Tasman District Council

Coastal Structures
Activity Management Plan

2015 - 2045

July 2015

Quality Assurance Statement		
Tasman District Council 189 Queen Street Private Bag 4 Richmond 7050 Telephone: (03) 543 8400 Fax: (03) 543 9524	**Version:**	Draft – January 2015
	Status:	Draft
	Project Manager:	Dwayne Fletcher
	Prepared by: **AMP Author**	Sarah Downs
	Approved for issue by: **Engineering Manager**	Peter Thomson

For full Quality Assurance Statement, Refer Appendix Z

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1 ACTIVITY DESCRIPTION

1.1 What We Do

The Coastal Structures activity comprises:

- the provision and management of coastal structures (wharves and jetties, boat ramps and foreshore protection walls) by the Council;
- the provision of navigation aids to help the safe use of coastal waters.

Some of the assets managed by this activity include:

- ownership and management of the wharf at Riwaka;
- jetties, boat ramps, navigational aids and moorings;
- coastal protection works at Ruby Bay and Marahau;
- navigation aids associated with harbour management.

A complete description of the assets included in the coastal structures activity is in Appendix B.

1.2 Why We Do It

Coastal structures have significant public value, enabling access to and use of coastal areas for commercial, cultural and recreational purposes. Council ownership and management of coastal assets ensures they are retained for the community.

2 COMMUNITY OUTCOMES AND OUR GOAL

The community outcomes that the coastal structures activity contributes to most are shown in Table 2-1.

Table 2-1: Community Outcomes

Community Outcomes	How Our Activity Contributes to the Community Outcome
Our unique natural environment is healthy and protected.	Coastal structures can be managed so their impact does not affect the health and cleanliness of the receiving environment.
Our urban and rural environments are pleasant, safe and sustainably managed.	The coastal structures activity ensures our built environments are functional, pleasant and safe by ensuring the coastal structures are operated without causing public health hazards and by providing attractive recreational and commercial facilities.
Our infrastructure is safe, efficient and sustainably managed.	The coastal structures activity provides commercial and recreational facilities to meet the community needs at an affordable level. The facilities are also managed sustainably.

2.1 Our Goal

The Council aims to maintain its coastal infrastructure and those structures that protect critical assets to achieve the vision of both the Council and the community, taking into account affordability and sustainability.

3 KEY ISSUES FOR THE COASTAL STRUCTURES ACTIVITY

The most important issues relating to the coastal structures activity are shown below in Table 3-1.

Table 3-1: Key Issues for the Coastal Structures Activity

Key Issue	Discussion
Jackett Island	An Environment Court decision in January 2014 determined that the Council was no longer obliged to find a long term solution to erosion on Jackett Island. This was because modelling and investigation work showed that the cost of a long term solution (such as a cut across the Motueka spit) and ongoing maintenance costs were unaffordable for the community, considering the dynamic nature of that particular coastline. Obtaining resource consent for such a project was also considered to be a difficult and expensive exercise with no guarantee of the application being successful. The Council are obligated to continue maintaining the existing sand bag wall on Jackett Island until January 2017. Regular monitoring of the Jackett Island foreshore and the Motueka spit will continue throughout this period.
Increasing demand for coastal structures	Urban development along coastal margins, coastal erosion and potential sea level inundation associated with climate change all increase the demand for coastal protection works. There is also increasing demand for coastal structures that enhance recreational access to coastal areas. The Council is planning to maintain existing Council-owned coastal protection works and recreational assets, but will not provide any increased levels of protection to properties or new recreational assets. The Council is also developing resource management policies to manage growth in coastal hazard areas to reduce the likelihood of further areas being developed that could be at risk from inundation from the sea and the need for coastal protection works for these areas. Modelling of the Tasman coastline is occurring and a full review of coastal polices is expected in the next three years. In the meantime, an interim coastal policy has been developed explaining the Council's priorities for maintenance of existing coastal structures.
Management of derelict wharves and jetties	There are some wharves and jetties within the coastal area which are in derelict condition and in some cases have no clear owner. The Council recognises that there is a potential risk to public safety should these structures not be managed appropriately. The Council is unlikely to upgrade or remove any coastal structures that do not belong to them.
Coastal protection asset inventory	The Council owns and maintains coastal protection under both this activity, the transportation, parks and reserves, and the commercial activities - dependent on the purpose that the asset serves. The Council requires more clarity on the exact location of these assets and which activity they belong to. Council is currently updating its databases with this information and will continue to do so in an on-going manner as inspections are completed. This will inform the Council on who manages what coastal structure, and how they are managed.

