been received leading to a credit balance in this account ($72K). We expect to receive the final invoice in October or November. Additionally, legal fees are $33K over budget due to costs associated with unexpected legal proceedings currently in progress.

For the period ending September 2017

Council Detail Report

	Information Management											
	Monthly				YTD				Full Year Budget			
Income	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Information Management	154,459	149,479	4,980	3%	443,792	435,775	8,016	2%	1,793,809	1,793,809	-	-
Knowledge Management	(67,865)	68,781	(136,647)	(199%)	165,898	206,344	(40,446)	(20%)	825,375	825,375	-	-
Property & Spatial Services	97,066	33,709	63,357	188%	150,404	101,127	49,277	49%	404,509	404,509	-	-
Total	**183,660**	**251,969**	**(68,310)**	**(27%)**	**760,093**	**743,247**	**16,847**	**2%**	**3,023,693**	**3,023,693**	**-**	**-**
	Monthly				**YTD**				**Full Year Budget**			
Operating Expenditure	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Information Management	157,716	151,459	(6,257)	(4%)	456,430	455,039	(1,391)	-	1,868,421	1,868,421	-	-
Knowledge Management	53,334	58,333	4,999	9%	165,898	174,666	8,768	5%	719,946	719,946	-	-
Property & Spatial Services	25,262	30,096	4,834	16%	150,404	157,743	7,339	5%	404,509	476,314	(71,805)	(18%)
Total	**236,312**	**239,888**	**3,576**	**1%**	**772,731**	**787,448**	**14,717**	**2%**	**2,992,876**	**3,064,681**	**(71,805)**	**(2%)**
	Monthly				**YTD**				**Full Year Budget**			
	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Net Surplus/(Deficit)	**(52,652)**	**12,081**	**(64,734)**	**(536%)**	**(12,638)**	**(44,201)**	**31,563**	**(71%)**	**30,818**	**(40,987)**	**(71,805)**	**(233%)**
	Monthly				**YTD**				**Full Year Budget**			
Capital Expenditure	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Information Management	2,775	4,083	1,308	32%	52,010	12,250	(39,760)	(325%)	1,857,911	1,945,330	(87,419)	(5%)
Knowledge Management	109,314	108,000	(1,314)	(1%)	219,190	217,500	(1,690)	(1%)	137,847	571,629	(433,782)	(315%)
Total	**112,089**	**112,083**	**(6)**	**-**	**271,200**	**229,750**	**(41,450)**	**(18%)**	**1,995,758**	**2,516,959**	**(521,201)**	**(26%)**

INFORMATION MANAGEMENT COMMENTARY

Overall Income is 2% ($17K) over budget for the year-to-date
Overall Operating Expenditure is 2% ($15K) over budget for the year-to-date.
The year-to-date position 71% ($32K) under budget for the year-to-date.
Capital expenditure is 18% ($41k) under budget

Information Management

Income is 2% ($8K) over budget for the year-to-date.
Expenditure is 0% ($1K) over budget.
The net year-to-date position is $7K under budget.

Capital Work:
Core Systems / Business Improvement Project:

Work is continuing on the mapping and identification of existing processes that are used across Council. This work is being captured in an online tool called ProMapp.

Council officers have established a ProMapp user group which is being used to ensure that knowledge around the usage of ProMapp and recognising any issues that arise whilst undertaking this work as well as recognising the rewards of achieving successes.

The Business Improvement activity has been driven by a small team with a selection of ELT to provide Governance across the organisation to drive this initiative. The work so far has certainly been beneficial to the teams that have taken up the ProMapp challenge.

The Business Solutions team have also undertaken a number pieces of work around exposing corporate data to activity areas which is leading to a better understanding of corporate data and the flow of information.

This will be a key component moving forward with Core Systems Review via Application Capacity and Strategic Values.

Knowledge Management

Income is 24% ($40K) under budget
Expenditure is 5% ($9K) under budget year to date.
Capital Expenditure is 1% over budget year to date.

Capital Work:
Digitisation Project:

Focus for the digitisation project has moved from sending paper away to starting the setup and changes to the electronic world and how we will be using this new media.

Planning for the rollout of the Trapeze tool that will be the primary tool for how staff will interact with the new electronic files. The new tool will provide the end users – particularly the regulatory services teams the ability to 'stamp' and 'mark-up' the documents that are used for the various consenting processes – RMA, Building and LIMs.

