



Wastewater

Asset Management Plan 2021-2031



TE KAUNIHERA Ā ROHE O
WHAKAAHURANGI
STRATFORD
DISTRICT COUNCIL

Long Term Plan 2021-31

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**The Wastewater
Asset Management Plan
(WWAMP)**

2021-2031

Contents

EXECUTIVE SUMMARY	6
1.0: INTRODUCTION	17
1.1. PURPOSE OF THE PLAN	18
1.2. THE STRATFORD DISTRICT.....	18
1.3. OUR MISSION, VISION AND VALUES.....	21
1.4. THE WASTEWATER ACTIVITY	23
1.5. THE IMPORTANCE OF THE WASTEWATER ACTIVITY.....	23
1.6. OUR PARTNERS, CUSTOMERS AND KEY STAKEHOLDERS	24
2.0: LEGISLATIVE AND STRATEGIC CONTEXT	26
2.1. OVERVIEW.....	27
2.2. NATIONAL CONTEXT.....	27
2.3. REGIONAL CONTEXT	33
2.4. DISTRICT CONTEXT	33
3.0: ASSET INFORMATION	37
3.1. ASSETS OVERVIEW.....	38
3.2. ASSET VALUATION	38
3.3. USEFUL LIFE.....	41
3.4. ASSET INFORMATION SYSTEM	41
3.5. THE WASTEWATER INFRASTRUCTURE ASSETS.....	41
3.6. DRAINAGE CATCHMENTS	41
3.7. ASSET MANAGEMENT MATURITY ASSESSMENT.....	42
3.8. ASSESSMENT OF ASSET CONDITION	44
3.9. DATA ACCURACY AND CONFIDENCE.....	46
3.10. IMPROVEMENT PLAN	48
4.0: FUTURE GROWTH AND DEMAND	50
4.1. OVERVIEW.....	51
4.2. DEMAND FORECASTING.....	51
4.3. DEMAND DRIVERS AND IMPACTS.....	51
4.4. IMPROVEMENT PLAN	57
5.0: LEVELS OF SERVICE PERFORMANCE	59
5.1. OVERVIEW.....	60
5.2. LEVEL OF SERVICE DEVELOPMENT/REVIEW PROCESS	60
5.3. PERFORMANCE MONITORING AND REPORTING.....	61
5.4. CURRENT PERFORMANCE.....	61
5.5. DESIRED PERFORMANCE	63

5.6.	IMPROVEMENT PLAN	64
6.0:	STRATEGIC ASSESSMENT	67
6.1.	OVERVIEW.....	68
6.2.	OUR BUSINESS CASE	68
6.3.	OUR PROBLEM STATEMENTS.....	68
6.4.	OUR BENEFIT STATEMENTS.....	70
7.0:	LIFECYCLE MANAGEMENT.....	73
7.	74
7.1.	OVERVIEW.....	74
7.2.	PROCUREMENT POLICY	74
7.3.	MANAGEMENT STRATEGIES.....	75
7.4.	CONTRACTUAL ARRANGEMENTS.....	75
7.5.	PROGRAMME BUSINESS CASE.....	76
7.6.	DISPOSAL STRATEGY	83
7.7.	IMPROVEMENT PLAN.....	84
8.0:	RISK MANAGEMENT	86
8.1.	OVERVIEW.....	87
8.2.	RISK MANAGEMENT STRATEGY	87
8.3.	RISK ASSESSMENT PROCESS	88
8.4.	POTENTIAL RISKS.....	89
8.5.	TOP TEN RISKS FOR THE WASTEWATER ASSETS AND ACTIVITY	89
8.6.	RISK RESPONSE	91
8.7.	SIGNIFICANT ADVERSE EFFECTS	92
8.8.	CRITICALITY	93
8.9.	EMERGENCY RESPONSE	96
8.10.	RISK INSURANCE	98
8.11.	PUBLIC HEALTH.....	99
8.12.	HEALTH AND SAFETY	99
8.13.	IMPROVEMENT PLAN.....	100
9.0:	INVESTMENT FUNDING STRATEGY	102
9.1.	OVERVIEW.....	103
9.2.	FINANCIAL STANDARDS.....	103
9.3.	FUNDING AND FINANCIAL POLICIES.....	103
9.4.	FUNDING OUR INVESTMENT STRATEGY	104
9.5.	RELIABILITY OF OUR INVESTMENT STRATEGY	105
9.6.	FINANCIAL STATEMENTS AND PROJECTIONS	106
10.0:	ASSET MANAGEMENT PRACTICES AND IMPROVEMENT PLAN	111

10.1	OVERVIEW.....	112
10.2	ASSET MANAGEMENT PRACTICES.....	112
10.3	ASSET MANAGEMENT IMPROVEMENT PLAN.....	115
APPENDICES		118
APPENDIX 1 - WASTEWATER RISK ASSESSMENT		119
APPENDIX 2 - WASTEWATER OPERATIONAL DOCUMENTS		129

FIGURES

Figure 1 - The Stratford District 2020.....	20
Figure 2 – The Executive Management Team.....	22
Figure 3 – The Assets Department.....	22
Figure 4 – Legislative and Strategic Context (WWAMP).....	32
Figure 5 – Wastewater Area of Benefit in Stratford as at 01 July 2020.....	39
Figure 6: Wastewater Condition Assessment - Critical vs Non-Critical Assets.....	45
Figure 7: Wastewater Condition Assessment – Overall.....	46
Figure 8 - Stratford District Infometrics projection of population change.....	52
Figure 9 - Stratford District's Population Age Structure.....	53
Figure 10 - Components of Population Change.....	53
Figure 11 – Current Population Geographic Distribution.....	53
Figure 12 GDP Growth 2005-2031.....	55
Figure 13 - Employment Levels in the Region.....	55
Figure 14 - Employment Forecast for Stratford.....	55
Figure 15 - Levels of Service Review Process.....	60
Figure 16 - Lifecycle Asset Management.....	74
Figure 17 - Wastewater Asset Management Strategies.....	75
Figure 18 - Wastewater Operating Expenditure.....	78
Figure 19 - Wastewater Renewal/Replacement History.....	79
Figure 20 - 10-year Replacement Profile.....	81
Figure 21 - Wastewater Levels of Service Improvements.....	82
Figure 22 - Risk Management Process.....	88
Figure 23 - The Risk Matrix (Source: Council's Vault system).....	88
Figure 24 - Incident Response Plan.....	97
Figure 25 - Asset Insurance Valuations.....	98
Figure 26 - All Assets Capital Investment Funding Strategy.....	104
Figure 27 - Wastewater Expenditure - Capital vs Operating Expenditure.....	105
Figure 28 – Wastewater Capital Investment Split – Level of Service vs Replacement.....	105
Figure 29 - Capital Expenditure by Activity - All Assets.....	107
Figure 30 - 10 Year Capital Expenditure Budget - Wastewater.....	109
Figure 31 - Asset Management Improvement Process.....	112
Figure 32 - Asset Management Plan Development Process.....	114
Figure 33 - Asset Management System Maturity Index.....	114

TABLES

Table 1- Wastewater Activity contribution to Community Outcomes.....	23
Table 2 – Partners, Customers and Stakeholders.....	24
Table 3 - District Strategic Drivers.....	34
Table 4 –Wastewater Asset Valuation Summary –Infrastructure Associates Ltd Asset Valuation Report as at 1 July 2018.....	40
Table 5 - Pump Stations and Catchment Discharge Areas.....	42
Table 6: 3-Waters Asset Management Maturity Index Assessment.....	42
Table 7 - Condition Grading System.....	45
Table 8 - Inspection Data Management Process.....	46
Table 9 - Data Confidence Grading System.....	47
Table 10: Asset Data Grading by Asset Group.....	47
Table 12 - Future Demands Improvement Plan.....	57
Table 13- DIA and Internal / Other Performance Measures.....	62
Table 14 - Performance Rating Index.....	64
Table 15 - Performance Measures.....	65
Table 16 – Problems, Projects and Benefit Statements.....	70
Table 17 –Identified Projects and Performance Measures.....	77
Table 18 - Planned Operation and Maintenance Works.....	78
Table 19 - Planned Renewal /Replacement Works.....	79
Table 20 - Planned Level of Service Improvement Works.....	82
Table 21 - Improvement Plan.....	84

Table 22 - Risk Response Strategies and Definitions.....	92
Table 23 - Activity Level Criticality Criteria.....	93
Table 24 - Activity Level Criticality Rating and Examples.....	93
Table 25 - Corporate Level Criticality.....	94
Table 26 - List of Critical Wastewater Assets.....	95
Table 27 - Risk Management Improvement Plan.....	100
Table 28 – All Asset Capital Expenditure Projection.....	106
Table 29 - Wastewater Activity Expenditure and Funding Projection.....	108
Table 30 - Asset Management Improvement Plan.....	115

Executive Summary

The Stratford District

The Stratford District is a land locked area encompassing 2170km² located in the heart of Taranaki. The district is adjacent to the New Plymouth and South Taranaki districts in the Taranaki region and the Ruapehu and Whanganui Districts in the Horizons Regional Council. Within the district there are four distinct geographical areas:

- The alpine and bush environment of Egmont National Park;
- The ring plain around Mt Taranaki;
- Hill country located between the ring plain and the eastern hill country; and
- Eastern hill country to the boundary with Ruapehu District Council.

The district's rural landscape supports large farming, forestry and Department of Conservation reserves. Stratford is a growing tourist destination owing to key attractions such as the Egmont National Park, the Manganui Ski Field, Forgotten World Highway (SH43), Dawson and Mt Damper Falls. Three main townships make up the Stratford District: Stratford; Midhirst and Toko.

The Wastewater Asset Management Plan

The Wastewater Asset Management Plan (WWAMP) describes the planning, engineering, financial and technical strategies and practices employed in the delivery of the Stratford District Council ('the Council')'s obligations for the provision of wastewater services at the agreed levels to the community. Activities include the operation, maintenance and development of collection, treatment and the distribution system of the wastewater service.

Based on forecasted growth and demand for service, the WWAMP sets out how the wastewater service will be managed over its lifecycle to ensure the optimal delivery of the service with the financial constraints set by the Council in its Long Term Plan (LTP) 2021-2031 and the Infrastructure Strategy (IS) 2021-2051. The levels of service to be delivered are as per the priorities and performance measures set by both the Council priorities; Regional Council resource consent conditions and Central Government initiatives and performance measures.

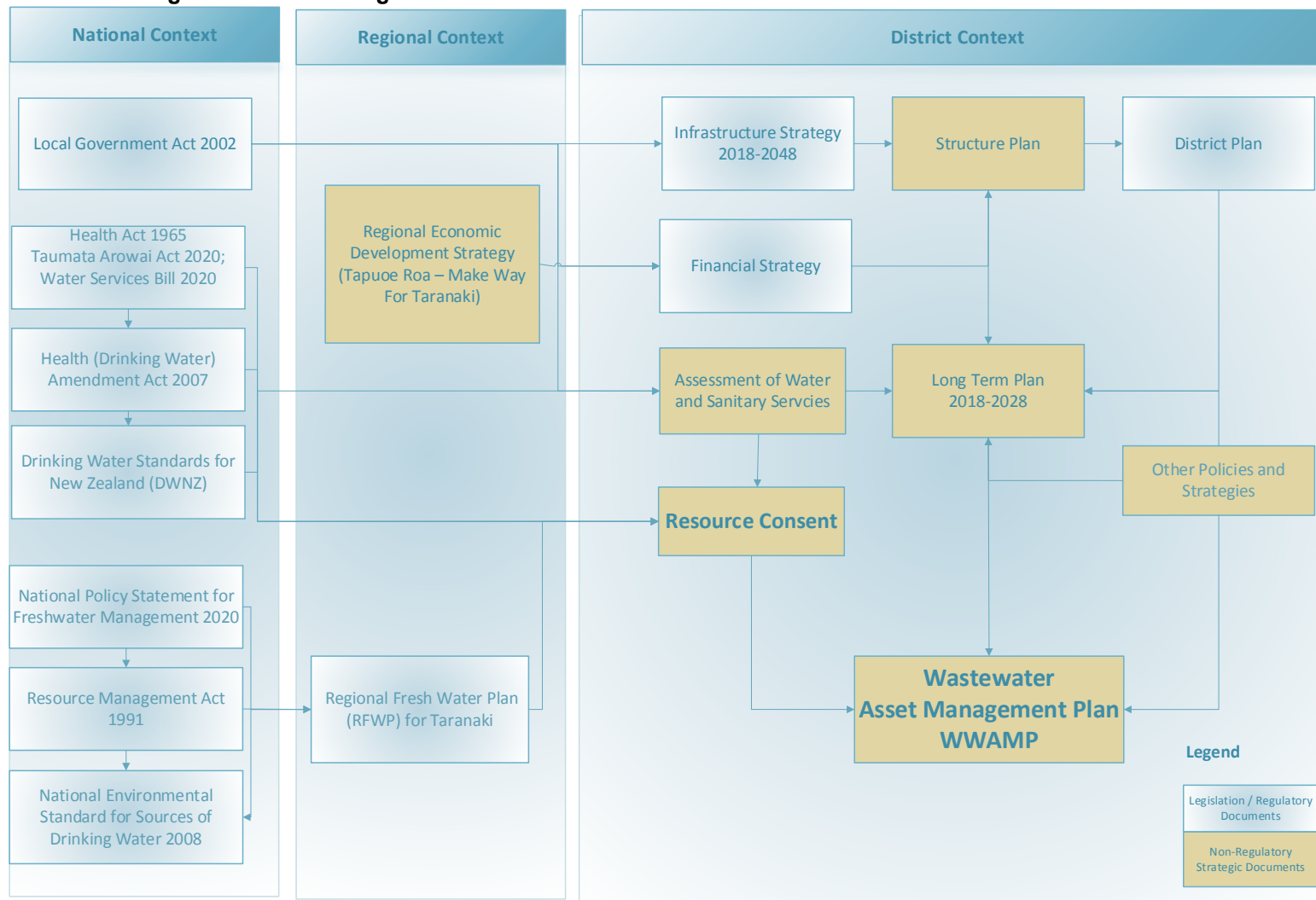
The WWAMP is a living document and is used to inform the Council's Long Term Plan and relevant reserve management plans. The AMP details Council owned assets and is used for communicating complex asset management information/strategies with stakeholders, elected members, service managers and other interested parties.

The Strategic and Legislative Context

The WWAMP sets the local, regional and central government Strategic and Legislative drivers for the provision of wastewater service in the urban areas that benefit from the service. The Strategic and Legislative Context for the WWAMP is as per the framework below. The key central, regional and local government drivers are:

- The Local Government Act 2002 (LGA);
- The Health Act 1956;
- The National Policy Statement for Freshwater 2020 (FVNPS);
- The Resource Management Act 1991 (RMA);
- The Regional Fresh Water Plan for Taranaki (RFWP);
- The Infrastructure Strategy 2021 – 2051 (IS); and
- The Long Term Plan 2021- 2031 (LTP)

The WWAMP Legislative and Strategic Context



Our Community Outcomes

The Council's vision for the 2021-2031 Long Term Plan (LTP) is 'a vibrant, resilient, and connected community – in the heart of Taranaki'. The Council's identified *Community Outcomes* to achieve the vision are:

- Vibrant community;
- Sustainable environment;
- Connected communities; and
- Enabling economy

The delivery of good quality infrastructure and the provision of services in a cost-effective manner via effective activity management planning will ensure the achievement of Council's Community Outcomes.

Our Problems and Benefits Statements

The Council has identified key problems to be addressed in the coming years. Along with these, projects, including associated benefits of implementing them, have been highlighted to address the identified problems.

A summary of the Council's *Problems and Benefit Statements* along with the projects identified to deliver the benefits are provided in the Table below.

Our Problem and Benefit Statements

Problem Statements	Preferred Option	Benefit Statements
Problem Statement 1 Resource Consent Implementation	Implement all necessary measures to achieve the conditions of the wastewater discharge consent.	<p>Compliance with the requirements of the wastewater discharge consent is essential for minimising the adverse effects on the environment.</p> <p>With the receipt of our new Wastewater Discharge Consent issued in April 2020, the Council has programmed to implement the required system upgrade at the set time per the consent condition. The Council will also continue to monitor the performance of the wastewater oxidation pond and provide feedback to the key affected parties on a regular basis. The first stakeholder meeting involving Iwi and Fish & Game was held in August 2020; annual meetings will be held, as a requirement of the resource consent, to discuss performance progress. Intermittent meetings will be held where issues arise to ensure they are addressed promptly.</p>
Problem Statement 2 Trade Waste Bylaw Implementation	Implementation of the Trade Waste Bylaw	<p>This project is to ensure the implementation of the Council's newly adopted Trade Waste Bylaw.</p> <p>Stratford District Council's Trade Waste Bylaw 2020 (TWB) was adopted by Council in July 2020; Council undertook to employ a part time Trade Waste Officer in August 2020 to investigate trade waste discharges within the district and enforce the provisions of the TWB. Following subsequent amendments, the final Trade Waste Bylaw was adopted in October 2020.</p> <p>The successful implementation of this bylaw will ensure that trade wastes are appropriately disposed of, costs lie where they fall and the quality of resulting treated wastes discharging into the receiving environment meets the conditions of our resource consent and requirements of the</p>

Problem Statements	Preferred Option	Benefit Statements
		NES-FW.
<p>Problem Statement 3</p> <p>Reticulation overload due to inflow/infiltration</p>	<p>Implementation of Inflow/Infiltration programme, including inspections of private property to identify direct discharge of stormwater to sewerage system</p>	<p>This programme primarily to optimise reticulation capacity during rainfall events, by ensuring there is no inflow or infiltration of water into the wastewater reticulation system.</p> <p>The Inflow/Infiltration programme is a suite of interventions designed to minimise the inflow and infiltration of surface and groundwater into the wastewater pipe network. This is an important part of our annual network maintenance and renewal programme that ensures that only wastewater collected from households and businesses is transported to the treatment plant.</p> <p>CCTV inspections are undertaken as part of the network conditions assessments therefore no additional costs are incurred. Identifying areas of high infiltration allows Council to better focus funds.</p> <p>The removal of stormwater increases the available reticulation capacity during rainfall events.</p>
<p>Problem Statement 4</p> <p>Pipework Capacity Issues</p>	<p>Programme the implementation of pipework capacity increase to support growth.</p>	<p>This programme is to address under-capacity of pipe network to support growth, residential infill and other intense land-use activities.</p> <p>There have been new residential subdivisions and developments, urban infill and other growth-related pressures created in both our wastewater and stormwater networks. The consequence of this is that some pipes are requiring upgrades in capacity to accommodate the increased flow.</p>
<p>Problem Statement 5</p> <p>Network Planning and Modelling</p>	<p>Full review and calibration of the existing Wastewater model</p>	<p>To accommodate growth and increased demand, Council has programmed to increase pipe capacity to cater for high flows. While officers are aware of some pipes within the network requiring increased capacity, the Council is will commission a network modelling project on our stormwater network to reveal how our network systems are behaving.</p> <p>This modelling project will comprise:</p> <ul style="list-style-type: none"> • the evaluation of network capacity; • the identification of inflow and infiltration into the pipe network; • the identification of bottlenecks in the existing or proposed network; and • the design of improvements needed to accommodate growth. The modelling project is expected to reveal the areas for improvement in the network from which priority areas can be programmed for improvement. <p>The existing model is over 10 years old and needs updating in the near future to provide accurate information on where Council should undertake network upgrades and renewals.</p>

Our Levels of Service and Performance Measures

The Council applies a range of mandatory, non-financial performance measures to assess the successful delivery of its wastewater service to the community. These measures allow for a national standardisation of key performance indicators. A summary of the Level of Service (LoS) performance measures as set by both the Department of Internal Affairs (DIA) and the Council is provided in the Table below.

Our Levels of Service and Performance Measures

	Level of Service	Performance Measure	Outcome Category
1.	System Adequacy	Dry weather sewerage overflows - The number of dry weather sewerage overflows from the territorial authority's sewerage system, expressed per 1000 sewerage connections to that sewerage system. This target is <5 per 1,000.	DIA measure
2.	Discharge Compliance	Resource Consent Compliance – Compliance with the territorial authority's resource consents for discharge from its sewerage system measured by the number of: <ul style="list-style-type: none"> • Abatement notices; • Infringement notices; • Enforcement orders; and • Convictions. Received by the territorial authority in relation to those resource consents. This target is 0.	DIA measure
3.	Response and Resolution Times	Sewerage overflows - Where the territorial authority attends to sewerage overflows resulting from a blockage or other fault in the territorial authority's sewerage system, the following median response times are measured: <ul style="list-style-type: none"> • Attendance time from the time that the territorial authority receives notification to the time that service personnel reach the site. This target is 1 hour. • Resolution time from the time that the territorial authority receives notification to the time that service personnel confirm resolution of the blockage or other fault. This target is 8 hours. 	DIA measure
4.	Customer satisfaction	Complaints - The total number of complaints received by the territorial authority about any of the following: <ul style="list-style-type: none"> • Sewage odour • Sewerage system faults • Sewerage system blockages, and • The territorial authority's response to issues with its sewerage system, Expressed per 1000 connections to the territorial authority's sewerage system. This target is 0.	DIA measure
5.	Trade Waste complaints response times	Attendance time: from the time that Council receives notification to the time that a Trade Waste Officer arrives on site. This target is 2 working days.	Council Measure
6.	Trade Waste consent processing	Percentage of trade waste consent applications processed within 15 working days. This target is 100%	Council Measure

Our Programme Business Case

The programme business case details how the problems identified in the previous sections will be addressed. This is presented in the Table below and shows how our identified projects address the identified problems and achieve the DIA and Internal/Other performance measures.

Work Category	Identified Projects	Performance measures				
		System Adequacy	Discharge Compliance	Response Times	Resolution Times	Customer Satisfaction
Operations/ Maintenance	Infiltration monitoring (smoke test, manhole inspections)	✓	✓	✓	✓	✓
	CCTV reticulation	✓	✓	✓	✓	✓
Renewal/ Replacement	Reticulation (Infiltration) Renewals (Replace existing infrastructure)	✓	✓	✓	✓	✓
	Bulk Discharge Renewals	✓	✓	✓	✓	✓
	Safety Renewals	✓				✓
	Pump station renewals (Replace existing mechanical and electrical infrastructure)	✓	✓	✓	✓	✓
	Camper Van Facility					✓
	Treatment Plant renewals (routine step/aerate renewals)	✓	✓			✓
	De-sludge Oxidation Ponds (restore ponds capacity)	✓	✓			✓
Level of Service Improvements	Reticulation Capacity Increase	✓		✓	✓	✓
	Modelling	✓		✓	✓	✓
	Inflow and infiltration programme	✓	✓	✓	✓	✓
	Diatomix	✓	✓			✓
	Camper van facility drainage					✓
	Stage 2 treatment Upgrade	✓	✓			✓

The delivery of good quality infrastructure and the provision of essential water services in a cost-effective manner via effective asset management planning will ensure the achievement of Council's Community Outcomes.

Funding Our Investment Strategy

The Council's Investment Strategy covers how the Stratford District Council plans to deliver on the services it offers whilst achieving value for money, with a key focus on future-proofing Council's assets.

Capital projects and activities carried out to maintain the Wastewater service for the next 10 years, including Renewal or Replacement projects and Level of Service Improvements, will be funded as per the Revenue and Financing Policy, through one or a combination of the following sources:

- Loans;
- Reserves; and/or
- Subsidies/ Grants by other Partners.

Generally, the Council expects that:

- Renewal or Replacement projects will be equally funded from Loans and Reserves;
- Operations and Maintenance activities will be funded through Rates; and
- Level of Service Improvements projects will be funded from loans and, where possible, any alternative funding source.

A summary of Council's Capital Investment funding Strategy over a 10-year period is shown in the Figures and Table below.

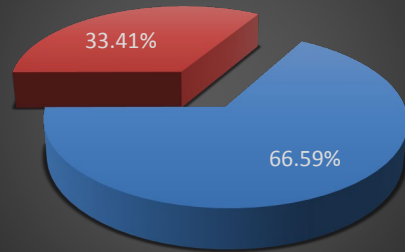
Executive Summary

10 –Year Capital and Operating Expenditure Projection

Budget 2020/21	Wastewater	Forecast 2021/22	Projection								
			2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
\$000		\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
993	Operating Expenditure	1,058	1,073	1,110	1,199	1,206	1,241	1,343	1,346	1,377	1,487
73	Revenue	73	75	77	78	80	82	83	85	87	89
920	Net Cost of Service	985	998	1,034	1,121	1,126	1,159	1,259	1,261	1,289	1,398
<u>EXPENDITURE</u>											
423	Operating Costs	452	428	439	472	461	473	508	497	510	547
59	Interest	42	53	59	72	76	81	101	103	104	115
300	Depreciation	311	331	340	380	387	394	440	446	451	510
211	Allocated Overheads	254	261	273	275	281	294	294	300	312	315
993	Total Operating Expenditure	1,058	1,073	1,110	1,199	1,206	1,241	1,343	1,346	1,377	1,487
91	Principal Loan Repayments	76	96	107	116	122	129	134	137	139	154
687	Capital Expenditure	1,013	614	638	472	508	500	456	446	449	1,145
1,771	Total Expenditure	2,147	1,783	1,855	1,787	1,836	1,869	1,933	1,930	1,965	2,785
<u>FUNDED BY:</u>											
73	Charges for Services	73	75	77	78	80	82	83	85	87	89
73	Revenue	73	75	77	78	80	82	83	85	87	89
881	Targeted Rates	936	985	1,021	1,107	1,112	1,146	1,245	1,248	1,278	1,387
36	Transfers (to) from Reserves	36	0	0	0	0	0	0	0	0	0
293	Transfer from Reserves	289	348	365	316	350	340	352	399	410	459
0	Depreciation funded from Reserves	0	0	0	0	0	0	0	0	0	0
485	Loan Funding - Capital	800	362	380	273	281	288	238	184	178	839
3	Other Funding	13	13	12	14	13	13	14	13	12	10
1,771	Total Funding	2,147	1,783	1,855	1,787	1,836	1,869	1,933	1,930	1,965	2,785

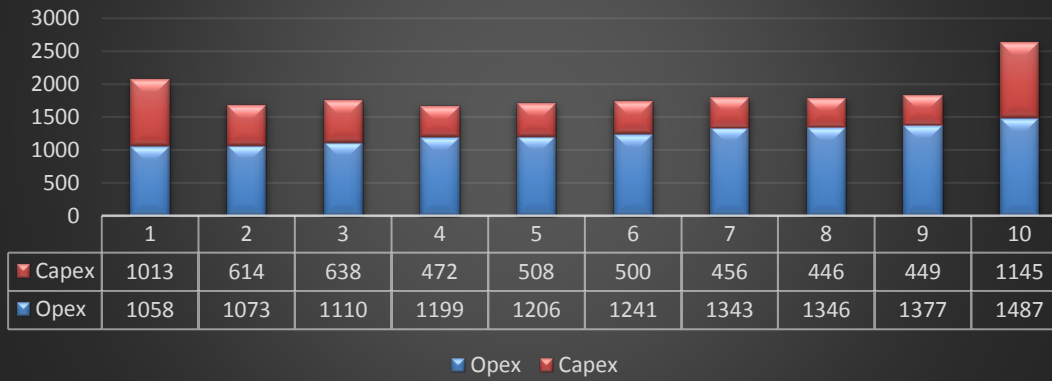
Executive Summary

Wastewater Expenditure

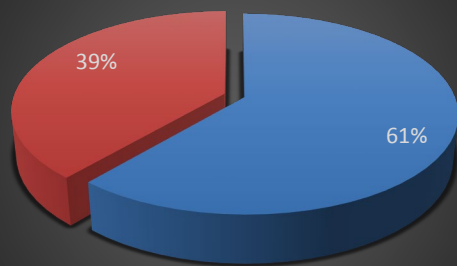


■ Operating Expenditure ■ Capital Expenditure

Annual Wastewater Budget - Capex vs Opex

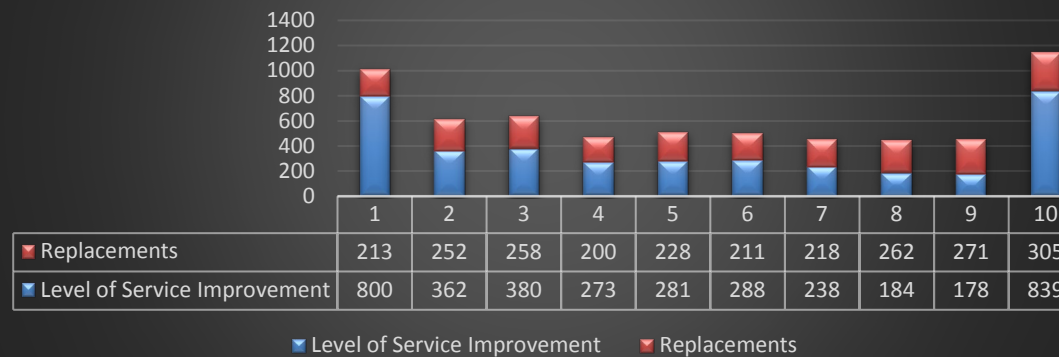


Wastewater Capex



■ Level of Service Improvement ■ Replacements

Annual Wastewater Budget - LoS vs Replacements 2021-2031



1.0

Introduction

1.0: Introduction

1.1.	PURPOSE OF THE PLAN	18
1.2.	THE STRATFORD DISTRICT.....	18
1.2.1.	District History.....	18
1.2.2.	District Geography	19
1.2.3.	District Main Communities.....	19
1.3.	OUR MISSION, VISION AND VALUES.....	21
1.4.	THE WASTEWATER ACTIVITY.....	23
1.5.	THE IMPORTANCE OF THE WASTEWATER ACTIVITY.....	23
1.6.	OUR PARTNERS, CUSTOMERS AND KEY STAKEHOLDERS	24
1.6.1.	The Customer Charter	24
1.6.2.	Significance and Engagement Policy.....	24

1.1. PURPOSE OF THE PLAN

The Wastewater Asset Management Plan 2021-2031 ('the WWAMP') is a 10 Year Strategic Plan for the Stratford District Council ('the Council'). It details how the Council will manage the Wastewater activity, assets and services in an efficient, safe, reliable and sustainable manner to provide value for money our customers and investors.

The WWAMP informs the development of the Council's 2021-2031 Long Term Plan ('the LTP'). It shows how the Council will prioritise and address key Wastewater issues, in the face of competing projects and constrained resources. The prioritisation of competing projects is necessary to deliver on Community Outcomes, the agreed Levels of Service (LoS) and also meet legislative objectives and requirements. The WWAMP proposes work programmes that deliver good value for money for our investment partners. This is achieved by doing the right things, in the right places, at the right times, for the right price and in the right ways.

The audience for this plan includes our Investment Partners, Wastewater Customers and Stakeholders, the Council representatives, Council staff, contractors, consultants, developers and members of the public who will take an interest in the future of levels of service the Council will be offering.

The SAMP is reviewed every three years in line with the long term planning process and in compliance with the Council's Asset Management Policy.

The Stratford District Council's Asset Management Policy requires the Asset Management Plans to be peer reviewed by an external reviewer, before the document is formally presented to Council for adoption.

1.2. THE STRATFORD DISTRICT

1.2.1. DISTRICT HISTORY

Initial settlements in the Stratford District were small Maori villages in the forested hills which were used as places of refuge in times of war, and for seasonal activities.

While New Plymouth and other coastal regions of Taranaki were settled by Europeans in the 1840s, the densely-forested inland Taranaki areas remained relatively isolated until the land wars of the 1860s. Following those wars, the land of Stratford District was both compulsorily purchased and freely sold.

The site for Stratford Township on the north bank of the Patea River was cleared in 1877 and was originally named Stratford-on-Patea. It was named after Stratford-Upon-Avon, Shakespeare's birthplace, and the streets were named after Shakespearean characters including Oberon, Cordelia, Juliet and Hamlet. By 1906 the population of Stratford numbered almost 6,000. Other towns throughout the district sprung up as the bush was cleared and new farming districts developed. Schools, hotels, stores and other community facilities were established, however, the Stratford Township remained the hub of the area.

From early on in the twentieth century there was rapid development of the dairy industry, with most communities having their own factory. Roads through the district were still relatively basic, which meant travelling any distance was difficult. As roads improved throughout the 20th century, communities in the district gradually began to lose their facilities. It was cheaper and easier to travel to larger towns for services than to maintain those services in smaller settlements.