4 OPERATIONS, MAINTENANCE AND RENEWALS STRATEGY

4.1 Operations and Maintenance

Routine maintenance of structures (e.g. wharves, jetties and light towers) is not currently undertaken on a programmed basis. Structures to date have been inspected on a five yearly basis. The Council intends to reduce this to at least two yearly inspections. Reactive maintenance of these assets is undertaken on an as-required basis, or following inspection. The work may be negotiated with the Council's existing contractors (e.g. transportation and/or bridging maintenance contractors). Significant works will be tendered as individual contracts.

The Council has allocated funds to allow for maintenance of existing boat ramps.

Maintenance of coastal rock protection is undertaken in a reactive manner i.e. when rock protection has been damaged as a result of a storm event. The Council engages experienced and approved contractors for site specific works as required.

Regulatory assets such as signs and aids to navigation are routinely maintained by the Council's Harbour Master.

Operation and maintenance is discussed in detail in Appendix E.

4.2 Renewals

Renewal expenditure 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 original capacity is new capital expenditure.

Assets are considered for renewal as they near the end of their effective working life, or where the cost of maintenance becomes uneconomical and when the risk of failure of critical assets is sufficiently high.

The renewal programme has been developed by the following.

- taking asset age and remaining life predictions from the valuation database, calculating when the remaining life expires and converting that into a programme of replacements based on valuation replacement costs;
- reviewing and justifying the renewals forecasts using the accumulated knowledge and experience of asset operations and asset management staff. This incorporates the knowledge gained from tracking asset failures through the Customer Services System;
- undertaking a review to identify opportunities for bundling projects across assets, optimised replacement, timing across assets and smoothing of expenditure.

The renewal programme is reviewed in detail during each AMP update (i.e. three yearly), and every year the annual renewal programme is reviewed and planned with the input of the operations team.

The work is undertaken in accordance with best practice, site specific design, site specific resource consents where applicable, and the Tasman Resource Management Plan (TRMP). Contractors are selected on their proven ability to provide best practice on an as required basis.

Regulatory assets such as signs and aids to navigation are renewed by the Council's Harbour Master on an as required basis.

Renewals are discussed in detail in Appendix I.

5 EFFECTS OF GROWTH, DEMAND AND SUSTAINABILITY

5.1 Population Growth

A comprehensive Growth Demand and Supply Model (GDSM or growth model) has been developed for Tasman District. The growth model is a long term planning tool, providing population and economic projections district wide. The population projections in the growth model have been taken from Statistics New Zealand population projections derived from the 2013 census data, using a "medium" growth rate projection for all settlement areas (see Figure 5-1.)

The supply potential is assessed as well as demand, and a development rollout for each settlement is then examined. The ultimate outputs of the GDSM include a projection of the district's population, and forecast of where and when new dwellings and business buildings will be built. The development rollout from the Growth Model informs capital budgets (new growth causes a demand for network services) which feed into the AMPs and in turn underpin the Long Term Plan and supporting policies e.g. Development Contributions Policy.

Population growth does not have a direct effect on the coastal structures activity. Therefore the model outputs are not directly relevant to this activity. However, generally population growth leads to intensification of the use of existing facilities for recreation and demand for further housing development close to the coast. The potential effects of this on the coastal activities are:

· increased use of ports, wharves, moorings, marinas and boat ramps for recreation.

