Infrastructure Asset Management Plan

Community Wastewater Management Systems (CWMS)

District Council of Tumby Bay

January 2018

Ref No. 20171052DR2B

DISTRICT COUNCIL of TUMBY BAY

Tonkin CONSULTING

Document History and Status

Rev	Description	Author	Reviewed	Approved	Date
A	Draft for client comment	TJF/KJS			12 December 2017
B	Edits following Council review	KJS	TJF	TJF	9 January 2018

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1 Introduction

1.1 Background

The District Council of Tumby Bay is situated to the north of Port Lincoln on the east coast of the Eyre Peninsula, is approximately 630km from Adelaide and covers an area of 261,950 hectares. The townships of Tumby Bay and Port Neill are located 45km and 85km north of Port Lincoln respectively. Tumby Bay has a population of 1200 and Port Neill has a population of 150. Both towns have increased populations during the summer months.

Tumby Bay is the major centre of the Council area, Port Neill a small coastal town 40km north east of Tumby Bay, Ungarra a small agricultural based town located 28km north west of Tumby Bay and Lipson a small historic farming town located 12km north west of Tumby Bay.

Council provides Community Wastewater Management Systems (CWMS) to residential and commercial properties in the townships of Tumby Bay and Port Neill.

In Tumby Bay, the wastewater is collected through a pipe network with inspection points and eighteen pump stations. It is then treated at a wastewater treatment plant and then reused to irrigate several open space areas via subsurface irrigation assets. A storage lagoon situated to the north of town is also used to store treated wastewater prior to reuse by irrigation.

In Port Neill, the wastewater is also collected through a pipe network and two pumping stations that pump the wastewater to a lagoon situated to the north of town. Wastewater is pumped from the lagoon through a small filtration plant and to the Oval for reuse by subsurface irrigation.

An overview of the CMWS infrastructure assets covered by this asset management plan are shown in Table 1 and Figure 1.

Table 1 Assets covered by this plan

Asset Category	Dimension	Replacement Value
Tumby Bay		
Gravity Pipes	22,542m	$4,017,681
Gravity Nodes	1,247 items	
Rising Mains	10,801m	$1,221,308
Pump Station Assets (18)	92 items	$1,575,940
Lagoon	2 lagoons	$1,392,820
Wastewater Treatment Assets	6 tanks, 26 items	
Irrigation Pipes/Driplines	53,521m	$1,494,068
Irrigation Items	639 items, 6km cabling, 1.5km hydraulic tubing	
Tumby Bay Total		**$9,701,818**
Port Neill		
Gravity Pipes	8,276m	$1,608,765
Gravity Nodes	372 items	
Rising Mains	2,278m	$102,601
Pump Station Assets (2)	11 items	$213,983
Lagoon	1 lagoon	$395,437
Filtration Plant Assets	16 items	
Irrigation Pipes/Driplines	45,900m	$370,384
Irrigation Items	64 items, 4.2km cabling	
Port Neill Total		**$2,691,170**
Tumby Bay and Port Neill CWMS CRC		**$12,392,988**

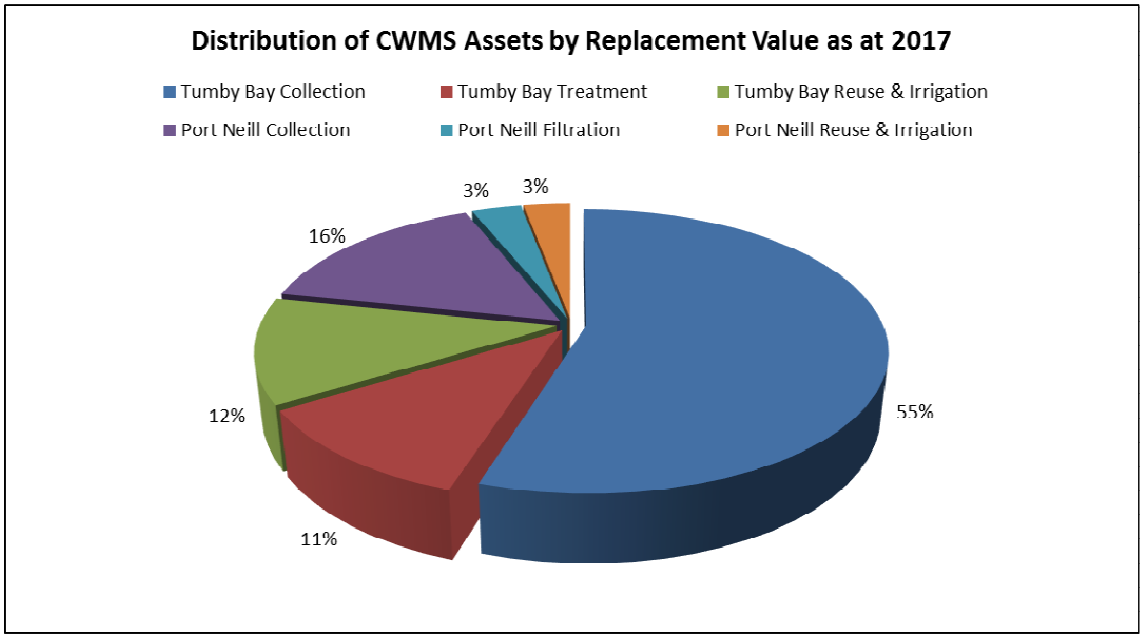

Figure 1 Distribution of CWMS Assets by Replacement Value as at 2017

1.2 Plan Framework

This CWMS infrastructure asset management plan is based on the fundamental structure of the IPWEA NAMS 3 Asset Management for Small, Rural or Remote Communities template and has been simplified to minimise the content to suit The District Council of Tumby Bay.

The District Council of Tumby Bay provides services for the community in part through the provision of infrastructure assets. Council have acquired these assets directly through construction by council staff or contractors and by donation of assets constructed by developers and others over time.

The goal in managing infrastructure assets is to meet the required level of service in the most cost effective manner for present and future consumers. The key elements of infrastructure asset management are:

- Taking a life cycle approach.
- Developing cost-effective management strategies for the long term.
- Providing a defined level of service and monitoring performance.
- Managing risks associated with asset failures.
- Sustainable use of physical resources.