The Forgotten World Highway (State Highway 43) links the towns of Stratford and Taumarunui and later became New Zealand's first heritage trail. It passes through the village of Whangamomona which was first settled in 1895, with no road or rail access. Today the village has approximately 150 full-time residents, a hotel, a handful of historic buildings and the odd goat.

1.2.2. DISTRICT GEOGRAPHY

The Stratford District is one of three territorial authorities ('TA') in the Taranaki region, overlying of which is the administrative area of the Taranaki Regional Council. The far eastern portion of the Stratford District is also overlain by the administrative area of the Horizons (Manawatu/Wanganui) Regional Council. The political division between the two regional councils lies along the Whangamomona Saddle.

Mount Taranaki or Mount Egmont, and Egmont National Park, dominate the landscape of the District. In the past, successive eruptions of ash and natural erosion have created an "apron" or a "ring plain" around the base of the mountain. The fertile and generally free draining soils of this ring plain support intensive pastoral farming, especially dairying.

East of the ring plain lies the rolling topography of the frontal hill country and further east, the deeply dissected hill country. These hills are not volcanic but consist of sedimentary rocks (mudstone, sandstone and siltstone). Soil properties in the eastern hill country are closely linked to the differences in rock hardness and composition. Most are steepland soils, ie, are shallow soils which have developed on steep, relatively unstable slopes. (*Refer: Stratford District Plan 2014.*)

1.2.3. DISTRICT MAIN COMMUNITIES

The Stratford District is home to many settlements, with the four main centres being Stratford, Midhirst, Toko and Whangamomona. A brief description of each town is summarised below.

Stratford

Stratford (Māori: Whakaahurangi) is the main town in the Stratford District. It is located on the banks of the Patea River roughly 48 km south-east of New Plymouth and 30 km north of Hawera at the junction of State Highways 3 and 43. Stratford is near the geographic centre of the Taranaki region and the largest settlement of the Stratford District with an estimated population of 6,690. The town is central Taranaki's main rural servicing centre, and the administrative base of the Stratford District Council and the Taranaki Regional Council.

Midhirst

Midhirst is located approximately 4 km north of Stratford, on State Highway 3. Inglewood is 17 km (11 mi) north of Midhirst and New Plymouth is 35 km (22 mi) to the northwest. An estimated 234 people live in Midhirst. One of the most distinctive features of Midhirst is the towering concrete and glass milk-powder drying plant, which was one of New Zealand's most advanced in its time (1980). The factory closed after amalgamating with Kiwi Dairies in 1983 and is now used for bulk grain storage.

The Toko Township

Toko is located 10 km east of Stratford, at the intersection of East Road (State Highway 43) and Toko Road. It is situated on a railway, the Stratford–Okahukura Line, the western portion of which was operated as a branch line known as the "Toko Branch" prior to the line's completion. The Toko Stream flows through the area to join the Patea River. An estimated 1,188 people live in or around Toko. This includes people living in the settlement and those living in the surrounding rural areas.

Whangamomona

Whangamomona is a rural settlement 65 km North East of Stratford on State Highway 43. Once quite a thriving settlement and the headquarters of the Whangamomona County Council with a number of stores and a post office, it suffered decline from the mid-20th Century with only the hotel remaining as a business in town. Today an estimated 150 people live in and around Whangamomona (Statistics NZ 2013).

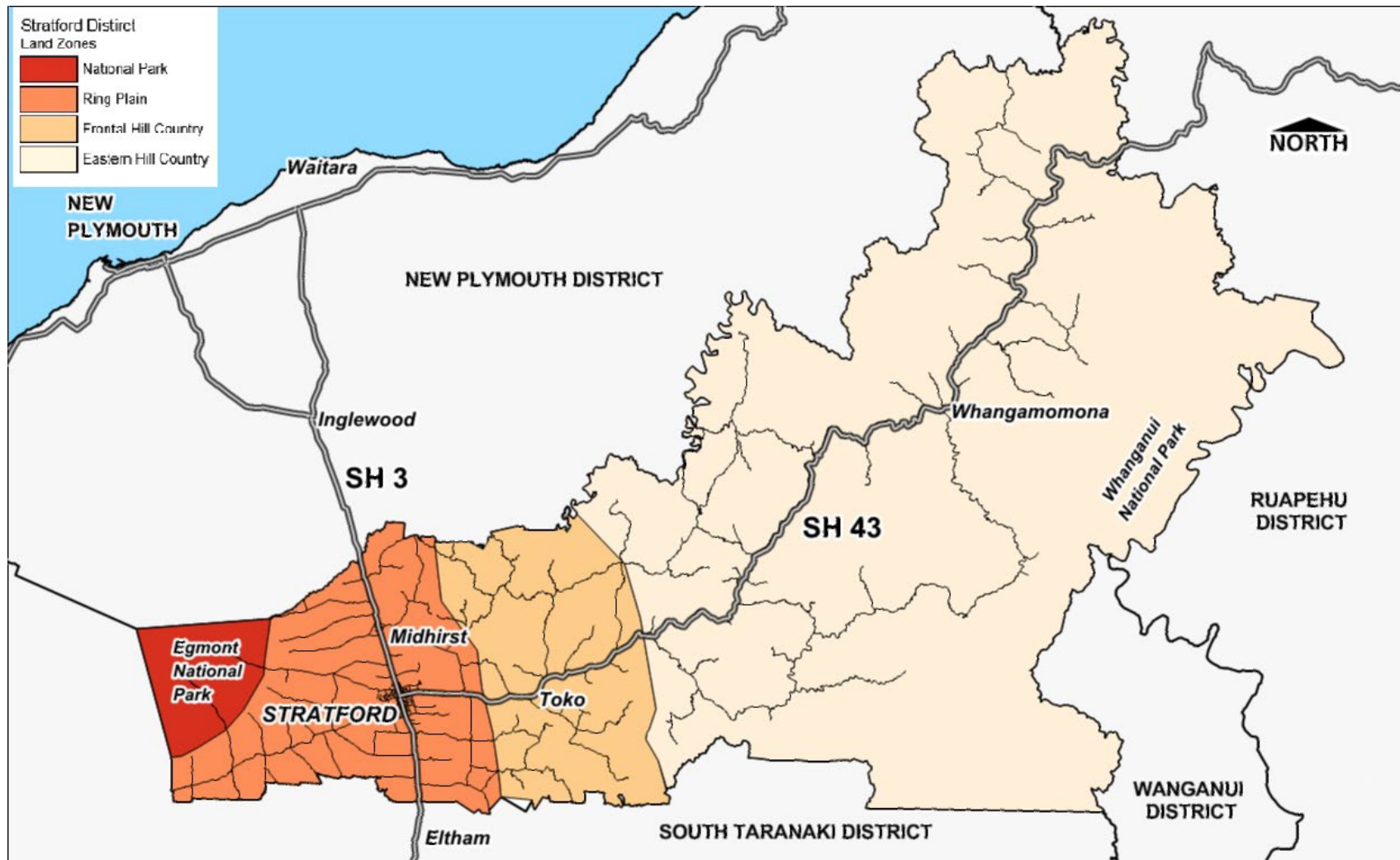


Figure 1 - The Stratford District 2020

1.3. OUR MISSION, VISION AND VALUES

Stratford District Council is local territorial authority for the Stratford District. Council's role in accordance with the Local Government Act 2002 (LGA) is to:

- Enable democratic local decision-making and action by, and on behalf of, communities; and
- Promote the social, economic, environmental, and cultural well-being of communities in the present and for the future

The Stratford District Council's Mission Statement is

'To serve the district and its communities through advocacy, promotion, services, facilities and positive leadership'

The Stratford District Council's **Vision Statement** is

'A vibrant, resilient, and connected community – in the heart of Taranaki'

The Stratford District Council's **Values** are:

Integrity: *Be loyal to the organisation and trustworthy, honest and courteous with everyone we deal with.*

Teamwork: *Work together in the same direction, assist each other and have respect for others. Maintain a positive attitude and encourage teamwork.*

Excellence: *Be effective in everything we do using our experience and knowledge. Do the right thing at the right time. Be efficient by being cost effective and ensure prudent management of public money and assets.*

Pride: *Take pride in our performance and our organisation.*

Commitment: *Have commitment and respect for each other, our business and our customers.*

Innovation: *Examine alternatives, challenge the obvious and have a flexible attitude.*

The Stratford District Council carries out its duties under the LGA (2002) through two key Management Teams:

- The *Executive Management Team*, comprising the Senior Leaders of the Council and headed by the Chief Executive. This team sets the overall direction for delivery of Roading activities and services; and
- The *Assets Management Team*, comprising the operational and maintenance staff who carry out the direction set by the *Executive Management Team*.

The structure for each Management Team is provided in Figures 2 and 3.

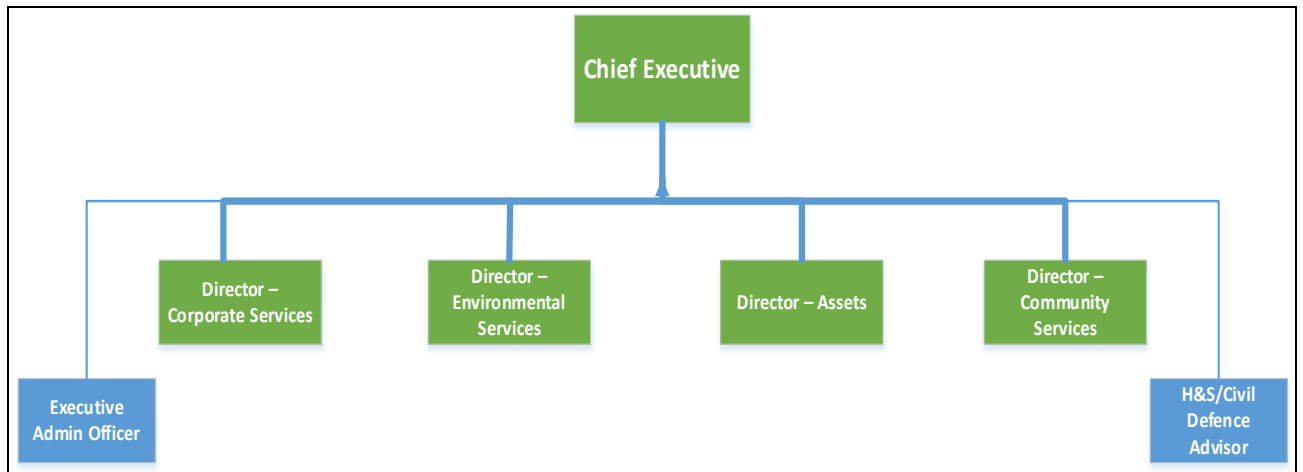


Figure 2 – The Executive Management Team

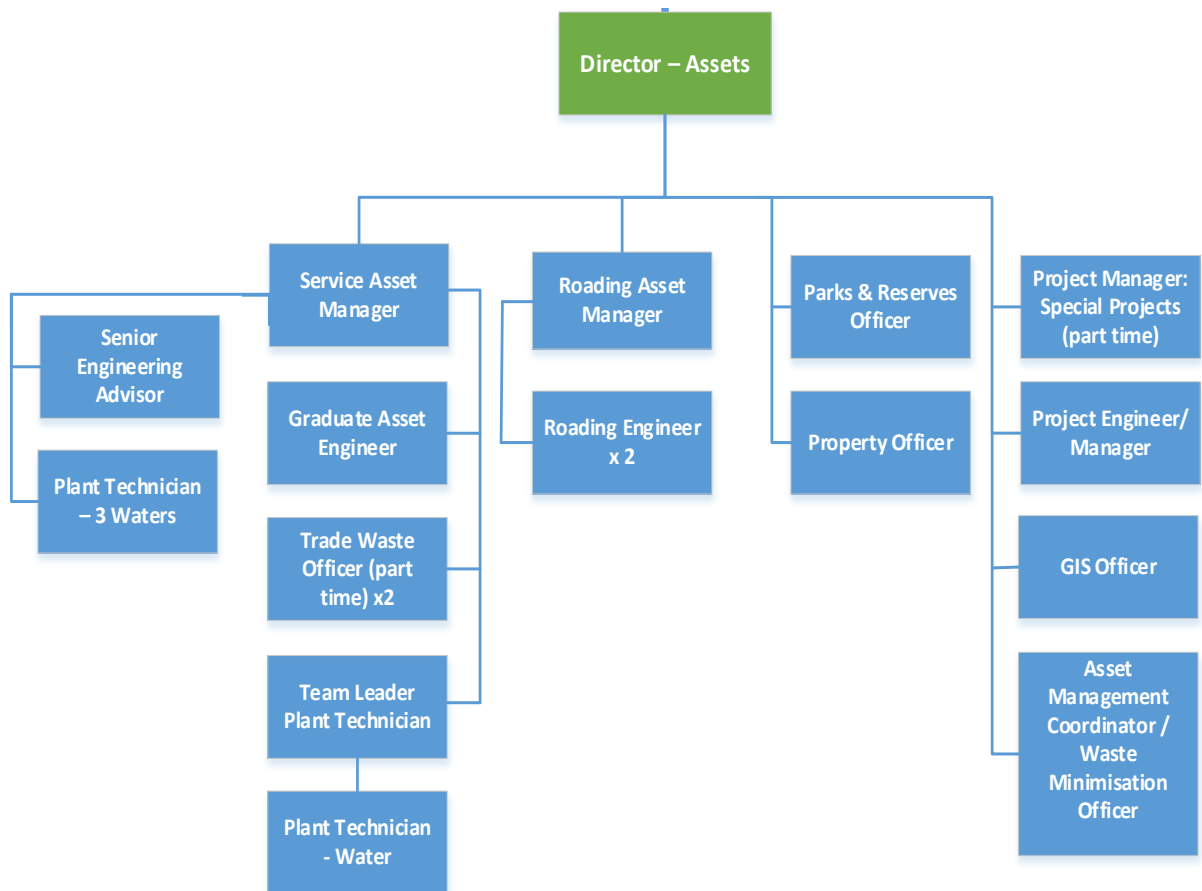


Figure 3 – The Assets Department

1.4. THE WASTEWATER ACTIVITY

The wastewater activity encompasses the planning, provision, operation, maintenance and renewal of wastewater, reticulation and treatment and disposal, and associated infrastructure for the Stratford urban area.

1.5. THE IMPORTANCE OF THE WASTEWATER ACTIVITY

Stratford District Council has obligations under the Local Government Act 2002, the Health Act 1956 and the Building Act 2004 to improve promote and protect public health through the sanitary and responsible treatment and disposal of wastewater.

The Council provides the Wastewater service to meet the needs and requirements of its customers and stakeholders. The goals and objectives of the Wastewater activity are:

- To collect wastewater from residential, commercial and industrial properties in a safe and efficient manner;
- To dispose of treated wastewater into the receiving environments in an environmentally friendly and sustainable manner in line with all applicable resource consent conditions.
- To facilitate the minimisation of risk and maintenance of public health through the safe disposal of wastewater into the receiving environment;
- To deliver on the agreed customer service levels;

Through the goals and objectives of the Wastewater Service Activity, this service contributes to achieving the goals and objectives of the Community Outcomes, as described in Table 1 below.

Table 1- Wastewater Activity contribution to Community Outcomes

Community Outcomes		Wastewater Activity Contribution
Vibrant community	<ul style="list-style-type: none"> • We celebrate and embrace our community's cultures and traditions. • We tell our unique story. • We will develop strong relationships with iwi, hapu and marae 	<ul style="list-style-type: none"> • Liaise with Iwi, other government agencies and community groups in relation to wastewater services. • By minimisation of risk to public health through the: <ul style="list-style-type: none"> ○ reduction of the risk of failure of pipe assets; ○ appropriate disposal of the treated wastewater into the receiving environment. • Ensuring the continued collection of wastewater in the Stratford community as per the agreed level of service. • Having an appropriate knowledge and actual state of the wastewater pipe network assets for optimal programming for maintenance and renewal / replacement. • Providing continued access to wastewater services. • Stratford will encourage developers to provide well planned developments that support the growth of the district. • Fund capital works which offer value for money for current and future generations of Stratford District ratepayers and ensures the financial security of Council is not compromised.
Sustainable environment	<ul style="list-style-type: none"> • Our natural resources can be enjoyed now and by future generations. • We are committed to working towards zero waste. • We have well planned and resilient infrastructure that meets the current and future needs of the district. • We strive to understand and support Te Ao Māori values and principles. 	
Connected communities	<ul style="list-style-type: none"> • Our neighbourhoods are safe and supported • We enable positive healthy lifestyles, through access to health, social and recreation services • We have a strong sense of belonging • We value opportunities to be involved and work together as a community 	
Enabling economy	<ul style="list-style-type: none"> • We are a welcoming and business friendly District • We encourage a strong and diverse local economy • We promote opportunities to visit, live and invest in the district • We support economic opportunities for Māori 	

1.6. OUR PARTNERS, CUSTOMERS AND KEY STAKEHOLDERS

The wastewater activity exists to meet the needs and requirements of our customers, partners and key stakeholders. These groups help us focus our strategic planning on the right things. They have information and knowledge that helps us make more informed decisions. Table 2 shows how our partners, customers and key stakeholders are involved in our planning activity.

Table 2 – Partners, Customers and Stakeholders

Customers, Partners and Stakeholders	Involvement
Home Owners and Occupiers; Businesses and Organisations;	These customers realise the benefits provided by the wastewater activity.
Taranaki Regional Council	Administers and enforces effective resource management in the Taranaki region. Applications from SDC are processed through TRC.
Audit New Zealand	Carries out annual audits of Council on the Auditor-General's behalf to give ratepayers assurance that Council is appropriately reporting on how they spend public money and on the services they have provided.
Other Government agencies; Ratepayers Associations; Iwi groups	These groups liaise with Council in relation to wastewater services.
Utility Owners	New Zealand Utilities Advisory Group (NZUAG) requirements for co-ordinating networks.
Local Iwi; Environmental groups	Affected parties to Council's resource consents
TEMO/Civil Defence	In the event of a Civil Defence emergency they provide advice and work alongside emergency services, lifeline utilities and government departments.
Elected Members; Committees; CEO, Management and Staff	Key internal stakeholders responsible for the management and operation of the wastewater system.

1.6.1. THE CUSTOMER CHARTER

Following an internal review an organisation-wide *Customer Charter* was developed and introduced in 2015. The [Customer Charter](#) states that Stratford District Council is dedicated to having commitment and respect for each other, our business and our customers. We will be honest, courteous and efficient and use our knowledge and experience to be effective by doing the right thing at the right time. We support a culture of innovation by examining alternatives, challenging the obvious and having a flexible attitude.

Our Customer Service Charter establishes a consistent customer service standard across all Council business, regardless of whether our customer is borrowing a book, going to the pool, or lodging a building consent. Our philosophy is to provide quality service to all our customers in line with the Service Standards stated in the Customer Charter.

1.6.2. SIGNIFICANCE AND ENGAGEMENT POLICY

The Stratford District Council uses its [Significance and Engagement Policy](#) in its decision-making to determine the level of community engagement needed for an issue or proposal, to gain a clearer understanding of community views and preferences and the ways the community can influence and participate in the decision-making of the Council.

2.0

Legislative and Strategic Context

2.0: Legislative and Strategic Context

2.1.	OVERVIEW.....	27
2.2.	NATIONAL CONTEXT.....	27
2.2.1.	The National Policy Statement for Freshwater Management.....	27
2.2.2.	The Resource Management Act.....	28
2.2.3.	The Local Government Act 2002 Amendment Act 2019.....	29
2.2.4.	The Health Act 1956.....	29
2.2.5.	Taumata Arowai - The Water Services Regulator Act 2020.....	29
2.2.6.	The Water Services Bill 2020.....	30
2.2.7.	The Three Waters Reform.....	31
2.3.	REGIONAL CONTEXT.....	33
2.3.1.	The Regional Fresh Water Plan for Taranaki (RFPW).....	33
2.3.2.	The Regional Economic Development Strategy - Make Way for Taranaki.....	33
2.4.	DISTRICT CONTEXT.....	33
2.4.1.	The Long Term Plan (LTP) 2021-2031.....	33
2.4.2.	The Infrastructure Strategy 2021 - 2051.....	34
2.4.3.	The District Plan.....	34
2.4.4.	The Annual Plan.....	34

2.1. OVERVIEW

This section of the plan describes the strategic context of the Wastewater activity and the linkages between national, regional and district goals and objectives.

2.2. NATIONAL CONTEXT

There are a number of national legislative requirements that drive the Wastewater Activity Levels of Service (LoS) and influence the operation and management of the Assets. While many are listed below; the key drivers are described in detail in the following section.

- The National Policy Statement for Freshwater Management 2020;
- The Resource Management Act;
- The Local Government Act 2002 (and amendments);
- The Health Act 1956 (and amendments);
- Taumata Arowai Act 2020;
- Water Services Bill 2020;
- Waste Minimisation Act 2008;
- New Zealand Waste Strategy 2002 (and amendments);
- Soil Conservation and Rivers Control Act 1941;
- Public Works Act 1981;
- Resource Management Act 1991 (and amendments);
- Climate Change Response Act 2002;
- Civil Defence Emergency Management Act 2002.

2.2.1. THE NATIONAL POLICY STATEMENT FOR FRESHWATER MANAGEMENT

The National Policy Statement for Freshwater Management 2020 sets out the objectives and policies for freshwater management under the Resource Management Act 1991. It comes into effect on 3 September 2020 and replaces the National Policy Statement for Freshwater Management 2014 (amended 2017). The new policy directions which are of relevance to, and have a direct impact on, how the Council manages its water and wastewater activities. The key requirements of the Freshwater NPS include:

- Managing freshwater in a way that 'gives effect' to Te Mana o te Wai through:
 - involving tangata whenua;
 - working with tangata whenua and communities to set out long-term visions in the regional policy statement and
 - prioritising the health and wellbeing of water bodies, then the essential needs of people, followed by other uses.
- Improving degraded water bodies, and maintaining or improving all others using bottom lines defined in the Freshwater NPS;
- An expanded national objectives framework:
 - two additional values - threatened species and mahinga kai - join ecosystem health and human health for recreation, as compulsory values
 - councils must develop plan objectives that describe the environmental outcome sought for all values (including an objective for each of the five individual components of ecosystem health)
 - new attributes, aimed specifically at providing for ecosystem health, include fish index of biotic integrity (IBI), sediment, macroinvertebrates (MCI and QMCI), dissolved oxygen, ecosystem metabolism and submerged plants in lakes; councils will have to develop action plans and/or set limits on resource use to achieve these attributes.
 - tougher national bottom lines for the ammonia and nitrate toxicity attributes to protect 95% of species from toxic effects (up from 80%)
- Identifying and working towards target outcomes for fish abundance, diversity and passage and address in-stream barriers to fish passage over time.
- Setting an aquatic life objective for fish and addressing in-stream barriers to fish passage over time.; and

- Monitoring and reporting annually on freshwater (including the data used); publish a synthesis report every five years containing a single ecosystem health score and respond to any deterioration.

2.2.2. THE RESOURCE MANAGEMENT ACT

The Resource Management Act 1991 (RMA) promotes the sustainable management of natural and physical resources such as land, air and water and is considered New Zealand's principal legislation for environmental management. The RMA regulates the discharge of wastes into the environment particularly to water and land.

The purpose of the National Planning Standards have been introduced as part of the 2017 amendments to the Resource Management Act 1991. The development of the National Planning Standards is enabled by sections 58B–58J of the RMA and is to improve consistency in plan and policy statement structure, format and content so they are easier to prepare, understand, compare and comply with. The Standards also support implementation of national policy statements and help people observe the procedural principles of the Resource Management Act 1991 (RMA).

The Stratford District Council holds Resource Consent 0196.5 for the discharge of treated wastewater into the Pate River. This consent was issued in April 2020 and expires in July 2034.

RMA Reform

The RMA is currently undergoing a reform into 3 pieces of legislations being the:

- Natural and Built Environments Act;
- Strategic Planning Act; and
- Climate Change Adaptation Act.

The reform is based on the findings of the comprehensive review of the resource management system which were released last year. These pieces of legislations are currently before Parliament and it is expected that they will be passed by the end of 2022.

The *Natural and Built Environments Act* is the core piece of legislation to replace the RMA. The purpose of this Act is to enhance the quality of the environment to support the wellbeing of present and future generations. Under the Act, central government's proposed new National Planning Framework will provide a set of mandatory national policies and standards on specified aspects of the new system. These will include environmental natural limits, outcomes and targets. This would be achieved by:

- promoting positive outcomes for both the natural and built environments;
- ensuring that use, development and protection of resources only occur within prescribed environmental limits; and
- ensuring adverse effects of activities on the environment are avoided, remedied or mitigated.

The *Strategic Planning Act* provides a strategic and long-term approach to how we plan for using land and the coastal marine area. The regional strategies would enable more efficient land and development markets to improve housing supply, affordability and choice, and climate change mitigation and adaptation.

Long-term spatial strategies in each region would be developed to identify areas that:

- will be suitable for development;
- need to be protected or improved;
- will need new infrastructure and other social needs; and
- are vulnerable to climate change effects and natural hazards such as earthquakes.

The *Climate Change Adaptation Act* would support New Zealand's response to the effects of climate change. It would address the complex legal and technical issues associated with managed retreat and funding and financing adaptation.

2.2.3. THE LOCAL GOVERNMENT ACT 2002 AMENDMENT ACT 2019

The Local Government Act 2002 Amendment Act 2019 amended the purpose of the Act to be: “to provide for democratic and effective local government that recognises the diversity of New Zealand communities”.

The purpose of the Local Government Act is now amended thus:

- to enable democratic local decision-making and action by, and on behalf of, communities; and
- to promote the social, economic, environmental, and cultural well-being of communities in the present and for the future.

The LGA outlines the responsibilities of local authorities and the decision-making process for activities undertaken on behalf of their community, primarily through the requirement to adopt a Long Term Plan. The LGA includes the principles that require Council to:

- make itself aware of community views;
- provide opportunities for Māori to participate in decision-making processes;
- collaborate and cooperate with other local authorities as appropriate; ensuring prudent stewardship of resources; and
- and take a sustainable development approach.

The LGA in Section 125, requires the Council to ‘from time to time’ complete assessments of water and sanitary services for communities throughout their districts. The purpose of the assessment is to determine, from a public health perspective, the adequacy of water and sanitary services available to communities. In making such an assessment the following matters need to be considered:

- (a) the health risks arising from any absence or deficiency in water or other sanitary services;
- (b) the quality of services available to communities within the district;
- (c) the current and estimated future demands for such services;
- (d) the extent to which drinking water meets applicable regulatory standards; and
- (e) the actual or potential consequences of stormwater or sewage discharges within the district.

The Council commenced a review of its *Assessment of Water and Sanitary Services and Solid Waste* in 2016.

2.2.4. THE HEALTH ACT 1956

The Health Act 1956 aims to protect the health and safety of people and communities by promoting adequate supplies of safe and wholesome drinking water from all drinking-water supplies larger than 25 or more people.

The Health (Drinking Water) Amendment Act 2007 amended the Health Act 1956 to require all drinking-water suppliers providing water to more than 500 people to develop and start to implement a Public Health Risk Management Plan to guide the safe management of the supply before 2013. A Public Health Risk Management Plan is a tool to help suppliers identify, manage and minimise events that could cause water quality to deteriorate.

2.2.5. TAUMATA AROWAI - THE WATER SERVICES REGULATOR ACT 2020

The Water Services Regulator Act was passed in July 2020. It establishes Taumata Arowai as a Crown Agent and provides for its objectives, functions, operating principles, and governance arrangements, including the appointment of an independent Board and a Māori Advisory Group. It provides the new drinking water regulator - Taumata Arowai - with significant new powers to give effect to the Government’s expectation that New Zealanders are “able to drink the water that comes out of the tap knowing that it is safe”

A complementary Bill, *the Water Services Bill*, is now before Parliament. This Bill is anticipated to be introduced in the second half of 2021, dependent on the election outcome and the post-election Parliamentary timetable. Once passed, Taumata Arowai will become Aotearoa’s dedicated regulator

of the three waters: Drinking water, wastewater and stormwater. Until then, the Ministry of Health remains the regulator of drinking water.

The establishment of Taumata Arowai is one three po (pillars) of the Government's Three Waters Reform programme, alongside the regulatory reforms outlined in the Water Services Bill, and the reforms to water delivery services. These reforms are intended to address issues and opportunities that were highlighted by the Government Inquiry into the Havelock North Drinking Water, and in the Government's Three Waters Review. The reforms are designed to:

- Provide clear leadership for drinking water regulation through a new, dedicated regulator;
- Significantly strengthen compliance, monitoring, and enforcement relating to drinking water regulation, and equip the new regulator with the powers and resources needed to build capability, support suppliers of all kinds to meet their regulatory obligations, and take a tougher, more consistent approach to enforcement where needed;
- Manage risks to drinking water safety and ensure source waters are protected;
- Ensure more people can access water that is safe to drink, by requiring all suppliers (except individual domestic self-suppliers) to be part of the regulatory system, and to provide safe drinking water on a consistent basis;
- Lift the environmental performance and transparency of wastewater and stormwater networks; and
- Improve national-level leadership, oversight, and support relating to wastewater and stormwater.

When Taumata Arowai is fully functionally, its role in essence will be to:

- Oversee and administer an expanded and strengthened drinking-water regulatory system, to ensure all New Zealand communities have access to safe drinking water. That includes holding suppliers to account, if need be; and
- Oversee from a national perspective the environmental performance of waste water and storm water networks. (Regional councils will remain the primary regulators of waste water and storm water).

2.2.6. THE WATER SERVICES BILL 2020

While the Taumata Arowai Act was passed in July 2020, Taumata Arowai will not become fully operational until enactment of the Water Services Bill, projected to in the second half of 2021.

The Water Services Bill proposes to repeal Part 2A of the Health Act 1956 and replace it with a standalone Act to regulate drinking water. The Bill received its first reading on Tuesday 8 December 2020 and has been referred to the Health Select Committee for consideration. The Bill is a companion to the Taumata Arowai - the Water Services Regulator Act 2020, which was passed earlier in the year.

Essentially, the Water Services Bill 2020 is a part of a broader Three Waters reform programme by central government. It proposes a new regulatory regime for managing drinking water supply. The obligations on drinking water suppliers proposed by the Bill are more onerous than those under the existing Health Act regime.

Until Taumata Arowai is fully operational, the Ministry of Health will remain the regulator for drinking water safety.

The Water services Bill contains all of the details of the new drinking water regulatory system, and provisions relating to source water protection and Taumata Arowai's wastewater and stormwater functions.

2.2.7. THE THREE WATERS REFORM

The Council signed a Memorandum of Understanding (MoU) with central government to work together to identify approaches that consider the design features of the 3 waters reform and is participating in the exploration of future service delivery options. The central government expects to create new water service delivery entities that are:

- of significant scale (most likely multi-regional) to enable benefits from aggregation to be achieved over the medium to long-term;
- asset owning entities, with balance sheet separation to support improved access to capital, alternative funding instruments and improved balance sheet strength; and
- structured as statutory entities, with competency-based boards;

The Council expects to make a decision in late 2021, to either stay with the new water service delivery entity or opt out. Any decision to participate is likely to be given effect to at some point in the 2023/4 financial year.

