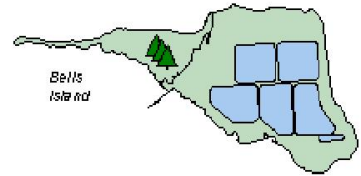


Nelson Regional Sewerage Business Unit

**BUSINESS PLAN
2021/2022**



NRSBU Business Plan 2021-2022

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Cover photograph Bell Island

1. PURPOSE

The purpose of the Nelson Regional Sewerage Business Unit Business Plan 2021/2022 is to summarise management goals and objectives to deliver wastewater collection and treatment services to the region; and to improve the effectiveness and efficiency in the delivery of those services.

2. MEMORANDUM OF UNDERSTANDING REQUIREMENTS

The Memorandum of Understanding states that the NRSBU Board shall by 31 December each year supply to the Councils (Nelson City and Tasman District Councils) a copy of its draft Business Plan. The Business Plan outlines the management of the Nelson Regional Sewerage Business Unit and the assets for the ensuing year, together with any variations to the charges proposed for that financial year.

The Memorandum of Understanding (MoU) commenced on 1 July 2015 and shall terminate on 30 June 2025. The MoU was updated in March 2019.

3. INTRODUCTION

This Business Plan 2021/22 outlines the projects and initiatives to be implemented during the year. It also outlines the associated funding required and the details of the performance targets and measures.

The Business Plan is aligned with the NRSBU Strategic Plan and the Draft NRSBU Activity Management Plan 2021-2031. It includes business objectives and performance targets (Section 7) and the three-year financial forecasts (Section 8). The following key pieces of information from those other documents are included in the appendices of this business plan:

Appendix A - Committee Activity Schedule

Appendix B - Targeted levels of service in the Activity Management Plan

Appendix C - Internal business improvement plan

Appendix D - The 10-year financial plan

Appendix E - Schematic layout of the NRSBU operations

Appendix F - Reduction of Adverse Environmental Effects

4. MISSION STATEMENT

The NRSBU's mission statement is:

Resilient, reliable, and effective infrastructure that supports and protects our community and environment.

Area	Goal
Our approach	Implement and operate infrastructure considering the needs of our community. Our priorities for this are protection of public health, the environment and cultural values.
Our Vision/Ambition/Aspiration	We will work towards the beneficial reuse of resources.
Our conduct	We will undertake our activities transparently, fairly, respectfully, in a timely manner and we will provide regional infrastructure leadership.

5. STRATEGIC GOALS AND PERFORMANCE OBJECTIVES

The NRSBU aspires to achieve the following goals:

Strategic Goal	Objective (This is what it looks like)	Level of Service (This is how we do it)
We will implement and operate infrastructure considering the needs of our community. Our priorities for this are protection of public health, the environment and cultural values.	Containment and conveyance that is resilient and minimises adverse impacts on the health of the environment and community	We have sufficient capacity in our network to cope with peak flows
		We are resilient to mechanical and electrical failures and natural hazards
		We can readily maintain the network
	Resilient wastewater treatment that minimises the impact on the environment and community	The treatment plant can reliably accept (N+1 for critical assets) all peak flows from the network
		The treatment plant can fully treat all dry weather flows
		The treatment plant does not create odour issues for the community
		Effluent Quality meets or exceeds required discharge requirements
	Long term vision that considers the future needs of the community	Our ongoing business is safeguarded through engagement with council planning processes
		We have long term plans for our activities and their impacts
		Have systems in place for the ongoing monitoring and reporting of emissions
Alternative methods of biosolids disposal that protect public health and the environment and are sensitive to cultural values	Have a backstop for issues with biosolids disposal	
We will work towards the beneficial reuse of resources	Use of ongoing improvement processes to identify, implement and operate feasible biosolids reuse	Treatment to maintain 100% reuse of biosolids
		Increase reuse value
		Maintain 100% diversion of biosolids from disposal to landfill
	Identified implement and operate feasible systems and infrastructure for the reuse of wastewater	We minimise the amount of effluent we discharge to water

The NRSBU functional activities are managed by the Nelson City Council and therefore the NRSBU functional activities shall comply with the requirements of the Nelson City Council Health and Safety Policy and fully subscribe to the vision for a Zero Harm Culture.