The Council will continue to allow the use of the assets for coastal related activities and other compatible uses in a manner that minimises conflict with the local community and the coastal environment, serves the needs of the district and is self-supporting.

No additional boat ramps are currently programmed.

Coastal protection work will be programmed as required and affordable to the community. Currently there is no new coastal protection programmed. No further work will be programmed until the modelling of the Tasman coastline has been completed and a formal policy on coastal hazard protection has been developed.

The 2014 growth model is a fourth generation growth model with previous versions being completed in 2005, 2008 and 2011. The Growth and Demand Model and the implications for the coastal structures activity is discussed in detail in Appendix F.

The Growth Demand and Supply Model is described in brief in Appendix F and in more detail in a separate model description report.

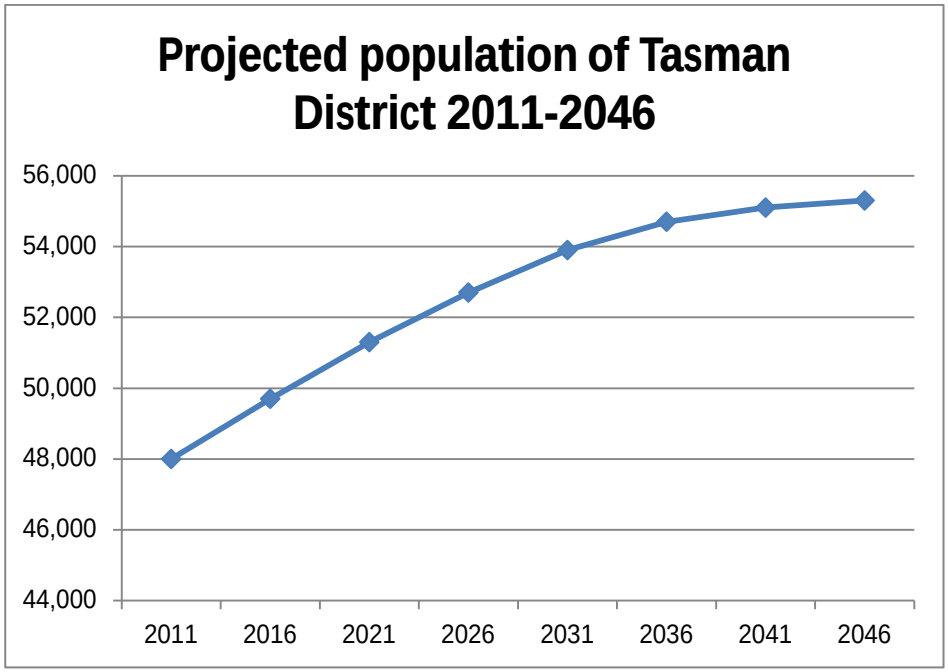


Figure 5-1: Projected Population Growth for Tasman District

5.2 Sustainability

The Local Government Act 2002 requires local authorities to take a sustainable development approach while conducting their business, taking into account the current and future needs of communities for good-quality local infrastructure, and the efficient and effective delivery of services.

Sustainable development is a fundamental philosophy that is embraced in the Council's Vision, Mission and Objectives, and is reflected in the Council's community outcomes. The levels of service and the performance measures that flow from these inherently incorporate the achievement of sustainable outcomes.

Many of the Council's cross-organisational initiatives are shaped around the community well-being (economic, social, cultural and environmental) and take into consideration the well-being of future generations. This is demonstrated in:

- Council's Integrated Risk Management approach which analyses risks and particularly risk consequences in terms of community well-being;
- Council's Growth Demand and Supply Model which seeks to forecast how and where urban growth should occur taking into account opportunities and risks associated with community well-being;
- Council adopting a 30 year forecast in the Activity Management Plans and the 30 year plus Infrastructure Strategy, to ensure the long term financial implications of decisions made now are considered;
- the adoption of a Strategic Challenges framework and work programme that includes consideration of natural hazards, financial sustainability and growth in the District.