Reference to the Government's reform strategy and timeline, including highlighting when it is proposed that there would be further engagement and consultation with communities is available at <https://www.dia.govt.nz/Three-Waters-Reform-Programme>

Legislative and Strategic Context

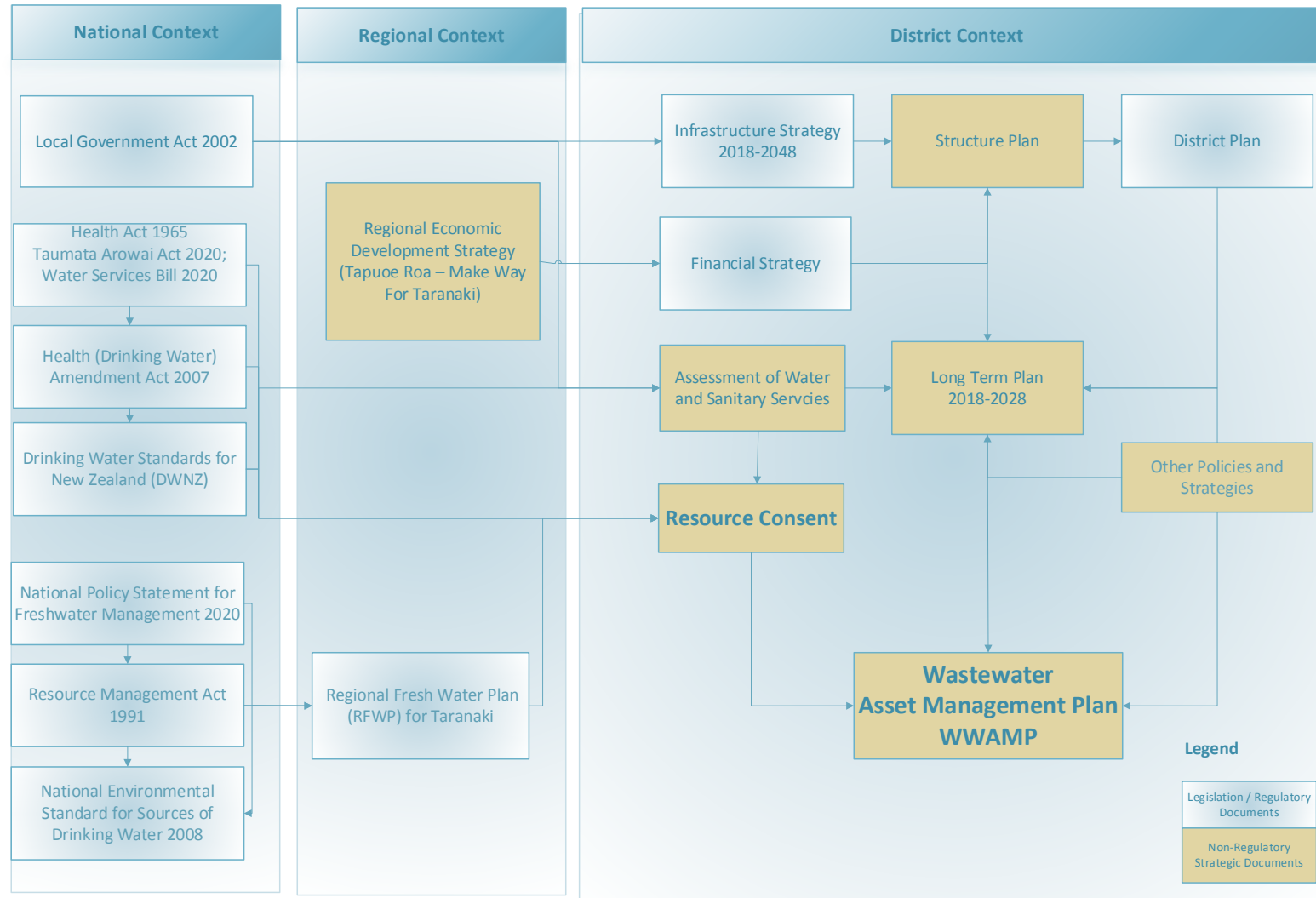


Figure 4 – Legislative and Strategic Context (WWAMP)

2.3. REGIONAL CONTEXT

The main regional drivers are the requirements of the Regional Freshwater Plan for Taranaki (RFP) and any other resource consents issued by the Taranaki Regional Council for relevant purpose.

2.3.1. THE REGIONAL FRESH WATER PLAN FOR TARANAKI (RFP)

The Regional Fresh Water Plan promotes sustainable management of the region's freshwater resources by applying rules and conditions to various activities. The Plan is currently under review.

The Plan identifies how the fresh water resources of the region (both surface water and groundwater) are to be managed. It does this by identifying important issues from state of the environment monitoring relating to the use, development and protection of the fresh water resources of Taranaki. Objectives, policies and methods are set out for addressing these issues. Ongoing state of the environment monitoring will enable the Taranaki Regional Council to assess the effectiveness of the Plan and review policy direction where necessary. In particular the Plan contains regional rules which categorise activities into different classes (permitted, controlled, discretionary or prohibited), with different standards, terms or conditions which apply to them, depending on the effects on the environment of that activity. Activities have been classified in this way to facilitate the processing of resource consents and to provide certainty for the community.

In relationship to this document the RFP supplies the framework for setting the conditions under which the Stratford Wastewater Treatment plant must operate to achieve the goals of the plan

2.3.2. THE REGIONAL ECONOMIC DEVELOPMENT STRATEGY - MAKE WAY FOR TARANAKI

The Regional Economic Development Strategy - Make Way for Taranaki was developed by the four local authorities of the Taranaki region in association with Venture Taranaki and the Ministry of Business, Innovation and Employment (MBIE). The strategy sets a direction for economic development and identifies priorities and measurable goals for the region as a whole. It is anticipated that the Strategy will enable and support economic growth and development in the Stratford District.

While economic growth for the Stratford District is desirable, Council is aware that growth can have an impact on infrastructure and the services delivered by that infrastructure. Anticipated impacts of the Regional Economic Development Strategy and any resulting growth on the Wastewater activity and infrastructure are expected to include.

2.4. DISTRICT CONTEXT

The Wastewater Asset Management Plan feeds, and in turn is fed into, a number of district strategies. The WWAMP forms a critical part of the planning framework, as shown in Figure 4. This provides a description of the District Strategic Drivers for the WWAMP, and how they influence or relate to the WWAMP. The key district drivers are provided in more detail below.

2.4.1. THE LONG TERM PLAN (LTP) 2021-2031

The Long Term Plan (LTP) 2021-2031 is a regulatory document pursuant to Section 93 of the Local Government Act 2002 Amendment Act 2019 that:

- Describes the activities of Stratford District Council;
- Outlines Council's contribution to the community outcomes and describes how we will manage activities we are responsible for;
- Provides integrated decision making and co-ordination of resources; and
- Provides a long-term focus for Stratford District Council's decisions and activities

The LTP provides the direction and strategies that drive the WWAMP. Programmes for Capital, Maintenance and Renewal works are linked to the LTP along with essential budgeting requirements. The LTP covers a planning period of 10 years and is reviewed three yearly.

2.4.2. THE INFRASTRUCTURE STRATEGY 2021 - 2051

The Infrastructure Strategy (IS) is a regulatory document pursuant to Section 101B of the Local Government Act 2002 Amendment Act 2014 for the purpose of:

- Identifying significant issues over the period covered by the strategy; and
- Identifying the principal options for managing those issues and the implications of these options.

The IS identified issues/opportunities from the 30 year strategy inform the relevant AMP and is reviewed every 3 years.

Like the LTP, the IS provides the direction and strategies that drive the WWAMP but in this case, the planning period primarily focussed on is for 10-30 years. The IS is a strategic document that allows Council to make informed decisions and place Council in a better position to understand and plan for major infrastructure investments.

2.4.3. THE DISTRICT PLAN

Developed in compliance with the requirements of the Resource Management Act 1991(RMA), the District Plan specifies land use policies aiming to mitigate and control the detrimental environmental effects of new developments. These areas of growth and development need to be accounted for within the WWAMP through the use of water modelling reports, levels of service increase works and forward works programming.

2.4.4. THE ANNUAL PLAN

The Annual Plan is a regulatory document pursuant to Section 95 of the Local Government Act 2002 Amendment Act 2014. The Annual Plan is developed in compliance with section 95 of the LGA 2002 and updates information reported on within the LTP including its objectives, intended activities, performance, income and expenditure. The Annual Plan shows how that year of the LTP will be funded.

The relationship between the Annual Plan and the WWAMP is similar to that of the LTP, with the exception of it only applying to the year of the LTP being prepared for.

Table 3 - District Strategic Drivers

Strategies/ Plans/ Documents	Description	Review Frequency	Relationship to the Asset Management Plan
Financial Strategy	Developed to provide a financial framework for Council debt and rate levels and limits - future proof Council owned and operated assets.	Ten yearly	Provides financial framework for asset management and activity budgeting and expenditure.
Infrastructure Strategy	Prepared for the purposes of identifying significant issues over the period covered by the strategy and identifying the principal options for managing those issues and the implications of these options.	Three yearly	Provides a core infrastructure asset management framework over a 30-year planning horizon.
Economic Development Strategy	Sets the direction for economic development and identifies priorities and measurable goals.	Three yearly	Support asset management planning and good practice.
Structure Plan	Provide a long term planning framework for the future development and redevelopment of the Stratford District. The plan will set out in broad terms, the layout of land uses, key infrastructure and transport links.	Unknown at this stage	Support asset management planning.
Significance and Engagement Policy	Developed in compliance with Section 76AA to set out Councils approach to: <ul style="list-style-type: none"> • The assessment of significance during decision-making. It provides direction on the consideration of community views and the level of community 	Three yearly	Determines level of engagement required for asset management planning activities/projects

Legislative and Strategic Context

Strategies/ Plans/ Documents	Description	Review Frequency	Relationship to the Asset Management Plan
	<p>engagement that might be desirable to enable Council to develop a clearer understanding of community views and preferences on an issue or proposal.</p> <p>Regarding community engagement and the ways the community can influence and participate in the decision-making of the Council.</p>		
Annual Report (AR)	Reports Council's performance for the previous year.	Annually	Provides annual KPI targets that are reported in the Annual Report.
Assessment of Water and Sanitary Services	Undertaken in compliance with Section 125 of the Local Government Act 2002 as part of Council meeting its obligation under the Health Act 1956 to improve, promote, and protect public health within its district.	Ten yearly	Identified issues and required actions feed into the relevant AMP
Other Council Policies, By-laws, etc.	<p>The tools that guide and direct Council activities (see Appendix 2)</p> <ul style="list-style-type: none"> • Trade Waste Bylaw • Wastewater Bylaw • Inflow/Infiltration Programme • Resources Consent; • Incident Response Plans 	As applicable	Support asset management planning and good practice.

3.0 Asset Information

3.0: Asset Information

3.1. ASSETS OVERVIEW..... 38

3.2. ASSET VALUATION 38

3.3. USEFUL LIFE..... 41

3.4. ASSET INFORMATION SYSTEM 41

3.5. THE WASTEWATER INFRASTRUCTURE ASSETS..... 41

 3.5.1. Wastewater Reticulation system..... 41

 3.5.2. Wastewater Treatment system..... 41

3.6. DRAINAGE CATCHMENTS 41

3.7. ASSET MANAGEMENT MATURITY ASSESSMENT..... 42

3.8. ASSESSMENT OF ASSET CONDITION 44

3.9. DATA ACCURACY AND CONFIDENCE..... 46

3.1. ASSETS OVERVIEW

Stratford District Council is responsible for wastewater treatment and reticulation in Stratford Township. The Stratford wastewater system services over 2,500 properties, which is approximately 97 percent of the Stratford urban area. All other dwellings in the district are serviced by on-site wastewater treatment systems.

This section details the current asset valuation summary and provides details about infrastructure asset components. It identifies the general condition of assets and any issues/opportunities Council will need to consider. It highlights how asset condition is identified and Council's level of confidence in asset data.

3.2. ASSET VALUATION

Section 111 of the Local Government Act 2002 requires that local authorities comply with "generally accepted accounting practice" which is taken to mean the principles of the General Accepted Accounting Practice that is prepared by the New Zealand Society of Accountants (ICANZ) and included in the New Zealand Accounting Standards.

Section 6 of the Local Government (Financial Reporting and Prudence) Regulations 2014 requires Local Authorities to disclose information about core assets in its annual report, including the local authority's most recent estimate of the replacement cost. The concept of intergenerational equity in the funding of infrastructure asset is included as one of the principles of financial management. Without accurate knowledge of serviceability of assets, local authorities will only be guessing when they attempt to spread the costs of infrastructure across present and future ratepayers.

As required under the LGA, the Council has its assets re-valued every three years by independent qualified valuers. Valuations will be undertaken more regularly if necessary to ensure no individual item of property, plant or equipment within a class has a carrying value that is materially different from its fair value.

The following asset valuations presented in Table 4 was carried out by Infrastructure Associates Ltd as at 01 July 2018.

Asset information and asset registers used for the re-valuation undertaken by Telfer Young (Taranaki) included Land and Buildings.

Asset information and asset registers used for the re-valuation undertaken by Just Add Lime included:

- Previous Revaluation Reports;
- Network asset data provided from SDC (from AssetFinda database for the three waters)
- Unit rates and effective lives as agreed with SDC.

Asset information excluded from the Just Add Lime re-valuation were:

- Resource Consents
- As Built Plans

Financial Reporting Standards (PBE IPSAS 17) applies to all SDC wastewater infrastructure assets considered in the Infrastructure Associates re-valuation for the general purpose of financial reports.

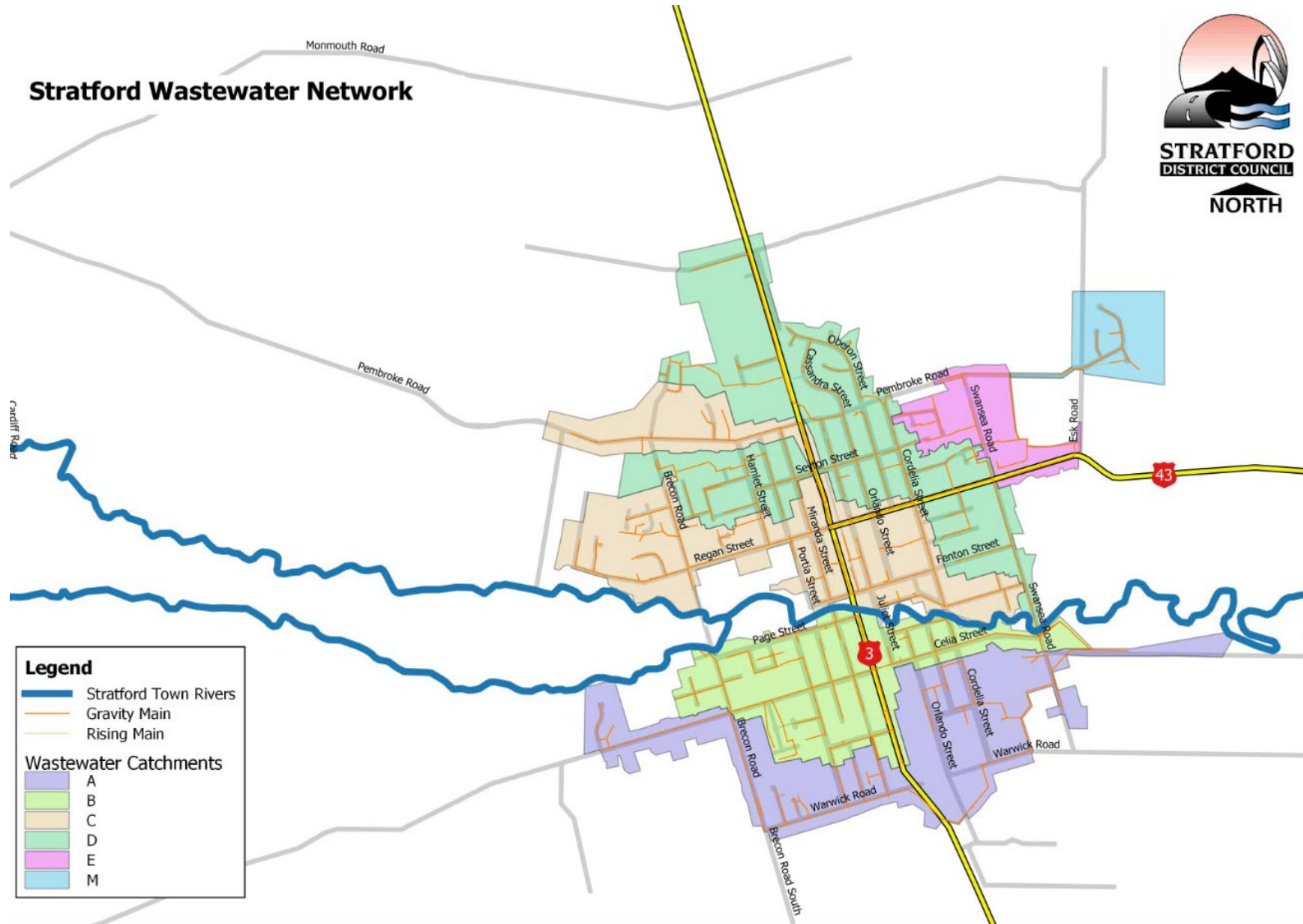


Figure 5 – Wastewater Area of Benefit in Stratford as at 01 July 2020

Table 4 –Wastewater Asset Valuation Summary –Infrastructure Associates Ltd Asset Valuation Report as at 1 July 2018

Asset Group	Asset Component	Size / length	Quantity	SDC Useful Life (yrs.)	Average Remaining Useful Life (yrs.)	Values		
						RC (\$)	ODRC (\$)	(AD (\$))
Pipes	Pipe	150mm	44,004	40-80	34	8,874,302	3,054,891	89,457
	Pipe	225mm	5,478	40-80	12	1,636,494	172,693	13,900
	Pipe	375mm	5,774	40-80	12	2,452,043	286,612	22,813
Total Pipes			55,256			12,962,839	3,514,196	126,170
Point and Plant	Service Connections	Varies	2,500	40-80	22	6,528,900	2,051,940	93,270
	Point	N/A	807	40-80	53	2,125,350	979,635	18,514
	Pump Stations	N/A	4	40-80	32	323,834	211,327	6,477
	Pre-treatment	N/A	6	40-80	24	282,488	197,102	8,075
	Treatment	N/A	7	40-80	33	1,922,729	1,049,809	31,718
	Post-treatment	N/A	24	40-80	67	231,141	200,109	2,979
Total Point and Plant						11,414,442	4,689,922	161,033
Total Wastewater						24,377,281	8,204,118	287,203

3.3. USEFUL LIFE

Useful life refers to either;

- The period over which an asset or component is expected to be available for use by an entity, or
- The number of production or similar units expected to be obtained from the asset or component by the entity. *Refer: International Infrastructure Management Manual (2015).*

The asset Useful lives are expressed as years. The asset **Age** is based on construction dates. The *Remaining useful life* is based on age and useful life of the assets

3.4. ASSET INFORMATION SYSTEM

The Stratford District Council uses AssetFinda to support management of the Wastewater Activity. Data on infrastructure assets is collected during inspections and monitoring using both paper based and electronic methods.

All data collected in relation to the Wastewater activity infrastructure is entered into AssetFinda by the Engineering Officer, GIS Officer, engaged Consultants or the Contractor.

3.5. THE WASTEWATER INFRASTRUCTURE ASSETS

The following constitute the wastewater infrastructure assets:

- Wastewater Reticulation system; and
- Wastewater Treatment System;

3.5.1. WASTEWATER RETICULATION SYSTEM

Wastewater is collected through the reticulation system and transported to the wastewater treatment plant on Victoria Road. Most of the wastewater flow to the treatment plant is gravity fed from the reticulation system. Wastewater then flows into the inlet works at the wastewater treatment plant.

Wastewater reticulation system comprises of pipes, manholes and pump stations.

3.5.2. WASTEWATER TREATMENT SYSTEM

The wastewater treatment system comprises of an inlet screen, a primary facultative pond, secondary maturation pond, and a rock filter. The final receiving environment for treated wastewater is the Patea River.

Table 5 provides a summary of the pump stations and the catchment areas they serve.

3.6. DRAINAGE CATCHMENTS

Stratford is divided into four main catchments with sub-catchments, as the sewer main branches shortly upstream of the treatment plant as shown in Figure 5. The area where catchments 3 and 4 are located has been arbitrarily separated into two catchments, with the point of separation immediately north of the intersection of Fenton Street and Swansea Road. The southern part of these two catchments also receives flow from a main along Pembroke Road, west of Broadway.

Table 5 - Pump Stations and Catchment Discharge Areas

Pump Station	Site Location	Service Area
Esk Rd Pump Station (P.S. 1)	On Esk Rd, 70mtrs north of SH43 intersection. NZTM coordinates (approx.): 5645396.46N, 1712016.56E	On demand station servicing catchment E. Flow is transferred to catchment D at the intersection of Swansea Road and Regan Street.
Cordelia St Pump Station (P.S. 3)	Outside 23 Cordelia St. NZTM coordinates (approx.): 5645283.41N, 1711046.17E	Overload station servicing high flow area of catchment D. Flow is transferred to low catchment C at the intersection of Cordelia and Regan Streets.
Miranda St Pump Station (P.S. 4)	Outside 103 Miranda Street NZTM coordinates (approx.): 5644132.98N, 1710779.62E	Overload station servicing high flow area of catchment B. Flow is transferred to low catchment A at the intersection of Romeo and Miranda Streets
Maria Place Pump Station (P.S. 2)	East side of Maria Plc cul de sac. NZTM coordinates (approx.): 5645859.52N, 1712280.69E	On demand station servicing catchment F. Flow is transferred to catchment E at Manhole E13 outside 168 Pembroke Rd.

3.7. ASSET MANAGEMENT MATURITY ASSESSMENT

The Council has assessed its Asset Management maturity across 5 key disciplines of asset management practice including:

- Setting the Strategic Direction;
- Establishing Levels of services;
- Forecasting Future Demand;
- Collecting Asset Information; and
- Monitoring Asset Performance and Condition.

The Asset Management Maturity Index assessment in Table 6 below provides a snapshot of where the Council is at in its asset management practices and in particular, emphasizes that seeking advanced practice in all areas may not be the best solution across activities, as this depends on the scale and type of assets being managed.

Table 6: 3-Waters Asset Management Maturity Index Assessment

	Asset Management Disciplines	Maturity Index	Maturity Description	What we do
1	Strategic Direction	Intermediate	<ul style="list-style-type: none"> • AM System scope is defined and documented. 	<ul style="list-style-type: none"> • The Council has adopted an Asset Management Policy to provide the overall direction for asset management in the district. • Scope is also refined as a consequence of our Early Conversation discussions with Elected Members, which inform the LTP, and also during our regular workshops to define Strategic Direction for the Council.
2	Defining Level of service	Intermediate to Advanced	<ul style="list-style-type: none"> • Level of service and cost relationship 	<ul style="list-style-type: none"> • Again, existing levels of service is are generally maintained, however, can be re-defined as result of either legislative

	Asset Management Disciplines	Maturity Index	Maturity Description	What we do
			<p>understood.</p> <ul style="list-style-type: none"> • Customers are consulted on significant service levels and options. • Customer communications plan in place. • Levels of service are integral to decision making and business planning. 	<p>requirements; customer feedback or in response to new technology. Re-definition is done as an outcome of our discussions with Elected Members, either prior to the LTP year or as and when required during the year.</p> <ul style="list-style-type: none"> • The LOS are defined in the AMPs for each work activity. • Redefined levels of service in previous years include: <ul style="list-style-type: none"> ○ Network Planning and modelling ○ Pipe work – increase the size; ○ New management of the trade waste discharges ○ Reduction in the wastewater pipe inflow/infiltration ○ Addition of new back flow devices; ○ More staff to implement higher LOS defined; ○ Universal metering; ○ Higher wastewater discharge quality;
3	Forecasting future demands	Core to Intermediate	<ul style="list-style-type: none"> • Risk associated with demand change broadly understood and documented. • Demand management considered as an alternative to major project development. 	<ul style="list-style-type: none"> • We have a broad understanding of the issues for each work activity and these are documented in the AMP as “Problem Statements”. • Forecasting is based on population and economic growth statistics in addition to regulatory changes at the central government level.. • Demand Management has been used in the water and wastewater activities, enforced by the Water Supply and Wastewater and Trade Waste Bylaws. Our resource consents also support our demand management initiatives. DM initiatives employed include: <ul style="list-style-type: none"> ○ Universal metering to encourage water conservation; and ○ New PRVs for flow and pressure managements;
4	Collecting Asset Information	Intermediate	<ul style="list-style-type: none"> • A reliable register of physical, financial and risk attributes recorded in an information system with data analysis and reporting functionality. Systematic and documented data collection process in place. 	<ul style="list-style-type: none"> • AssetFinda is the database for our 3-waters assets for recording the physical, financial and risk attributes. • Data is collected, updated and validated on an ongoing basis, particularly when new assets are being installed and maintenance occurs on existing assets.

	Asset Management Disciplines	Maturity Index	Maturity Description	What we do
5	Monitoring Asset Performance and Condition	Core	<ul style="list-style-type: none"> Condition and performance information is suitable to be used to plan maintenance and renewals to meet over the short term. 	<ul style="list-style-type: none"> The condition - physical integrity - of an asset is deduced based on the age, material type and analysis of collected statistical data. The performance, being a measure of whether the asset is delivering level of service requirements – is monitored during routine inspections and asset upgrade.

3.8. ASSESSMENT OF ASSET CONDITION

Asset condition is a measure of an asset’s physical integrity, while asset performance is a measure of whether the asset is delivering level of service requirements. Knowing the condition of an asset enables more accurate prediction of asset development, maintenance and renewal/replacement requirements. The Stratford District Council identifies the condition of our wastewater infrastructure assets by age and through visual targeted inspections, analysis of collected statistical data, and through maintenance monitoring.

Generally, the Council takes a risk-based approach to monitoring the condition of assets and conducts condition assessments of its critical assets. Where assets have low risk because they are in the first half of their life, condition monitoring is low. If the consequences of running an asset through to failure are high, the Council, through a more intensive monitoring regime and targeted inspections, hold more information on the asset condition.

The Council has no backlog or deferred maintenance in its work programme.

Targeted inspections are carried out on asset components that are considered critical to Council and the community, have the potential to impact on public health and safety; or where there is a specific requirement. Targeted inspections of wastewater infrastructure assets are carried out by Council staff, the Maintenance Contractor, or specialist Consultant to identify the condition of specific asset components at intervals specified by the Asset Manager or upon request.

To identify the general condition of its wastewater assets, the Council undertakes the following targeted inspections:

- Underground reticulation – by the Contractor during works or as issues are identified;
- Underground reticulation – annual videoing of sample section;
- Buildings – annually by the Contractor; and
- Carparks – annually by the Council Roding Engineer.

Maintenance monitoring is carried out by the Contractor at intervals specified in the Maintenance Contract. Maintenance monitoring is carried out to identify the condition of infrastructure and any item(s) that needs attention or could affect the integrity of the asset and the service it provides.

Maintenance monitoring of wastewater assets includes:

- Oxidation Ponds
- Pump Stations
- Underground reticulation
- Manholes

Condition Grading - Visual targeted inspections, analysis of collected statistical data, and maintenance monitoring provide both qualitative descriptions and quantitative grading of asset component condition. Condition grading supports the development, maintenance, and renewal/replacement of an asset by enabling more accurate prioritisation of forward works programmes.

Both the New Zealand Infrastructure Asset Grading Guidelines (1999) and the National Asset Condition Grading Standards (2005) provide examples of standard condition grading schedules for infrastructure assets. The International Infrastructure Management Manual (2011) provides guidance on assessing the condition of assets and approaches to grading the condition. In line with this Stratford District Council has developed a condition grading system to support identifying the condition of assets at the group level. Using the system, the assessed condition of assets are ranked from 1-5 as illustrated in Table 7 below. Over the last 3 years the Wastewater assets have increased with new flowmeters and telemetry equipment installed in the treatment plant. This is due to the new resource consent requirements that came in to effect in 2020.

Table 7 - Condition Grading System

Grade	Condition	Description	Indicative Network Assessment
1	Very Good	Asset in structurally sound and excellent physical condition. No work required	25%
2	Good	Asset in structurally sound and acceptable physical condition. Minor work required (if any)	17%
3	Average	Asset is structurally sound but shows deterioration. Moderate work required to return asset to agreed level of service	14%
4	Poor	Asset failure likely in the short term. Significant work required now to return asset to agreed level of service	16%
5	Very Poor	Asset has failed/is about to fail. Renewal/Replacement required Urgently	27%

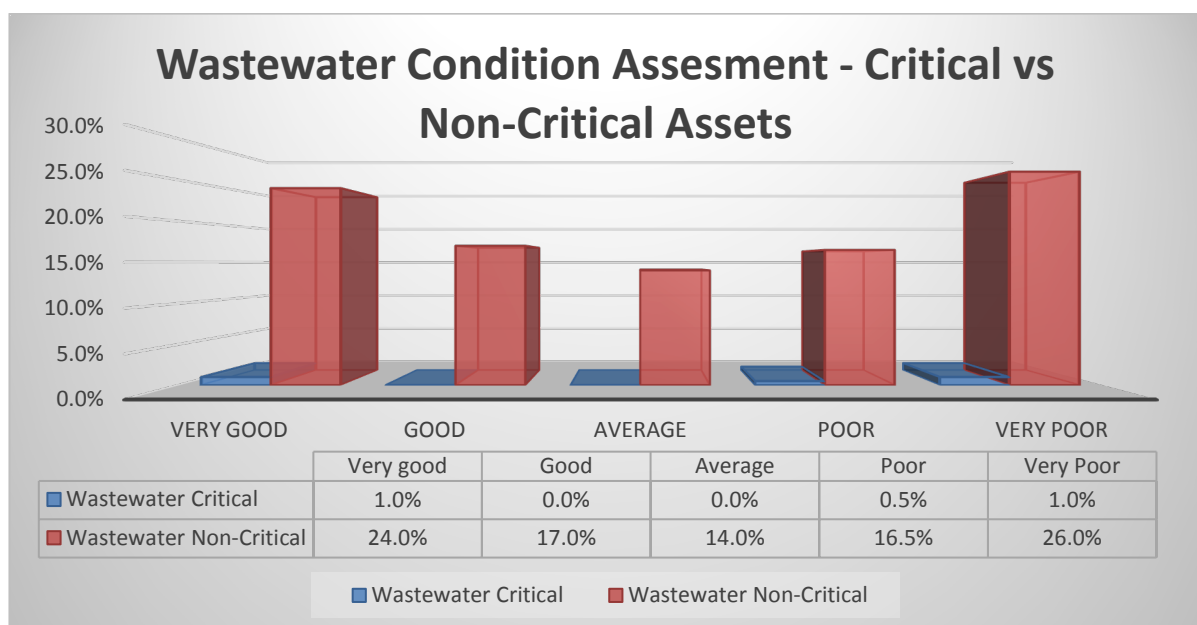


Figure 6: Wastewater Condition Assessment - Critical vs Non-Critical Assets

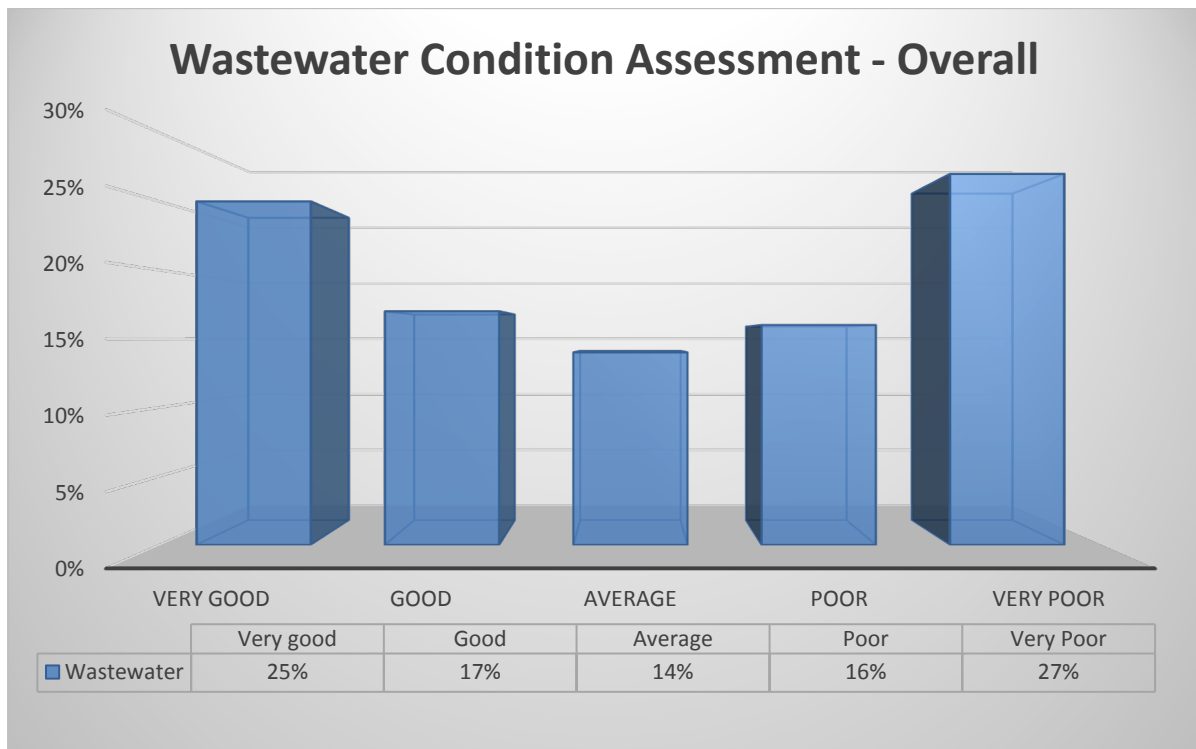


Figure 7: Wastewater Condition Assessment – Overall

3.9. DATA ACCURACY AND CONFIDENCE

The accuracy and currency of data is critical to effective asset management. Accurate data enables Council and the community to have confidence in decisions made about asset development, maintenance, and renewal/replacement.