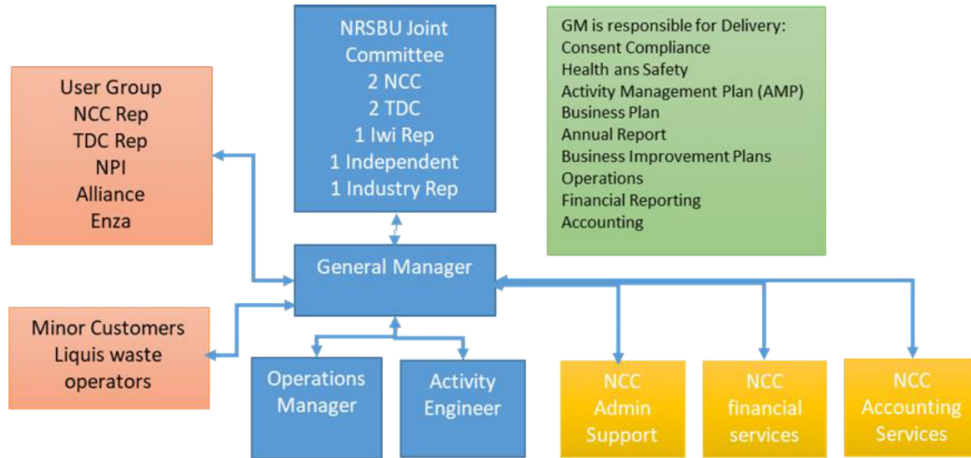
All strategic goals are important and no one goal will be pursued at the expense of another.

It is important to note that discussion is occurring nationally in regard to the delivery of water services in New Zealand. This discussion includes the implementation of national discharge standards for wastewater treatment facilities. This work could have a significant influence on NRSBU, at this time NRSBU is unable to identify the outcome of this work and therefore will continue with Business As Usual.

It is necessary for NRSBU to maintain an understanding of these issues so that an appropriate response can be made if required.

6. NRSBU STRUCTURE

The structure of the Nelson Regional Sewerage Business Unit is as follows:



The Nelson Regional Sewerage Business Unit was established in July 2000, replacing the former Nelson Regional Sewerage Authority established in the 1970s.

Following the adoption of a new Strategic Plan in August 2013, the 2017 Wastewater Activity Management Plan was developed and adopted on 15 September 2017. A draft of the long-term financial plan based on the Asset Management Plan, was provided to Tasman District Council and Nelson City Council in July and October 2017 respectively to enable them to consolidate the NRSBU long-term plan into their own strategic documents.

This business plan relates to the first year of the not yet adopted NRSBU Activity Management Plan 2021-2031.

7. BUSINESS OBJECTIVES AND PERFORMANCE MEASURES review

The objectives outlined below describe the long-term aims of the business unit. Performance measure targets and dates (where they are not specified below) are set annually in the Business Plan along with performance measures for projects identified in the Activity Management Plan. Performance will be reported quarterly to the Board and annually to the shareholding councils.

Performance Measure (This is how we know we're doing it)	Target
Number of overflows per year (all networks) due to NRSBU network capacity constraints, or mechanical or electrical failures.	Zero
Number of pump stations with redundant pumps and power supply.	All by 2023
Pump stations are to a level 3 importance level standard.	All by 2023
Number of pump stations where able to carry out routine PS maintenance works while managing ADWF.	All by 2031
Number of times PWWF flows exceed inlet works capacity.	Zero by 2031
Number of times diurnal flows bypass the mechanical system annually OR Treatment capacity of mechanical plant.	Zero OR 500L/s by 2029
Number of odour complaint events annually.	Zero by 2025
Pond free water above sludge layer.	>1m in all ponds by 2023
Chemical Parameters comply with consents for discharge to water when discharge occurs.	Ongoing consent compliance for all parameters
Effluent quality appropriate for safe and sustainable use with land irrigation systems.	Pathogens, Nitrogen defined for land application requirements by 2023
Obtain reuse consents for appropriate land areas for Reuse Water.	Demonstrated quality performance and consents in place for reuse for dust suppression by June 2024
We have up to date plans as follows: Master plan (50 years focus) Activity Plan (10 years Focus) Business plan (1 year focus, but also with tentative three year actions)	All plans are live and are reviewed annually
The number of alternate methods/options for biosolids disposal.	One by 2035
Increase in quality of biosolids.	Biosolids Reuse Development Plan Draft by 2023
Percentage of biosolids that is reused.	100%
Annual volume of biosolids sold.	Biosolids Reuse Development Plan Draft by 2023
Proportion of biosolids to land or reuse/sale	100%
Number of days effluent is discharged to water in summer period (1 Dec to 31 March).	Draft Wastewater reuse plan developed by 2023, with a goal to reaching zero by 2035
Volume of high-value water-reuse we achieve.	Draft Wastewater reuse plan developed by 2023
Amount of total flow we can divert from discharge to water.	At least 75 th percentile by 2040