At the activity level, a sustainable development approach is demonstrated by the following:

- ensuring minimal impact on the environment by the activity and that the Council's activity level policies for coastal structures and works comply with the Tasman Resource Management Plan and the New Zealand Coastal Policy Statement 2010;
- ensuring that the district's likely future Coastal Structure requirements are identified at an early stage and that they, and the financial risks and shocks, are competently managed over the long term without the Council having to resort to disruptive revenue or expenditure measures.

6 LEVEL OF SERVICE AND PERFORMANCE MEASURES

Table 6-1 summarises the levels of service and performance measures for the coastal structures activity. Development of the levels of service is discussed in detail in Appendix R. Shaded rows are the levels of service and performance measures to be included in the Long Term Plan.

Table 6-1: Levels of Service

ID	Levels of Service (we provide)	Performance Measure (We will know we are meeting the level of service if…)	Current performance (as at end June 2014)	Future Performance			Future Performance (targets) by Year 10 2024/25
				Year 1 2015/16	Year 2 2016/17	Year 3 2017/18	
Community Outcome: Our unique natural environment is healthy and protected.							
1	**Our works are carried out so that the impacts on the natural coastal environments are minimised to a practical but sustainable level.**	*Resource consents are held and complied with for works undertaken by Council or its contractors on Council owned coastal protection.* *As measured by the number of abatement notices issued to Council.*	**Actual** = There have been no notices issued for breach of resource consent conditions.	*No notices issued*	*No notices issued*	*No notices issued*	*No notices issued*
2		Council owned coastal protection is maintained to its original constructed standard. The Council has a detailed inventory of coastal assets and condition As measured by routine inspections after storm events.	**Actual** = Not currently measured	100%	100%	100%	100%
Community Outcome: Our infrastructure is safe, efficient and sustainably managed.							
3	**Faults in the existing council owned coastal assets managed by the Engineering department are responded to and fixed promptly**	We are able to respond to Customer Service Requests in our coastal assets within the timeframes we have agreed with our suppliers and operators, and within the available funding. Respond to CSR and begin actioning sequence within 5 days	**Actual** = 100%	70%	90%	100%	100%

7 CHANGES MADE TO ACTIVITY OR SERVICE

Table 7-1 summarises the key changes for the management of the coastal structures activity since the 2012 Activity Management Plan.

Table 7-1: Key Changes

Key Change	Reason for Change
Introduction of an interim position on coastal works	An increasing number of storm events in the district have caused considerable damage and erosion along parts of the Tasman coastline. Community expectations for the Council to protect private property is unaffordable, so an interim position statement was developed while further modelling and investigation work into the effects of climate change and sea level rise on the Tasman district are assessed. The interim position statement is: · The Council will maintain or repair only existing Council-owned coastal protection structures (subject to a review of economic benefit and affordability and compliance with NZCPS and TRMP) · The Council will consider new investment in coastal protection works only where there are substantial Council-owned capital works, assets or infrastructure at risk and it is impracticable to relocate Council assets (subject to compliance with the NZCPS and the TRMP) · The Council will not invest in or maintain any new Council-owned coastal structures or works to protect private property, nor will it accept responsibility for repair or maintenance of existing private coastal works · The Council will only give consideration to allow any privately funded construction of shoreline protection structures on Council-owned land, for the purposes of protecting Council-owned land or private property, where a proposal is substantially compliant with the objectives and policies of the NZCPS and objectives, policies and rules of the TRMP, and Council's Reserves General Policies document. In any event the Council retains complete discretion regarding authorisation of private structures on Council-owned land.

8 KEY PROJECTS

Table 8-1 details the key capital and renewal work programmed for years 2015 to 2025.