To ensure accurate asset data is entered into the asset management system Stratford District Council has put in place the *Inspection Data Management Process* for managing targeted visual inspection data. Also, to determine the level of confidence Council has in targeted inspection data Stratford District Council has put in the *Data Confidence Grading System* in Table 9. Asset Grading by asset group is provided in Table 10.

Table 8 - Inspection Data Management Process

Step	Management process	Description
1	Collect Data	Data is collected and documented about asset and asset condition.
2	Hold Data	Where feasible data is stored in a temporary place until enough is gathered for sample auditing.
3	Audit a sample of Collected Data	Where applicable a sample of collected data is checked against the asset by authorised Council staff/Consultant – minimum 5%.
4	Enter Data into Asset Management System	Data is entered into the Asset Management System by the staff member responsible for the system.

Table 9 - Data Confidence Grading System

Grade	Confidence Level	Description
1	Highly Reliable	Data based on sound records, procedures, investigations and analysis which is properly documented and recognised as the best method of assessment - dataset is complete and estimated to be accurate +- 2%
2	Reliable	Data based on sound records, procedures, investigations and analysis which is properly documented but has minor shortcomings; for example the data is old, some documentation is missing and reliance is placed on unconfirmed reports or some extrapolation - dataset is complete and estimated to be accurate +- 10%
3	Uncertain	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolation from a limited sample for which grade A or B data is available - dataset substantially complete but up to 50% extrapolated data and estimated to be accurate +- 25%
4	Very Uncertain	Data based on unconfirmed verbal reports and/or cursory inspection and analysis - dataset may not be fully complete and most data is estimated or extrapolated and estimated to be accurate +- 40%
5	Unknown	None or very little data held

Table 10: Asset Data Grading by Asset Group

Asset Group	Key Confidence Attributes Percentage (%)				Average	Assessed Confidence Level	Confidence Grading
	Location	Diameter /size	Material	Age			
Pipe	95	80	80	70	81.25	Uncertain	3
Service Connections	5	80	5	10	25	Unknown	5
Point	90	70	70	70	75	Uncertain	3
Pump Stations	100	70	70	70	77.5	Uncertain	3
Pre-treatment	90	90	90	90	90	Reliable	2
Treatment	90	90	90	90	90	Reliable	2
Post-treatment	90	90	90	90	90	Reliable	2
Critical Assets Assessment	Reliable						
Non-Critical Assets	Reliable to Uncertain						
OVERALL ASSESSMENT	Reliable to Uncertain						

While Council's overall confidence around its data quality is *'Reliable to Uncertain'*, the Council's confidence level for the 3-Waters is *'Reliable'* for its critical assets and *'Reliable to Uncertain'* for non-critical assets. This uncertainty stems from data held around the age of the non-critical assets, which have been deduced from the approximate date of construction, and also from the quality of data held on our service connections. However, given these are non-critical assets, impact of premature asset failure on continued service delivery is very low, as any disruption to service is limited to a few properties. The associated financial impact is also very low.

It is important to note that these assets do not fail simultaneously, as they are individual assets - any failed part can be isolated and managed, so the risk and consequences of failure is very low. This is evidenced from our annual performance indicators reported every month to the Council and summarized in the Annual Report. Our track record is good. Our strategy to mitigate the impacts of this *Uncertainty* is to be ready at all times to respond to all asset failures. Therefore we have, on hand or ready access to, supplies to replace any failed asset. Our contractors are on board as per the requirements of their maintenance contract.

The Council continues to validate the data in the AssetFinda database - as assets are replaced. Our maintenance contractors interact directly with our asset management system and provide corrections and updates to the condition data which is reviewed and/or updated as new data becomes available. Assets that are frequently interacted with therefore, are better documented than those that only get dug up as part of upgrades, renewals or repair work. It will take some time for the assessment of our 'confidence level' of our non-critical assets to be *'Reliable'*. The charts above provide snapshots of the overall *Condition Grading Assessment* for all assets –critical and non-critical and a summary of the *Data Confidence Levels*.

3.10. IMPROVEMENT PLAN

Actions identified in this Section for improving management of the asset are as follows:

Sub Section	Task	Due Date
3.7	<p>Update asset condition data</p> <p>Continue to use information collected from maintenance tasks to update asset condition data</p>	Ongoing
3.7	<p>Improve condition data accuracy and reliability</p> <p>The issues related to condition data for <u>below ground</u> wastewater supply assets does not allow Council to accurately forecast remaining useful life. However, using the information collated from both 'scheduled' and 'reactive' maintenance (under the Services Maintenance Contract 2014), Council is able to update asset condition data regularly. Over time as maintenance and renewals are carried out, the condition information will improve.</p> <p>Therefore, the implementation of additional major projects to assist Council in improving condition data information is not required.</p>	Ongoing

4.0

Future Growth and Demand

4.0: Future Growth and Demand

4.1.	OVERVIEW.....	51
4.2.	DEMAND FORECASTING.....	51
4.3.	DEMAND DRIVERS AND IMPACTS.....	51
4.3.1.	Population	52
4.3.2.	Economic Development.....	54
4.3.3.	Climate Change	55
4.3.4.	Tourism.....	56
4.3.5.	The (draft) Structure Plan for Stratford.....	56
4.3.6.	Regulatory changes	57
4.3.7.	Customer Needs and Expectations.....	57
4.4.	IMPROVEMENT PLAN	57

4.1. OVERVIEW

This section provides a description of population; economic growth trends and forecasts and demand drivers for the provision, development and sustainability of Council's Wastewater Services to the community. It identifies the demand forecasting model used by the Council and highlights the factors that influence the demand for infrastructure and services and the associated impacts of each driver on the demand for the Wastewater Services.

The demand for the provision of Wastewater services is generally determined by the degree to which customers use the service. The forecasting of future demand for services enables Stratford District Council to plan ahead and identify the best way to meet that demand.

Section 14 of the Local Government Act 2002 requires local authorities to take a sustainable development approach in conducting business. In doing this Stratford District Council must take into account;

- I. the social, economic, and cultural interests of people and communities; and
- II. the need to maintain and enhance the quality of the environment; and
- III. the reasonably foreseeable needs of future generations.

Stratford District Council is committed to planning for the changing needs of its community. As part of this commitment Council utilises demand forecasting in all asset management planning.

4.2. DEMAND FORECASTING

Demand forecasting enables Stratford District Council to identify areas that are likely to experience significant pressures, and plan accordingly. Currently, the Stratford District Council uses a "basic" model for demand forecasting. It is a combination of formal and informal techniques. Central to this is an understanding of how growth and future demand trends will impact on Levels of Service and desired community outcomes.

As part of the planning process Council considers:

- the Asset use, demand, and capacity;
- the implementation and planning for quality and process improvements; and
- environmental impacts

Key Information gathered during the forecasting process includes:

- Historical data;
- Observed patterns and trends – use, demand, and popularity;
- Statistical estimates and projections;
- Commercial activity and anticipated business migration;
- Pending legislative changes.

From this assumptions are formed about what could happen; enabling Council to better plan for the future needs of the community.

4.3. DEMAND DRIVERS AND IMPACTS

Demand drivers are the factors that influence demand for services or the infrastructure that provides those services. Future growth in the Stratford community can be attributed to a number of factors described in detail below, including:

- Population;
- Economic Development;
- Tourism;
- Regulatory Changes;
- Land Use Changes via the Structure Plan;
- Changing Customer Needs and Expectations

4.3.1. POPULATION

Under the medium population growth scenario projected by the Infometrics Model, the Taranaki region's population is expected to grow to over 145,100 by 2051. Under a high growth scenario, higher levels of net migration would lead to a regional population of 163,100 by 2051, while the low growth scenario results in the population growing to approximately 129,000 residents by 2035, and then remaining relatively static at that level until 2051.

For the Stratford District, the forecast under the High growth scenario is to increase from above 10,000 in 2021 to just under 12,000 in 2051. This is equivalent to just under 0.7% increase per annum, an estimated total increase of approximately 18% over these 30 years. Under the low growth scenario, the forecast is to decline from above 10,000 in 2030, to just above 9,000 in 2051

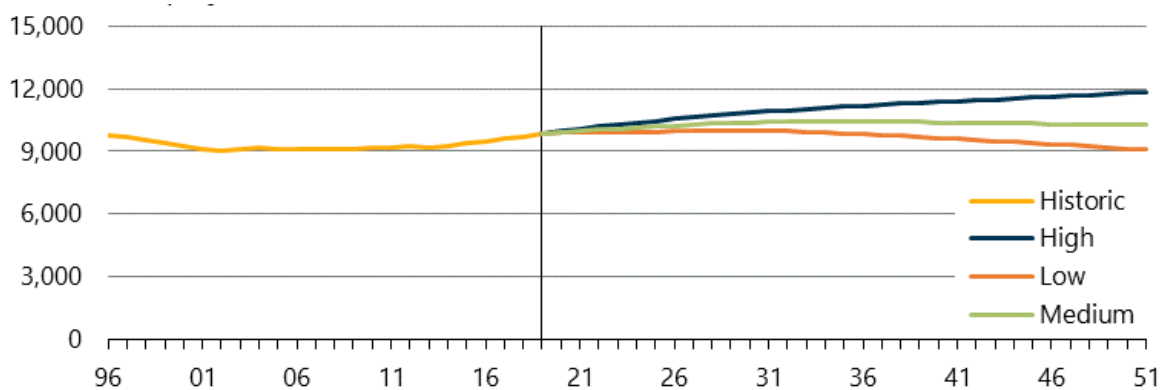


Figure 8 - Stratford District Infometrics projection of population change

Population distribution

Currently, there are 1,250 Maori population – 48% are under 20. Maori make up 13% of district population. Population growth has averaged 0.2% in the last 20 years, and averaged 0.7% in the last 10 years, however, in the last 3 years population growth has increased annually by 0.8% on average.

Population 2019 Infometrics data shows that Stratford district is approximately 9,860 – a growth of 1.3% from previous year. The source of growth was 78% due to natural increase and 22% due to net migration. We are anticipating an annual average population growth of 0.5% over the next eight years, centered around the urban area and mostly as a result of births.

The district's Population Age Structure and Projection is shown in Figure 9; Components of Population Change in Figure 10 and the Population Geographic Distribution in Figure 11.

Elderly Population

The average age of Stratford residents is expected to increase over the next 30 years from 40 to 42 years. 580 residents (5% of the district population) are aged 80+.

With a rising older population and a potentially declining older working population Stratford District Council and the Water Supply Activity will need to consider the services it delivers and the infrastructure required to deliver these services.

For a clearer picture of the impacts on infrastructure and the demand for services, further assessment is necessary. The cost of this assessment will need to be weighed against the benefits of embarking on the project.

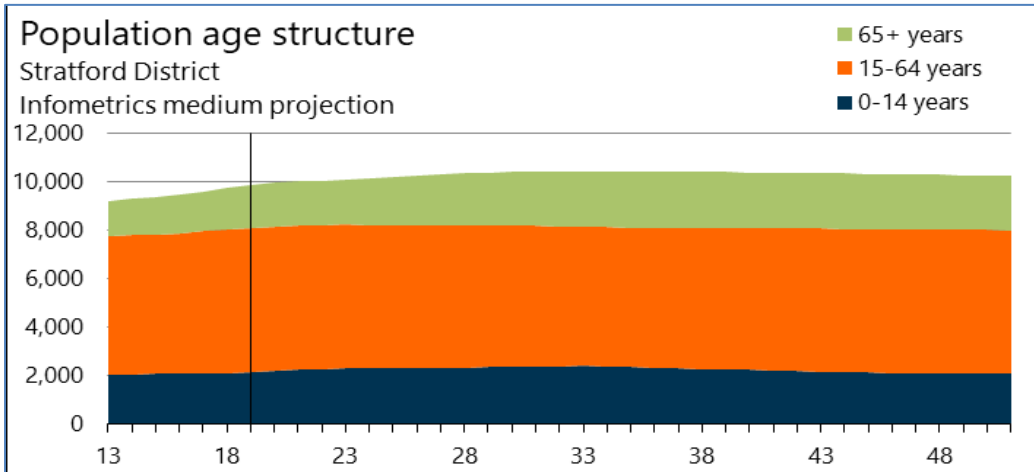


Figure 9 - Stratford District's Population Age Structure

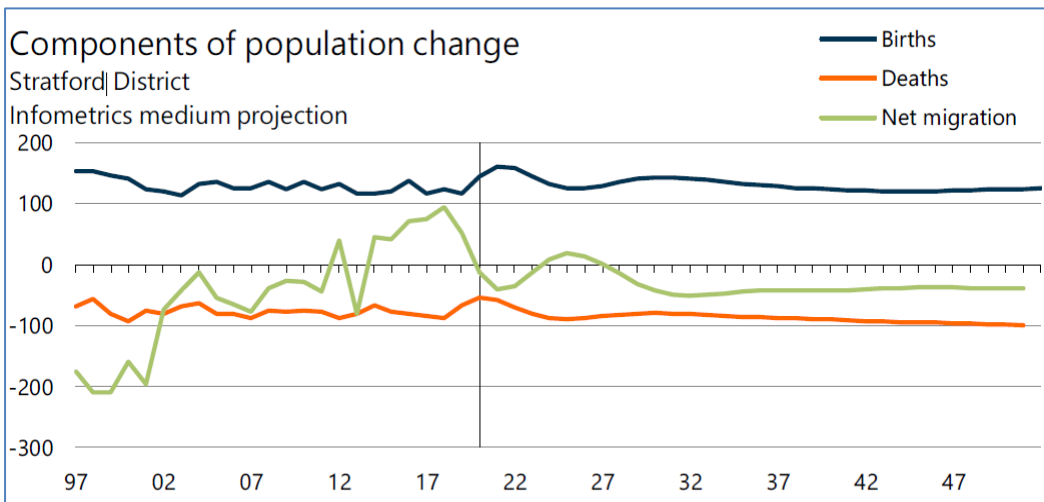


Figure 10 - Components of Population Change

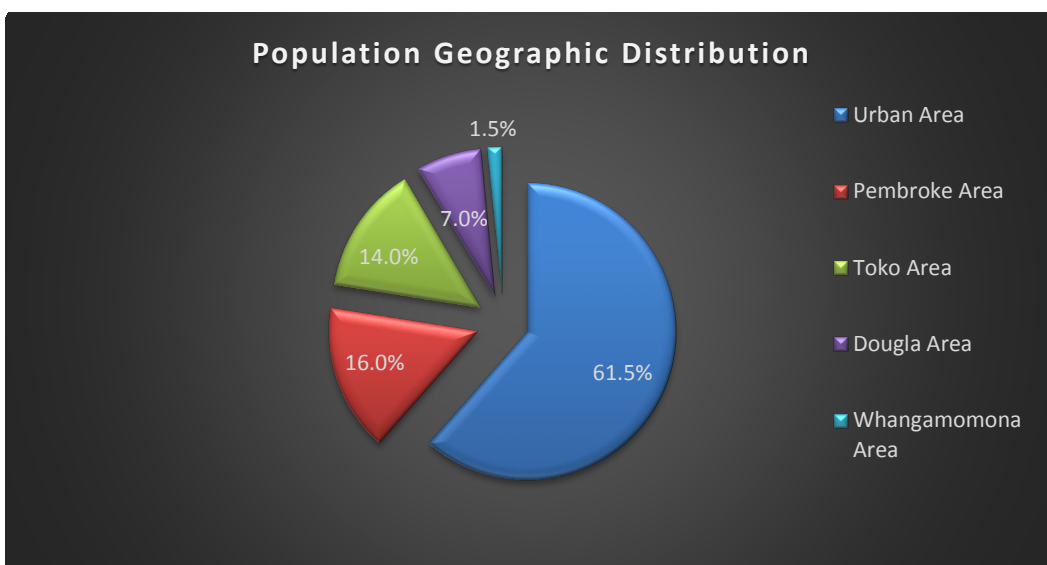


Figure 11 – Current Population Geographic Distribution

4.3.2. ECONOMIC DEVELOPMENT

The four local authorities of the Taranaki region in association with Venture Taranaki and the Ministry of Business, Innovation and Employment (MBIE) have developed a new regional Economic Development Strategy and Action Plan for Taranaki. The Taranaki Regional Economic Development Strategy became official in August 2017 and is known as “Tapuoe Roa - Make Way for Taranaki”.

This strategy sets a direction for economic development and identifies priorities and measurable goals for the region as a whole. It is anticipated that the Strategy will enable and support economic growth and development in the Stratford District.

While economic growth for the Stratford District is desirable Council is aware that growth can have an impact on infrastructure and the services delivered by that infrastructure.

Anticipated impacts of the Regional Economic Development Strategy and any resulting growth on the Water Supply activity and infrastructure are expected to include:

- Increased demand for water services
- Increased pressure on existing infrastructure.
- Increased maintenance and renewal costs.

Economic History and Forecast

According to the Infometrics Model, GDP growth is static to low, and generally under the national average – except for 2009 and 2012 where there were spikes in the district's GDP compared to the rest of the country.

The two biggest contributing industries in Stratford are the Agriculture and Forestry sector contributing 27% (Dairy Farming making up 16% of this) of district GDP, and the Electricity and Gas Supply contributing 16%. Stratford has the region's largest electricity generation site at Contact's 575MW gas powered plant – it is considered a nationally significant generation site.

In 2019, there were 3,462 filled jobs in the Stratford District. The district unemployment rate was 4.4%, compared to the regional unemployment rate of 5.0% and national unemployment rate of 4.3%. Employment growth lags behind the rest of the country (2018 Stratford: 1.5%, National: 3.0%), although it did spike above the national average in 2009.

In terms of industry employment the top five employing industries in 2019 were:

- Education and Training 11%
- Dairy farming 9%
- Health Care and Social Assistance 7%
- Accommodation and Food Services 6%
- Supermarket and Specialised Food Retailing 6%

The biggest increase in jobs in Stratford since 2017 has been in the house construction (building) sector, and in primary education. Stratford generally has a higher rate of self-employment than the national average at 19%, compared to 17% nationally. Stratford also has a higher productivity rating per employee. In 2018, GDP per employee came to \$120,631, compared to the national average of \$97,174.

The 10-year and 30-year GDP and Employment forecast are provided in Figures 12 – 14.

	GDP level (\$m, 2010 prices)			Annual % change	
	2005	2018	2031	05-18	18-31
New Plymouth	3,908	5,349	6,074	2.4%	1.0%
South Taranaki	1,869	1,948	2,080	0.3%	0.5%
Stratford	415	414	459	0.0%	0.8%
Taranaki	6,192	7,712	8,613	1.7%	0.9%

Figure 12 GDP Growth 2005-2031

The Infometrics data above shows minimal change in GDP growth from 2018 to 2031

	Employment level			Annual % change	
	2005	2018	2031	05-18	18-31
New Plymouth	33,926	40,748	47,261	1.4%	1.1%
South Taranaki	13,959	13,952	15,256	0.0%	0.7%
Stratford	3,637	3,434	3,639	-0.4%	0.4%
Taranaki	51,522	58,134	66,157	0.9%	1.0%

Figure 13 - Employment Levels in the Region

Employment was expected to increase over the period to 2031, however the impact of Covid-19 has changed these figures

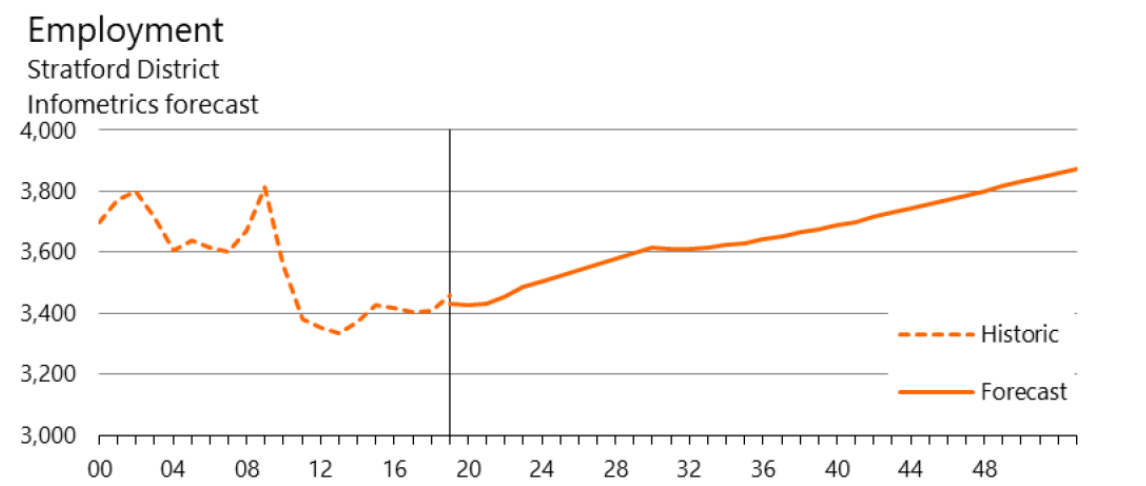


Figure 14 - Employment Forecast for Stratford

Employment is expected to increase slightly over the next 10-30 years

4.3.3. CLIMATE CHANGE

Scientific evidence indicates the earth's climate is changing because of increases in greenhouse gases caused by human activities.

Anticipated impacts for New Zealand over the next 100 years include:

- Changes in temperature
- Projected changes in rainfall
- Extreme weather events
- Decreased frost risk
- Increased frequency of high temperatures
- Increased frequency of extreme daily rainfalls
- Higher snow lines and possible reduced snow coverage
- Possible increase in strong winds
- An increase in average sea level.

At the regional and district level research indicates Taranaki could experience more extreme and varied rainfall patterns and severe weather events.

Extreme weather events and heavy rainfall would see increases in flooding, landslides, avalanches and mudslides during heavy rainfall events while on the flip side a lack of rain during summer months could see prolonged periods of drought. Both extremes place increased pressure on government, private flood insurance schemes, and disaster relief.

The Government's principal policy response to climate change is the New Zealand Emissions Trading Scheme (ETS). In various sectors (such as energy), the Government is also undertaking a range of other policies and measures that are contributing to reducing greenhouse gas emissions while achieving other policy goals.

Council responds to and plans for impacts of climate change as part of asset management practices by monitoring NIWA data in order to plan for and make adjustments to infrastructure where and when needed. Where adjustments are needed they are undertaken through New Works and/or Renewal/Replacement.

4.3.4. TOURISM

The Visitor Sector Action Plan is one of six action plans developed as part of the "Make Way for Taranaki" Regional Development Strategy.

The action plan describes the current regional sector dynamic, growth objectives, challenges, opportunities and the actions required to achieve sector growth. It is anticipated that the Visitor Sector Action Plan will enable and support growth in the Stratford District Visitor Sector.

Council welcomes the Stratford District being seen as a visitor destination but is mindful that increases in visitor numbers may have an impact on infrastructure and the services it provides. Anticipated impacts of the Visitor Sector Action Plan and any increases in visitor numbers on the Wastewater Service and infrastructure are expected to include:

- Increased demand for wastewater services
- Increased pressure on existing infrastructure.
- Increased maintenance and renewal costs.

4.3.5. THE (DRAFT) STRUCTURE PLAN FOR STRATFORD

The SDC is currently undertaking a Structure Plan of the Stratford District, which is in response to an increased demand for residential development sites in Stratford. This 30 year long term Strategy Plan will feed into the District Plan review and the Infrastructure Strategy, to ensure that the growth areas identified herein are duly catered for as and when required.

The Plan will identify key growth areas in Stratford, in addition to areas that lend themselves to infilling. Roading, Water and Wastewater infrastructure will be planned to service these areas accordingly. Given its proximity and centrality to key employment generators and tourist areas in the New Plymouth and South Taranaki District, the creation of new and affordable residential lots is expected to support the growth forecast for the Town.

4.3.6. REGULATORY CHANGES

Regulatory changes are mainly implemented through resource consent conditions. Currently, the changes to the National Policy Statement for Freshwater (FVNPS) require stricter discharge outcomes from all holders of water-related resource consents. The Taranaki Regional Council is currently reviewing its Regional Fresh Water Plan (RFWP) for Taranaki to take into account the new requirements.

4.3.7. CUSTOMER NEEDS AND EXPECTATIONS

The Stratford District is experiencing a change in customer needs and expectations. Changes are primarily driven by an increase in the older resident population and people moving to Stratford from larger metropolitan areas. Customers are expecting a higher level of service in terms of roads, footpaths, structures, water services, vegetation, and so forth.

4.4. IMPROVEMENT PLAN

Actions identified in this Section for improving management of the asset are as follows:

Table 11 - Future Demands Improvement Plan

Sub Section	Task	Due Date
4.3.1	Further analysis to determine how the impacts of growth and customer expectation will affect the structural integrity of an aging Wastewater Infrastructure network.	July 2020
4.3.2	Continue to use information collected from maintenance tasks to update asset condition data	Ongoing

5.0

Level of Service Performance

5.0: Levels of Service Performance

5.1.	OVERVIEW.....	60
5.2.	LEVEL OF SERVICE DEVELOPMENT/REVIEW PROCESS	60
5.3.	PERFORMANCE MONITORING AND REPORTING.....	61
5.4.	CURRENT PERFORMANCE.....	61
5.4.1.	System Adequacy.....	61
5.4.2.	Discharge Compliance.....	61
5.4.3.	Response and Resolution Times.....	63
5.4.4.	Customer satisfaction.....	63
5.4.5.	Trade Waste Consent Processing.....	63
5.4.6.	Trade Waste Complaints Response Times.....	63
5.5.	DESIRED PERFORMANCE	63
5.6.	IMPROVEMENT PLAN	64

5.1. OVERVIEW

Levels of Service (LoS) define the form and quality of service that the Stratford District Council provides to the community. They are the balance between what the community wants and what the community is willing to pay for.

Through asset management planning, the relationship between the LoS and the cost of service is determined. Once determined, the relationship is evaluated in consultation with the community to define the agreed LoS, which are then used to:

- Inform customers of the proposed LoS;
- Develop AM strategies to the deliver LoS;
- Develop targets to measure performance;
- Identify and evaluate the costs and benefits of services offered; and
- Enable customers to assess customer values such as accessibility, quality, safety, and sustainability.

The Levels of Service section details legislative and regulatory requirements affecting the operation, management and Levels of Service for the Wastewater Supply activity and infrastructure assets.

This section:

- Highlights the current LoS provided by the Stratford District Council;
- Defines the desired LoS for the futures; and
- Outlines performance measures that will be used to monitor the delivery of the agreed LoS.

5.2. LEVEL OF SERVICE DEVELOPMENT/REVIEW PROCESS

LoS review is an on-going process which can be triggered by a variety of drivers. The development and review of the LoS will be undertaken following the process diagram in Figure 15 (*Source: IIMM (2015)*).

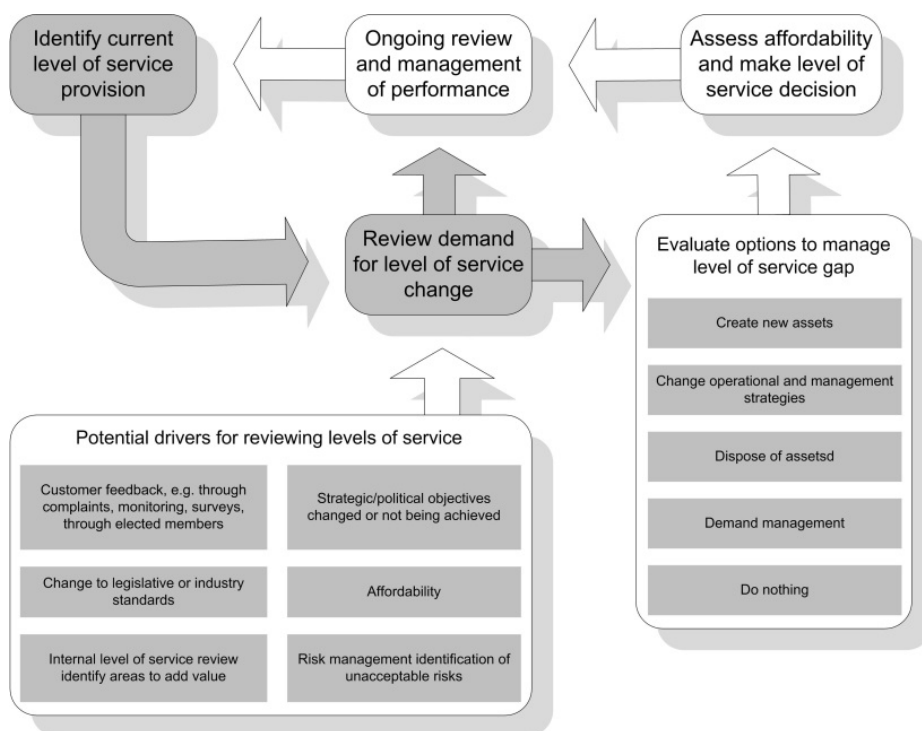


Figure 15 - Levels of Service Review Process

5.3. PERFORMANCE MONITORING AND REPORTING

The Stratford District Council has undertaken to provide a safe and well maintained wastewater network that meets LoS expectations and regulatory requirements. To ensure these expectations and requirements are met, the Stratford District Council undertakes performance monitoring of Water activities and infrastructure through the use of performance measures and key performance indicators (KPIs).

Performance measures and reporting enable Stratford District Council to identify how well it is delivering on the agreed LoS. KPIs enable Council to regularly measure actual performance against projected targets. By doing this we are able to identify trends, areas of achievement and areas for improvement to be identified.

The results of the performance monitoring are reported internally and externally through:

- monthly reports to Elected Members, also accessible to the public via the Council website; and
- the Long Term Plan, Annual Plan and Annual Report to our customers, key stakeholders and partners.

5.4. CURRENT PERFORMANCE

To ensure the wastewater services are delivered, the Council undertakes performance monitoring of the services it provides through the use of performance measures and key performance indicators (KPIs) as presented in Table 13. Our current performance is monitored through the measures from two main sources:

- The Department for Internal Affairs (DIA) performance measures; and
- Internal/Agency performance measure

The DIA Performance Measures: Since 2014 all local authorities have been required to comply with a standard set of performance measures. The performance measures are intended to provide information that will enable the public to contribute to discussions on future levels of service and participate more easily and effectively in decision-making processes.

The Internal/Agency Performance Measures: These are performance measures put in place by Council or other Agencies and are intended to inform the community about how well Council is delivering on Levels of Service and the asset performance of the activity.

5.4.1. SYSTEM ADEQUACY

Dry weather sewerage overflows - The number of dry weather sewerage overflows from the territorial authority's sewerage system, expressed per 1,000 sewerage connections to that sewerage system.

This target is <5 per 1,000.

In 2019/2020, there were no dry weather overflows.

5.4.2. DISCHARGE COMPLIANCE

Compliance with the territorial authority's resource consents for discharge from its sewerage system measured by the number of

- Abatement notices
- Infringement notices
- Enforcement orders; and
- Convictions,

Received by the territorial authority in relation to those resource consents. This target is 0.

In 2019/2020, there were no compliance notices.