Key elements of the plan are:

- Levels of service – specifies the services and levels of service to be provided by council.
- Future demand - how this will impact on future service delivery and how this is to be met.
- Life cycle management – how the organisation will manage its existing and future assets to provide the required services.
- Financial summary – what funds are required to provide the required services.
- Plan improvement and monitoring – how the plan will be monitored to ensure it is meeting the organisation's objectives.

This asset management plan is prepared under the direction of Council's vision, mission, goals and objectives.

Council's vision is:

> *"To create an unrivalled location incorporating growth, prosperity and amenity in which to reside, work or visit."*

Council's mission is:

> *"Council commits to a safe, healthy and sustainable community through leadership, quality service provision and partnerships."*

2 Levels of Service

The community generally expect that Council will provide an effective method for collection and disposal of wastewater which meets the required Australian and State legislative regulations applicable to CWMS assets. Council has defined service levels in two terms and provides the level of service objective, performance measure process and service target in Table 2 and Table 3.

Community Levels of Service relate to the service outcomes that the community wants in terms of reliability, responsiveness, amenity, safety and financing.

Table 2 Community Levels of Service

Key Performance Measure	Level of Service Objective	Performance Measure Process	Service Target
Reliability	Minimise interruption to service provision.	Reported service interruptions due to CWMS infrastructure failure.	<5 per year
	Collection system operation without blockage.	Reported or identified blockages.	<5 per year
	Maintenance of service during power outage.	Manage system in accordance with contingency plan to minimise and manage overflow.	Activation of contingency plan as required.
Responsiveness	Response to blockages and alarms within set timeframe.	Response to critical alarms and complaints.	Within 1 hour
Amenity	Maintain visual amenity of CWMS infrastructure.	Maintain equipment and land clear from weeds and debris.	Weed spraying of CWMS sites in conjunction with footpath spraying program.
	Control odour generation from pump stations, treatment plants and storage lagoons.	Reported odour complaints.	<5 per year
Safety	Ensure public safety around high risk system components including pump stations, manholes, treatment plant and storage lagoons.	All lockable infrastructure secured from public access.	No unauthorised access to CWMS infrastructure.
	Manage public access to sites irrigated with reclaimed water.	Irrigation operation in conformance with Irrigation Management Plan.	Minimise risk to public health from public area irrigation.
Financing	Ensure annual services charges meet requirements for compliant operations of scheme and planned asset renewals.	Adequate recording and reporting on costs and charges.	Charges cover operations, maintenance and renewal.
	Annual budget reporting in line with Council financial processes.		

Technical Levels of Service support the community service levels and are operational or technical measures of performance. These technical measures relate to the allocation of resources to service activities that the council undertakes to best achieve the desired community outcomes.

Table 3 Technical Levels of Service

Key Performance Measure	Level of Service Objective	Performance Measure Process	Service Target
Quality	Treated effluent to comply with license conditions. Infrastructure compliant with current SA Health and EPA standards.	Quarterly sampling and testing by NATA accredited laboratory. Infrastructure compliant or plans for upgrade to meet compliant levels.	Within DH requirements for water quality.
Reliability	Ongoing operation of pump stations and treatment plant. Availability of treated effluent for irrigation.	System outage frequency and duration due to CWMS infrastructure failure. Acceptable quantity and quality of water to meet irrigation requirements.	<48 hours treatment plant downtime per annum. 90% of foreshore and town oval irrigation requirements met through reclaimed water.
Maintenance	System maintenance in accordance with component manufacturers' recommendations and Council Operations and Maintenance Plan.	Reporting	Records maintained of all system maintenance.
Renewal	Planned asset renewal and upgrade undertaken to maintain system in compliant operational condition.	Asset management plan integrated with Long Term Financial Plan and annual budget process.	Updated plans adopted for 2015/16 budgeting and reviewed annually.
Capacity	Ensure adequate capacity for future growth forecasts.	System planning based on growth forecasts and development planning.	System catchment component plans completed and aligned to growth forecasts and development planning.
Safety	System free of preventable hazards	Assessment of hazardous components and tasks in accordance with Hazard Management Procedure.	No lost time injury associated with CWMS operations.

3 Future Demand

3.1 Demand Forecast

Factors affecting demand include population change, changes in demographics, seasonal factors, vehicle ownership, consumer preferences and expectations, economic factors, agricultural practices, environmental awareness, etc. Demand factor trends and impacts on service delivery are summarised in Table 4.

Table 4 Demand Factors, Projections and Impact on Services

Demand Driver	Present Position	Projection	Impact on Services
Growth in connections.	Tumby Bay: Recently installed connections through medium sized land division remain predominantly to vacant land. 12 new connections from 2016/17 to 2017/18. Port Neill: No significant growth in connections expected during next three years	Tumby Bay: Growth in accordance with historical background growth of approx. 8 allotments per annum.	New developer contributed infrastructure. Downstream impact on existing collection, transfer, treatment and storage infrastructure.
Population growth.	Tumby Bay: Historical background population growth of 0.8% per annum Port Neill: Historical background population growth of 0% per annum. Estimated annual growth of two systems 0.6%	Growth in accordance with historical background growth, noting potential impact of significant regional economic development including mining operations and regional export port.	New developer contributed infrastructure. Downstream impact on existing collection, transfer, treatment and storage infrastructure.
Regulatory change to CWMS standards and guidelines including SCOSA/OTR requirements under Water Industry Act	Tumby Bay and Port Neill: Schemes compliant with current regulatory requirements of ESCOSA, EPA and DHA.	Tumby Bay: Potential change to disinfection requirements may trigger treatment upgrade need. Timeframe, scope and cost currently unknown. Port Neill: No increased treatment or disposal requirements anticipated.	Capital costs and timing not yet quantified. Requirements not yet known.

3.2 Demand Management Plan

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Council will determine the ability of the existing schemes to manage increased output for new developments within townships. Developers will be required to provide additional infrastructure for existing schemes and upgrade where necessary to ensure adequate wastewater disposal. Opportunities identified to date for demand management are shown in Table 5. Further opportunities will be developed in future revisions of this asset management plan.