The trapeze tool will also closely integrate with Council's document management software that will be the repository for this information.

Council will also have available a kiosk option in the Invercargill reception area for members of the public to be able access this information via the Public View software that was part of the project. This work is being done as a pilot to the wider requests that the Customer Support group will be aiming to rollout to the remaining Council sites around the District.

Expenditure to date includes the purchase of Nova software licence and setup of Nova for Council's requirements, project management, and costs associated with packing and transporting files to Power Business Services premises in Auckland and processing up to the end of August.

Council received an update status report at the August meeting.

Property and Spatial Services

Income is 33% ($49K) over budget.
Expenditure is 5% ($7K) under budget.

For the period ending September 2017

Council Detail Report

	Other Activities											
	Monthly				YTD				Full Year Budget			
Income	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Grant Allocation Committees	14,349	15,182	(833)	(5%)	56,410	56,378	32	-	309,644	309,644	-	-
Operating investments	139,298	114,888	24,410	21%	372,300	344,664	27,635	8%	1,097,412	1,097,412	-	-
Total	**153,647**	**130,070**	**23,577**	**18%**	**428,710**	**401,043**	**27,667**	**7%**	**1,407,056**	**1,407,056**	-	-
	Monthly				**YTD**				**Full Year Budget**			
Operating Expenditure	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Grant Allocation Committees	8,000	10,920	2,920	27%	9,826	26,450	16,624	63%	309,729	309,729	-	-
Operating investments	(95,635)	3,224	98,859	3067%	4,255	9,671	5,416	56%	1,045,882	1,045,882	-	-
Total	**(87,635)**	**14,143**	**101,779**	**720%**	**14,081**	**36,121**	**22,040**	**61%**	**1,355,611**	**1,355,611**	-	-
	Monthly				**YTD**				**Full Year Budget**			
	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Net Surplus/(Deficit)	**241,282**	**115,927**	**125,355**	**108%**	**414,628**	**364,922**	**49,707**	**14%**	**51,445**	**51,445**	-	-

OTHER ACTIVITIES COMMENTARY

Grant Allocation Committee

Year to date Income is on budget.

Year to date Expenditure is 63% ($17K) under budget. The first round of grants allocation will not occur until November.

Operating Investments

Income is $27K over budget year to date.

- Interest earned on operating investments is $126K over budget which is offset by $99k under budget for interest earned on internal loans. Surplus cash has been invested as it has not been needed for the distribution of internal loans.

Operating Expenditure is $5k under budget year to date due to lower bank charges.