8. THREE YEAR RENEWAL EXPENDITURE FORECAST (\$'000)

Renewal Plan (\$,000)	Projected 2020/21	2021/22	2022/23	2023/24
Pump Stations and Rising Mains	50	385	537	168
Inlet, Aeration Basin, Clarifier and Ponds	828	1159	41	
Solids Handling	723	381	254	1704
ATAD rust proofing				
Rabbit Island		78	49	
Biosolids and sludge storage tank refurbishment	75			
Facilities and Roads	225		135	11
PLC renewal	100			
General	120	191	130	41
Total	2121	2194	1146	1924

The renewal programme of the NRSBU assets is developed around lifecycle and condition assessment.

An iterative process is followed whereby the renewal programme is considered annually with inputs from the Operation and Maintenance operator and a review of remaining useful life of assets.

Condition assessment reports may be commissioned where additional information is required to ensure optimal spend on renewals.

General items are at the discretion of the General Manager.

9. THREE YEAR CAPITAL UPGRADE PLAN

The following table outlines the capital upgrades proposed over the next three years. This is followed by a commentary outlining more detail on each of the proposals.

Capital upgrades:

Project	Estimated cost (\$ thousands)		
	21/22	22/23	23/24
Pump station overflow screens and monitoring systems	300		
Regional pipeline capacity upgrades	3,720	2,470	2,150
Pump and discharge pipework upgrades at pump stations		2,050	350
Strategic review and seismic strengthening of pump stations			50
Flood protection of pump stations			
Storage at pump stations			50
Additional screening and duplicate grit trap at WWTP			
Hydraulic capacity upgrades at WWTP		80	1,500
Power supply upgrades at Best Island and WWTP			
Design of system to remove algae from pond	20		
Desludging ponds	400		
New technology assessments to meet Resource Consent	50		
Biosolids drying		100	
Odour and equipment upgrades at Rabbit Island	200		150
Buffer storage at WWTP			25
Best Island irrigation		100	50
Bell Island irrigation and effluent re-use	110	50	
Total capex upgrades (excluding renewals)	4,800	4,850	4,325

Commentary on Upgrade for 2021/22

The programme of work for the NRSBU has been significantly altered as a result of the Activity Management review.

There is a small amount of desludging work required to dredge the high points from Ponds F1 and F3. This follows the works done in 2020/21 desludging pond F2. The intent is to reduce the depth of sludge in ponds F1 and F3 to improve the available vertical space in those ponds.

Pump station upgrades to comply with the conditions of the aberrational discharge consent have been partly completed, the final pump station (Saxton Rd) needs to be completed during the 2021/2022 year.

The rising main upgrades for Saxton to Monaco, and Beach Road to Saxton Road have been spread over four years to reduce the expenditure profile.

The Capital upgrades for 2021/22 covers items such as:

- Additional works associate with the Saxton Road to Monaco pipeline, including pump reconfiguration, MCC upgrades and new pipework.
- Additional works to further mitigate odour issues at Rabbit Island.

Regional Pipeline Upgrade:

- Regional pump stations consent compliance, plus storm surge defence plan and implementation programme.
- Capacity improvements (in particular, downstream of Beach Road), but this programme of work has been extended into 2023/24 due to concerns that NRSBU staff will not be able to deliver the programme of works.

Emission Management System

Emission management will be ongoing, however 2021/22 will be used to develop a mitigation plan using the data that NRSBU has gathered from the system installed during 2020/2021.

This Emission Management work is expected to involve an assessment of the emission profile from the Bell Island WWTP, Rabbit Island Biosolids application system and the Nelson Regional Sewerage System.

It will include a draft model that can be used annually to redo the Carbon Emission Assessment based on the information collected as part of the Operations and Maintenance.

This model should be suitable for use by NRSBU staff to annually assess and report on the emissions from the NRSS and to outline emission reduction opportunities.

NRSBU Records and data:

Additionally, we will continue to collate all the NRSBU historic and current information into a single access point electronic storage location.