Table 5 Demand Management Plan Summary

Service Activity	Demand Management Plan
Waste Water Collection	1. Capacity assessment of each pump station 2. Evaluation of impact of new allotments on existing infrastructure. 3. Developer contributions per Council policy. 4. Negotiated developer system augmentations where required. 5. Planning to incorporate an average 0.6% per annum growth factor over asset life for Tumby Bay and Port Neill assets. 6. Significant population growth due to regional economic development projects to be assessed and negotiated during development assessment phases. 7. Incorporate in future iterations of the Asset Management Plan as requirements are known.

4 Life Cycle Management

The life cycle management plan details how Council plans to manage and operate the assets at the agreed levels of service (defined in Section 2) while optimising life cycle costs.

4.1 Background Data

The District Council of Tumby Bay's CWMS assets are located in the townships of Tumby Bay and Port Neill and the assets covered by this asset management plan are shown in Table 1.

The age profile of the assets shown by Current Replacement Cost (CRC) included in this plan is shown in Figure 2.

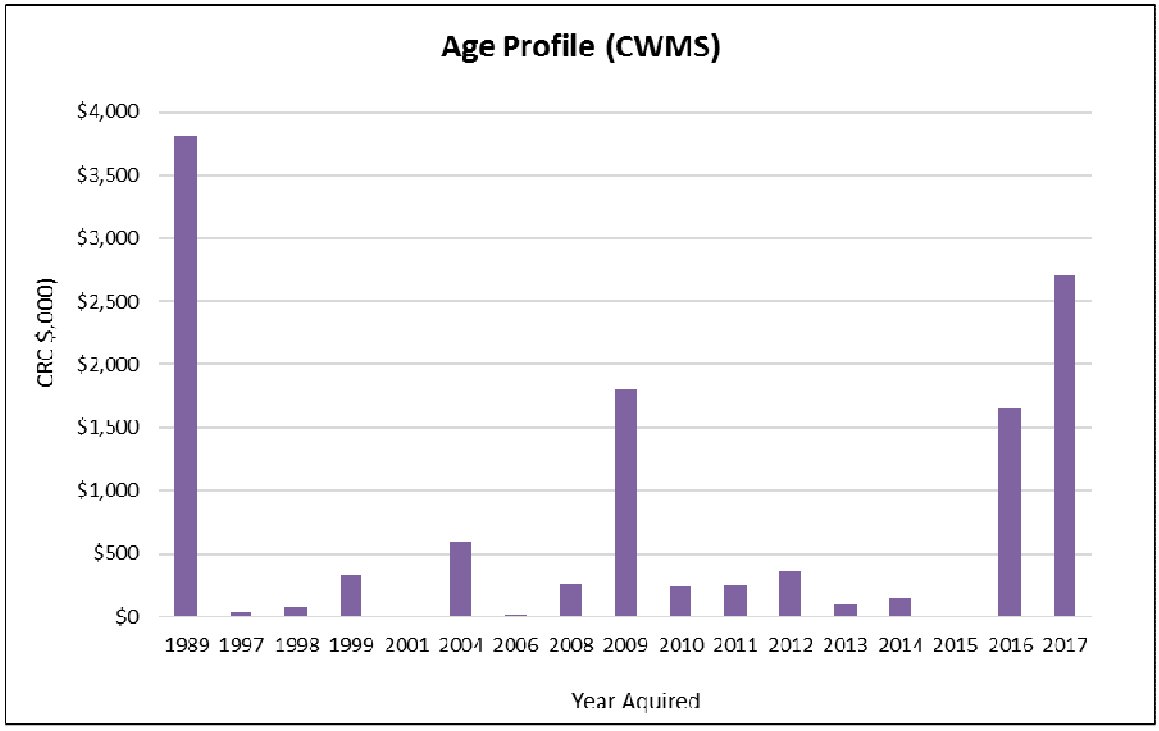

Figure 2 CWMS Asset Age Profile

The Tumby Bay system was first built in 1989 consisting of gravity pipes, rising mains, inspection points and pump stations. New assets were added to the system and the majority of the pumps have been replaced at the pump stations between 2004 and 2017. The wastewater treatment plant was constructed in 2009 along with the addition of new irrigation assets providing reuse options for Council. Capital renewal, upgrade and new additions have continued annually since 2009. A new storage lagoon was constructed to the north of the existing storage lagoon in 2016. While the majority of assets are long life assets there are a number of shorter life pump and wastewater treatment plant assets that while constructed on or after 1989 will feature in the 20 year plan for renewal.

The Port Neill CWMS system was built and commissioned in 2017. The system includes a gravity collection network with two pump stations and rising mains to the storage lagoon. A filtration plant and pump station situated adjacent to the storage lagoon transfers reuse water to the town oval for subsurface irrigation.

4.1.1 Asset Capacity and Performance

Council's services are generally provided to meet design standards where these are available. Locations where deficiencies in service performance are known are detailed in Table 6.

Table 6 Known Service Performance Deficiencies

Location	Service Deficiency
Stormwater Infiltration	Despite efforts to identify and rectify stormwater intrusion into the CWMS collection system, increased flow is notable during significant rainfall events. Short term flow increases are accommodated within treatment plant design and operation.
Network	In Tumby Bay some of the flushing points have been buried due to local earthworks/roadworks however there are now an adequate number of points available for access. Ongoing exposure of flushing points is being undertaken as required.

Council is addressing the known deficiencies described in Table 6.

4.1.2 Asset Condition

Asset condition information is only available for the pump motors and pump chambers located at the various pump station locations, the remaining life for all other assets is measured from the date of construction. As further information becomes available on the condition of all assets this will be included in this document. Condition will be measured using a 0-100 rating system as detailed in Table 7.

Table 7 Condition Scores

Condition Rating	Description
0	Very Good: <5years old no sign of deterioration
25	Good> 5years old no sign of deterioration
50	Poor > 5yrs signs of deterioration
75	Due for recondition / replacement
100	Immediate recondition / replacement required

An equivalent year of acquisition for condition based assets has been calculated (Expiry - Standard Life) for inclusion in the Age Profile shown in Figure 2.

4.1.3 Asset Valuations

The value of the CWMS assets recorded in the asset register as at 1 July 2017 covered by this asset management plan is shown below. Assets were last revalued at 1 July 2017.