For the period ending September 2017

Council Detail Report

	Services & Assets											
	Monthly				YTD				Full Year Budget			
Income	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Area Engineers	(66,497)	94,165	(160,662)	(171%)	252,860	282,495	(29,635)	(10%)	1,139,252	1,163,634	24,382	2%
Around Mountains Cycle Trail	2,376	2,879	(503)	(17%)	12,015	8,637	3,378	39%	34,549	34,549	-	-
Council Property	76,660	82,884	(6,225)	(8%)	249,348	248,653	694	-	998,411	998,411	-	-
District Reserves	17,805	20,608	(2,803)	(14%)	53,412	61,823	(8,412)	(14%)	247,294	247,294	-	-
District Sewerage	312,777	310,817	1,960	1%	931,534	932,450	(916)	-	3,808,992	3,808,992	-	-
District Water	314,696	336,635	(21,939)	(7%)	816,712	860,729	(44,016)	(5%)	3,446,193	3,446,193	-	-
Engineering Administration	36,620	43,470	(6,851)	(16%)	114,168	130,411	(16,243)	(12%)	512,171	521,644	9,473	2%
Engineering Consultants	(73,776)	65,572	(139,348)	(213%)	202,346	196,717	5,629	3%	786,866	786,866	-	-
Forestry	-	-	-	-	1,024,286	387,490	636,796	164%	3,874,899	3,874,899	-	-
Property Administration	44,490	46,678	(2,188)	(5%)	133,469	140,033	(6,563)	(5%)	560,130	560,130	-	-
Public Conveniences	59,473	59,724	(251)	-	175,118	179,173	(4,055)	(2%)	716,690	716,690	-	-
Road Safety Com. Advisor	-	3,042	(3,042)	(100%)	-	9,127	(9,127)	(100%)	36,520	36,520	-	-
Waste Management	336,833	332,390	4,443	1%	1,065,041	1,019,171	45,870	5%	4,081,861	4,081,861	-	-
Water Services	93,730	90,789	2,941	3%	271,964	272,367	(403)	-	1,095,783	1,095,783	-	-
Work Schemes (CTF)	15,284	24,603	(9,319)	(38%)	39,790	73,808	(34,018)	(46%)	295,231	295,231	-	-
Total	**1,170,469**	**1,514,256**	**(343,787)**	**(23%)**	**5,342,062**	**4,803,083**	**538,979**	**11%**	**21,634,842**	**21,668,697**	**33,855**	-
	Monthly				**YTD**				**Full Year Budget**			
Operating Expenditure	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Area Engineers	79,568	88,539	8,970	10%	252,860	267,428	14,568	5%	1,130,127	1,130,127	-	-
Around Mountains Cycle Trail	14,581	2,879	(11,702)	(406%)	19,484	8,637	(10,847)	(126%)	34,549	34,549	-	-
Council Property	94,210	75,087	(19,123)	(25%)	420,530	412,986	(7,544)	(2%)	1,088,765	1,088,765	-	-
District Reserves	31,369	20,893	(10,476)	(50%)	57,385	62,979	5,595	9%	251,020	251,020	-	-
District Sewerage	272,390	366,087	93,697	26%	1,038,753	1,166,072	127,319	11%	3,579,124	3,636,013	(56,889)	(2%)
District Water	194,011	328,534	134,522	41%	878,583	1,052,371	173,787	17%	3,130,750	3,130,750	-	-
Engineering Administration	36,620	40,535	3,916	10%	114,168	122,212	8,045	7%	512,171	512,171	-	-
Engineering Consultants	(73,776)	65,572	139,348	213%	202,346	196,716	(5,629)	(3%)	786,866	786,866	-	-
Forestry	40,724	54,800	14,075	26%	545,696	407,044	(138,651)	(34%)	2,693,302	2,693,302	-	-
Property Administration	46,489	44,007	(2,481)	(6%)	130,430	132,524	2,094	2%	560,130	560,130	-	-
Public Conveniences	60,173	52,045	(8,128)	(16%)	180,622	215,085	34,463	16%	683,488	683,488	-	-
Road Safety Com. Advisor	41,495	3,043	(38,452)	(1264%)	70,736	9,304	(61,432)	(660%)	37,889	37,889	-	-
Waste Management	438,885	336,933	(101,952)	(30%)	981,979	1,023,867	41,888	4%	4,061,882	4,061,882	-	-
Water Services	347,106	110,694	(236,412)	(214%)	568,499	369,817	(198,682)	(54%)	1,263,799	1,263,799	-	-
Work Schemes (CTF)	19,259	21,460	2,200	10%	60,428	65,711	5,284	8%	274,469	274,469	-	-
Total	**1,643,105**	**1,611,108**	**(31,996)**	**(2%)**	**5,522,497**	**5,512,754**	**(9,743)**	-	**20,088,332**	**20,145,221**	**(56,889)**	-
	Monthly				**YTD**				**Full Year Budget**			
	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Net Surplus/(Deficit)	**(472,635)**	**(96,852)**	**(375,783)**	**388%**	**(180,435)**	**(709,671)**	**529,236**	**(75%)**	**1,546,510**	**1,523,476**	**(23,034)**	**(1%)**