Levels of Service Performance

Table 12- DIA and Internal / Other Performance Measures

	Level of Service	Performance Measure	Outcome Category
1.	System Adequacy	Dry weather sewerage overflows - The number of dry weather sewerage overflows from the territorial authority's sewerage system, expressed per 1000 sewerage connections to that sewerage system. This target is <5 per 1,000.	DIA measure
2.	Discharge Compliance	<p>Resource Consent Compliance – Compliance with the territorial authority's resource consents for discharge from its sewerage system measured by the number of:</p> <ul style="list-style-type: none"> • Abatement notices; • Infringement notices; • Enforcement orders; and • Convictions. <p>Received by the territorial authority in relation to those resource consents. This target is 0.</p>	DIA measure
3.	Response and Resolution Times	<p>Sewerage overflows - Where the territorial authority attends to sewerage overflows resulting from a blockage or other fault in the territorial authority's sewerage system, the following median response times are measured:</p> <ul style="list-style-type: none"> • Attendance time from the time that the territorial authority receives notification to the time that service personnel reach the site. This target is 1 hour. • Resolution time from the time that the territorial authority receives notification to the time that service personnel confirm resolution of the blockage or other fault. This target is 8 hours. 	DIA measure
4.	Customer satisfaction	<p>Complaints - The total number of complaints received by the territorial authority about any of the following:</p> <ul style="list-style-type: none"> • Sewage odour • Sewerage system faults • Sewerage system blockages, and • The territorial authority's response to issues with its sewerage system, <p>Expressed per 1000 connections to the territorial authority's sewerage system. This target is <5.</p>	DIA measure
5.	Trade Waste complaints response times	<p>Attendance time: from the time that Council receives notification to the time that a Trade Waste Officer arrives on site.</p> <p>This target is within 2 working days.</p>	Council Measure
6.	Trade Waste consent processing	<p>Percentage of trade waste consent applications processed within 15 working days.</p> <p>This target is 100%</p>	Council Measure

5.4.3. RESPONSE AND RESOLUTION TIMES

Where the territorial authority attends to sewerage overflows resulting from a blockage or other fault in the territorial authority's sewerage system, the following median response times measured:

- **Attendance time** from the time that the territorial authority receives notification to the time that service personnel reach the site. This target is 1 hour. In 2019/2020 the median response time for attendance was 42 minutes. Although this is an increase on the previous year the Wastewater activity achieved Level of Service requirements for attendance to a fault.
- **Resolution time** from the time that the territorial authority receives notification to the time that service personnel confirm resolution of the blockage or other fault. This target is 8 hours. In 2019/2020 the median response time for resolution was 4 hours and 34 minutes.

5.4.4. CUSTOMER SATISFACTION

This was a measure introduced for the 2015-2025 Long Term Plan. The performance measure target for customer satisfaction is the total number of complaints received by SDC for:

- Sewage odour
- Sewerage system faults
- Sewerage system blockages, and
- The territorial authority's response to issues with its sewerage system,

Expressed per 1000 connections to the territorial authority's sewerage system. This target is <5.

5.4.5. TRADE WASTE CONSENT PROCESSING

This was a new measure introduced by Council to ensure that the processing of new trade waste consents are completed within the specified timeframe, subject to receipt of complete information. It is the percentage of trade waste consent applications processed within 15 working days.

The performance measure target is 100%.

5.4.6. TRADE WASTE COMPLAINTS RESPONSE TIMES

This was a new measure introduced by Council to measure the time it takes Council Officers to respond to trade waste complaints. This is the Attendance Time – from the time that Council receives notification to the time that a Trade Waste Officer arrives on site.

The performance measure target is within 2 working days.

5.5. DESIRED PERFORMANCE

A summary of the Council's targets/ desired performance levels are presented in Table 14. This desire stems from the Council's resolve to maintain its agreed level of service delivery and strengthen the community's confidence in the Council's ability to deliver excellent Water Service to the users.

The Council will take into account its Customer Charter in its provision quality service to all our customers. Council will rate its performance against the key performance indicators (KPI's) or targets as per Table 15 below.

Table 13 - Performance Rating Index

Rating	Description
Achieved	Required actions have been completed and the intended level of service has been achieved; or Where a long-term level of service is targeted, the results for the year are in keeping with the required trend to achieve the intended level of service.
Not Achieved	None of the required actions have been undertaken, or The result for the year is less than half of the intended level of service, or Where a long-term level of service is targeted, the results for the year are contrary to the required trend to achieve the intended level of service.
Not Applicable	No action was required during the year.

5.6. IMPROVEMENT PLAN

Actions identified in this Section for improving management of the asset are as follows:

Sub Section	Task	Due Date
5.4.2	Pursue an environmentally - friendly, cost-effective and sustainable solution in renewing the Resource Consent for the discharge of treated wastewater into the Patea River	June 2021
5.4.2	Continue to produce high quality discharges to the Patea River through environmentally - friendly, cost-effective and sustainable treatment measures in the oxidation pond.	On-going

Table 14 - Performance Measures

Level of Service	Performance Measure	Outcome Category	Trends				Current		Target			How Measured
			2016/17	2017/18	2018/19	2019/20	2020/21	Year 1 2021/22	Year 2 2022/23	Year 3 2023/24	Years 4-10 2024-31	
System Adequacy	Dry weather sewerage overflows	DIA measure	Ach - 0	Ach - 1.59	Ach - 1.6	Ach - 0	<5	<5	<5	<5	<5	Reporting against corporate CRM system.
Discharge Compliance	Resource Consent Compliance <ul style="list-style-type: none"> Abatement notices Infringement notices Enforcement orders; Convictions, 	DIA measure	Ach - 0	Ach - 0	Ach - 0	Ach - 0	0	0	0	0	0	Consent & compliance documentation.
Response and Resolution Times	Sewerage overflows – Attendance Time	DIA measure	Ach 48 min	Not/A - 1 hr 50 min	Ach – 23 min	Ach 42min	1 hour	1 hour	1 hour	1 hour	1 hour	Work order tracking/reporting Council's asset management system.
	Sewerage overflows – Resolution Time	DIA measure	Ach 1 hr 55 min	Not/A 10 hr 22 min	Ach 2hr 50 min	Ach 4hr 34 min	8 hours	8 hours	8 hours	8 hours	8 hours	
Customer satisfaction	Complaints – <ul style="list-style-type: none"> Sewage odour Sewerage system faults Sewerage system blockages, and Response to issues with its sewerage system, 	DIA measure	Not/A - 6.1	Ach - 4.4	Not Recorded	Ach - 0	<5	<5	<5	<5	<5	Reporting against corporate CRM system.
Trade Waste complaints response times	Attendance time: from the time that Council receives notification to the time that a Trade Waste Officer arrives on site.	Council Measure	N/A	N/A	N/A	N/A	Within 2 working days	Within 2 working days	Within 2 working days	Within 2 working days	Within 2 working days	Work order tracking/reporting through Assetfinda
Trade Waste consent processing	Percentage of trade waste consent applications processed within 15 working days.	Council Measure	N/A	N/A	N/A	N/A	N/A	100 %	100 %	100 %	100 %	Authority
'Ach' – Achieved; Not /A – Not Achieved, N/A – Not Applicable												

6.0

Strategic Assessment

6.0: Strategic Assessment

- 6.1. OVERVIEW..... 68
- 6.2. OUR BUSINESS CASE..... 68
- 6.3. OUR PROBLEM STATEMENTS..... 68
 - 6.3.1. Resource Consent Implementation..... 69
 - 6.3.2. Trade Waste Implementation..... 69
 - 6.3.3. Inflow/Infiltration Programme..... 69
 - 6.3.4. Pipework Capacity Increase..... 70
 - 6.3.5. Network Planning and Modelling..... 70
- 6.4. OUR BENEFIT STATEMENTS..... 70

6.1. OVERVIEW

The Stratford District Council provides wastewater collection services to the properties within the urban area of Stratford Township.

The Council provides this service by collecting, treating and discharging treated wastewater into the Patea River. The collection, treatment and disposal of wastewater is a core service provision in line with Section 11A of the Local Government Act (LGA) 2002. The delivery of this service is contingent on the appropriate disposal of treated wastewater consented by the Taranaki Regional Council (TRC). The Council discharges the treated wastewater into the Patea River, under the terms and conditions of a consent granted by the TRC.

The Council collects wastewater from households via an underground system of pipes and manholes. Being underground, the condition of these pipes and manholes are more difficult to assess visually and so, the condition and remaining lives of these assets have been based on the known age of the pipe material.

The '*Strategic Assessment*' section presents an assessment of the need for investment to support and improve Council's delivery of the wastewater service. It defines the problems facing the Council and highlights the benefits of the investment in addressing these problems.

6.2. OUR BUSINESS CASE

Section 17A of the Local Government Act (LGA) 2002 requires the local authority to '*review the cost-effectiveness of current arrangements for meeting the needs of communities within its district or region for good quality local infrastructure, local public services and performance of regulatory functions*'.

Between June and September 2020, Council staff prepared and presented *Early Conversation papers*¹ for discussion with the Elected Members as part of the Long Term Plan (LTP) process. The purpose of these early conversations was to ask elected members for direction regarding some capital projects being proposed in the 2021-2031 LTP.

The Early Conversations with the Elected Members identified:

- Problems and items for improvement in the delivery of our Wastewater Service;
- Future proofing Objectives in addition to Council Community Outcomes;
- Options for addressing the identified problems; and
- An assessment of each option against Council Outcomes and the identified future proofing objectives;
- Risks and Opportunities associated with each option and
- Preferred Options to address each Problem Area.

The Elected Members considered the information and provided the necessary direction - in some cases modifying the preferred option. The outcomes of these conversations provided a 10-year plan for implementation of the Preferred Options for each Problem area identified.

6.3. OUR PROBLEM STATEMENTS

The main problems identified and partly *workshopped* as part of the Early Conversations are:

- Resource Consent Implementation;
- Trade Waste Implementation;
- Reticulation overload due to inflow/infiltration;
- Pipework Capacity Issues; and
- Network Planning and Modelling

¹ D20/11169

6.3.1. RESOURCE CONSENT IMPLEMENTATION

Condition 6 of our Wastewater Discharge consent states:

“Before 1 June 2022, the consent holder shall install the Diatomix system in the oxidation pond and advise the Taranaki Regional Council of the date of installation.”

Between 2013/14 and 2019/20, the Council approved a budget of \$2.85 Million for the Wastewater oxidation pond upgrade, as part of the Resource Consent renewal requirements and to date, only \$750,000.00 has been spent. The treatment is in 2 stages:

- Stage 1 - Reducing the phosphorus concentration in the influent – this has been implemented and is being monitored; and
- Stage 2 – Reducing the nitrate concentration in the resulting discharge – using the Diatomix System

The consent condition requires this installation to be completed by June 2022, so effectively, installation is expected to commence by July 2021. Given that it is a requirement of the resource consent, the installation of this system is non-negotiable. Council staff estimate the cost of this at \$500,000.

6.3.2. TRADE WASTE IMPLEMENTATION

Stratford District Council’s Trade Waste Bylaw 2020 (TWB) was adopted by Council in July 2020, with subsequent amendments adopted in October 2020.

Consent conditions, consent templates and other associated documents have been created; applications for trade waste discharges have been received and processed. The initial focus of the consenting process was directed towards bulk tanker discharges, other industries have been identified as requiring consent and are working through the process, the consent process is ongoing.

Although the Local Government Act 2002 has enforcement provisions for breaches of bylaws using the court system, ‘minor’ offending does not. Offences are being documented within the TWB infringement fees for the offences have been established and included in the LTP fees and Charges schedule. Consultation process has been completed with the Ministry of Justice, and the infringement scheme is now being reviewed by both the Parliamentary Counsel Office and Department of Internal Affairs.

Discharges to and from the wastewater treatment ponds are being sampled on a monthly basis. A health and safety induction document has been created for the wastewater treatment ponds. A wastewater spillage contingency plan for the wastewater ponds and sewer network has been created. Monitoring of the telemetered data and maintenance of the instruments operating at the wastewater treatment ponds is ongoing.

6.3.3. INFLOW/INFILTRATION PROGRAMME

The Inflow/Infiltration programme is a suite of interventions designed to minimise the inflow and infiltration of surface and groundwater into the wastewater pipe network. This is an important part of our annual network maintenance/renewal programme that ensures that only wastewater collected from households/businesses is transported to the treatment plant. Recently, Council Officers have also been identifying leaks from a number of private drains that need to be addressed in the future.

The requirement for this programme is echoed in Condition 9 of our resource consent which requires us to provide a report, before 31 July each year, to the Taranaki Regional Council, with copies to Ngati Ruanui and Fish and Game covering:

- details of the progress made towards reducing inflow and infiltration reduction over the previous year ending 30 June;
- the consent holder’s target for reduction of inflow and infiltration in the coming year; and
- details of the works proposed in order to meet that target.

6.3.4. PIPEWORK CAPACITY INCREASE

As described in 6.3.5 below, there have been new residential subdivisions and developments, urban infill and other growth-related pressures created in our wastewater network. The consequence of this is that some pipes are requiring upgrades in capacity to accommodate this increased wastewater flow.

6.3.5. NETWORK PLANNING AND MODELLING

With the new subdivision, urban infill and other growth areas springing up in Stratford, Council Officers are proposing to commission a network modelling project on our wastewater network. Network modelling will involve hydraulic analysis to reveal how our wastewater system is behaving. Hydraulic analysis will comprise the evaluation of capacity; identification of inflow and infiltration into the pipe network; identification of bottlenecks in the existing or proposed piping and plumbing works; and the design of improvements needed to accommodate growing demand for service and emergency response.

Wastewater modelling will provide details on the rainfall-derived inflow and infiltration in the network and identify overflow investigations which will help to inform our forward works programme and support compliance with our resource consent conditions.

6.4. OUR BENEFIT STATEMENTS

The Council has identified projects to address the problems to delivering wastewater services in a safe and environmentally friendly manner and at the agreed level of service to the community. The projects identified are presented in Table 16 below and include:

Table 15 – Problems, Projects and Benefit Statements

Problem Statements	Preferred Option	Benefit Statements
Problem Statement 1 Resource Consent Implementation	Implement all necessary measures to achieve the conditions of the wastewater discharge consent.	<p>Compliance with the requirements of the wastewater discharge consent is essential for minimising the adverse effects on the environment.</p> <p>With the receipt of our new Wastewater Discharge Consent issued in April 2020, the Council has programmed to implement the required system upgrade at the set time per the consent condition. The Council will also continue to monitor the performance of the wastewater oxidation pond and provide feedback to the key affected parties on a regular basis. The first stakeholder meeting involving Iwi and Fish & Game was held in August 2020; annual meetings will be held, as a requirement of the resource consent, to discuss performance progress. Intermittent meetings will be held where issues arise to ensure they are addressed promptly.</p>
Problem Statement 2 Trade Waste Bylaw Implementation	Implementation of the Trade Waste Bylaw	<p>This project is to ensure the implementation of the Councils newly adopted Trade Waste Bylaw.</p> <p>Stratford District Council's Trade Waste Bylaw 2020 (TWB) was adopted by Council in July 2020; Council undertook to employ a part time Trade Waste Officer in August 2020 to investigate trade waste discharges within the district and enforce the provisions of the TWB. Following subsequent amendments, the final Trade Waste Bylaw was adopted in October 2020.</p> <p>The successful implementation of this bylaw will ensure that</p>

Problem Statements	Preferred Option	Benefit Statements
		trade wastes are appropriately disposed of, costs lie where they fall and the quality of resulting treated wastes discharging into the receiving environment meets the conditions of our resource consent and requirements of the NES-FW.
<p>Problem Statement 3</p> <p>Reticulation overload due to inflow/infiltration</p>	<p>Implementation of Inflow/Infiltration programme, including inspections of private property to identify direct discharge of stormwater to sewerage system</p>	<p>This programme primarily to optimise reticulation capacity during rainfall events, by ensuring there is no inflow or infiltration of water into the wastewater reticulation system.</p> <p>The Inflow/Infiltration programme is a suite of interventions designed to minimise the inflow and infiltration of surface and groundwater into the wastewater pipe network. This is an important part of our annual network maintenance and renewal programme that ensures that only wastewater collected from households and businesses is transported to the treatment plant.</p> <p>CCTV inspections are undertaken as part of the network conditions assessments therefore no additional costs are incurred. Identifying areas of high infiltration allows Council to better focus funds. The removal of stormwater increases the available reticulation capacity during rainfall events.</p>
<p>Problem Statement 4</p> <p>Pipework Capacity Issues</p>	<p>Programme the implementation of pipework capacity increase to support growth.</p>	<p>This programme is to address under-capacity of pipe network to support growth, residential infill and other intense land-use activities.</p> <p>There have been new residential subdivisions and developments, urban infill and other growth-related pressures created in both our wastewater and stormwater networks. The consequence of this is that some pipes are requiring upgrades in capacity to accommodate the increased flow.</p>
<p>Problem Statement 5</p> <p>Network Planning and Modelling</p>	<p>Full review and calibration of the existing Wastewater model</p>	<p>To accommodate growth and increased demand, Council has programmed to increase pipe capacity to cater for high flows. While officers are aware of some pipes within the network requiring increased capacity, the Council is will commission a network modelling project on our stormwater network to reveal how our network systems are behaving.</p> <p>This modelling project will comprise:</p> <ul style="list-style-type: none"> • the evaluation of network capacity; • the identification of inflow and infiltration into the pipe network; • the identification of bottlenecks in the existing or proposed network; and • the design of improvements needed to accommodate growth. The modelling project is expected to reveal the areas for improvement in the network from which priority areas can be programmed for improvement. <p>The existing model is over 10 years old and needs updating in the near future to provide accurate information on where Council should undertake network upgrades and renewals.</p>

7.0

Lifecycle Management

7.0: Lifecycle Management

7.1.	OVERVIEW.....	74
7.2.	PROCUREMENT POLICY.....	74
7.3.	MANAGEMENT STRATEGIES.....	75
7.4.	CONTRACTUAL ARRANGEMENTS.....	75
7.5.	PROGRAMME BUSINESS CASE.....	76
7.5.1.	Operation and Maintenance.....	78
7.5.2.	Renewal/Replacement.....	79
7.5.3.	Level of Service Improvements.....	82
7.6.	DISPOSAL STRATEGY.....	83
7.7.	IMPROVEMENT PLAN.....	84

7.1. OVERVIEW

Lifecycle Asset Management focuses on management options and strategies to minimise risks to assets, and any potential risk of assets. It considers all relevant consequences from initial planning through to renewal, replacement, disposal or rationalisation of assets.

Lifecycle Asset Management acknowledges that assets are always in a state of decay and their useful life is primarily influenced by;

- Physical characteristics
- Operating environment
- Customer requirements

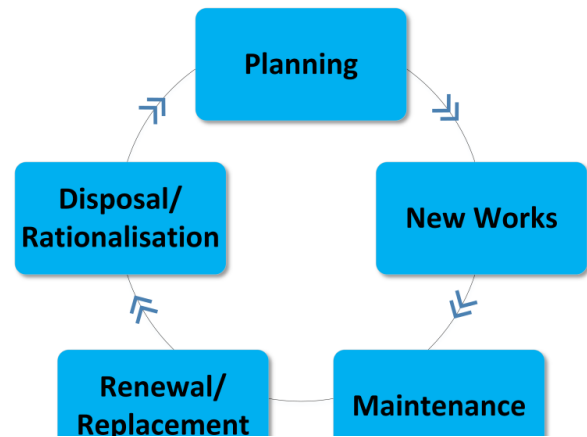


Figure 16 - Lifecycle Asset Management

Lifecycle Asset Management enables Stratford District Council to identify issues, determine appropriate response options and identify strategies and programmes for response to identified issues/opportunities in order to deliver Levels of Service and achieve both asset and organisational goals and objectives.

The Lifecycle Asset Management section contains current Stratford District Council procurement and contractual arrangements and the prioritisation of works:

- That meets the short and long term needs of our community;
- That offers value for money; and
- In a sustainable manner to the least whole-of-life cost.

This section presents a detailed plan of prioritised work over a 10-year planning period in response to the problem and benefit statements highlighted in this AMP. It presents Council's practices and projects to maintain the wastewater assets over its lifecycle through Council's:

- Procurement Policy;
- Management Strategies;
- Contractual Arrangements;
- Programme Business Case for the next 10 years;
- Disposal Strategy; and
- Planning for Improvement

7.2. PROCUREMENT POLICY

Procurement for the purpose implementing projects identified in the work programmes are undertaken in accordance with the Council's Procurement Policy. The Council's Procurement Policy for the purpose of procuring goods works and services is aimed at ensuring that Council:

- Achieves the right outcomes and value for money;
- Manages risk while allowing staff to exercise business judgement and be innovative;
- Demonstrates fairness;
- Reflects best management practice; and
- Has a local procurement policy applying to works with a monetary value up to a limit prescribed by Council.

All personnel involved in procurement procedures are required to maintain the confidentiality of the process. The Council, as a public entity, must act fairly and consistently, in accordance with relevant legislation.

7.3. MANAGEMENT STRATEGIES

The overall management of infrastructure will be driven through strategies aimed at:

- Complying with the legislative and strategic requirements;
- Meeting customer expectations and agreed levels of service; and
- Delivering value for money for ratepayers, funding partners and the Council.

These strategies as presented in Figure 17, are either under review or currently being prepared and include a strategy for the Treatment and compliance with disposal standards required by the Resource Consent (0195-6).

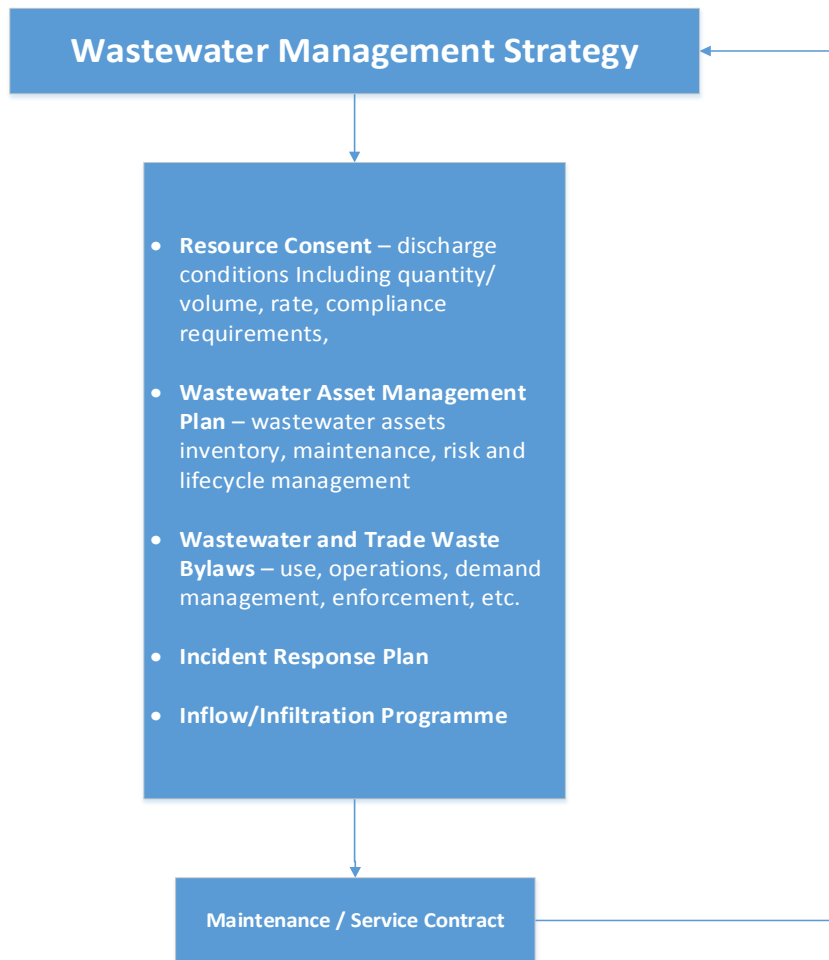


Figure 17 - Wastewater Asset Management Strategies

7.4. CONTRACTUAL ARRANGEMENTS

The Stratford District Council has in place contractual agreements for the delivery of the agreed levels of service. Service is delivered under three main contractual agreements:

- Professional Services;
- Physical Works; and
- Maintenance Contracts

Professional services are either usually catered for by Council's in-house Business unit. Where not catered for in-house, they are either delivered as part of Council's shared service arrangements or covered by the Maintenance Contract sought in accordance with Stratford District Council's Procurement Procedures.

Physical Works not mainly covered by the Maintenance Contract. However, where not covered, this service is procured in accordance with Stratford District Council's Procurement Procedures.

The Council has a Services Maintenance Contract which covers an initial period of 3 years from 1 July 2019 and expires on 30 June 2022. It is a three year service delivery Contract with two rights of renewal of two years each for the continued operation and maintenance of the Stratford District Council's Water, Wastewater and Stormwater Services.

This Contract requires the Contractor to provide not only physical works but also a degree of professional services for significant aspects of the work. The Contract was entered into in 2019 with its first renewal option in 2022.

The Council is responsible for the operation of both the treatment plant (oxidation ponds) and the pump stations.

7.5. PROGRAMME BUSINESS CASE

The programme business case details how the problems identified in the previous sections will be addressed. This is presented in Table 17 below and shows the identified projects that are proposed to address the identified problems presented in Section 6 of this report and achieve the DIA and Internal/Other performance measures as per Section 5.

The identified projects are grouped under three main categories of:

- Operations/Maintenance works;
- Renewal/Replacement works; and
- Level of Service Improvements.

The prioritisation of planned maintenance and renewal/replacement is based on Level of Service requirements, the level of risk, age and condition of the asset and budgetary constraints.

Options for delivery of the Wastewater activity works programme have been considered based on the potential impacts on LoS and the risks associated with investment levels that potentially change the level of service.

These key outcomes have been considered for each activity at an asset group level.

All options take a risk based approach incorporating higher risk approach for low volume and access roads.

Table 16 –Identified Projects and Performance Measures

Work Category	Identified Projects	Performance measures				
		System Adequacy	Discharge Compliance	Response Times	Resolution Times	Customer Satisfaction
Operations/ Maintenance	Infiltration monitoring (smoke test, manhole inspections)	✓	✓	✓	✓	✓
Renewal/ Replacement	Reticulation (Infiltration) Renewals (Replace existing infrastructure)	✓	✓	✓	✓	✓
	Bulk Discharge Renewals	✓	✓	✓	✓	✓
	Safety Renewals	✓				✓
	Pump station renewals (Replace existing mechanical and electrical infrastructure)	✓	✓	✓	✓	✓
	Camper Van Facility					✓
	Treatment Plant renewals (routine step/aerate renewals)	✓	✓			✓
	De-sludge Oxidation Ponds (restore ponds capacity)	✓	✓			✓
Level of Service Improvements	Reticulation Capacity Increase	✓		✓	✓	✓
	Modelling	✓		✓	✓	✓
	Inflow and infiltration programme	✓	✓	✓	✓	✓
	Diatomix	✓	✓			✓
	Camper van facility drainage					✓
	Stage 2 treatment Upgrade	✓	✓			✓

Please note that all figures are not inflated

7.5.1. OPERATION AND MAINTENANCE

Operation and Maintenance strategies cover policies that determine how the asset will be operated and maintained on a day-to-day basis to consistently achieve optimum use. A key element of asset management planning is determining the most cost-effective blend of planned and unplanned maintenance.

Operating budgets are detailed in the Financial Forecasts Section of this document.

The operation and maintenance of assets is undertaken through:

- **Routine Maintenance** - The Day to day maintenance which is required on an on-going basis and is budgeted for under the Services Maintenance Contracts as “key tasks” ;
- **Planned Maintenance** - Non day-to-day maintenance which is identified in advance and is incorporated into a maintenance budget for a certain time period; and
- **Ready Response** - Maintenance that is unexpected and necessary to continue operation of the service.

The previous expenditure figures for operations and maintenance, as detailed in the Annual Plan, are presented in Figure 18. The planned works are presented in Table 18 below.



Figure 18 - Wastewater Operating Expenditure

Table 17 - Planned Operation and Maintenance Works

Project	2021/22	2022/23	2023/2024	2024-2031
Identify future treatment options (Operations)	0	0	0	0

Problem Statement	It is uncertain what environmental future standard will be imposed
Benefits of investment	Council will be able identify financial implications of possible/probable LoS requirements and plan accordingly.
Consequences of non-investment	A lack of planning will result in a high level of customer dissatisfaction.

Infiltration monitoring (Operations)	- Smoke testing,	\$20,000			\$60,000
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Problem Statement LoS Performance (demand management) targets are currently difficult to attain. Resource consent conditions require a reduction in groundwater infiltration.

Benefits of investment Assists Council in reducing infiltration aiding in meeting demand management performance targets and resource consent conditions.

Consequences of non-investment Risk of continued non-performance against agreed LoS Performance, issuing of infringement notices, and/or non-renewal of resource consent.

7.5.2. RENEWAL/REPLACEMENT

Renewal is major work which does not increase the asset’s design capacity but restores, rehabilitates, replaces or renews an existing asset to its original capacity. Work over and above restoring an asset to its original capacity is new asset expenditure. Assets identified for renewal are typically:

- Near or beyond the end of their expected life;
- Have known condition and / or performance deficiencies; and
- Have both known deficiencies and are of a critical nature.

The previous expenditure figures for assets renewal/replacement, as detailed in the Annual Plan, are presented in Figure 19. The planned works are presented in Table 19 below. A 10-year Replacement profile is presented in Figure 20.

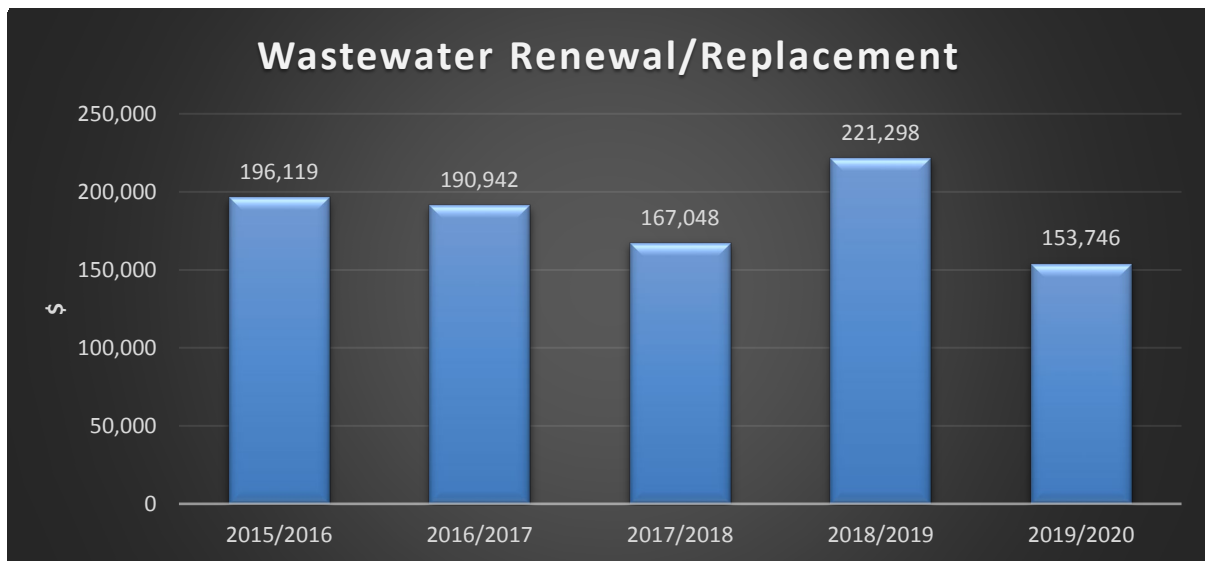


Figure 19 - Wastewater Renewal/Replacement History

Table 18 - Planned Renewal /Replacement Works

Project	2021/22	2022/23	2023/24	2024-2031
Reticulation Renewals	\$183,000	\$183,000	\$183,000	\$1,161,000
Pump station Renewals, including bulk discharge		\$30,000		\$20,000
Safety Renewals				\$10,000
Pumps and Electrics			\$30,000	
Camper Van Facility				\$10,000

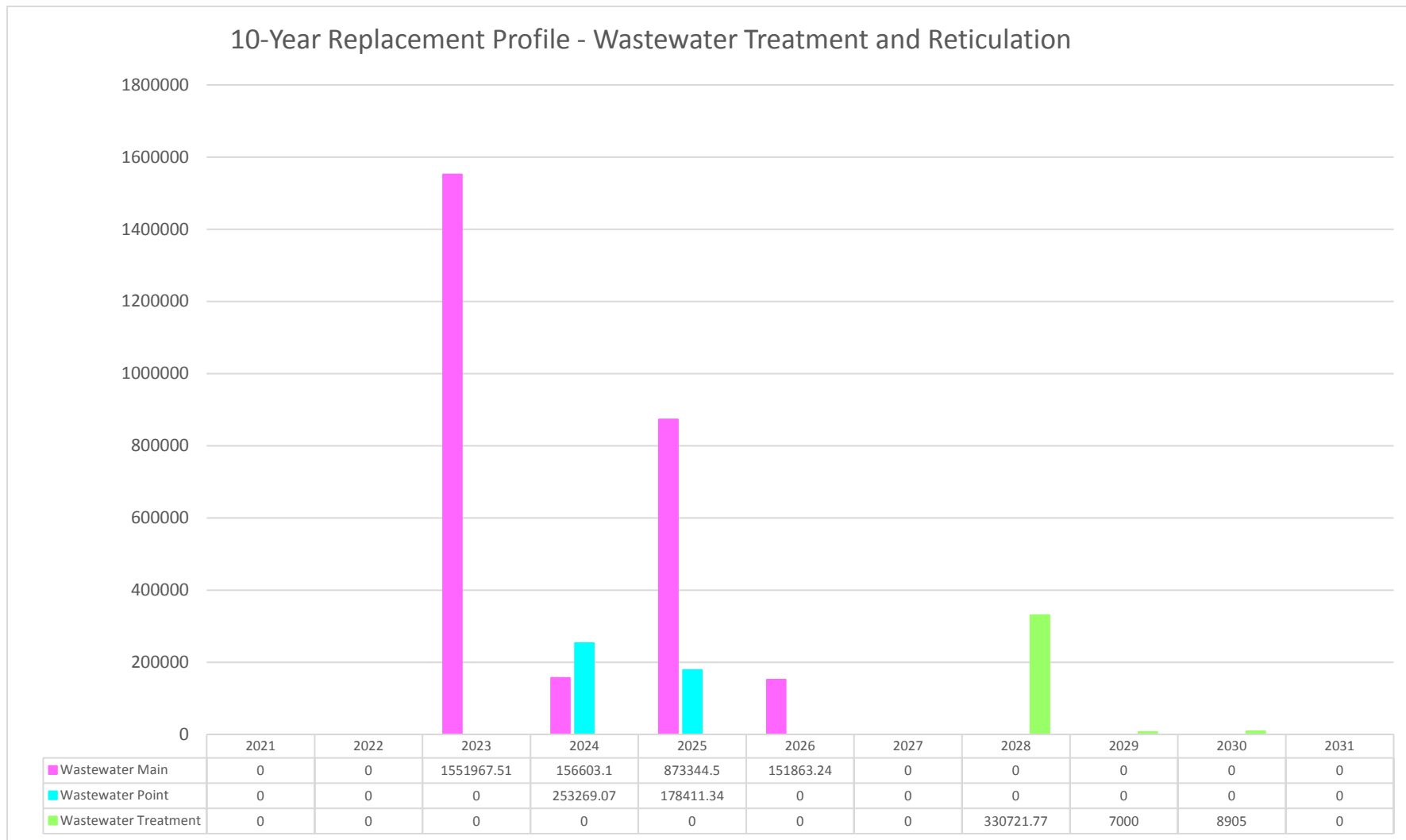


Figure 20 - 10-year Replacement Profile

7.5.3. LEVEL OF SERVICE IMPROVEMENTS

The Stratford District Council’s is main focus is on maintain levels of service rather than improving levels of services.