Current Replacement Cost	$12,392,988
Written Down Value	$10,097,254
Annual Depreciation Expense	$247,559

Depreciation expense shown is the 2017/2018 forecast as reported at the 1 July 2017 revaluation.

The current rate of consumption (annual depreciation / current replacement cost) for CWMS assets is 2%. This indicates on average over the life of the asset that 2% of the depreciable amount is consumed annually. The translation of this consumption rate into renewals is subject to a decision on funding, service level determination and condition.

4.2 Risk Management

An assessment of risks associated with service delivery from CWMS infrastructure assets has not been undertaken by Council. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

Critical risks, assessed as being 'Very High' - requiring immediate corrective action and 'High' - requiring prioritised corrective action will be identified with associated costs in future revisions of the plan.

This plan does not include a full risk assessment, however Council has identified that risks are primarily related to non-compliance (prosecution, public health impact and environmental degradation) and loss of skills as some of the specialist knowledge of the system operations is stored across only a few key people. Future iterations of the plan may consider these in more detail.

4.3 Required Expenditure

This asset management plan identifies the projected operations, maintenance and capital renewal expenditures required to provide an agree level of service to the community over a 10 year medium term financial planning period, this provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

4.3.1 Routine Maintenance

Routine maintenance is the regular on-going work that is necessary to keep assets operating, including instances where portions of the asset fail and need immediate repair to make the asset operational again. Maintenance includes reactive (unplanned), planned and specific maintenance work activities. Assessment and prioritisation of reactive maintenance is undertaken by operational staff using experience and judgement.

The current and future maintenance expenditure is broken down into the main areas of activity for each town as shown in Table 8. At Tumby Bay one quarter of the septic tanks are desludged each year whilst at Port Neill all the septic tanks will be desludged every four years.

Note that all costs are shown in 2017/2018 financial year dollar values.

Table 8 Maintenance Areas of Activity

Area of Activity	Annual Operations (2017/18)	Annual Maintenance (2017/18)	Additional Maintenance for Port Neill 2020/21, 2024/25, 2028/29
Tumby Bay collection and irrigation systems	$34,700	$156,600	
Tumby Bay storage and treatment plant	$9,400	$82,100	
Tumby Bay septic tank desludging	-	$69,700	
Port Neill collection, storage, filtration plant & irrigation systems	$19,600	$29,500	
Port Neill septic tank desludging			$65,000
Total	**$63,700**	**$337,900**	**$65,000**

Future operations and maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Table 9 and Figure 3, the average annual operation and maintenance cost over a 10 year planning period (medium term) is $426,014.

The projected costs for annual operations and maintenance have been increased annually by 0.6% to account for an increase in growth as identified in the demand forecast section 3.1.

Table 9 Projected Operations and Maintenance Expenditure

Financial Year	Operations	Maintenance	Total
2017-18	$63,700	$337,900	$401,600
2018-19	$64,082	$339,927	$404,010
2019-20	$64,467	$341,967	$406,434
2020-21	$64,853	$410,196	$475,049
2021-22	$65,243	$346,083	$411,325
2022-23	$65,634	$348,159	$413,793
2023-24	$66,028	$350,248	$416,276
2024-25	$66,424	$420,129	$486,553
2025-26	$66,823	$354,464	$421,287
2026-27	$67,224	$356,591	$423,814
Total	**$654,477**	**$3,605,665**	**$4,260,142**

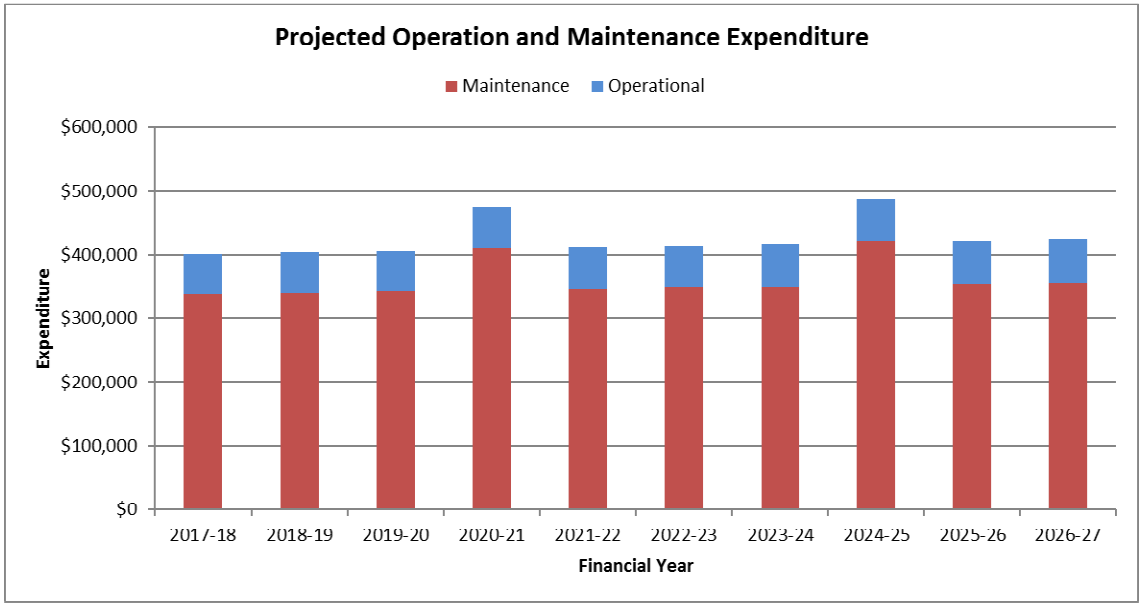

Figure 3 Projected Operations and Maintenance Expenditure

4.3.2 Capital Renewal

Renewal expenditure is major work which does not increase the asset's design capacity but restores, rehabilitates, replaces or renews an existing asset to its original service potential. Work over and above restoring an asset to original service potential is considered upgrade expenditure.

The method used to develop the renewal plan uses the asset register data to project the renewal costs for renewal years using acquisition year and useful life, this equates to the expiry date generated from Council's asset management system.

The costs associated with the renewals have been aggregated for each financial year over a 10 year planning period (medium term) and shown in Table 10 and Figure 4, the average annual capital renewal cost over the medium term is $43,339.