Item 8.1 Attachment B

SOUTHLAND DISTRICT COUNCIL

For the period ending September 2017

Council Detail Report

	Monthly				YTD				Full Year Budget			
Capital Expenditure	Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var %	Budget	Projection	Variance	Var %
Area Engineers	-	-	-	-	-	-	-	-	41,227	81,554	(40,327)	(98%)
Around Mountains Cycle Trail	(605)	-	605	-	13,550	-	(13,550)	-	-	-	-	-
Council Property	-	211,792	211,792	100%	-	635,375	635,375	100%	2,541,499	2,541,499	-	-
District Reserves	-	-	-	-	2,750	-	(2,750)	-	-	-	-	-
District Sewerage	118,421	232,456	114,035	49%	118,053	697,368	579,315	83%	1,904,827	2,789,472	(884,645)	(46%)
District Water	128,714	375,003	246,289	66%	146,294	1,125,008	978,713	87%	3,501,636	4,500,030	(998,394)	(29%)
Engineering Administration	-	3,403	3,403	100%	-	10,208	10,208	100%	-	40,833	(40,833)	-
Engineering Consultants	-	-	-	-	-	-	-	-	-	-	-	-
Forestry	-	-	-	-	-	-	-	-	-	-	-	-
Property Administration	-	-	-	-	-	-	-	-	-	-	-	-
Public Conveniences	-	12,768	12,768	100%	-	38,304	38,304	100%	153,216	153,216	-	-
Road Safety Com. Advisor	-	-	-	-	-	-	-	-	-	-	-	-
Waste Management	4,125	-	(4,125)	-	7,572	-	(7,572)	-	-	-	-	-
Water Services	-	-	-	-	-	-	-	-	-	-	-	-
Work Schemes (CTF)	-	-	-	-	-	-	-	-	-	-	-	-
Total	250,655	835,421	584,766	70%	288,220	2,506,262	2,218,043	89%	8,142,405	10,106,604	(1,964,199)	(24%)

SERVICES AND ASSETS COMMENTARY

Overall Financial Performance

The overall variance across Services and Assets for the period ending 30 September 2017 is (1%) deficit.

Income

Forestry activity during the 1st Quarter has included finishing off the harvesting in Ohai (an overlap of last year's program) this has resulted in a $637K net surplus. Other areas with negative variances are Community Engineers ($29K), District Water ($44K) and Work Schemes ($34K). Variances are generally reduced recoveries Overall $539K over budget of $4,803K.

Operating Expenditure

Expenditure is $10K over budget of $5,512K at the end of September. The significant variations in operating expenditure relate to:

- Forestry is $139K over budget, this reflects the harvesting at Ohai.
- Water Services is $199K over budget, due to timing of Journal for 10/01 Contract. This will be corrected next month
- District Sewerage and Water is $301K under budget mainly due to an accounting timing issue.

Capital Expenditure

Council Property, District Water and District Sewerage are all significantly under budget at the end of September.

Included in Council Property is a project relating to the Invercargill Office. This project is currently on hold and will be reduced during the first round of forecasting. The only expected costs this year are to engage an external party to provide an analysis of options available.

For District Water limited physical construction has occurred to the end of September. Significant projects for the year include:

- Winton Water Mains renewal ($1.6M) – contract let for this project with Contract awarded to Fulton Hogan.
- Te Anau lateral replacements ($0.4M) – this contract has been awarded and work will commence at the end of October.
- Eastern Bush water supply upgrade ($1.2M) – the consent process is currently being worked through with contract award delayed pending outcome of Havelock North inquiry to determine implications for the design of planned upgrade..

District Sewerage also has limited physical construction has occurred to the end of September. Significant projects for the year include:

- Winton desludging ($500K) – at this stage it is not known if the contractor will be able to re-establish during the year.
- Te Anau oxidation pond improvement including desludging ($622K) - at this stage it is not known if the contractor will be able to re-establish during the year.
- Aerators for the Te Anau and Winton wastewater ponds ($400K). Aerators ordered and en- route to New Zealand