Table 8-1: Significant Projects

Project Name	Description	Year 1 ($)	Year 2 ($)	Year 3 ($)	Years 4 to 10 ($)	Project Driver[1]
Boat Ramp at Grossi Point	Upgrading of formed boat ramp.	80,000	0	0		LoS

Note:

1. See Appendix F for a full detailed list of new capital works projects driven by growth, renewals and/or an increase in level of service.
2. See Appendix I for a full detailed list of renewal projects.

9 MANAGEMENT OF THE ACTIVITY

9.1 Management

The strategic approach to the management of the coastal structures activity is diagrammatically presented below in Figure 9-1.

[1] LoS = Levels of Service, R = Renewal, G = Growth

STRATEGIC HIERARCHY GRAPH

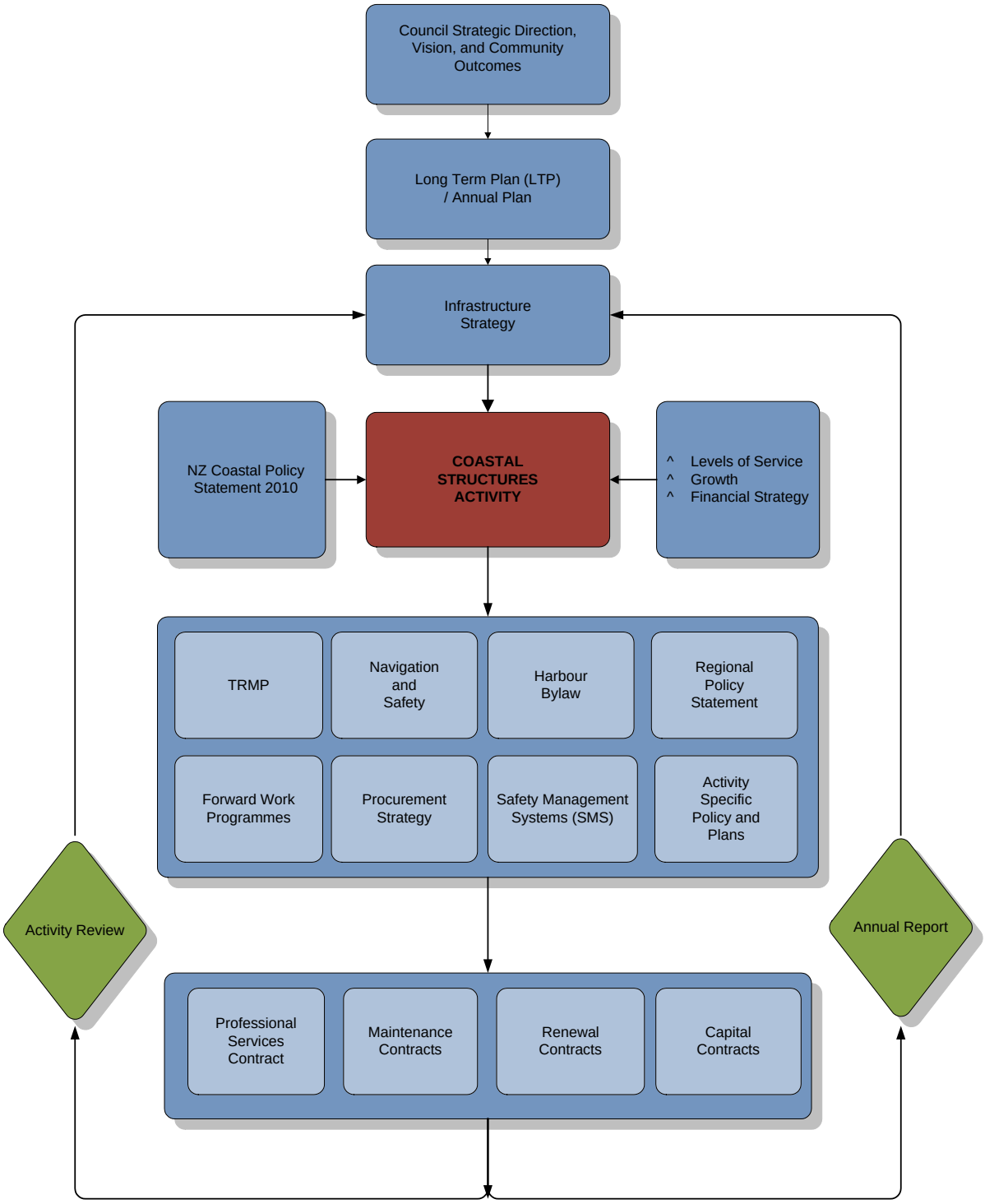


Figure 9-1: Hierarchy of Council Policy, Strategy and Planning for the Coastal Structures Activity

The Council carries out the following roles in the management of coastal assets included in this activity.

Engineering Services

· Management of coastal structures owned by the Council included in this Activity Management Plan.

Other coastal structures, such as the boat ramp on Rabbit Island (Parks and Reserves) and Mapua Wharf (Corporate Services) are managed by other council departments.

9.2 Significant Effects

The significant negative and significant positive effects are listed below in Table 9-1 and Table 9-2 respectively.

Table 9-1: Potential Significant Negative Effects

Effect	Description	Mitigation Measures
Visual pollution of coastal structures	The construction of structures that appear out of character with the coastal environment.	The Council controls this through bylaws and the TRMP, and may impose conditions on lessees to improve the amenity value of existing buildings.
Noise pollution from recreational users	Increased traffic and noise from both commercial and recreational users of coastal facilities.	The Council controls the use of coastal areas and facilities through bylaws, the TRMP, restriction of access and education.