Table 10 Required Capital Renewal Expenditure

Financial Year	Capital Renewal Expenditure
2017-18	$4,638
2018-19	$99,391
2019-20	$27,071
2020-21	$4,106
2021-22	$0
2022-23	$0
2023-24	$140,608
2024-25	$6,024
2025-26	$44,500
2026-27	$107,056
Total	**$433,393**

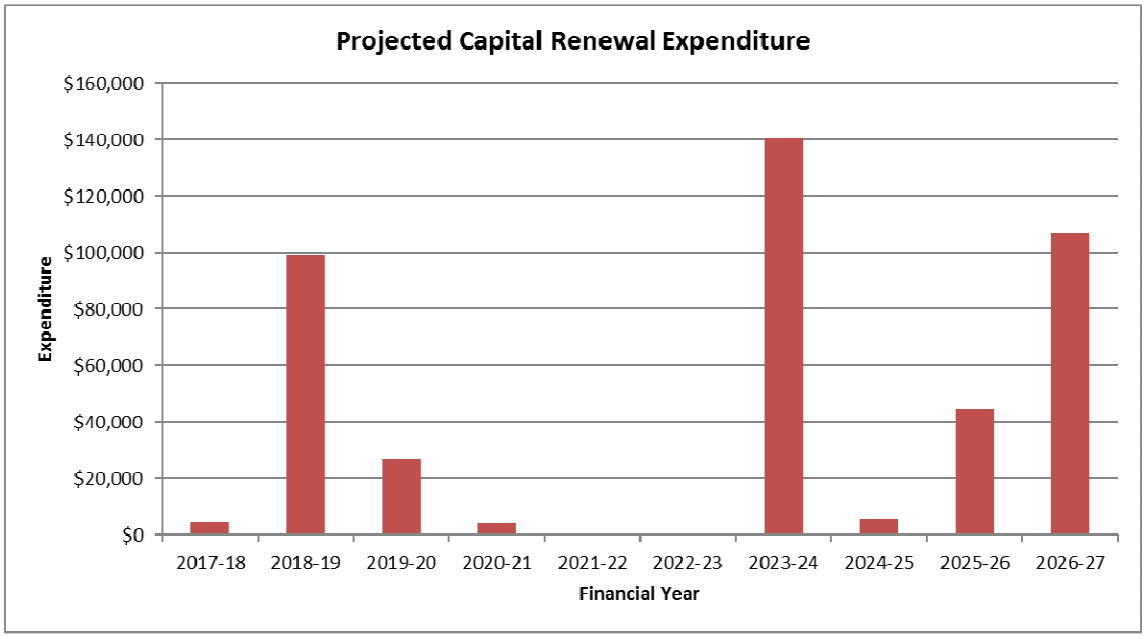

Figure 4 Projected Capital Renewal Expenditure

The Projected capital renewal program is shown in Appendix A.

4.3.3 Capital New/Upgrade and Acquisition

New/upgrade expenditure is major work that creates a new asset that did not previously exist, or works which upgrade or improve an existing asset beyond its existing capacity. They may result from growth, social or environmental needs. Assets may also be acquired at no cost to the Council from land development.

Since the previous CWMS Infrastructure Asset Management Plan, a new storage lagoon at Tumby Bay has been constructed and a CWMS system for Port Neill has been constructed and commissioned in early 2017.

A planned expenditure of $350,000 during 2017/18 is expected for the construction of a new pump station, gravity drain and rising mains in Tumby Bay to service six existing and approximately 42 future properties.

There are currently no plans for any upgrade works for the CWMS system at Port Neill.

The costs associated with the upgrades have been aggregated for each financial year over a 10 year planning period (medium term) and shown in Table 10 and Figure 4. The average annual capital renewal cost over the medium term is $35,000.

Table 11 Budgeted New/Upgrade Expenditure

Financial Year	Capital Upgrade Expenditure
2017-18	$350,000
2018-19	$0
2019-20	$0
2020-21	$0
2021-22	$0
2022-23	$0
2023-24	$0
2024-25	$0
2025-26	$0
2026-27	$0
Total	**$350,000**

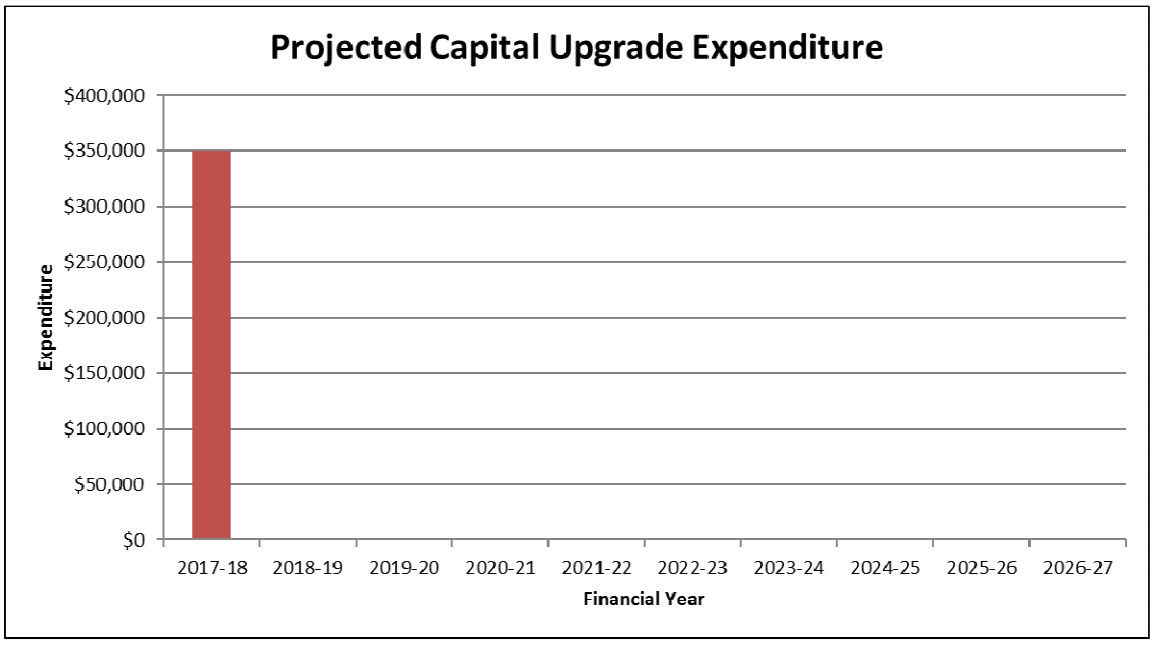

Figure 5 Budgeted New/Upgrade Expenditure

4.3.4 Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. Council has not identified any CWMS infrastructure assets to be disposed in the 10 year planning period (medium term).