For the period ending September 2017

Council Roading Report

		Roading											
		Monthly				YTD				Full Year Budget			
		Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var%	Budget	Projection	Variance	Var %
Income													
Contributions		-	-	-	-	-	-	-	-	-	-	-	-
Grants		1,102,301	1,497,283	(394,982)	(26%)	2,955,553	4,491,849	(1,536,296)	(34%)	17,253,030	17,967,395	714,365	4%
Internal Income		-	438	(438)	(100%)	35,555	42,555	(6,999)	(16%)	176,179	176,179	-	-
Other Income		77,622	41,531	36,091	87%	150,256	124,593	25,663	21%	500,873	509,260	8,387	2%
Rates		1,126,966	1,125,668	1,298	-	3,344,823	3,335,765	9,058	-	13,466,778	13,466,778	-	-
User Charges and Fees		-	2,655	(2,655)	(100%)	-	7,966	(7,966)	(100%)	31,864	31,864	-	-
Total		**2,306,890**	**2,667,576**	**(360,686)**	**(14%)**	**6,486,187**	**8,002,727**	**(1,516,540)**	**(19%)**	**31,428,724**	**32,151,477**	**722,752**	**2%**
Direct Expenditure													
Advertising		-	66	66	100%	-	197	197	100%	789	789	-	-
Communications		2,816	664	(2,152)	(324%)	4,469	1,993	(2,476)	(124%)	7,972	7,972	-	-
Conferences and courses		480	1,360	880	65%	1,000	4,081	3,081	75%	16,322	16,322	-	-
Electricity		5,068	3,000	(2,068)	(69%)	9,659	9,000	(659)	(7%)	36,000	36,000	-	-
Financial Expenses		-	-	-	-	-	-	-	-	-	-	-	-
Grants		-	-	-	-	30,526	-	(30,526)	-	-	-	-	-
Insurance		-	-	-	-	1,723	1,877	154	8%	1,877	1,877	-	-
Other Expenditure		(35,432)	5,561	40,993	737%	(125,764)	16,683	142,447	854%	66,733	66,733	-	-
Postage and Stationery		57	88	30	35%	1,059	263	(796)	(303%)	1,052	1,052	-	-
Professional Services		-	3,067	3,067	100%	10,450	9,202	(1,248)	(14%)	36,808	36,808	-	-
Rates		-	196	196	100%	-	589	589	100%	2,355	2,355	-	-
Repairs and Maintenance	Emergency Reinstatement	-	22,885	22,885	100%	-	68,655	68,655	100%	274,621	274,621	-	-
	Environmental Maintenance	63,802	90,951	27,149	30%	398,578	272,852	(125,727)	(46%)	1,091,406	1,091,406	-	-
	Level Crossing Warning Devices	-	2,591	2,591	100%	566	7,772	7,206	93%	31,089	31,089	-	-
	Maint - General	-	438	438	100%	1,000	1,315	315	24%	5,258	5,258	-	-
	Maint - Unsealed Roads	-	-	-	-	-	-	-	-	-	-	-	-
	Network and Asset Management	176,335	180,596	4,261	2%	589,801	541,787	(48,014)	(9%)	2,167,149	2,167,149	-	-
	Operating Costs	-	-	-	-	(120,357)	-	120,357	-	-	-	-	-