The previous expenditure figures for assets renewal / replacement, as detailed in the Annual Plan, are presented in Figure 21. The planned works are presented in Table 20 below.

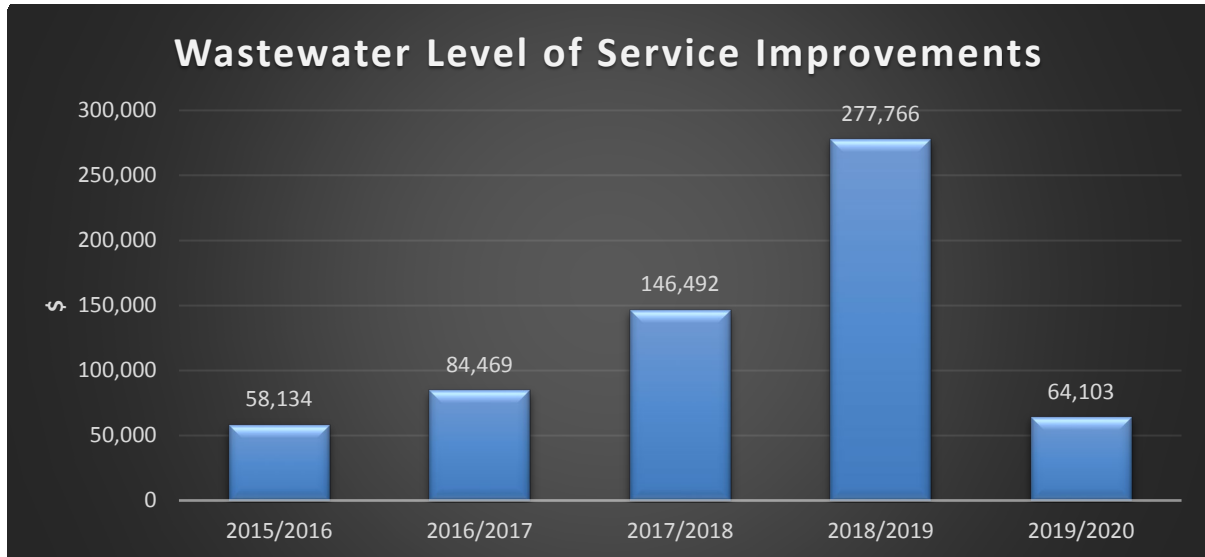


Figure 21 - Wastewater Levels of Service Improvements

Table 19 - Planned Level of Service Improvement Works

Project	2021/22	2022/23	2023/24	2024-2031
Reticulation capacity increase (Level of Service)	\$150,000	\$150,000	\$150,000	\$610,000
Problem Statement	Undersized network causing sewer overflows during adverse weather events.			
Benefits of investment	Project will assist Council in achieving adequate LoS performance.			
Consequences of non-investment	Overflow causes health problem that could results in infringement notice/fines			
Modelling (level of Service) including bulk discharge		\$50,000		
Problem Statement	To understand the network capacity , identification on inflow and infiltration points, identify bottlenecks, it is necessary to undertake the modelling of the wastewater network is necessary			
Benefits of investment	To facilitate network planning and accommodate anticipated growth			
Consequences of non-investment	Inability to support growth and extend services as and when required.			
Inflow and infiltration programme	\$150,000	\$150,000	\$150,000	\$610,000
Problem Statement	Reticulation overload due to inflow/infiltration of stormwater into the wastewater system			
Benefits of investment	To optimise reticulation capacity during rainfall events			
Consequences of non-investment	Overflow causes health problem that could results in infringement notice/fines			

Diatomix to enhance the growth of good algae		\$500,000		
Problem Statement	To improve on the quality of discharge into the Patea River, particularly, the nitrogen and phosphorus concentration			
Benefits of investment	Achievement of resource consent conditions and positive impacts on ecology of the Patea River			
Consequences of non-investment	TRC Resource Consent requirements not complied with.			
Camper van facility drainage			\$7,500	\$10,000
Problem Statement	The need to improve on the drainage system where the camper van facility is located			
Benefits of investment	Project will assist Council in achieving adequate LoS performance.			
Consequences of non-investment	Adverse impacts on the environment			
Stage 2 treatment upgrade			\$50,000	\$150,000
Problem Statement	To improve on the quality of discharge into the Patea River, particularly, the nitrogen and phosphorus concentration			
Benefits of investment	Achievement of resource consent conditions and positive impacts on ecology of the Patea River			
Consequences of non-investment	TRC Resource Consent requirements not complied with.			

7.6. DISPOSAL STRATEGY

Disposal is the retirement or sale of assets whether surplus or replaced by new or improved systems. Assets may need to be disposed of for a number of reasons, particularly if they fall under some criteria, including those identified below:

- Underutilisation;
- Obsolescence;
- Cost Inefficiency;
- Policy change;
- Provision exceeds required Levels of Service;
- Service provided by other means (e.g. private sector involvement); and
- Potential risk of ownership (financial, environmental, legal, social).

As part of the lifecycle asset management process, Council considers the costs of asset disposal in the long-term financial forecasts. These costs are generally incorporated in the capital cost of Level of Service increases or asset renewals.

While there are assets that fit under one or more of the above criteria, the Local Government Act provides clear instances when assets can be disposed of. The Council has in the past sought legal opinion on the disposal of assets identified under these criteria, however, it appears that provisions of Section 345 of the Local Government Act 1974, which the Council is unable to meet at this time, override these criteria.

Therefore, at this time, the Stratford District Council has neither a Disposal Strategy nor plans to dispose of any Wastewater assets other than those that become obsolete as a result of renewal or upgrading works.

7.7. IMPROVEMENT PLAN

Actions identified in this Section for improving management of the asset are as follows:

Table 20 - Improvement Plan

Sub Section	Task	Due Date
7.3	Maximise AssetFinda capabilities for predictive modelling purposes	On-going
7.5.1	Continue to undertake CCTV Condition Assessment the wastewater reticulation assets, to ascertain the useful and remaining lives of these assets	On-going

8.0

Risk Management

8.0: Risk Management

8.1.	OVERVIEW.....	87
8.2.	RISK MANAGEMENT STRATEGY.....	87
8.3.	RISK ASSESSMENT PROCESS.....	88
8.4.	POTENTIAL RISKS.....	89
8.5	TOP TEN RISKS FOR THE WASTEWATER ASSETS AND ACTIVITY	89
8.6	RISK RESPONSE.....	91
8.7	SIGNIFICANT ADVERSE EFFECTS.....	92
8.7.1	Environment.....	92
8.7.2	Public Health	92
8.7.3	Culture.....	92
8.7.4	Social	92
8.8	CRITICALITY.....	93
8.8.1	Criticality Evaluation.....	93
8.8.2	Critical Assets.....	94
8.9	EMERGENCY RESPONSE.....	96
8.9.1	Civil Defence	96
8.9.2	Fire.....	96
8.9.3	Lifelines.....	96
8.9.4	Incident Response Plans.....	96
8.10	RISK INSURANCE	98
8.11	PUBLIC HEALTH.....	99
8.11.1	Assessment of Water and Sanitary Services	99
8.12	HEALTH AND SAFETY	99
8.12.1	Health and Safety Advisor.....	99
8.12.2	Health and Safety Policy	99
8.12.3	Incident/Accident Reporting.....	100
8.13	IMPROVEMENT PLAN.....	100

8.1. OVERVIEW

Risk is the effect of uncertainty on objectives. Risk events are events which may compromise the delivery of the organisation's strategic objectives.

The main risk to asset management planning is the inability to deliver on agreed Levels of Service due to unplanned events and situations.

The Risk Management section highlights the Stratford District Council's risk management framework and process. It identifies significant negative effects and hazards linked to the activity and infrastructure assets. The section also identifies critical assets and our approach to emergency response and health and safety.

8.2. RISK MANAGEMENT STRATEGY

The Stratford District Council has prepared a *Corporate Risk Management Framework June 2018* which includes processes that identify, evaluate and manage all risks that may impact on the agreed Levels of Service to the Community. The purpose of this framework is to promote consistency and to describe the components of Stratford District Council's risk management system. The Council wide risk register allocates all council risks into the following 6 categories:

- Compliance and Legislation Risks;
- Data Information Risks;
- Financial
- Health and Safety Wellbeing
- Operational Risks
- Reputational and Conduct Risks;

The potential risks identified for the Wastewater assets and activities under these six categories are described in detail in this report.

The Council's risk management approach is underpinned by principles that will ensure the minimisation of risks for the principal asset systems through the non-achievement of critical business objectives and impact of system failure. The risk management principles are:

- Adds value by contributing to the achievement of Stratford District Council's objectives and improving performance;
- An integral part of the Stratford District Council's planning, processes, and decision making;
- Structured approach that is well-defined, transparent, and aligned with good practice;
- Responsive to change by monitoring, reviewing, and responding to the changing environment;
- Pragmatic by focusing on the most important risks and allowing informed risk taking;
- Explicitly addresses uncertainty based on best available information; and
- Continuous improvement as we get better at identifying and managing risks and opportunities.

The objectives of the Council's Risk Management framework are establish a systematic and structured approach to managing risks across the Stratford District Council and to embed risk management practices into business strategy, planning and core operations to ensure that key risks are proactively identified, managed and communicated. Benefits from applying effective risk management include:

- Improved achievement of the Council's strategic direction, objectives and priorities;
- Reduced risks – significant risks are identified and managed and early warning of problems and emerging risks are addressed, with appropriate design and operation of internal controls;
- Improved decisions – decisions are made after analysis of risk;
- Improved planning and resource allocation – risks are prioritised and included in business planning so that resources are better managed; and

- Increased accountability and transparency – clarity of key risks and the responsibility and accountability for their management.

8.3. RISK ASSESSMENT PROCESS

The Stratford District Council’s Risk Management Process in Figure 22 identifies risk management strategies to minimise risks associated with the provision of services. It is designed to ensure that:

- All significant operational and organisational risks are understood and identified;
- The highest risks that should be addressed within a ten year planning horizon are identified;
- Risk reduction treatments which best meet business needs are applied; and
- Responsibilities for managing risks are allocated to specific staff and reporting regimes are specified.

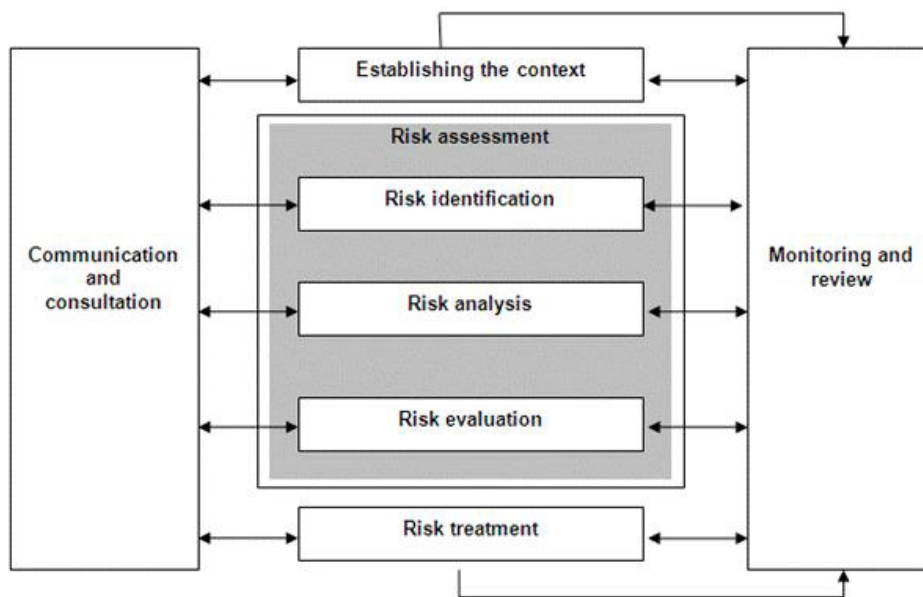


Figure 22 - Risk Management Process

A Risk Matrix allows for easy identification for the highest risks in the Council enabling appropriate resources to be allocated.

		Consequences				
		Minor	Important	Serious	Major	Catastrophic
Likelihood	Almost Certain	2- Moderate	5- High	7- High	20-Extreme	25-Extreme
	Likely	2- Moderate	4- Moderate	6- High	16-Very High	20-Extreme
	Possible	1-Low	3- Moderate	4- High	12-Very High	15-Very High
	Unlikely	1-Low	2- Moderate	3- Moderate	8- High	10-Very High
	Rare	1-Low	1-Low	1-Low	4- Moderate	5- High

Figure 23 - The Risk Matrix (Source: Council's Vault system)

8.4. POTENTIAL RISKS

The Stratford District Council has made a number of risk assumptions² under the six broad risk areas of Compliance and Legislation, Data Information, Financial, Health and Safety Wellbeing, Operational, & Reputational and Conduct. These are presented in [Appendix 1](#).

8.5 TOP TEN RISKS FOR THE WASTEWATER ASSETS AND ACTIVITY

The Stratford District Council has identified the following top ten Wastewater risks from the 6 categories in the Risk Management Framework ([Appendix 1](#)) in Table 18.

While *Compliance and Legislation, Financial and Reputation and Conduct Risks* impact on the achievement of the Organisation's high-level objectives and actions in the Long Term Plan, *Operational Risks* impact people, processes and technologies that support the business-as usual delivery of activities. The *Control Description* is a set of management intervention/ mitigation measures applied in response to risks, while *Residual Risk* is the resulting risk following the application of the mitigation measures.

Table 18 – Top Ten Identified Wastewater Risks

	Risk Subject	Risk Description	Risk Score Raw	Control Description	Residual Risk Score
1. Compliance and Legislation					
1.1	Legislation Changes	IF changes to legislation or case law occur and are not implemented by staff, THEN council may be acting illegally and in breach of legislation.	8 High	<ul style="list-style-type: none"> Staff will implement the changes Regular review and update Legislative Compliance Register. Staff training and attending relevant industry conferences. Regular policy review to ensure policies and procedures are in line with legislation changes. Ensure maintenance contractor and staff are up to date with legislative requirements through regular updates of legislative compliance register Subscribe to regular email updates from local government and relevant industry bodies, Council list server to ensure staff are notified of legislative changes. 	1 Low
1.4	Bylaws and Policies	IF Council fails to keep Policies and Bylaws up to date, THEN the Policies and Bylaws may become unenforceable and irrelevant, and council could be acting illegally, or the policy is not fit for purpose.	8 High	<ul style="list-style-type: none"> Quality assurance, Resourcing levels maintained Regular Policy Schedule review by CEO. Regular review of Bylaw timetable maintained in Content Manager. 	3 Moderate
2. Data and Information					

² statements that are presumed to be true without concrete evidence to support them

	Risk Subject	Risk Description	Risk Score Raw	Control Description	Residual Risk Score
2.1	Systems Down - Natural Disaster/Pandemic	IF there is a natural disaster THEN systems may be down temporarily, reduction in worker productivity, unable to respond to customers, data unavailable, potential permanent loss of data.	8 High	<ul style="list-style-type: none"> Backups done daily and stored off-site. Most critical data is in the cloud, data centre is overseas so workers can access system remotely from anywhere. Civil Defence will make hardware available for emergency response. 	3 Moderate
2.2	Server Failure	IF the server failed THEN systems down, data unavailable, potential data loss	12 Very High	<ul style="list-style-type: none"> Restore from backup, backups stored off-site. Fail-over for Melbourne data centre replicates to Sydney data centre. 	3 Moderate
4. Health and Safety					
4.1	Lone Worker	IF a staff member is seriously injured or killed during field inspections/site visits, THEN possible health and safety breaches, death or serious injury.	12 Very High	<ul style="list-style-type: none"> Quality assurance, Ongoing training/awareness of HSE requirements and responsibilities, Better use of council data/knowledge base on dangerous or insanitary sites before staff member deploys to site, Use of GPS tracking, mobile phone tracking. Compliance officers to wear body cameras when on duty. 	1 Low
4.9	Employee Substance Abuse	IF staff are affected by drugs or alcohol while at work, THEN there is an increased risk of an accident or injury, property damage, and reduced work performance.	8 High	<ul style="list-style-type: none"> Ensure staff are aware of drug and alcohol policy. Initial drug testing done prior to employment to filter out regular users. Utilise EAP. 	2 Moderate
5. Operational					
5.4	Maintenance Contractor fails to deliver	IF maintenance contractor fails to deliver contractual service necessitating termination of contract and re-tendering, THEN assets may become under threat, unreliable, or unable to meet community needs.	8 High	<ul style="list-style-type: none"> Careful assessment of tender to ensure contract price viable for contractor to deliver level of service. Regular liaison with contractor to monitor performance and ensure compliance. Contractor pre-approval process must not be bypassed. 	3 Moderate
5.6	Natural Disaster or Fire - Response preparedness	IF a Natural Disaster or Fire causes significant damage to infrastructure and buildings THEN community welfare may be severely compromised, putting		<ul style="list-style-type: none"> Civil Defence Emergency Management plans are in place. Procedures following an emergency event are widely known by a number of staff due to Civil Defence Foundational training being rolled out 	12 Very High

	Risk Subject	Risk Description	Risk Score Raw	Control Description	Residual Risk Score
		peoples lives at risk, and staff may be unable to access systems to carry out their day to day duties and functions.	12 Very high	<p>to majority of council staff.</p> <ul style="list-style-type: none"> Business Continuity Plans need to be in place and practiced regularly for all activities - Directors responsible for having a plan in place for each of their departments to ensure core functions can continue to be delivered. 	
5.9	Critical Asset Failure	IF a critical asset (water treatment plants, stormwater, wastewater, reticulation, roading) failed, THEN unexpected financial burden may arise and there could be significant disadvantage and risk to the community.	12 Very High	<ul style="list-style-type: none"> Conduct 2 yearly Asset Criticality Review. Ensure there are established Civil Defence Emergency Management response procedures in relation to fixing critical assets in an emergency event. Management practices and staff training, retention to ensure appropriate skill level in critical asset maintenance. 	4 High
5.11	Government Policy Impacting on Local Government	IF Government Policy significantly changes the services Council delivers or the way they are delivered, THEN this could put financial pressure on the district to fund investment in changes, or it may mean previous investment has become redundant.	12 Very High	<ul style="list-style-type: none"> Where a policy change may have a significant impact on the Council then we must ensure that the Council makes a submission challenging the change and suggesting alternative options. Council officers and elected members need to keep up to date with policy, and anticipate potential impacts of legislative changes and respond strategically, rather than being in a reactive position or being overly proactive. This could include joint collaboration with business and other councils, accessing alternative funding sources, or obtaining legal or professional advice. 	12 Very High

8.6 RISK RESPONSE

The Stratford District Council has a suite of response strategies for the potential risks identified above and in [Appendix 1](#), They include avoiding, exploiting, transferring/sharing, reducing or accepting the risk. These response strategies are summarised in Table 22.

Table 21 - Risk Response Strategies and Definitions

Response	Definitions
Avoid	To terminate exposure to a potential risk, generally the organisation needs to exit the activity which gives rise to the risk, or not start an activity which would give rise to the risk
Exploit	For risks which present an opportunity for Stratford District Council, a legitimate approach is to increase Stratford District Council's exposure to the risk; generally this would represent a situation where Stratford District Council can gain an advantage through their management of this risk.
Transfer/ Share	Risk transfer is getting another party to undertake the activity generating the risk, or getting another party to take on all or part of the risk itself.
Reduce	For risks which present a threat to Stratford District Council, but which cannot be avoided, the development of additional controls or mitigation strategies will reduce the likelihood or impact of the risk.
Accept	Accepting the risk by informed decision. This means continuing with the business activity/project as currently defined, aware of how much risk is being carried, monitoring changes in overall risk, and ensuring appropriate levels of contingency at the Stratford District Council level.

8.7 SIGNIFICANT ADVERSE EFFECTS

The Wastewater system has the potential to have a negative effect on public health, the environment, and cultural wellbeing if it fails to operate according to the required performance standards. As standards are improved, the system is upgraded to suit.

8.7.1 ENVIRONMENT

Wastewater discharge can have a significant negative effect on the environment, particularly on water quality and aquatic life if disposal standards are not met. Overflows from the wastewater system may occur during heavy rainfall which could adversely affect eco systems in the receiving environments.

The Council currently discharges treated wastewater into the Patea River from the Stratford Treatment Plant under Resource Consent 0196-5. The Taranaki Regional Council monitors the discharge of the treated wastewater. The Council will ensure compliance with the terms and standards of the Resource Consent to minimise the potential for such overflows.

8.7.2 PUBLIC HEALTH

Periodic failures in the system, such as discharge overflows in domestic reticulation systems and through street manholes, are of concern and are being addressed as a priority by Council.

8.7.3 CULTURE

There are cultural impacts associated with the continued disposal of treated wastewater into the Patea River. The Council is currently addressing these negative impacts as part of the resource consent renewal process.

8.7.4 SOCIAL

Odours from the wastewater system could be objectionable to neighbouring properties. In addition effects on the adjacent public walkway in close proximity to the treatment and discharge site.

8.8 CRITICALITY

Critical assets are defined as those assets that are likely to have more significant consequences than other assets if they fail. Failure of critical assets has the potential to have significant economic, social and environmental impacts for the community and Council.

Wastewater assets are considered critical by Stratford District Council.

8.8.1 CRITICALITY EVALUATION

The Stratford District Council establishes criticality by using two rating levels - activity level and corporate level.

Activity level criticality is based on the criticality criteria shown in Table 23; Table 24 provides the Activity Level Criticality Rating with examples. **Corporate level criticality** ranks activities based on the criticality of the service the activity provides at the corporate level as illustrated in Table 25 below.

Table 22 - Activity Level Criticality Criteria

Customers affected	Number of customers affected by asset failure.
Redundancy	Ability to replace or circumvent the failed asset.
Health and Safety	Direct or indirect impact of asset failure on the health of safety of individuals or the community.
Cost of failure	Cost to repair/ replace the asset including cost of temporary service provision.

Table 23 - Activity Level Criticality Rating and Examples

Rating ID	Rating	Description	Example
1	Very High	Critical, no redundancy - Failure of equipment compromises H&S directly (impact, explosion) or indirectly (failure to supply drinking water to hospital).	Oxidation Pond
2	High	Critical, no redundancy - Failure of equipment does not compromise H&S but affects production or Level of Service	Wastewater reticulation on Broadway in the CBD
3	Medium	Critical with redundancy - Failure of equipment does not compromise H&S but affects production or Level of Service	Trunk main on Swansea Rd at the Patea River
4	Low	Not critical, no redundancy - Failure of equipment has no effects on H&S and/or production/Level of Service but cost of repair/replacement is above \$100k	Trunk mains elsewhere
5	Very Low	Not critical, no redundancy - Failure of equipment has no effects on H&S and/or production/LoS and cost of repair/replacement is below \$100k	Oxidation Pond embankment

Corporate level criticality ranks activities based on the criticality of the service the activity provides at the corporate level as illustrated below in Table 25.

Table 24 - Corporate Level Criticality

Rating	Description
1	Roading, Water Supply assets.
2	Cemeteries. Wastewater (Sewage).
3	Solid Waste and Stormwater.
4	Property
5	Parks and Reserves

8.8.2 CRITICAL ASSETS

The AssetFinda database holds a record of the critical Wastewater assets. The identified critical assets are ranked according to their functional criticality.

Functional Criticality is a product of the Activity Criticality and Corporate Criticality, i.e.:

$$\text{Functional Criticality} = \text{Activity Criticality} \times \text{Corporate Criticality}$$

The functional criticality ranking ranks assets from 1 to 5, with 1 being the highest score (the most critical) and 5 being the lowest (least critical).

In 2017, Stratford District Council undertook an internal review of its critical assets. The review identified that there was a need to:

- Document the formula used for identifying criticality in the Asset Management Plans;
- Link criticality and critical assets to incident response; and
- Prioritise critical assets at the Activity level.

Following the review we have undertaken the following:

- Identified the formula used for identifying functional criticality. This formula is shown in the above paragraph in brackets.
- The linking of criticality and critical assets to incident response is currently being considered as part of reviewing our Incident Response Plans.

Critical assets have been prioritised at the Activity level and added to the asset register. These critical assets are listed in Table 26.

The review also confirmed that the critical assets for the Wastewater activity are as follows:

Table 25 - List of Critical Wastewater Assets

Criticality Rating				Asset Description	Criticality Description
Activity Priority	Functional Criticality	Activity Level	Corporate Level		
1	4	2	2	Oxidation Pond	Failure would allow a significant volume of raw sewage to escape into the Patea River placing public health at risk and cause significant impact on the environment for an extended length of the river. The event is likely to result in a prosecution by the Regional Council. The event would incur very high recovery costs and cause significant negative publicity and a loss of faith/good will by community.
2	4	2	2	Wastewater reticulation on Broadway in the CBD	Failure would allow raw sewage to flood shop basements in the CBD placing public health at risk and cause significant damage to commercial premises/stock, prolonged shop closures to clean up and reinstate. The failure would also cause severe disruption to SH 3 traffic while repair/replacement is undertaken. The event is likely to result in prosecution by the Regional Council. The event would incur very high recovery costs and cause significant negative publicity and a loss of faith/good will by community.
3	6	3	2	Trunk main on Swansea Rd over the Patea River	Failure would allow a large volume of raw sewage to escape into the Patea River causing severe public health issues and significant impact on the environment for an extended length of the river. The event is likely to result in prosecution by Regional Council. The event would incur very high recovery costs and cause significant negative publicity and a loss of faith/good will by community.
4	6	3	2	Trunk mains elsewhere	Failure would allow raw sewer overflows to several neighbouring properties placing public health at risk and potentially leading to prosecution by the Regional Council. The event would incur low to moderate costs and cause negative publicity and a loss of faith/good will by community.

8.9 EMERGENCY RESPONSE

8.9.1 CIVIL DEFENCE

The Taranaki Region operates a CDEM (Civil Defence Emergency Management) Group Office, called the Taranaki Emergency Management Office (TEMO). TEMO is a shared service between all four councils in Taranaki.

In 2017 The Taranaki CDEM group agreed to a constituting agreement that outlined the separate roles of the Group Office (TEMO), Taranaki Regional Council, and the three district councils. Funding for this arrangement comes from the *'Uniform Annual General Charge; (UAGC) Rates*.

The Stratford District Council has plans and resources in place to ensure it can;

- Reduce the risk of emergencies occurring;
- Be ready for an emergency;
- Respond to any emergency; and
- Recover from any emergency.

8.9.2 FIRE

Fire and Emergency New Zealand was established on 1 July 2017 and provides a single approach to improved fire management of urban and rural fires within the District. The District comprises of all lands, within the three Taranaki territorial local authority areas including those lands administered by the Department of Conservation (DOC).

8.9.3 LIFELINES

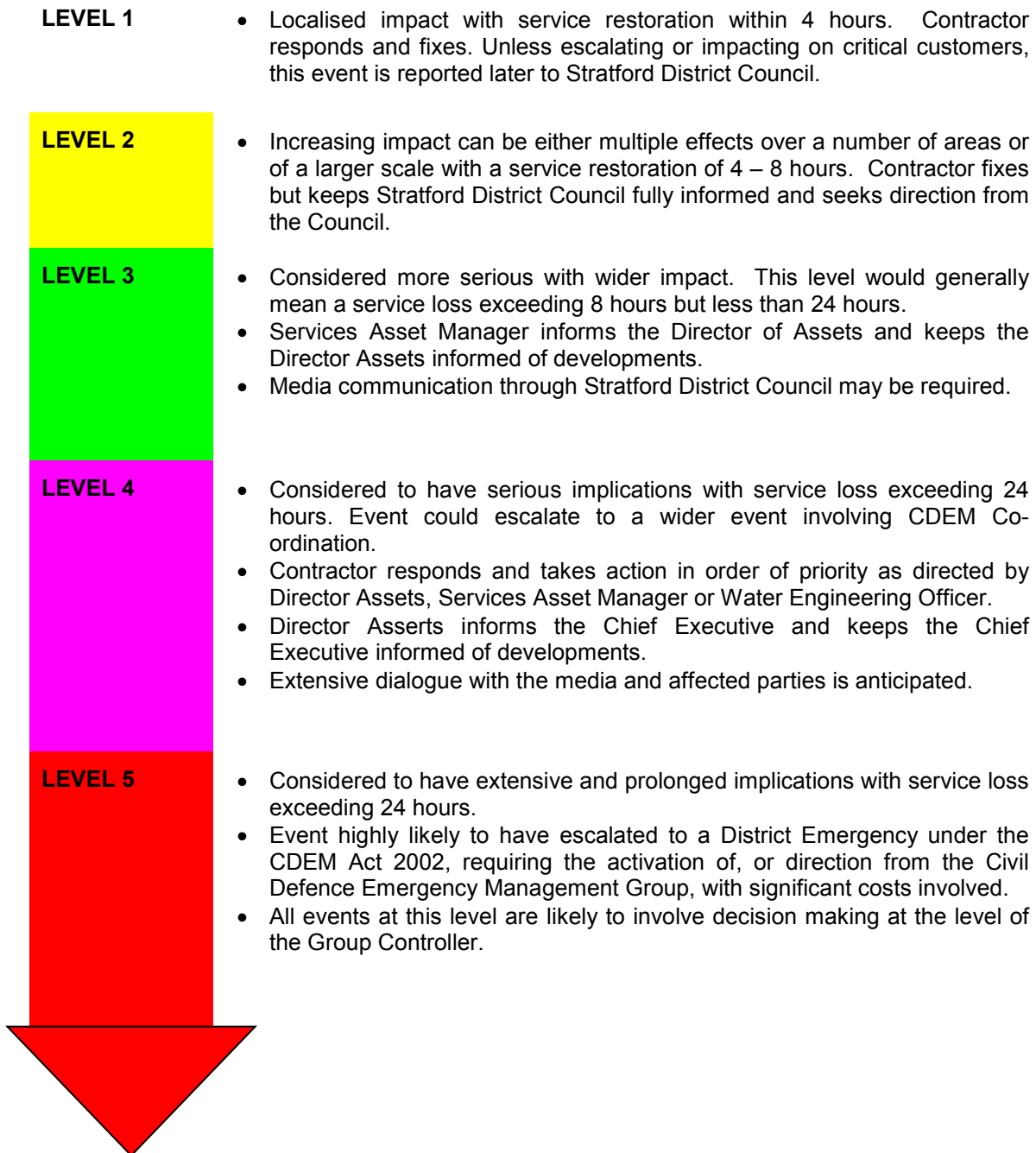
Lifeline utilities are entities that provide essential infrastructure services to the community such as water, wastewater, transport, energy and telecommunications. These services support communities, enable business, and underpin the provision of public services. The wastewater activity is a lifeline service as described in Part B of Schedule 1 of the Civil Defence Emergency Management Act (CDEMA) 2002.