4.3.5 Financial Projections

The financial projections are shown in Table 12 and Figure 6 for projected operating (operations and maintenance), capital renewal, capital upgrade and estimated budget funding.

Table 12 Operating and Capital Expenditure

Financial Year	Operations and Maintenance	Capital Renewal	Capital Upgrade	Estimated Budget Funding
2017-18	$401,600	$4,638	$350,000	$756,238
2018-19	$404,010	$99,391	$0	$503,401
2019-20	$406,434	$27,071	$0	$433,505
2020-21	$475,049	$4,106	$0	$479,155
2021-22	$411,325	$0	$0	$411,325
2022-23	$413,793	$0	$0	$413,793
2023-24	$416,276	$140,608	$0	$556,884
2024-25	$486,553	$6,024	$0	$492,577
2025-26	$421,287	$44,500	$0	$465,786
2026-27	$423,814	$107,056	$0	$530,870
Total	**$4,260,142**	**$433,393**	**$350,000**	**$5,043,535**

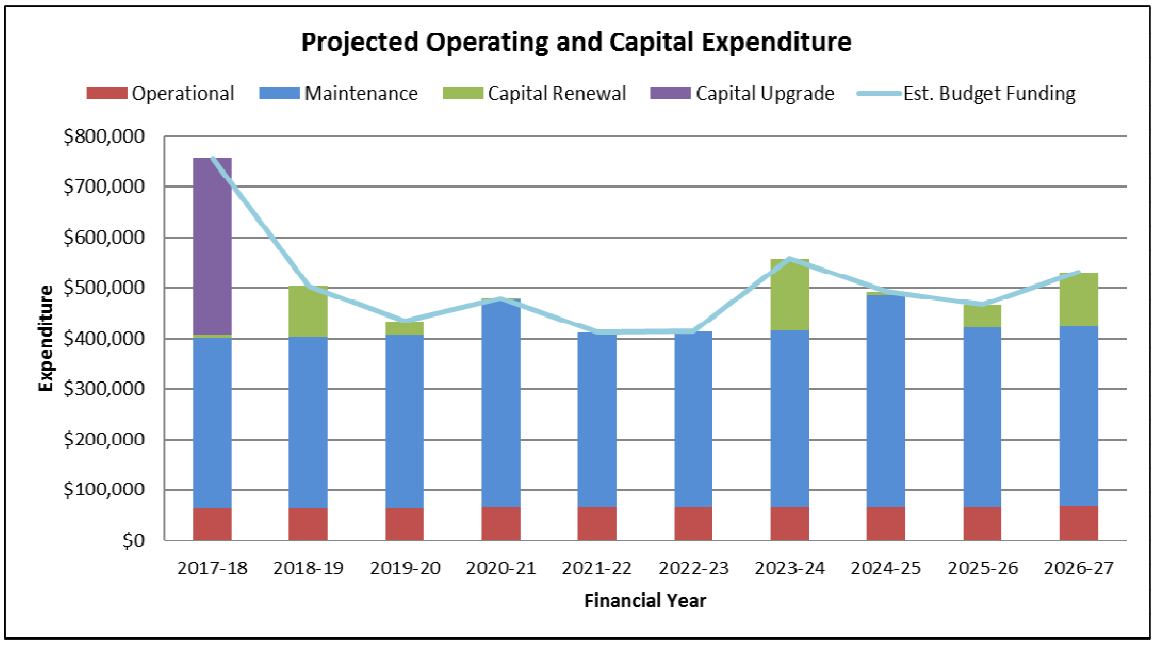

Figure 6 Projected Operating and Capital Expenditure over the Medium Term (10 Years)

The average projected operations, maintenance and capital expenditure required over the 10 year planning period is $504,353 per year.

5 Plan Improvement and Monitoring

The following tasks have been identified for improving future versions of the plan. Council should assign responsibilities and recourses to these tasks as part of the endorsement of the plan.

Table 13 Tasks identified for improving future versions of the plan

Task No.	Task	Responsibility
1.	Conduct a risk assessment workshop in order to develop a critical risk and treatment plan for inclusion in future iterations of the plan.	Council

This asset management plan will be reviewed during annual budget planning processes and amended to recognise any material changes in service levels and/or resources available to provide those services as a result of budget decisions.

This plan has a life of 4 years and is due for revision and updating within 2 years of each Council election.

6 References

District Council of Tumby Bay Strategic Plan 2012-2022

District Council of Tumby Bay Annual Business Plan 2017-2018

IPWEA, 2006, *NAMS.PLUS3 Asset Management*, Institute of Public Works Engineering Australia, Sydney, www.ipwea.org

IPWEA, 2011, Asset Management for Small, Rural or Remote Communities Practice Note, Institute of Public Works Engineering Australia, Sydney, www.ipwea.org

Appendix A

Projected 10 Year Capital Renewal

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Projected 10 Year Capital Renewal Program