Item 8.1 Attachment B

		Roading											
		Monthly				YTD				Full Year Budget			
		Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var%	Budget	Projection	Variance	Var %
Repairs and Maintenance	Routine Drainage Maintenance	70,119	79,335	9,217	12%	249,046	238,006	(11,040)	(5%)	952,024	952,024	-	-
	Sealed Pavement Maintenance	123,691	264,064	140,373	53%	492,426	792,193	299,767	38%	3,168,772	3,168,772	-	-
	Spraying	-	3,188	3,188	100%	-	9,565	9,565	100%	38,258	38,258	-	-
	Stock Underpasses Minor Improv	-	6,477	6,477	100%	-	19,431	19,431	100%	77,723	77,723	-	-
	Street Lighting Transit	-	2,292	2,292	100%	6,496	6,875	379	6%	27,500	27,500	-	-
	Structures Maintenance	60,156	14,681	(45,475)	(310%)	122,525	44,043	(78,481)	(178%)	176,173	176,173	-	-
	Traffic Services Maintenance	51,527	35,654	(15,873)	(45%)	119,992	106,963	(13,029)	(12%)	427,852	427,852	-	-
	Unsealed Pavement Maintenance	195,956	202,903	6,947	3%	677,136	608,709	(68,427)	(11%)	2,434,837	2,434,837	-	-
	Total	741,587	906,055	164,468	18%	2,537,209	2,718,166	180,957	7%	10,872,662	10,872,662	-	-
Staff Costs		58,059	44,102	(13,957)	(32%)	151,184	132,306	(18,878)	(14%)	570,572	570,572	-	-
Travel and Accommodation		995	996	1	-	1,483	2,989	1,506	50%	11,954	11,954	-	-
Vehicle Expenses		1,267	81	(1,186)	(1465%)	3,585	243	(3,343)	(1377%)	971	971	-	-
Total		**774,897**	**965,237**	**190,340**	**20%**	**2,626,584**	**2,897,587**	**271,003**	**9%**	**11,626,067**	**11,626,067**	-	-
Indirect Expenditure													
Depreciation (Funded)		1,283,703	1,284,600	897	-	3,851,108	3,853,800	2,692	-	8,155,956	8,155,956	-	-
Internal Expenses		73,465	82,374	8,909	11%	236,783	263,075	26,292	10%	1,008,718	1,008,718	-	-
Total		**1,357,168**	**1,366,975**	**9,807**	**1%**	**4,087,892**	**4,116,875**	**28,984**	**1%**	**9,164,674**	**9,164,674**	-	-
Net Surplus/(Deficit)		**174,825**	**335,364**	**(160,539)**	**(48%)**	**(228,289)**	**988,265**	**(1,216,554)**	**(123%)**	**10,637,983**	**11,360,735**	**722,752**	**7%**
Capital Expenditure													
Capital Expenditure	Assoc Imprvmnts - Acq Demand	-	-	-	-	-	-	-	-	-	-	-	-
	Assoc Imprvmnts - Acq LOS	-	-	-	-	-	-	-	-	-	-	-	-
	Bridges - Renewal	22,351	77,927	55,576	71%	595,910	233,780	(362,130)	(155%)	935,120	935,120	-	-
	Bridges - Acquisition LOS	-	-	-	-	-	-	-	-	-	-	-	-
	Concrete Kerbs - Acquis LOS	-	-	-	-	-	-	-	-	-	-	-	-
	Culverts - Acquisition - LOS	-	-	-	-	-	-	-	-	-	-	-	-
	Culverts - Renewal	-	-	-	-	-	-	-	-	-	-	-	-
	Drainage Renewals - Acq Demand	-	-	-	-	-	-	-	-	-	-	-	-
	Drainage Renewals - Acq LOS	37,908	93,482	55,574	59%	86,645	280,446	193,802	69%	1,121,785	1,121,785	-	-
	Drainage Renewals - Renewal	34,587	17,272	(17,316)	(100%)	118,803	51,815	(66,988)	(129%)	207,262	207,262	-	-
	Footpaths - Acquisition LOS	-	-	-	-	-	-	-	-	-	-	-	-
	Furniture/Fitting - Acq LOS	-	-	-	-	-	-	-	-	-	-	-	-
	Improvements - Acq LOS	-	-	-	-	-	-	-	-	-	-	-	-