10. FINANCIAL PLAN

Nelson Regional Sewerage Business Unit				
Budget Summary for 2021 to 2023				
	Budget	1	2	3
	20/21	21/22	22/23	23/24
Income				
Contributors	8,643	9,522	9,866	10,309
Interest	0	0	0	0
Other Recoveries	158	158	158	158
Total Income	8,802	9,680	10,025	10,468
Expenditure				
Operations & Maintenance	3,785	4,277	4,241	4,279
Management	500	500	500	500
Interest	548	730	901	1,065
Insurance	75	98	98	98
Depreciation	2,469	2,553	2,667	2,775
Total Operating Cost	7,376	8,159	8,407	8,717
Surplus/Deficit	1,425	1,522	1,618	1,751
Use of Funds				
Loan Repayment	348	359	1,521	851
Renewals	2,121	2,194	1,146	1,924
Owners Distribution	1,425	1,522	1,618	1,751
Upgrades	8,890	4,800	4,850	4,325
	12,784	8,875	9,135	8,851
Sources of Funds				
Surplus/Deficit	1,425	1,522	1,618	1,751
Depreciation	2,469	2,553	2,667	2,775
New Loans	8,890	4,800	4,850	4,325
	12,784	8,875	9,135	8,851

APPENDIX A

Nelson Regional Sewerage Business Unit Committee Activity Schedule 2021-2023

Date	Activity	Papers required
By 31 August 2021	Review draft Annual Report and Financial Statement.	Draft annual report and financial statement.
By 30 September 2021	Deliver annual financial statement to Councils.	Financial Statement.
By 31 December 2021	Review board planning/meeting timetable. Adopt draft business plan for presentation to Tasman District Council and Nelson City Council. Review and update Interests Register. Adopt business continuity plan.	Planning/meeting timetable. Business Plan. Interests Register. Draft business continuity plan.
By 20 March 2022	Present Annual Report and Business Plan to Tasman District Council and Nelson City Council.	Annual Report and Business Plan.
By 30 June 2022	Review board performance Review governance policy. Review Demand Management Plan. Receive report on Contingency Plan review by customer representatives. Receive report on Risk Management review by customer representatives. Review customer satisfaction survey results. Annual review of Strategic Plan. Adopt Energy Conservation Plan. Review Audit Management Report. Annual Carbon Emission Review.	Checklist for committee effectiveness. Governance Policy. Draft Demand Management Plan. Report on Contingency Plan review by customer representatives. Report on Risk Management review by customer representatives. Customer survey report. Strategic plan. Energy Conservation Programme. Carbon Mission Measurement System development