8.9.4 INCIDENT RESPONSE PLANS

Stratford District Council has an Incident Response Plan³ for the Wastewater activity. The plan contains schedules and procedures for managing incidents and escalating events that affect the delivery of services. Incidents are ranked on a scale of 1 – 5 to determine response and control level. See Figure 24.

³ D17/26535

Figure 24 - Incident Response Plan



8.10 RISK INSURANCE

The Local Government Act 2002 requires that from 2014 details of insurance of assets be included. This information is included in the following table. Insurance Arrangements as at 30 June 2020 are as follows:

Figure 25 - Asset Insurance Valuations

	CARRYING VALUE (as at 30 June 2020) \$000
ASSETS FROM STATEMENT OF FINANCIAL POSITION	
Property, plant and equipment	328,554
Investment property	168
Total	328,722
LESS	
Land component of operational assets	-8,998
Land under roads	-54,384
Land – restricted assets	-8912
Total	-72,294
NET NON-FINANCIAL ASSETS (EXCLUDING LAND)	256,428

	INSURED VALUE (as at 30 June 2020) \$000	
INSURANCE ARRANGEMENTS		
Material damage cover for buildings, plant, contents	-51,317	Subject to various deductibles including \$5k for most claims except for earthquake or volcanic eruption where deductible is 5% of sum insured or 10% for pre 1935 buildings.
Motor vehicle insurance cover (including leased vehicles)	-183	Insured for market value – carrying value assumed for this purpose.
RISK SHARING ARRANGEMENTS		
Cover for infrastructure assets as a member of LAPP Central Government assistance	-22,100	Sum equates 40% of the ORV value of scheduled assets. A deductible of \$150,000 applied. It is anticipated (though cannot be guaranteed) that under the terms contained in the Guide to Civil Defence Emergency Management Plan central government may fund 60% of the qualifying cost of reinstating essential infrastructure with a deductible of \$150,000
Council arrangements for covering deductibles and/or uninsured assets	73,600	
SUM NOT SPECIALLY INSURED	182,828	Note the 60% of the ORV of infrastructure assets which may be funded by central government equates \$33.1m.

The Council has no insurances relating to financial or intangible assets. The uninsured assets consist of the Roding Network, \$202m, which NZTA may assist with in the event of an emergency.

8.11 PUBLIC HEALTH

8.11.1 ASSESSMENT OF WATER AND SANITARY SERVICES

In 2021, Stratford District Council undertook its second assessment of water and sanitary services. The purpose of the assessment was to determine, from a public health perspective, the adequacy of water and sanitary services available to communities. For the Wastewater activity the assessment focused on:

- the health risks arising from any absence or deficiency;
- the quality of services available to communities within the district; and
- the current and estimated future demands for such services;

The assessment concluded that:

- The current system can be extended to meet increased demand provided hydraulic issues associated with inflow volumes and outflow ground water infiltration into the reticulation can be resolved;
- Planned works over the next 10 years to decrease stormwater infiltration is expected to reduce pressure on the network linked to hydraulic issues.

While no new actions were identify, the 201 Actions still apply and they are for Council to:

- *Continue to address ground water infiltration into the wastewater reticulation within the Stratford community; and*
- *Continue to extend the wastewater reticulation to areas of medium to high density housing within the Stratford community.*

In relation to areas of the District where Council does not provide wastewater services, the assessment concluded that:

- There are no public health issues at this time;
- Where there is further development intensive use of septic tank disposal systems has the potential to cause health issues;
- There is the potential for increased demand for service in Stratford;
- The use of individual septic tanks is expected to remain appropriate wastewater treatment system un-serviced areas;
- There is no increase in demand for service; and
- No public health issues have been identified at this time.

The only action required by Council is to ensure *the proposed District Plan provisions have required section sizes suitable for septic tank installation, disposal and reserve areas.*

8.12 HEALTH AND SAFETY

8.12.1 HEALTH AND SAFETY ADVISOR

Stratford District Council employs a Human Resource/Health and Safety Advisor. The Advisor is responsible for the ongoing development and management of our HSE environment and ensuring staff are adequately trained in all aspects of health and safety.

8.12.2 HEALTH AND SAFETY POLICY

In 2019 Stratford District Council reviewed and updated its Health and Safety Policy to better reflect legislative requirements reinforce its commitment to the philosophy that the health and safety of its employees, volunteers, contractors and subcontractors is of prime importance. SDC is committed to ensuring its operations are conducted in a safe and efficient manner that will not incur injury to personnel or damage to the environment.

8.12.3 INCIDENT/ACCIDENT REPORTING

In accordance with the Stratford District Council Health and Safety Policy all Council staff are required to report any accidents/incident. Accidents/incidents are reported via the Vault incident reporting system. Vault was integrated into Stratford District Council in 2016 as part of a joint initiative between Stratford District Council and South Taranaki District Council.

8.13 IMPROVEMENT PLAN

Actions identified in this Section for improving management of the asset are as follows:

Table 26 - Risk Management Improvement Plan

Sub Section	Task	Due Date
8.7.1	<p>Infiltration of Groundwater</p> <p>Continue addressing ground water infiltration into the wastewater reticulation to ensure continued an efficient performance of critical asset</p>	On-going
8.7.1	<p>Trade Waste Implementation</p> <p>Continue to Implement the Trade Waste Bylaw to ensure all non-domestic wastes are identified and captured under the necessary conditions to avoid critical asset failure</p>	On-going

9.0

Investment Funding Strategy

9.0: Investment Funding Strategy

9.1 OVERVIEW.....103

9.2 FINANCIAL STANDARDS.....103

9.3 FUNDING AND FINANCIAL POLICIES.....103

 9.3.1 Revenue and Financing Policy.....103

 9.3.2 Treasury Management Policy.....103

 9.3.3 Development and Financial Policy.....104

9.4 FUNDING OUR INVESTMENT STRATEGY104

9.5 RELIABILITY OF OUR INVESTMENT STRATEGY105

9.6 FINANCIAL STATEMENTS AND PROJECTIONS106

9.1 OVERVIEW

Our Investment Funding Strategy (IFS) incorporates our *Funding Impact Statement* and sets out how the Stratford District Council plans to finance its overall operations to meet its objectives now and in the future. A key objective of the strategy is the future-proofing of delivery of the Wastewater Activities.

This IFS provides the long term financial forecasting for all Wastewater Activities and projects described in this WWAMP. The IFS presents the funding sources determined for each of these to ensure a sustainable long-term approach to planning and asset management.

The historical cost for the Wastewater Activity by asset group is described in detail in the *Lifecycle Management* Section. This section presents the Council's Capital Investment Strategy for the Wastewater Activities for the next ten years and the financial standards and policies used in developing the strategy.

9.2 FINANCIAL STANDARDS

All prospective Financial Statements (financial statements) within this plan comply with the requirements of FRS 42 issued by the New Zealand Accounting Standards Board of the External Reporting Board (XRB), and the New Zealand equivalent of International Reporting Standard for Public Benefit Entities (NZ IFRS PEB), with Council designating itself as a Tier 2 public benefit entity for the purposes of compliance with these standards.

9.3 FUNDING AND FINANCIAL POLICIES

The Local Government Act in Section 102 requires that the Stratford District Council '*must, in order to provide predictability and certainty about sources and levels of funding, adopt the funding and financial policies listed*' below:

- A *Revenue and Financing Policy*; and
- A *Liability Management Policy*; and
- An *Investment Policy*; and
- A policy on *Development Contributions (CD) or Financial Contributions (FC)*; and
- A policy on the *Remission and Postponement of Rates on Maori freehold land*.

The Council may also adopt either or both the *Rates Remission Policy* and a *Rates Postponement Policy*.

The Council has adopted all the relevant funding and financial policies described below. These policies guide the funding and financial decisions relating to the management of the Council's Wastewater Assets.

9.3.1 REVENUE AND FINANCING POLICY

The *Revenue and Financing Policy* sets out Stratford District Council's policies in respect of the funding for capital and operating expenditure. The current policy was reviewed in December 2017 and is due for renewal in 2021. The funding sources are detailed in the LTP 2021-2031 and include general and targeted rates, borrowing, grants and subsidies, etc.

9.3.2 TREASURY MANAGEMENT POLICY

The Council's Treasury Management Policy incorporates the *Liability Management Policy* and the *Investment Policy* requirements of the LGA. It guides the Council to prudently manage its revenue, expenditure, assets, liabilities, reserves and investments, in the interest of the Council and district ratepayers. The current policy was reviewed in 2019.

9.3.3 DEVELOPMENT AND FINANCIAL POLICY

The Council's *Development and Financial Contribution Policy* is consistent with the purpose as set out in Section 106 of the LGA. The Council does not require *Development Contributions*, however, the *Financial Contributions Policy* meet the requirement as set out in Section 108 (9) of the *Resource Management Act* (RMA) 1991.

9.4 FUNDING OUR INVESTMENT STRATEGY

Capital projects and activities carried out to maintain the Wastewater service, including Renewal or Replacement projects and Level of Service Improvements, for the next 10 years will be funded as per the Revenue and Financing Policy, through one or a combination of the following sources:

- Loans;
- Reserves; and/or
- Subsidies/ Grants by other Partners.

The Council expects that:

- All Level of Service Improvement projects for all the Three-Waters Activities will be funded 100% from Loans;
- Renewal or Replacement projects will be equally funded from Loans and Reserves; and
- While the cost of capital projects driven by growth and led by a private Developer will be borne by the Developer, any Council-led projects in support of growth will be accounted for within the particular project budget rather than by activity budgets.

The Council is very pro-active in seeking alternate funding sources. Where appropriate, the Council submits funding requests to the *TSB Community Trust (TSB)* and the *Taranaki Electricity Trust (TET)*. The Council also applies to the *Ministry of Business, Innovation and Employment (MBIE)* for tourism grants and initiatives

A summary of Council's Capital Investment Funding Strategy is shown in Figures 26 - 28. Tables 28 and 29 provides the financial projections for the wastewater activity.

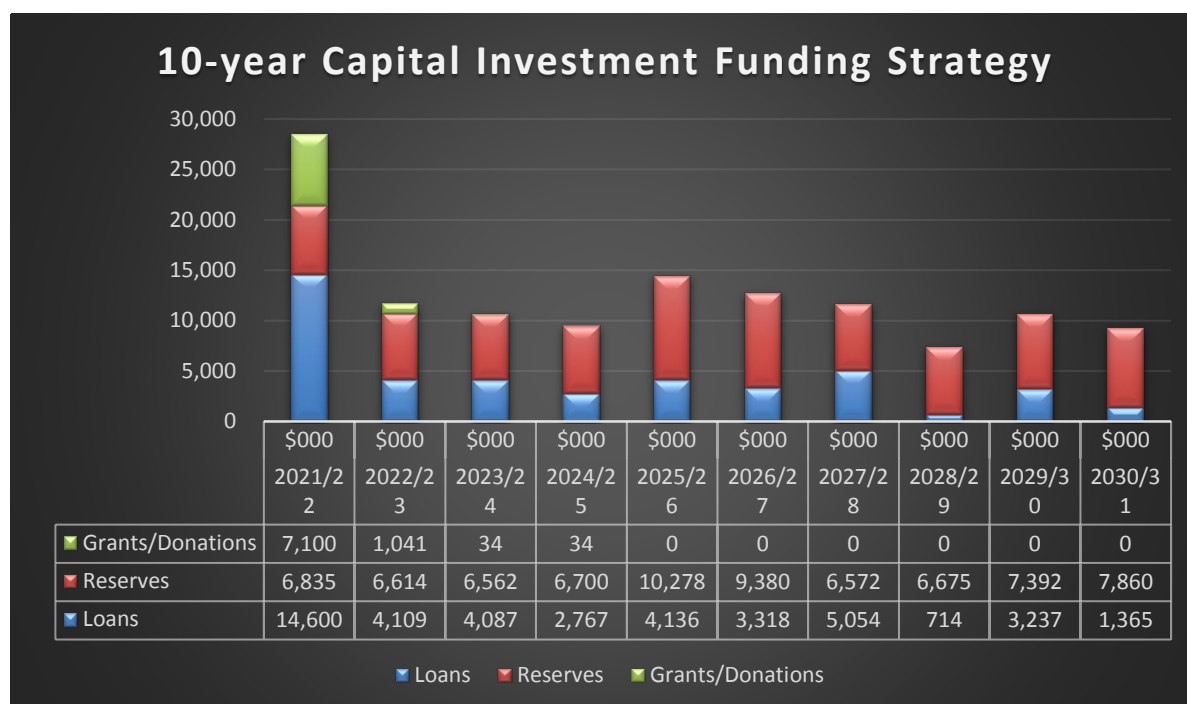


Figure 26 - All Assets Capital Investment Funding Strategy

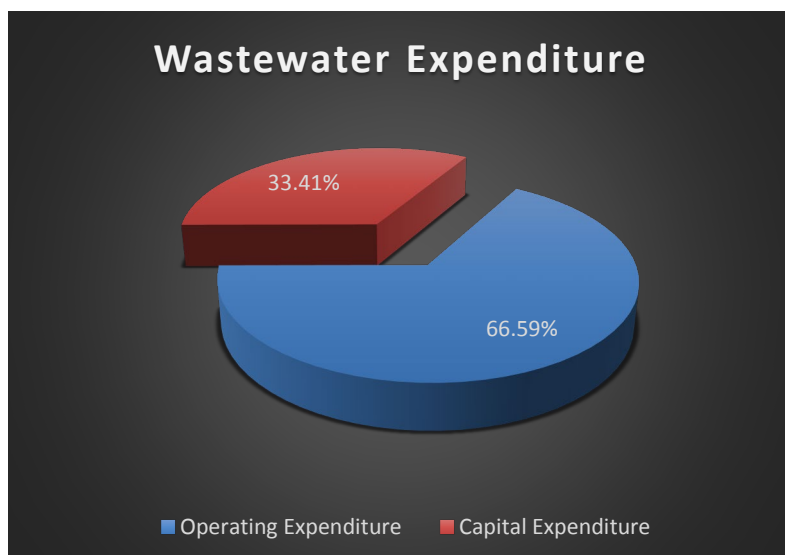


Figure 27 - Wastewater Expenditure - Capital vs Operating Expenditure

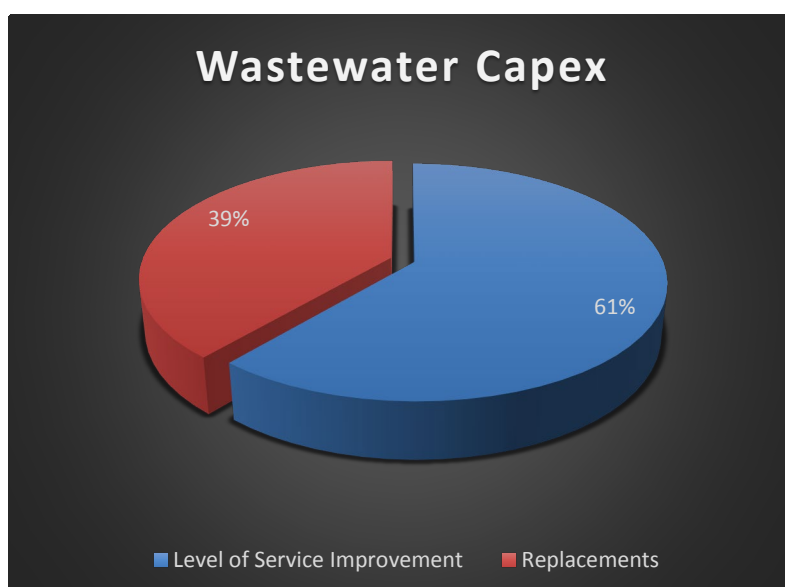


Figure 28 – Wastewater Capital Investment Split – Level of Service vs Replacement

9.5 RELIABILITY OF OUR INVESTMENT STRATEGY

The Council provides an assessment of the reliability of its Investment Funding Strategy below – overall, the forecast is considered a reliable estimate of the financial investment in the Wastewater Activity:

- The Council’s funding source is largely from rates. Rates will be confirmed for the 2021-2024 period via the appropriate processes for inclusion in the LTP 2021-2031. Once adopted, the rates in the LTP 2021-2031 will constitute a reliable funding source for the delivery of Wastewater Activities;
- The Council is confident in its ability to raise funds within our financial strategy limits, and is reasonably certain that it would secure loans at an affordable interest rates throughout this period.
- The Council relies on *Fees and Charges* or *Development Contributions* to deliver wastewater services. Any new demand for new assets to be vested in Council or services will generally be funded by the direct beneficiary of the assets/service.

9.6 FINANCIAL STATEMENTS AND PROJECTIONS

Table 27 – All Asset Capital Expenditure Projection

	Forecast	Projection								
	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
<u>Roading</u>										
Level of Service Improvement	350	619	1,221	929	7,028	5,554	417	306	630	324
Replacements	5,413	4,983	4,920	4,983	4,977	5,085	5,436	5,446	5,983	6,452
<u>Stormwater</u>										
Level of Service Improvement	252	292	533	275	283	291	300	310	321	331
Replacements	53	55	56	167	59	61	63	65	67	122
<u>Water Supply</u>										
Level of Service Improvement	1,780	1,904	369	673	390	401	4,289	37	38	0
Replacements	695	812	510	414	443	496	452	486	502	498
<u>Solid Waste</u>										
Level of Service Improvement	0	0	0	0	0	0	0	0	0	0
Replacements	0	10	0	11	0	11	0	12	14	12
<u>Wastewater (Sewerage)</u>										
Level of Service Improvement	800	362	380	273	281	288	238	184	178	839
Replacements	213	252	258	200	228	211	218	262	271	305
<u>Parks & Reserves</u>										
Level of Service Improvement	97	110	99	69	0	0	0	0	0	0
Replacements	47	0	0	0	0	0	0	0	0	0
<u>Property</u>										
Meet Additional Demand	1,200	1,025	1,049	0	0	0	0	0	0	0
Level of Service Improvement	17,335	1,112	609	607	442	171	64	63	2,454	68
Replacements	114	6	59	114	7	7	7	7	17	8
<u>Administration</u>										
Replacements	186	222	621	788	276	121	142	210	153	266
<u>TOTAL PROJECTS (excl GST)</u>										
	28,535	11,764	10,683	9,501	14,414	12,698	11,626	7,389	10,629	9,225
<u>FUNDING</u>										
Loans	14,600	4,109	4,087	2,767	4,136	3,318	5,054	714	3,237	1,365
Section sales	0	0	0	0	0	0	0	0	0	0
Cash from Investments	0	0	0	0	0	0	0	0	0	0
Reserves	6,835	6,614	6,562	6,700	10,278	9,380	6,572	6,675	7,392	7,860
Grants/Donations	7,100	1,041	34	34	0	0	0	0	0	0
Rates	0	0	0	0	0	0	0	0	0	0
NZTA Financial Assistance	0	0	0	0	0	0	0	0	0	0
<u>TOTAL (excl GST)</u>										
	28,535	11,764	10,682	9,501	14,414	12,698	11,626	7,389	10,629	9,225

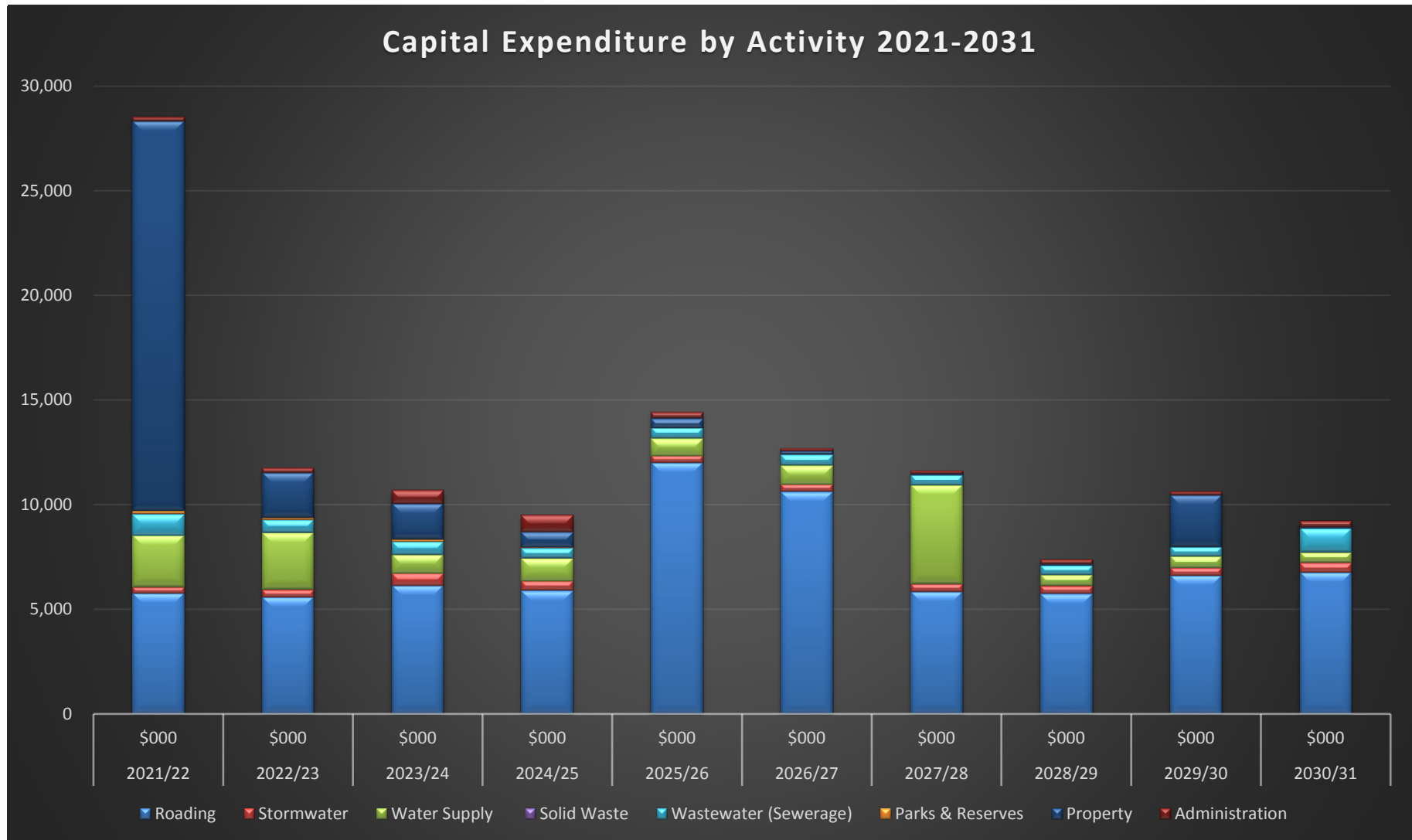


Figure 29 - Capital Expenditure by Activity - All Assets

Table 28 - Wastewater Activity Expenditure and Funding Projection

Budget 2020/21 \$000	Forecast 2021/22 \$000	Projection									
		2022/23 \$000	2023/24 \$000	2024/25 \$000	2025/26 \$000	2026/27 \$000	2027/28 \$000	2028/29 \$000	2029/30 \$000	2030/31 \$000	
993	Operating Expenditure	1,058	1,073	1,110	1,199	1,206	1,241	1,343	1,346	1,377	1,487
73	Revenue	73	75	77	78	80	82	83	85	87	89
920	Net Cost of Service	985	998	1,034	1,121	1,126	1,159	1,259	1,261	1,289	1,398
EXPENDITURE											
423	Operating Costs	452	428	439	472	461	473	508	497	510	547
59	Interest	42	53	59	72	76	81	101	103	104	115
300	Depreciation	311	331	340	380	387	394	440	446	451	510
211	Allocated Overheads	254	261	273	275	281	294	294	300	312	315
993	Total Operating Expenditure	1,058	1,073	1,110	1,199	1,206	1,241	1,343	1,346	1,377	1,487
91	Principal Loan Repayments	76	96	107	116	122	129	134	137	139	154
687	Capital Expenditure	1,013	614	638	472	508	500	456	446	449	1,145
1,771	Total Expenditure	2,147	1,783	1,855	1,787	1,836	1,869	1,933	1,930	1,965	2,785
FUNDED BY:											
73	Charges for Services	73	75	77	78	80	82	83	85	87	89
73	Revenue	73	75	77	78	80	82	83	85	87	89
881	Targeted Rates	936	985	1,021	1,107	1,112	1,146	1,245	1,248	1,278	1,387
36	Transfers (to) from Reserves	36	0	0	0	0	0	0	0	0	0
293	Transfer from Reserves	289	348	365	316	350	340	352	399	410	459
0	Depreciation funded from Reserves	0	0	0	0	0	0	0	0	0	0
485	Loan Funding - Capital	800	362	380	273	281	288	238	184	178	839
3	Other Funding	13	13	12	14	13	13	14	13	12	10
1,771	Total Funding	2,147	1,783	1,855	1,787	1,836	1,869	1,933	1,930	1,965	2,785

Annual Wastewater Budget - LoS vs Replacements 2021-2031

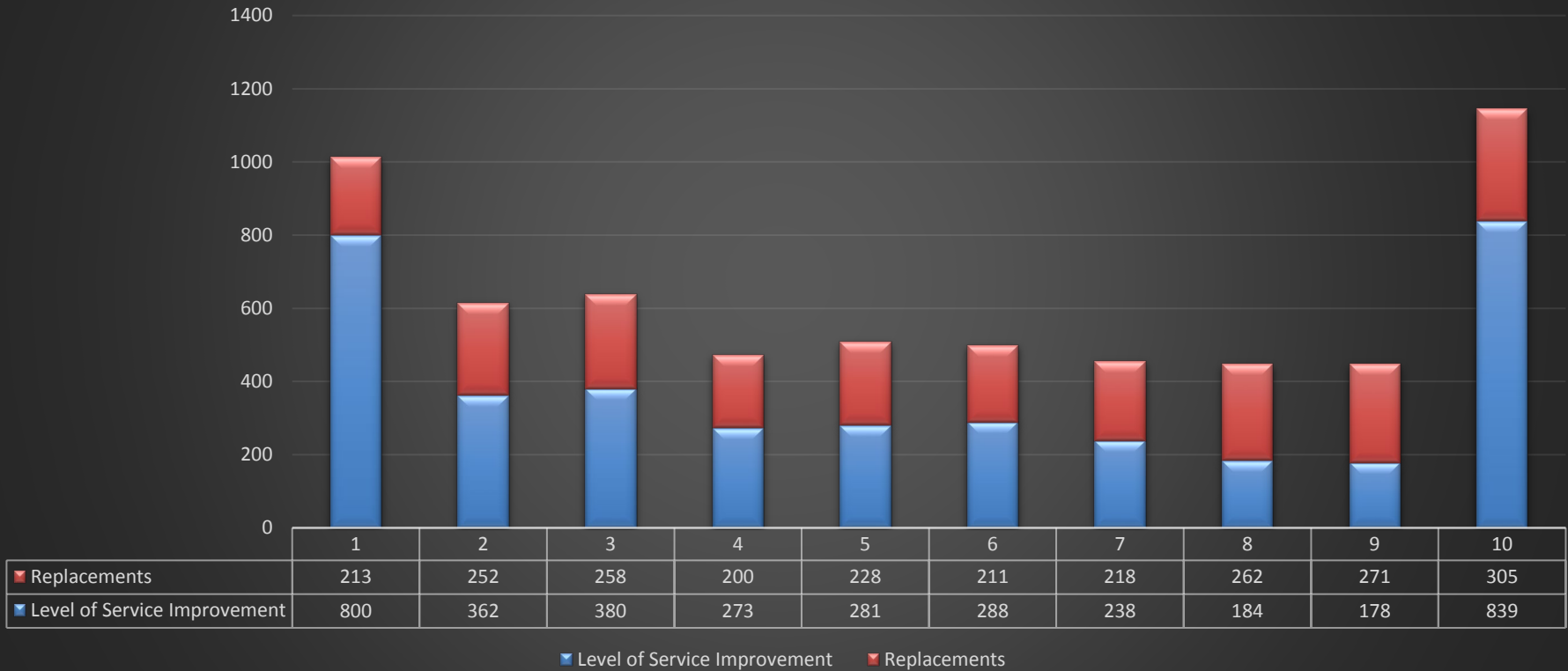


Figure 30 - 10 Year Capital Expenditure Budget - Wastewater

10.0

Asset Management Practices and Improvement Plan

10.0: Asset Management Practices and Improvement Plan

10.1 OVERVIEW.....112

10.2 ASSET MANAGEMENT PRACTICES.....112

 10.2.1 Asset Management Policy.....112

 10.2.2 Asset Management Goals and Objectives.....112

 10.2.3 Asset Management Plan Development.....113

 10.2.4 Asset Management Maturity.....113

10.3 ASSET MANAGEMENT IMPROVEMENT PLAN.....115

10.1 OVERVIEW

Asset management improvement planning is a process. It enables Council to improve the way it manages infrastructure assets and the services they provide.

The Asset Management Practices and Improvement Plan section identifies the maturity of Stratford District Council asset management practices, improvements made since the last Asset Management Plan review and a plan for future asset management improvements resulting from areas for improvement identified in earlier Sections of this plan

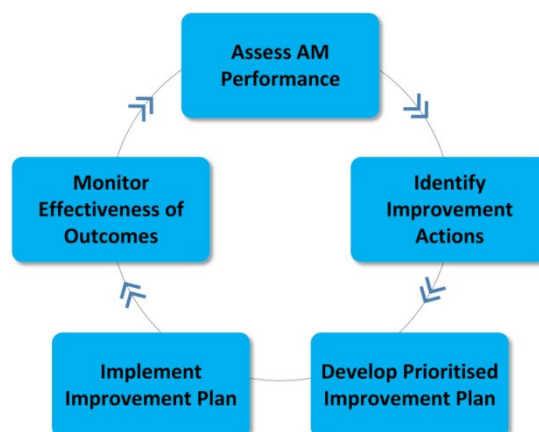


Figure 31 - Asset Management Improvement Process

10.2 ASSET MANAGEMENT PRACTICES

10.2.1 ASSET MANAGEMENT POLICY

Stratford District Council developed and adopted its inaugural Asset Management Policy in 2016 and a review was completed in 2020. The Policy establishes the first level of Council's asset management framework for managing infrastructure assets in a structured, coordinated, and financially sustainable manner. The objectives of this Policy are:

- Provide for a consistent approach to asset management planning within Council and ensure plans reflect the strategic direction of Council.
- Demonstrate to the community that Council recognises the critical importance of managing the District's assets and related activities in an effective and sustainable manner in order to deliver appropriate Levels of Service to current and future generations.
- Confirm a coordinated process for each asset/activity area that links their contribution to the Community Outcomes with specific Levels of Service performance requirements and desired improvement priorities and strategies.

The Council's Asset Management Policy can be viewed on the Stratford District Council website.

10.2.2 ASSET MANAGEMENT GOALS AND OBJECTIVES

The Council's Asset Management goals and objectives are guided by the Asset Management Policy to drive best practice. The Asset Management goals and objectives for Stratford District Council are to:

- Provide for a consistent approach to asset management planning to ensure plans reflect the strategic direction of Council.
- Demonstrate to the community that Council will manage the District's assets and related activities in a safe, cost-effective and sustainable manner to deliver agreed LoS to current and future generations.
- Confirm a coordinated process for each asset/activity area that links their contribution to the Community Outcomes with specific LoS performance requirements and desired improvement priorities and strategies.

The Council's overarching principles for sound asset management are:

- Asset management goals and objectives are aligned with corporate objectives and community outcomes.
- Affordable and financially sustainable AMPs are developed to industry standard appropriate for the scale of assets and associated risks being managed.
- AMPs reflect the priorities of the Council and are used to drive the day to day management of assets and the associated services;
- Capital, operation and maintenance, and renewal/replacement works are aligned with asset management objectives.
- Sustainability and sustainable development are considered in the selection of options for asset development and service delivery.
- Asset management strategies are established through the use of optimised lifecycle management and costing principles.
- Funding is allocated for the appropriate level of maintenance for assets to deliver the required LoS.
- Accurate, up to date asset data is collected for analysis and use throughout asset management planning processes.
- A strategic management approach is taken to improvement planning, asset management plan development and implementing improvement practices.
- Growth and demand forecasting will be integrated as part of all asset management planning to meet current and future needs of the community.
- Risk management will be integrated as part of all asset management planning to recognise the risks associated with the delivery of agreed LoS and manage them appropriately;
- Design, construction and maintenance of assets, so far as reasonably practical, are without risk to the health or safety of any person.