		Roading											
		Monthly				YTD				Full Year Budget			
		Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var%	Budget	Projection	Variance	Var %
Capital Expenditure	Improvements - Renewals	-	-	-	-	-	-	-	-	-	-	-	-
	Land - Acquisition LOS	-	-	-	-	-	-	-	-	-	-	-	-
	Minor Improvements Acq LOS	5,905	225,694	219,790	97%	33,275	677,083	643,807	95%	2,059,917	2,708,331	(648,414)	(31%)
	Minor Improvements Demand	-	-	-	-	-	-	-	-	-	-	-	-
	Minor Improvements Renewals	170,356	-	(170,356)	-	741,509	-	(741,509)	-	-	-	-	-
	Other Equip - Acq LOS	-	-	-	-	-	-	-	-	-	-	-	-
	Pavement Rehab - Acq LOS	-	33,367	33,367	100%	-	100,100	100,100	100%	400,401	400,401	-	-
	Pavement Rehab - Renewal	134,295	329,181	194,885	59%	136,400	987,542	851,142	86%	3,950,167	3,950,167	-	-
	Preventive Maint - Acq LOS	-	-	-	-	-	-	-	-	-	-	-	-
	Preventive Maint - Renewals	-	21,590	21,590	100%	-	64,769	64,769	100%	259,077	259,077	-	-
	Road Reconstruction	-	-	-	-	-	-	-	-	-	-	-	-
	Road Reserve - Acquis LOS	-	-	-	-	-	-	-	-	-	-	-	-
	Seal Rd Resurface - Acq Demand	-	-	-	-	-	-	-	-	-	-	-	-
	Seal Rd Resurface - Acq LOS	490,700	503,726	13,026	3%	849,653	1,511,179	661,527	44%	4,150,000	6,044,717	(1,894,717)	(46%)
	Seal Rd Resurface - Renewal	10,678	396,110	385,432	97%	(17,556)	1,188,329	1,205,884	101%	4,753,314	4,753,314	-	-
	Sealed Roads - Acq LOS	-	-	-	-	-	-	-	-	-	-	-	-
	Sealed Roads - Acquis Demand	-	-	-	-	-	-	-	-	-	-	-	-
	Sealed Roads - Renewals	-	-	-	-	-	-	-	-	-	-	-	-
	SI Coastal Protection - LOS	-	-	-	-	-	-	-	-	-	-	-	-
	SI Storm Damage - Renewal	-	-	-	-	-	-	-	-	-	-	-	-
	Signs - Acquisition Demand	-	-	-	-	-	-	-	-	-	-	-	-
	Signs - Acquisition LOS	-	-	-	-	-	-	-	-	-	-	-	-
	Stormwater - Acquisition LOS	-	-	-	-	-	-	-	-	-	-	-	-
	Street Lighting - Acquis LOS	-	-	-	-	-	-	-	-	-	-	-	-
	Structure Component - Acq Dem	-	-	-	-	-	-	-	-	-	-	-	-
	Structure Component - Acq LOS	-	-	-	-	-	-	-	-	-	-	-	-
	Structure Component - Renewal	9,651	18,993	9,343	49%	6,515	56,980	50,465	89%	227,920	227,920	-	-
	Traffic Services - Acq LOS	179	80,188	80,009	100%	7,359	240,564	233,205	97%	962,256	962,256	-	-
	Traffic Services - Renewal	33,593	73,005	39,412	54%	169,090	219,014	49,924	23%	876,054	876,054	-	-
	Unsealed Rd Metal - Acq LOS	-	-	-	-	-	-	-	-	-	-	-	-
	Unsealed Rd Metal - Renewal	216,392	174,510	(41,881)	(24%)	587,145	523,531	(63,613)	(12%)	2,094,125	2,094,125	-	-
	Unsealed Roads - Acquis LOS	1,073	-	(1,073)	-	1,073	-	(1,073)	-	-	-	-	-
	Vehicles - Acquisition LOS	-	-	-	-	-	-	-	-	-	-	-	-
	Vehicles - Renewal	-	-	-	-	-	-	-	-	36,111	73,514	(37,403)	(104%)

Item 8.1 Attachment B

		Roading											
		Monthly				YTD				Full Year Budget			
		Actual	Budget	Variance	Var %	Actual	Budget	Variance	Var%	Budget	Projection	Variance	Var %
Capital Expenditure	WIP - Roading	-	-	-	-	-	-	-	-	-	-	-	-
	Total	1,167,667	2,045,044	877,377	43%	3,315,819	6,135,132	2,819,313	46%	22,033,509	24,614,043	(2,580,534)	(12%)
Total		1,167,667	2,045,044	877,377	43%	3,315,819	6,135,132	2,819,313	46%	22,033,509	24,614,043	(2,580,534)	(12%)

TRANSPORT COMMENTARY

Operating Income

YTD Income is $6.5M versus a Budget of $8M with a variance of $1.5M or 18.75%. The variance is predominantly due to the timing of capital expenditure ($2.8M).

Direct Expenditure

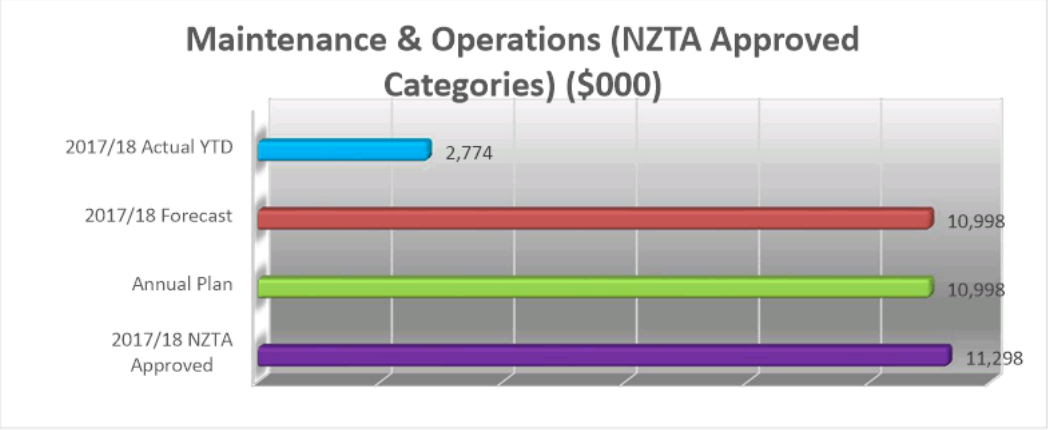
YTD Direct Expenditure is $2.63M versus a Budget of $2.90M with a variance of $271K. This is related to the timing of various works and those being weather dependent. Special Purpose Roads Business Unit is tracking $45K under budget.