Asset ID	Town	Sub Category	Asset Name	Remaining Life (Years)	Planed Renewal Year	Renewal Cost ($)	Useful Life (Years)
1752	Tumby Bay	Mechanical	Pump Motor 2 for Pump Station 4 in Excell St	0	2017-18	$4,638	15
					Subtotal	**$4,638**	
2017	Tumby Bay	Mechanical	M-324-120-AC Auto Spin Klin Disc Filter at Tumby Bay Treatment Plant	1	2018-19	$14,893	10
2018	Tumby Bay	Mechanical	Abtech 1200 Carbon Filter at Tumby Bay Treatment Plant	1	2018-19	$28,382	10
2019	Tumby Bay	Mechanical	UV Disinfection System at Tumby Bay Treatment Plant	1	2018-19	$8,124	10
2021	Tumby Bay	Mechanical	ITT Flygt 15kW Submersible Aerator at Tumby Bay Treatment Plant	1	2018-19	$17,043	10
2022	Tumby Bay	Mechanical	Tsurimi 1.5kW Submersible Aerator at Tumby Bay Treatment Plant	1	2018-19	$4,038	10
2034	Tumby Bay	Valve	Actuated Valve (DN80) at Tumby Bay Treatment Plant	1	2018-19	$2,862	10
2035	Tumby Bay	Valve	Actuated Valve (DN100) at Tumby Bay Treatment Plant	1	2018-19	$2,862	10
2036	Tumby Bay	Valve	Actuated Valve (DN150) at Tumby Bay Treatment Plant	1	2018-19	$3,888	10
2038	Tumby Bay	Valve	Control Valve (DN100) at Tumby Bay Treatment Plant	1	2018-19	$2,862	10
2243	Tumby Bay	Instrumentation	Irrigation Toro Modular Controller (TMC-424E) for Tumby Bay Foreshore (North End System)	1	2018-19	$1,323	10
2244	Tumby Bay	Instrumentation	Irrigation Toro Flow Meter (TFS-150) for Tumby Bay Foreshore (North End System)	1	2018-19	$873	10
2245	Tumby Bay	Instrumentation	Irrigation Toro Water Meter (40mm WMMJ-040-P100 class B ISO 4064) for Tumby Bay Foreshore (North End System)	1	2018-19	$873	10
2246	Tumby Bay	Valve	Irrigation RPZ Non Return Valve (Apollo Conbraco 4020T11) for Tumby Bay Foreshore (North End System)	1	2018-19	$1,246	10
2252	Tumby Bay	Instrumentation	Irrigation Toro Modular Controller (TMC-424E) for Tumby Bay Foreshore (South End System)	1	2018-19	$1,323	10
2253	Tumby Bay	Instrumentation	Irrigation Toro Flow Meter (TFS-150) for Tumby Bay Foreshore (South End System)	1	2018-19	$873	10
2254	Tumby Bay	Instrumentation	Irrigation Toro Water Meter (40mm WMMJ-040-P100 class B ISO 4064) for Tumby Bay Foreshore (South End System)	1	2018-19	$873	10
2255	Tumby Bay	Valve	Irrigation RPZ Non Return Valve (Apollo Conbraco 4020T11) for Tumby Bay Foreshore (South End System)	1	2018-19	$1,246	10
8732	Tumby Bay	Valve	Irrigation 40mm Solenoid Valves for Tumby Bay Foreshore (North End System)	1	2018-19	$2,391	10
8737	Tumby Bay	Valve	Irrigation 40mm Solenoid Valves for Tumby Bay Foreshore (South End System)	1	2018-19	$3,416	10
					Subtotal	**$99,391**	
1734	Tumby Bay	Mechanical	Pump Motor 1 for Pump Station 16 in Graham Smelt Causeway (Corner of Wandana Pl)	2	2019-20	$4,638	15
1740	Tumby Bay	Mechanical	Pump Motor 1 for Pump Station 2 in West Tce	2	2019-20	$4,638	15
1755	Tumby Bay	Mechanical	Pump Motor 2 for Pump Station 11 in Graham Smelt Causeway (Corner of Lawrie St McCallum St)	2	2019-20	$4,638	15
1756	Tumby Bay	Mechanical	Pump Motor 2 for Pump Station 2 in West Tce	2	2019-20	$4,638	15
1757	Tumby Bay	Mechanical	Pump Motor 2 for Pump Station 5 in Tumby Tce (opposite Seabreeze Hotel)	2	2019-20	$8,519	15
					Subtotal	**$27,071**	
2261	Tumby Bay	Instrumentation	Irrigation Controller for Tumby Bay Oval	3	2020-21	$1,323	10
2262	Tumby Bay	Instrumentation	Irrigation Flow Meter for Tumby Bay Oval	3	2020-21	$2,783	10
					Subtotal	**$4,106**	
2029	Tumby Bay	Mechanical	EBARA Supernatant Pump at Tumby Bay Treatment Plant	6	2023-24	$2,773	15
2030	Tumby Bay	Mechanical	Iwaki Hypochlorite Dosing Pump at Tumby Bay Treatment Plant	6	2023-24	$2,073	15
2032	Tumby Bay	Instrumentation	Switchboard at Tumby Bay Treatment Plant	6	2023-24	$23,657	15
2033	Tumby Bay	Instrumentation	Flow Meter (<=DN150) at Tumby Bay Treatment Plant	6	2023-24	$3,055	15
2037	Tumby Bay	Valve	Air Release Valve at Tumby Bay Treatment Plant	6	2023-24	$610	15
2247	Tumby Bay	Mechanical	Irrigation Filter (SA500C) for Tumby Bay Foreshore (North End System)	6	2023-24	$7,006	15
2256	Tumby Bay	Mechanical	Irrigation Filter (SA500C) for Tumby Bay Foreshore (South End System)	6	2023-24	$7,006	15
8698	Tumby Bay	Valve	Irrigation Diversion Valve (DN150) (CWMS-N-1246) in Carr Street	6	2023-24	$3,888	15
8699	Tumby Bay	Valve	Irrigation Scour Valve (DN150) (CWMS-N-1243) in Tresize street	6	2023-24	$1,313	15
8709	Tumby Bay	Valve	Irrigation Isolation Valve (DN90) (CWMS-N-1355) in Tumby Terrace	6	2023-24	$627	15
8710	Tumby Bay	Valve	Irrigation Isolation Valve (DN150) (CWMS-N-1356) in McCallum Street	6	2023-24	$1,313	15
8733	Tumby Bay	Valve	Irrigation 40mm Ball Valve Flushing Point for Tumby Bay Foreshore (North End System)	6	2023-24	$3,074	15