Cost of coastal structures	The cost of providing the services.	The Council uses competitive tendering processes to achieve best value for money for works it undertakes. It also uses priority matrices to prioritise funding allocations.
Environmental impact of coastal structures	Potential changes to the natural coastal process due to placement of structures. This may include loss of natural sand dunes.	The Council mitigates/minimises changes to the natural environment through the TRMP and compliance with the NZCPS 2010.
Cultural impact of coastal structures	Potential to affect waahi tapu sites relating to the local iwi.	The Council undertakes consultation with affected parties prior to undertaking works. The Council also maintains a record of known cultural heritage sites.

Table 9-2: Potential Significant Positive Effects

Effect	Description
Economic development	Provision and maintenance of coastal structures allows for the development of commercial businesses, therefore, contributing to economic growth and prosperity in the district.
Safety and personal security	Provision and maintenance of coastal protection schemes improves protection for some residents and the built environment.
Community value	Coastal structures contribute to community well-being by providing assets for recreational use of residents and visitors to the area.
Environmental sustainability	The Council aims to achieve environmental sustainability whilst managing the coastal structures activity.
Economic efficiency	The Council's management of the coastal structures activity uses best practice and competitive tendering to provide value for money for the ratepayers and provides jobs for contractors.

9.3 Assumptions

The Council has made a number of assumptions in preparing the AMP. These are discussed in detail in Appendix Q. Table 9-3 lists the most significant assumptions and uncertainties that underline the approach taken for this activity.