Capital Expenditure

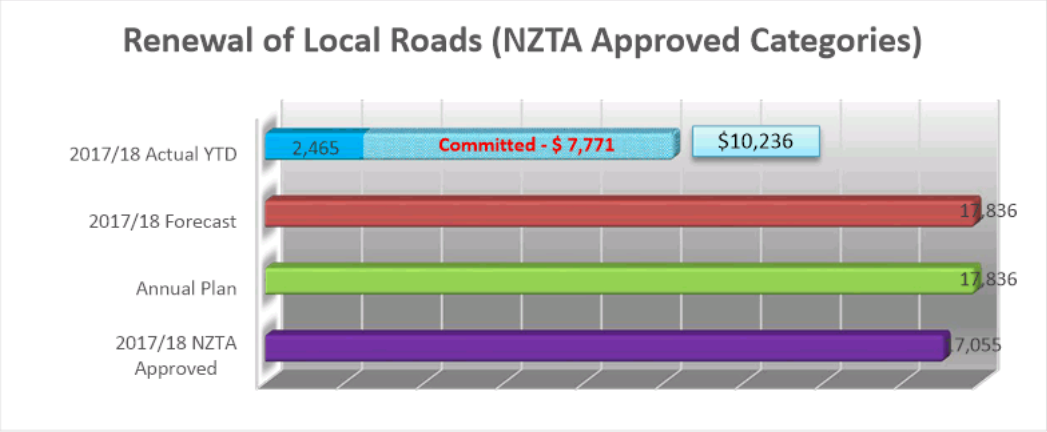
YTD Capital Expenditure is $3.32M versus a Budget of $6.14M with a variance of ($2.82M). The variance is predominately due to the timing of Capital Expenditure in relation to seasonality of programmed works.

NZTA Performance

The below information includes the main business activity for Council (excluding the Alternative Coastal Route Seal Extension and other Business Units that are fully funded by NZTA).



Financial Tracking vs Plans (Maintenance)			
YTD	Forecast	Annual Plan	NZTA Approved
25.22%	25.00%	25.00%	24.55%



Financial Tracking vs Plans (Capital)			
YTD	Forecast	Annual Plan	NZTA Approved
13.82%	25.00%	25.00%	14.45%

NZTA Commentary

Maintenance is slightly over against budget due to a cold start to the financial year with Ice Gritting for the Central Alliance $55K over budget for the year. Logging has caused issues for the Central Alliance with Granity and Pourakino Roads requiring extensive repairs this activity over budget for the year. The Coastal Route is in need of repairs due to the heavy traffic load currently interventions have cost approx. $30K with an additional $30K worth of work identified. Being early in financial year it is expected that the Alliance will manage the total budget to remain on track.

Capital Expenditure is tracking below budget, currently the Strategic Roading team have $8.5M of projects already tendered with a major focus on planning and designing the remaining capital works for 2017/18. At the time of writing the LED project is being put forward at a meeting in Wellington for final NZTA approval.

Other Commentary

Currently the Alternative Coastal Route Seal Extension project slightly behind schedule due to inclement weather. Aggregate production is behind schedule as well as Earthworks and Drainage on the main route, Sub base on Slope Point is ahead of schedule by 25 days.

Special Purpose Roads are currently under budget due to no invoices being received from NZTA. This Business Unit is 100% funded from NZTA this has no overall impact on SDC. The Lower Hollyford Road has required no emergency works this year with no preventative maintenance spent the Chaslands Highway.

Transit Recoveries are expected to be on budget at year end, this Business Unit is also 100% funded by NZTA this has no overall impact on SDC.