8738	Tumby Bay	Valve	Irrigation 40mm Ball Valve Flushing Point for Tumby Bay Foreshore (South End System)	6	2023-24	$3,757	15
1725	Tumby Bay	Mechanical	Pump Motor 1 for Pump Station 9 in Robert St	6	2023-24	$4,638	15
1731	Tumby Bay	Mechanical	Pump Motor 1 for Pump Station 6 in O'Connor St	6	2023-24	$4,638	15
1733	Tumby Bay	Mechanical	Pump Motor 1 for Pump Station 8 in Dutton Tce	6	2023-24	$4,638	15
1735	Tumby Bay	Mechanical	Pump Motor 1 for Pump Station 10 in West Tce (in Football Grounds)	6	2023-24	$4,638	15
1736	Tumby Bay	Mechanical	Pump Motor 1 for Pump Station 12 in Berryman St	6	2023-24	$4,638	15
1737	Tumby Bay	Mechanical	Pump Motor 1 for Pump Station 13 in Tumby Tce (Yacht Club)	6	2023-24	$8,519	15
1738	Tumby Bay	Mechanical	Pump Motor 1 for Pump Station 14 in Tumby Bay Caravan Park (Foreshore)	6	2023-24	$4,638	15
1739	Tumby Bay	Mechanical	Pump Motor 1 for Pump Station 15 in Tumby Tce	6	2023-24	$8,519	15
1742	Tumby Bay	Mechanical	Pump Motor 1 for Pump Station 7 in Butterfield St	6	2023-24	$4,638	15
1747	Tumby Bay	Mechanical	Pump Motor 2 for Pump Station 13 in Tumby Tce (Yacht Club)	6	2023-24	$8,519	15
1749	Tumby Bay	Mechanical	Pump Motor 2 for Pump Station 15 in Tumby Tce	6	2023-24	$8,519	15
1753	Tumby Bay	Mechanical	Pump Motor 2 for Pump Station 7 in Butterfield St	6	2023-24	$4,638	15
1754	Tumby Bay	Mechanical	Pump Motor 2 for Pump Station 10 in West Tce (in Football Grounds)	6	2023-24	$4,638	15
1760	Tumby Bay	Mechanical	Pump Motor 2 for Pump Station 16 in Graham Smelt Causeway (Corner of Wandana Pl)	6	2023-24	$4,638	15
					Subtotal	**$140,608**	
8703	Tumby Bay	Valve	Irrigation Isolation Valve (DN150) (CWMS-N-1351) in Tresize Street	7	2024-25	$1,313	15
8704	Tumby Bay	Valve	Irrigation Isolation Valve (DN150) (CWMS-N-1352) in Tresize Strret	7	2024-25	$1,313	15
8707	Tumby Bay	Valve	Irrigation Air Release Valve (DN150) (CWMS-N-1344) in McCallum Street	7	2024-25	$2,085	15
8708	Tumby Bay	Valve	Irrigation Scour Valve (DN150) (CWMS-N-1345) in McCallum Street	7	2024-25	$1,313	15
					Subtotal	**$6,024**	
2264	Tumby Bay	Valve	Irrigation RPZ Non Return Valve for Tumby Bay Oval	8	2025-26	$3,946	15
8700	Tumby Bay	Valve	Irrigation Scour Valve (DN90) (CWMS-N-1248) in Lipson Road	8	2025-26	$923	15
8701	Tumby Bay	Valve	Irrigation Air Release Valve (DN90) (CWMS-N-1249) in Lipson Road	8	2025-26	$960	15
8702	Tumby Bay	Valve	Irrigation Isolation Valve (DN90) (CWMS-N-1350) in ESPLANADE	8	2025-26	$627	15
8716	Tumby Bay	Valve	Irrigation 40mm Solenoid Valves for Golf Course	8	2025-26	$25,619	10
8724	Tumby Bay	Valve	Irrigation 40mm Solenoid Valves for Mortlock Oval	8	2025-26	$5,465	10
8727	Tumby Bay	Instrumentation	Irrigation Flowmeter for Golf Course	8	2025-26	$2,783	10
8729	Tumby Bay	Instrumentation	Irrigation Controller for Golf Course	8	2025-26	$1,323	10
8745	Tumby Bay	Instrumentation	Irrigation Hydraulic Actuators for Sprinklers for Tumby Bay Oval	8	2025-26	$2,855	15
					Subtotal	**$44,500**	
5316	Port Neill	Valve	Irrigation 40mm Solenoid Valves for Port Neill Oval	9	2026-27	$9,564	10
5319	Port Neill	Valve	Irrigation RPZ Valves for Port Neill Oval	9	2026-27	$2,492	10
5327	Port Neill	Mechanical	Filter for Port Neill Filtration Plant	9	2026-27	$5,656	10
5329	Port Neill	Valve	Gate Valves for Port Neill Filtration Plant	9	2026-27	$2,769	10
5336	Port Neill	Mechanical	Irrigation Filter for Port Neill Oval	9	2026-27	$5,656	10
5338	Port Neill	Valve	Irrigation 63mm Master Solenoid Valve for Port Neill Oval	9	2026-27	$503	10
8705	Tumby Bay	Valve	Irrigation Isolation Valve (DN100) (CWMS-N-1353) in Tresize Street	9	2026-27	$923	15
8706	Tumby Bay	Valve	Irrigation Isolation Valve (DN50) (CWMS-N-1354) in Tresize Street	9	2026-27	$397	15
1716	Tumby Bay	Civil	Pump Chamber for Pump Station 11 in Graham Smelt Causeway (Corner of Lawrie St McCallum St)	9	2026-27	$36,500	30
1726	Tumby Bay	Mechanical	Pump Motor 1 for Pump Station 5 in Tumby Tce (opposite Seabreeze Hotel)	9	2026-27	$8,519	15
1728	Tumby Bay	Mechanical	Pump Motor 1 for Pump Station 18 in Bawden St	9	2026-27	$8,519	15
1732	Tumby Bay	Mechanical	Pump Motor 1 for Pump Station 1 in Elanora Ave	9	2026-27	$8,519	15
1744	Tumby Bay	Mechanical	Pump Motor 2 for Pump Station 18 in Bawden St	9	2026-27	$8,519	15

Projected 10 Year Capital Renewal Program

Asset ID	Town	Sub Category	Asset Name	Remaining Life (Years)	Planed Renewal Year	Renewal Cost ($)	Useful Life (Years)
1745	Tumby Bay	Mechanical	Pump Motor 2 for Pump Station 1 in Elanora Ave	9	2026-27	$8,519	15
					Subtotal	**$107,056**	
					Program Total	**$433,393**	