10.2.3 ASSET MANAGEMENT PLAN DEVELOPMENT

Planning processes tend to be circular with built in reviews. The AMP and LTP need to have regular review cycles so that they remain current and deal with issues at the time. An important function of the review cycle is to monitor performance against the goal levels of service and KPIs that were set some years before.

The AMPs are reviewed every three years in line with the 10 year long term planning cycle but work programmes can change annually. These changes can be brought about by outside pressure, weather events, budget constraints and new projects becoming apparent.

The ability to become responsive each year is through the annual planning process. The AMP details goals, levels of service, goals, KPIs and targets which contribute to Stratford's organisational vision for the district and community.

The review process considers the overall impact of the planned programme to deliver the defined levels of service through the on-going development of the AMP. This review/AMP development process moderates competing priorities within the context of community affordability and may result in some projects being deferred or budgets being re-prioritised. Figure 31 below shows a graphical display of the AMP development process.

10.2.4 ASSET MANAGEMENT MATURITY

We have assessed that our asset management system maturity is predominantly at the Core level. It is largely based on the long-term knowledge of the asset management team. It contains asset data that has been collected over time and held in asset management information systems.

Through continual improvement and development of asset management practices and processes it is our intention that the asset management plans progressively improve.

Our target is to develop our asset management practices and processes to an Intermediate level of maturity where appropriate. The Council in the process of assessing our asset management maturity

level to identify areas for improvement. The Council is considering options for undertaking a formal assessment of our asset management maturity. The five levels of asset management plan maturity are shown in Figure 32 and are Aware, Basic; Core; Intermediate and Advanced.

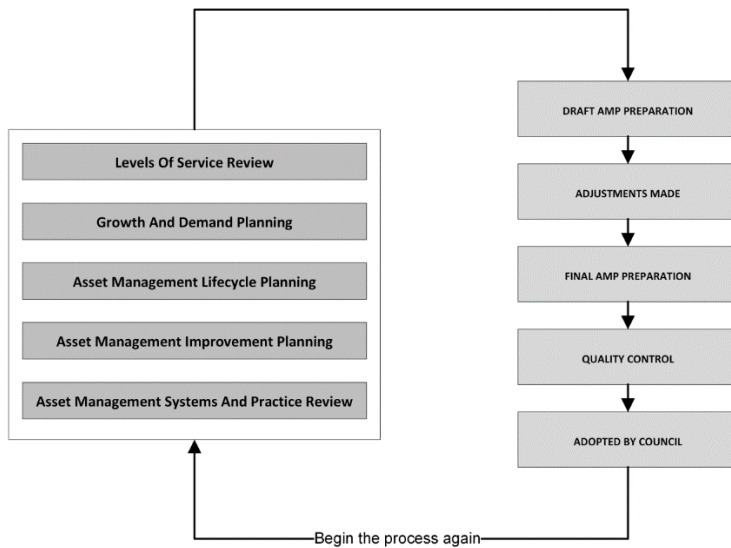


Figure 32 - Asset Management Plan Development Process

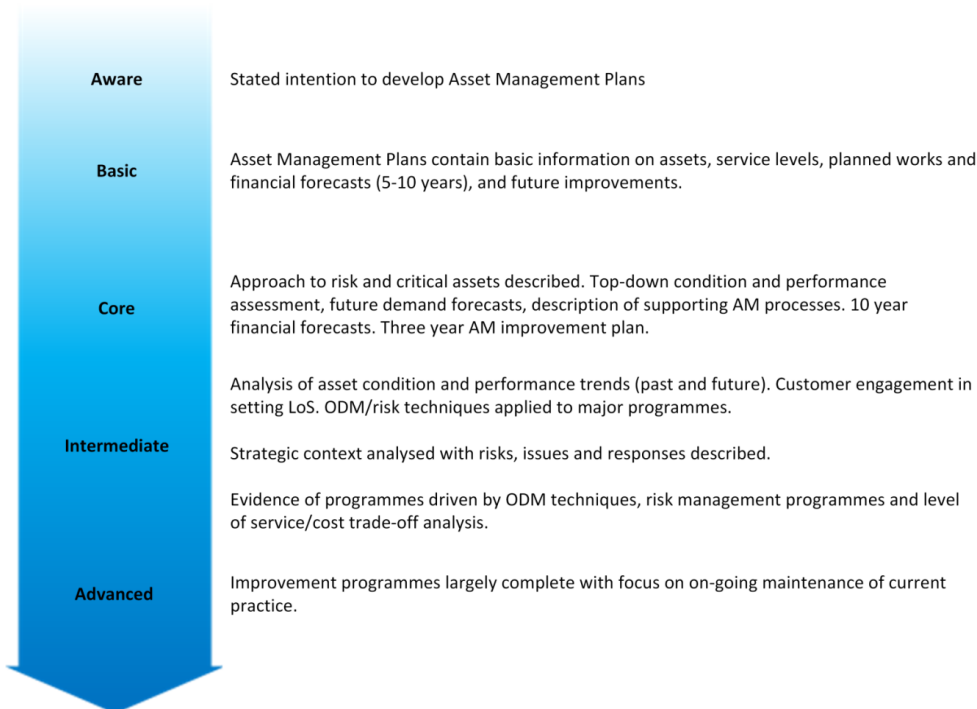


Figure 33 - Asset Management System Maturity Index

10.3 ASSET MANAGEMENT IMPROVEMENT PLAN

Table 29 - Asset Management Improvement Plan

Asset Management Practice Area	Improvement/s Made	Date in Place	Future Improvements	Section Identified	Responsibility	Due Date
Asset Information	Information data Tablets fully integrated for Three Waters data collection and entry into AssetFinda.	2016	Update asset condition data Continue to use information collected from maintenance tasks to update asset condition data	3.7	Asset Services Manager Plant Engineer	On-going
	Asset Register Data Process for verifying data accuracy now in place and documented in Asset Management Plan.	2016	Improve condition data accuracy and reliability The issues related to condition data for <u>below ground</u> wastewater supply assets does not allow Council to accurately forecast remaining useful life. However, using the information collated from both 'scheduled' and 'reactive' maintenance (under the Services Maintenance Contract 2014), Council is able to update asset condition data regularly. Over time as maintenance and renewals are carried out, the condition information will improve. Therefore, the implementation of additional major projects to assist Council in improving condition data information is not required.	3.7	Asset Services Manager Plant Engineer	On-going
Future Growth and Demand	N/A	2018	Further analysis to determine how the impacts of growth and customer expectation will affect the structural integrity of an aging Wastewater Infrastructure network.	4.3	Director, Assets Asset Services Manager	On-going
	N/A	2018	Continue to use information collected from maintenance tasks to update asset condition data	4.3	Asset Services Manager Plant Engineer	On-going
Level of Service Performance	DIA Measures Department of Internal	2018	Resource Consent Pursue an environmentally - friendly, cost-effective and	5.4	Director, Assets Asset Services	On-going

Asset Management Improvement Plan and Monitoring

Asset Management Practice Area	Improvement/s Made	Date in Place	Future Improvements	Section Identified	Responsibility	Due Date
	Affairs (DIA) Mandatory Performance Measures in place.		sustainable solution in renewing the Resource Consent for the discharge of treated wastewater into the Patea River		Manager	
	N/A	N/A	Continue to produce high quality discharges to the Patea River through environmentally - friendly, cost-effective and sustainable treatment measures in the oxidation pond.	5.4	Director, Assets Asset Services Manager	On-going
Lifecycle Management	N/A	N/A	Optimise AssetFinda Capabilities Maximise AssetFinda capabilities for predictive modelling purposes	7.3	Asset Services Manager Plant Engineer	On-going
	N/A	N/A	Condition Assessment Continue to undertake CCTV Condition Assessment the wastewater reticulation assets, to ascertain the useful and remaining lives of these assets	7.5	Asset Services Manager Plant Engineer	On-going
Risk Management	N/A	N/A	Infiltration of Groundwater Continue addressing ground water infiltration into the wastewater reticulation to ensure continued an efficient performance of critical asset	8.7	Asset Services Manager Plant Engineer	On-going
	N/A	N/A	Trade Waste Implementation Continue to Implement the Trade Waste Bylaw to ensure all non-domestic wastes are identified and captured under the necessary conditions to avoid critical asset failure	8.7	Asset Services Manager Plant Engineer	On-going
AM practices and Improvement Plan	N/A	2018	Document Management Document template updated to better reflect IIMM, Audit and NZTA requirements.	10	Director, Assets Asset Services Manager	On-going

Asset Management Improvement Plan and Monitoring

Asset Management Practice Area	Improvement/s Made	Date in Place	Future Improvements	Section Identified	Responsibility	Due Date
			Draft documents saved to TRIM to enable direct contribution from Asset Managers.			
	AM Policy Development Asset Management Policy developed and adopted by Council.	2016	Review completed May 2020.	10	Director, Assets Asset Services Manager	Ongoing

Appendices

- Appendix 1 - Wastewater Risk Assessment**
- Appendix 2 - Wastewater Operational Documents**

Appendix 1 - Wastewater Risk Assessment

COMPLIANCE AND LEGISLATION RISKS

1. Compliance and Legislation Risk Assessment				
Risk Subject	Risk Description	Risk Score Raw	Control Description	Residual Risk Score
Legislation Changes TOP TEN RISK	IF changes to legislation or case law occur and are not implemented by staff, THEN council may be acting illegally and in breach of legislation	8 High Unlikely/ Major	<ul style="list-style-type: none"> Staff will implement the changes Regular review and update Legislative Compliance Register. Staff training and attending relevant industry conferences. Regular policy review to ensure policies and procedures are in line with legislation changes. Ensure maintenance contractor and staff are up to date with legislative requirements through regular updates of legislative compliance register Subscribe to regular email updates from local government and relevant industry bodies, Council list server to ensure staff are notified of legislative changes. 	1 Low Rare/ Serious
Incorrect Planning Advice	IF Council gives out wrong advice on LIM, or issues Resource Consent when it should not have, THEN it could be subject to a judicial review or similar form of dispute process involving legal costs, possible fines, and reputational damage.	3 Moderate Unlikely/ Serious	<ul style="list-style-type: none"> Quality assurance. Resourcing and ongoing training of competent staff. Low tolerance for poor quality documentation from consent applicants. Good quality legal counsel. Council has professional indemnity, public liability, and statutory liability insurance. 	1 Low Rare/ Serious
Statutory Reporting Commitment	IF Council does not meet statutory commitments (eg for reporting to the national monitoring system) THEN it may be acting illegally and receive attention from Ministry which could result in financial penalty and council functions being removed, or elected members being replaced.	3 Moderate Unlikely/ Serious	<ul style="list-style-type: none"> Quality assurance. Resourcing levels maintained. Schedule of dates and commitments is regularly maintained and updated by Quality Assurance officer. Regular review and update of Legislative Compliance Register. 	1 Low Rare/ Serious
Bylaws and Policies TOP TEN RISK	IF Council fails to keep Policies and Bylaws up to date, THEN the Policies and Bylaws may become unenforceable and irrelevant, and council could be acting illegally, or the policy is not fit for purpose.	8 High Unlikely/ Major	<ul style="list-style-type: none"> Quality assurance, Resourcing levels maintained. Regular Policy Schedule review by CEO. Regular review of Bylaw timetable maintained in Content Manager. 	3 Moderate Unlikely/ Serious

Appendices

DATA AND INFORMATION RISKS

2. Data and Information Risk Assessment				
Risk Subject	Risk Description	Risk Score Raw	Control Description	Residual Risk Score
Systems Down - Natural Disaster/Pandemic TOP TEN RISK	IF there is a natural disaster THEN systems may be down temporarily, reduction in worker productivity, unable to respond to customers, data unavailable, potential permanent loss of data.	8 High Unlikely/Major	<ul style="list-style-type: none"> • Backups done daily and stored off-site. • Most critical data is in the cloud, data centre is overseas so workers can access system remotely from anywhere. • Civil Defence will make hardware available for emergency response. 	3 Moderate Unlikely/Serious
Server Failure TOP TEN RISK	IF the server failed THEN systems down, data unavailable, potential data loss	12 Very High Possible/Major	<ul style="list-style-type: none"> • Restore from backup, backups stored off-site. • Fail-over for Melbourne data centre replicates to Sydney data centre. 	3 Moderate Unlikely/Serious
Records Handling	IF hard copy protected records are handled in a way that could cause damage, degradation or disorganisation, THEN this could lead to loss of protected records, non-compliance with legislation and potential financial penalties.	1 Low Rare/Important	<ul style="list-style-type: none"> • Access to archives is limited to trained staff. • Ensure the Information Management Specialist is fully trained in all areas of protected records management. • Maintain a register of archived records, and a process by which records will be archived. • Storage area must be restricted and temperature controlled. 	1 Low Rare/Important
Unapproved online platforms used	IF unapproved online platforms are used for Council business, THEN Council sensitive information and individual private details could be hacked and made available publically.	4 High Possible/Serious	<ul style="list-style-type: none"> • All Council information should only be stored on platforms that are approved by IT and gone through proper procedures and checks by IT. 	1 Low Rare/Serious

Appendices

FINANCIAL RISKS

3. Financial Risk Assessment				
Risk Subject	Risk Description	Risk Score Raw	Control Description	Residual Risk Score
Accessing Funding	IF incorrect assessment is made to determine required maintenance funding, all funding options are not sought, or insufficient funding is made available THEN Council may miss out on funding and Council has to fully fund projects.	3 Moderate Possible/ Important	<ul style="list-style-type: none"> Ensure funding assessments are carried out by sufficiently experienced personnel and strong cases are made for funding. A system should be established to regularly monitor all available funding for council projects. 	1 Low Rare/ Important
Internal Financial Controls	IF internal financial controls are compromised and ineffective, THEN possible fraud, budget blowout, delayed service	4 High Possible/ Serious	<ul style="list-style-type: none"> Good quality controls. Implement annual external and internal audit recommendations. Adhere to Procurement and Delegations Policy. Communications of internal controls to all staff. Recommend internal audit programme every year by independent contractor. 	1 Low Rare/ Serious
Procurement contracts	IF procurement contracts entered into are not cost-effective and do not comply with Council's Procurement Policies THEN council projects could go over budget and council procurement could be subject to industry, media, legal scrutiny.	6 High Likely/ Serious	<ul style="list-style-type: none"> Ensure procurement policy and procurement manual are appropriate, comply with legislation and good practice, and followed by all staff and significant contracts are reviewed by an independent professional. 	1 Low Rare/ Serious
Significant Population Reduction	IF there is a significant population reduction, resulting in loss of ratepayer base and reduction in property values - THEN this could result in higher rates for others and significant cost reductions may be required.	3 Moderate Unlikely/ Serious	<ul style="list-style-type: none"> Ensure variable costs are clearly identifiable, and therefore able to be isolated and adjusted if ratepayer base reduced. Council actions to align with council mission and vision to make Stratford a great place to live. 	3 Moderate Unlikely/ Serious
New Regulations require Significant Investment	IF new environmental regulations or legislation imposed on councils requires a significant increase in capital expenditure, THEN ability to finance investment could be compromised and rates increases could breach limits.	3 Moderate Possible/ Important	<ul style="list-style-type: none"> Attempt to keep debt and expenditure low and achieve cost efficiencies regularly so that council can weather any necessary investment in order to be compliant with changing legislative environment. 	1 Low Rare/ Serious
Theft by Contractors	IF contractors have unrestricted access to council property and/or information, THEN there is an opportunity for theft and consequently loss of	2 Moderate Unlikely/	<ul style="list-style-type: none"> All contractors must go through a pre-qualification process. Visitors to Council buildings must sign in. 	1 Low

Appendices

3. Financial Risk Assessment				
Risk Subject	Risk Description	Risk Score Raw	Control Description	Residual Risk Score
	Council assets.	Important	<ul style="list-style-type: none"> • Access to the building has now been restricted with the use of fobs. • Protected records are stored in a safe or locked storage room. 	Rare/ Serious
Inadequate financial provision to fund asset replacement	IF there is inadequate financial provision in reserves to fund the replacement of assets, THEN the Council may have to borrow more than expected, or asset replacement may need to be delayed which may affect service level performance.	3 Moderate Possible/ Important	<ul style="list-style-type: none"> • Ensure annual depreciation is based on accurate fixed asset values (replacement cost) and accurate useful lives. • Assets should not, unless necessary, be replaced before the end of their useful life. 	1 Low Rare/ Important
Bribery and Corruption	IF elected members or staff act in a way that is, or is perceived to be, influenced by Bribery or Corruption, THEN the Council's reputation could be damaged, there is potential for legal action against Council, increased scrutiny by the Office of the Auditor General. There is also the risk that Council could have lost financially, or in some other way, by entering into an unethical contract.	3 Moderate Unlikely/ Serious	<ul style="list-style-type: none"> • Ensure HR Policy, Procurement Policy, Anti-Fraud and Corruption Policy and Elected Members' Code of Conduct cover these areas sufficiently and that guidance is given to all staff and elected members at least annually on conflicts of interest, and Policies are widely distributed within Council and made available to all staff, particularly new staff. • The Fraud Policy includes a process for reporting any suspected instances of bribery and corruption - ensure this is widely available and all staff are aware of reporting process. 	1 Low Rare/ Serious
Management Override of Internal Controls	IF a Manager uses their unique position to override internal controls, THEN the financial statements may be incorrect and potential fraud may result.	4 High Possible/ Serious	<ul style="list-style-type: none"> • Audit and Risk Committee oversight. Internal and External audits annually. • Fraud Policy awareness training. • Regular review of policies to ensure in line with best practice. • SLT to undergo ethics training. • Full reference checking of at least one recent, direct manager (particularly for financial and management roles). • Zero tolerance for any bullying type behaviour. 	1 Low Possible/ Minor

Appendices

HEALTH AND SAFETY WELLBEING RISKS

4. Health and Safety Wellbeing Risk Assessment				
Risk Subject	Risk Descriptions	Risk Score Raw	Control Description	Residual Risk Score
Lone Worker TOP TEN RISK	If a staff member is seriously injured or killed during field inspections/site visits, then possible health and safety breaches, death or serious injury.	12 Very High Possible/ Major	<ul style="list-style-type: none"> • Complete quality assurance, Ongoing training/awareness of HSE requirements and responsibilities • Better use of council data/knowledge base on dangerous or insanitary sites before staff member deploys to site • Use of GPS tracking, mobile phone tracking 	3 Moderate Unlikely/ Serious
Council Vehicle accident	If a staff member has an accident in a council vehicle, then this could result in possible death or serious injury and damage to motor vehicle asset.	4 High Possible/ Serious	<ul style="list-style-type: none"> • All staff must have a full drivers licence and all staff are aware of procedures if there is an accident. • Staff driver training to be provided to regular drivers. • GPS and mobile phone tracking. 	3 Moderate Unlikely/ Serious
Staff under Stress	If staff are affected by personal issues or by work pressures and experiencing high levels of stress, then work performance may decline and/or fatigue, illness, unsafe work practices may result.	5 High Almost Certain/ Important	<ul style="list-style-type: none"> • Managers are responsible for being aware of the wellbeing of their direct reports • There are various options available for relieving the pressure of staff who are overworked including increasing staff or reallocating work • Ensure access to EAP service is widely known and communicated to all staff • Ensure all staff have a backup option available so they can take annual leave for at least a week at a time 	3 Moderate Possible/ Important
Exposure to Hazardous Substances	IF staff are affected by exposure to hazardous substances eg chemicals, liquids, fumes and other toxic substances THEN there are possible risks to staff health and wellbeing.	4 High Possible/ Serious	<ul style="list-style-type: none"> • Staff are up to date with relevant immunisations. • Training is mandatory for all staff working with hazardous substances. • Use appropriate PPE gear at all times in the vicinity of the hazardous substances. • Regular health checks for staff. • Regular testing of hazardous substances and chemicals LABELLING and STORAGE be carried out RANDOMLY. • The Stratford Water Treatment Plant has site licences for the storage of chemicals, these must be kept up to date. • Fire extinguishers are on site, all signage is current and covers off on all of the chemicals held on site, 	3 Moderate Unlikely /Serious
Workplace Bullying or Harassment	IF Bullying and harassment in the workplace occurs THEN it can have an impact on the health and wellbeing of staff subject to the bullying and other staff witnessing the behaviour. This may impact	4 High Possible/ Serious	<ul style="list-style-type: none"> • Top down culture against bullying and harassment of any kind, policy is followed through by management, staff are aware of the reporting process. • The reporting process to deal with bullying and harassment is fair, transparent, and confidential and dealt with in a timely manner. 	3 Moderate Unlikely/ Serious

Appendices

4. Health and Safety Wellbeing Risk Assessment				
Risk Subject	Risk Descriptions	Risk Score Raw	Control Description	Residual Risk Score
	on staff productivity and the ability of Council to attract good quality candidates.			
Asbestos Related Work	IF council buildings are contaminated with asbestos, THEN there is the possibility of asbestos exposure to staff and the public and increased risk of asbestosis and other lung and pleural disorders.	4 Moderate Unlikely/ Important	<ul style="list-style-type: none"> • Asbestos protocols need to be developed in line with the asbestos regulations. • Community needs to be made aware of Asbestos disposal guidelines. • Staff involved in construction work should be appropriately trained in handling of asbestos materials. 	2 Moderate Unlikely/ Important
Muscular discomfort - Ergonomics	IF muscular pain or discomfort or eye strain occurs as a result of the work environment and setting, THEN this will impact on staff health and wellbeing and long term comfort at work.	2 Moderate Likely/ Minor	<ul style="list-style-type: none"> • Apply ACC Habit At Work guidelines. • Workstation assessments should be carried out to reduce the likelihood of onset of long term discomfort and pain conditions. 	1 Low Possible/ Minor
Armed Robbery	IF there is an armed robbery at any of council's services centres, THEN there is the potential for death or serious harm.	1 Low Rare/ Serious	<ul style="list-style-type: none"> • Establish emergency procedures, including use of panic buttons. • Security cameras in place. • Ensure staff are trained to deal with potential threat. • Design / limit access to building so that threats are minimised. 	1 Low Rare/ Serious
Employee Substance Abuse TOP TEN RISK	IF staff are affected by drugs or alcohol while at work, THEN there is an increased risk of an accident or injury, property damage, and reduced work performance.	8 High Unlikely/ Major	<ul style="list-style-type: none"> • Ensure staff are aware of drug and alcohol policy. • Initial drug testing done prior to employment to filter out regular users. • Utilise EAP. 	2 Moderate Unlikely/ Important
Fatigue Management	IF Fatigue affects an employee, as a result of working extraordinary hours, THEN the employee may have limited functionality which could result in personal injury or injury to others. It could also lead to stress and long term mental illness if it is reoccurring and could mean Council is in breach of the Health and Safety Act.	3 Moderate Possible/ Important	<ul style="list-style-type: none"> • Ensure employees take regular, quality rest breaks during the working day, in line with the Employment Relations Act (HR Policy requires this). • Ensure all staff know their responsibilities in terms of managing fatigue. • Ensure shift workers rostered times are manageable. • The Vehicle Use Policy has limits on driving a Council vehicle after exceeding max number of work hours. • Contractor fatigue management to be reported and monitored through regular contractor meetings. 	1 Low Rare/ Minor

Appendices

OPERATIONAL RISKS

5. Operational Risk Assessment				
Risk Subject	Risk Descriptions	Risk Score Raw	Control Description	Residual Risk Score
Contractor - Damage to Property	IF maintenance contractor damages council or private property while carrying out contracted work, THEN council could be liable for damages and additional expenditure.	4 High Possible/ Serious	<ul style="list-style-type: none"> • Stringent Operational procedures: • Daily reporting of compliance. • Regular liaison with contractor and regulators to monitor performance to ensure compliance. • Contractor pre-approval process. • Council has material damage insurance policy. 	3 Moderate Possible/ Important
Other Contractors in Network Corridor	IF work by others in Network Corridor results in damage to components of the 3 waters infrastructure THEN services to the public may cease or become unreliable or compromised.	4 Moderate Likely/ Important	<ul style="list-style-type: none"> • Co-ordination between services before major projects begin. • Ensure all works have Corridor Access Requests. 	1 Low Rare/ Important
Attracting Qualified Staff	IF Council is unable to attract suitably qualified personnel, THEN services may become under threat and may cease.	6 High Likely/ Serious	<ul style="list-style-type: none"> • Internal training and succession planning programs. • Ensure market wages are offered for all high demand positions. • Recruit off shore option should be available for high-demand positions. • Make greater use of consultants if necessary and/or shared services with neighbouring Councils. • Make Stratford District Council a great place to work - measure staff engagement and respond to any issues expediently. 	2 Moderate Unlikely/ Important
Maintenance Contractor fails to deliver TOP TEN RISK	If a maintenance contractor fails to deliver contractual service necessitating termination of contract and re-tendering, then assets may become under threat, unreliable, or unable to meet community needs.	8 High Unlikely/ Major	<ul style="list-style-type: none"> • Careful assessment of tender to ensure contract price viable for contractor to deliver level of service • Regular liaison with contractor to monitor performance and ensure compliance • Contractor pre-approval process must not be bypassed 	3 Moderate Unlikely/ Serious
Key Person risk	If a key person in the organisation could not work for a significant period of time then this could affect Council's ability to perform core functions and duties.	3 Moderate Possible/ Important	<ul style="list-style-type: none"> • Ensure PROMAPP is up to date with all staff day to day processes • If known absence ahead of time ensure an appropriate training plan in place • Make use of local consultants where appropriate • Connect with colleagues from neighbouring three councils to share 	1 Low Possible/ Minor

Appendices

5. Operational Risk Assessment				
Risk Subject	Risk Descriptions	Risk Score Raw	Control Description	Residual Risk Score
			resource if needed.	
Natural Disaster or Fire - Response preparedness TOP TEN RISK	IF a Natural Disaster or Fire causes significant damage to infrastructure and buildings THEN community welfare may be severely compromised, putting people's lives at risk, and staff may be unable to access systems to carry out their day to day duties and functions.	12 Very High Possible/ Major	<ul style="list-style-type: none"> Civil Defence Emergency Management plans are in place. Procedures following an emergency event are widely known by a number of staff due to Civil Defence Foundational training being rolled out to majority of council staff. Business Continuity Plans need to be in place and practiced regularly for all activities - Directors responsible for having a plan in place for each of their departments to ensure core functions can continue to be delivered. 	12 Very High Possible/ Major
Disease Outbreak/ Pandemic	If there is a human disease outbreak in the district, then this could impact staff and contractors staff available to deliver service	5 High Rare/ Catastrophic	<ul style="list-style-type: none"> Health and Safety Advisor to keep aware of any public health notifications of disease outbreaks Ensure there is a plan to respond to any notifications Civil Defence covers infectious human disease pandemics and will take responsibility for local management. Follow Ministry of Health's NZ Influenza Pandemic Action Plan. 	1 Low Rare/ Serious
Biosecurity threat risk	IF there is a biosecurity threat to animals, or plant life THEN this could affect the economic wellbeing of the district and the ability of council to financially meet community needs.	4 High Possible/ Serious	<ul style="list-style-type: none"> Ensure council takes a proactive approach to working with Biosecurity NZ, MPI, TRC and the community where a threat is identified. 	2 Moderate Unlikely/ Important
Critical Asset Failure TOP TEN RISK	IF a critical asset (water treatment plants, stormwater, wastewater, reticulation, roading) failed, THEN unexpected financial burden may arise and there could be significant disadvantage and risk to the community.	12 Very High Possible/ Major	<ul style="list-style-type: none"> Conduct 2 yearly Asset Criticality Review. Ensure there are established Civil Defence Emergency Management response procedures in relation to fixing critical assets in an emergency event. Management practices and staff training, retention to ensure appropriate skill level in critical asset maintenance. 	4 High Possible/ Serious

Appendices

5. Operational Risk Assessment				
Risk Subject	Risk Descriptions	Risk Score Raw	Control Description	Residual Risk Score
Heavy/Extreme Rainfall incidents	IF the Stratford District experiences heavy rainfall continually over a period THEN roads may flood, restricting accessibility, landslips and mudslides may restrict road access and cause property damage, productive land areas may flood reducing functions, Stormwater, Wastewater and Water Supply assets may fail from overburdening, and overflows from Wastewater system may result in untreated water entering the Patea River.	4 Moderate Likely/ Important	<ul style="list-style-type: none"> Asset Management Plans and Incident Control Response Plans to document critical asset areas and response plan in the event of heavy rainfall incidents. 	2 Moderate Likely/ Minor
Government Policy Impacting on Local Government TOP TEN RISK	If Government Policy significantly changes the services Council delivers or the way they are delivered, then this could put financial pressure on the district to fund investment in changes, or it may mean previous investment has become redundant.	12 Very High Possible/ Major	<ul style="list-style-type: none"> Where a policy change may have a significant impact on the Council then we must ensure that the Council makes a submission challenging the change and suggesting alternative options. Council officers and elected members need to keep up to date with policy, and anticipate potential impacts of legislative changes and respond strategically. This could include joint collaboration with business and other councils, accessing alternative funding sources, or obtaining legal or professional advice 	12 Very High Possible/ Major
Consents	The Council does not undertake the work in accordance with the resource consent conditions. Council can be fined by the Regional Council for breach of conditions.	3 Moderate Possible/ Important	<ul style="list-style-type: none"> Not negotiable - Consent conditions must be abided by otherwise the consent will be breached Council needs to submit to the Regional Council a methodology about how they are going to undertake the works. 	2 Moderate Unlikely/ Important

REPUTATIONAL AND CONDUCT RISKS

6. Reputational and Conduct Risk Assessment				
Risk Subject	Risk Descriptions	Risk Score Raw	Control Description	Residual Risk Score
Online Passwords	IF online passwords are shared or used inappropriately, THEN there is the risk that staff can access or hack Council owned systems and release sensitive information.	3 Moderate Possible/ Important	<ul style="list-style-type: none"> • Ensure that where a staff member leaves and they have access to logins accessible online that the passwords are changed and access ceases. • Limit use of online accounts. 	2 Moderate Unlikely/ Important
Contractor Damage or Breach	If Council and/or Council contractors are found to be liable for public/environmental damage, or any actions that are unsafe or non-compliant with legislation and applicable policies and standards, then fines, possible injury, long-term damage, reputational damage could result.	4 High Possible/ Serious	<ul style="list-style-type: none"> • Appropriate procedures and guidelines are in place to monitor contractor actions and our own including health and safety audits, contractor meetings/KPI's • The Council requires all physical works contractors to go through a thorough health and safety pre-qualification process and become approved before commencing any physical work • All relevant staff are kept up to date with pre-approved contractors register • Mini audits and random checks should be built into contracts • Contractor public liability insurance required for all major contracts. 	3 Moderate Unlikely/ Serious
Council employees/contractors abuse members of the public	If Council employees, during the course of their Council duties abuse members of the public,, then the Council may suffer significant reputational damage and potentially be taken to court.	4 High Possible/ Serious	<ul style="list-style-type: none"> • All staff in a public facing role, particularly where they must deal with children, must be police vetted before they commence work. • Exception is where the role is urgent and requires immediate start - in these situations the employee should not be left alone at any time until a satisfactory police report has been received 	3 Moderate Unlikely/ Serious

Appendix 2 - Wastewater Operational Documents

Consents	Commencement Date	Expiry Date	CM Reference
0196-5.0 - Stratford Oxidation Pond Discharge to Patea River	1/05/2020	1/06/2034	D20/6149
Policies	Commencement Date	Review Date	CM Reference
Procurement Policy	11/06/2019	2022/2023	D18/29563(v3)
Asset Management	26/05/2020	2023/2024	D20/4330
Trade Waste Policy	11/06/2019	2021/2022	D19/13626
Bylaws	Commencement Date	Review Date	CM Reference
Wastewater Bylaw	1/07/2020	1/07/2030	D20/11525
Trade Waste Bylaw	1/07/2020	1/07/2030	D20/33703
Strategies	Commencement Date	Review Date	CM Reference
Infrastructure Strategy 2021-2051	1/02/2021	2050/2051	D21/2700
Contracts	Commencement Date	Review Date	CM Reference
3 Waters Maintenance Contract (1434)	1/07/2019	30/06/2022	D19/14719