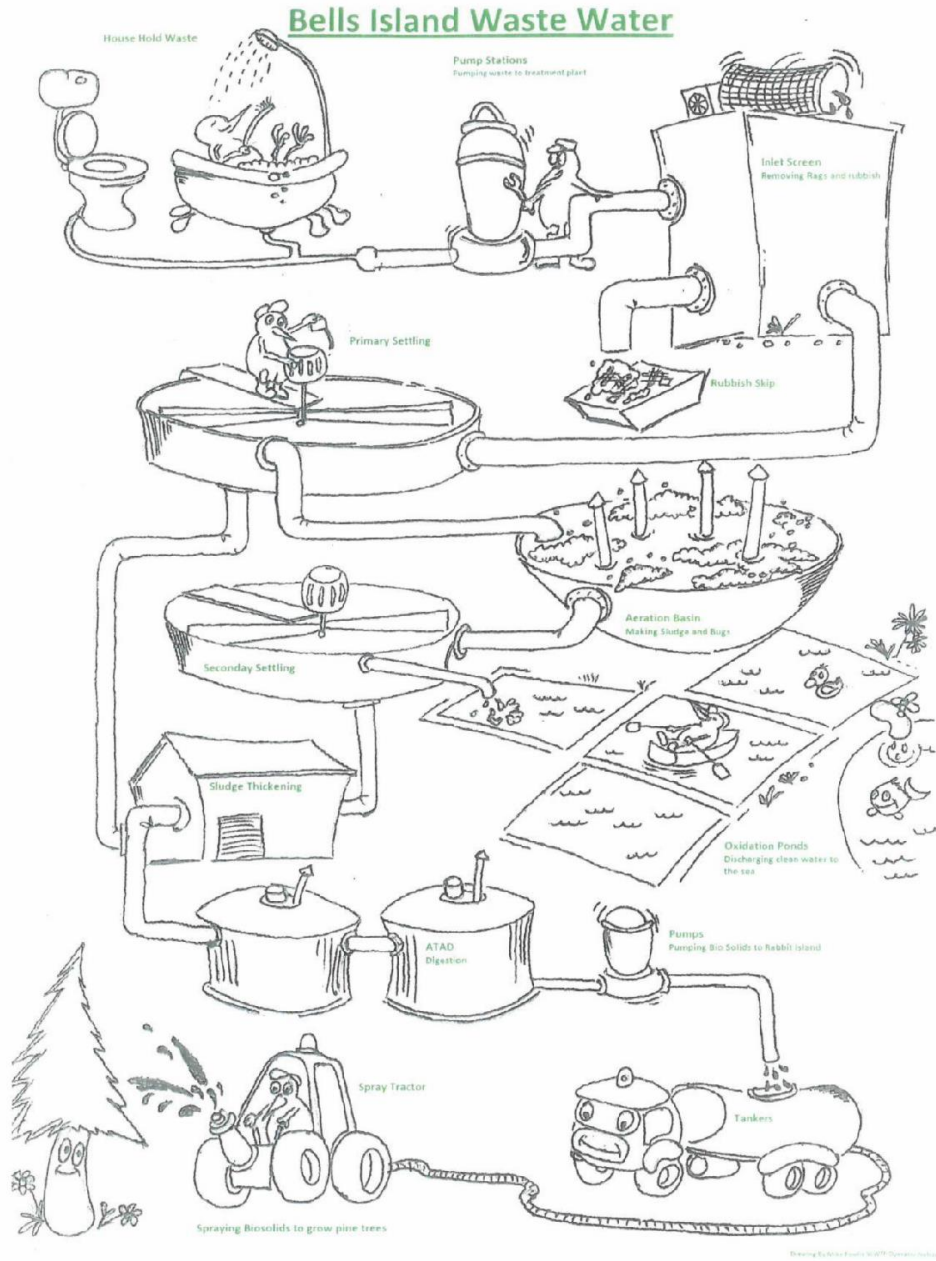
Appendix B**BUSINESS IMPROVEMENT PLAN**

This section describes initiatives to improve the efficiency and effectiveness of the Business Unit and is based on the Nelson Regional Sewerage Business Unit Strategic Plan and referenced to the 2017 Wastewater Asset Management Plan.

IP	Description	Resource Requirements	Progress
IP-1	Consolidate all data and information; and review ease of access	In-house and consultants	Implementation ongoing for completion by June 2022.
IP-2	Continue sludge removal programme.	In-house and Contractor	On-going, Sludge Bund Consent granted 2019/2020 complete. Sludge containment area under construction 2020/2021 complete. Desludging to be begin 2020 – Pond F2 complete by Calendar Year End 2021. F1 and F3 to be desludged in 2021/22.
IP-3	Determine the long-term strategy (Master Plan)	In-house and consultants	Consultant seconded to assist preparation. Draft to be available by September 2021 and the finalised Master Plan to be completed by 30 June 2022.
IP-4	Implement Hazardous Gas Management system for Gravity Belt Thickener system	In-house and consultants	This is programmed for early 2022.
IP5	Electrical Supply to Bell Island	In-house and Consultants.	Investigation and implementation of mitigation measured.

APPENDIX C

BELL ISLAND TREATMENT PLANT SCHEMATIC



APPENDIX D

FOCUS ON COMMUNITY AND ENVIRONMENTAL BENEFITS

The NRSBU intends to:

- have facilities that are robust and resilient
- reduce overflow into the coastal marine environment and Tasman Bay beyond
- have a greater focus on the immediate coastal marine environment and impacts on the ecology of Tasman Bay
- consider water quality, water reuse, and biodiversity and estuary health as priorities over the next two years
- reduce the volume of wastewater discharged to Waimea Inlet over time
- increase attention to facilitating cultural and recreational and educational activities where these don't adversely affect core business activities.

To implement this vision, the NRSBU will:

- develop a programme of work to investigate and implement ways to reduce overflows from the sewerage pump stations to the estuary
- implement the conditions associated with the pump stations Aberrational Discharge resource consent
- undertake a trial to re-use treated wastewater to clean the inlet screens (reducing the use of potable water and consequently the volume discharged to the estuary)
- further develop investigations into the potential re-use (by others) of treated wastewater
- investigate potential tree and vegetation planting around the perimeter of Bell Island
- continue to operate the treatment plant well and achieve high quality effluent
- commission a high-level report into alternative wastewater treatment systems (that would avoid or significantly reduce the discharge of treated wastewater to the Waimea Inlet).