Table 9-3: Significant Assumptions

Assumption Type	Assumption	Discussion
Financial assumptions.	That all expenditure has been stated in 1 July 2014 dollar values and no allowance has been made for inflation, and all financial projections are GST exclusive.	The LTP will incorporate inflation factors. This could have a significant impact on the affordability of the plans if inflation is higher than allowed for, but the Council is using the best information practically available from Business and Economic Research Limited (BERL).
Asset data knowledge.	That Council has adequate knowledge of its assets and their condition so that the planned renewal work will allow Council to meet the proposed levels of service.	There are several areas where the Council needs to improve its knowledge and assessments but there is a low risk that the improved knowledge will cause a significant change to the level of expenditure required. At present, we have scant knowledge on ownership of coastal structures, their condition and remaining life. A project to update our knowledge of our coastal structures and the impact of sea level change is taking place. This may impact on how coastal structures are managed in future activity management plans.
Major events.	That no major storm events will occur creating coastal erosion and damage to the Council's coastal infrastructure.	If a major event occurs it may have moderate effect on the operations and maintenance budgets due to the extent of reinstatement required and associated costs. The Council will need to prioritise expenditure. The risk of this occurring is high.
Timing of capital projects.	That capital projects will be undertaken when planned.	The risk of the timing of projects changing is high due to factors like, resource consents and funding. The Council tries to mitigate this issue by undertaking the consultation, investigation and design phases sufficiently in advance of the construction phase. If delays are to occur, it could have an effect on the level of service.
Funding of capital projects.	That the projects identified will receive funding.	The risk of the Council not funding capital projects is moderate due to community affordability issues. If funding is not secured, it may have an effect on the levels of service as projects may be deferred. The risk is managed by consulting with the affected community/users and appropriate distribution of fees and charges.
Accuracy of capital project cost estimates.	That the capital project cost estimates are sufficiently accurate enough to determine the required funding level.	The risk of large under estimation is low; however the significance is moderate as the Council may not be able to afford the true cost of the projects. The Council tries to reduce the risk by including a standard contingency based on the projects lifecycle.
Land purchase and access.	That the Council will be able to secure land and/or access to enable completion of projects.	The risk of delays to project timing or changes in scope is high due to the possibility of delays in obtaining land. Where possible the Council undertakes land negotiations well in advance of construction to minimise delays. If delays do occur, it may influence the level of service the Council can provide.

Assumption Type	Assumption	Discussion
Resource consents.	That there will be no material change in the need to secure consents for construction activities and that consent costs for future projects will be broadly in line with the cost of consents in the past.	Obtaining resource consent for proposed works in the coastal marine area has become more difficult. It is likely that it will become more difficult over time.
Emergency funding.	That the level of funding in these budgets and held in Council's disaster fund reserves will be adequate to cover reinstatement following emergency events.	The risk of requiring additional funding is moderate and may have a moderate effect on planned works due to reprioritisation of funds.
Changes in legislation and policy.	That there will be no major changes in legislation or policy.	The risk of major change is high as it is likely to have an impact on the required expenditure. The Council has not mitigated the effect of this.

The major capital projects and their potential uncertainties are listed in Appendix Q.

9.4 Risk Management

The Council's risk management approach is described in detail in Appendix Q.

The risk assessment framework was developed in 2011 to be consistent with *AS/NZS IS 4360:2004 Risk Management.* It assesses risk exposure by considering the consequence and likelihood of each risk event. Risk exposure is managed at three levels within the Council organisation:

- Level 1 – Corporate Risks;
- Level 2 – Activity Risks;
- Level 3 – Operational Risks.

At an activity level (Level 2), the Council has identified key risks to the activity. These are listed in Table 9-4.

Risk Event	Mitigation Measures
Catastrophic failure of a coastal structure.	**Current:** · at least five yearly inspections of assets; · reactive inspection following extreme weather events. **Proposed:** · develop inventory of Council owned coastal structures and their current condition; · increase the timing of routine inspections to every two years.
Premature deterioration or obsolescence of an asset.	**Current:** · routine inspections. **Proposed:** · increase number of routine inspections and scheduling of maintenance programme.

Failure to adequately prepare for climate change and failure to respond to changing coastline.	**Current:** · reactive inspections and maintenance/repairs following extreme weather events; · introduction of an interim coastal policy statement which states what the Council is prepared to protect. **Proposed:** · ongoing coastal hazard modelling will provide the Council with a clearer picture of where issues may exist and prepare for sea level change; · development of a coastal hazard policy which includes the fundamentals of NZCPS 2010.
Customer perception of the Council not doing enough to protect private property and public assets.	**Current:** · introduction of the interim coastal policy statement; · regular contact with communities at risk from coastal inundation; · management of resource consents and CSRs.
Failure to manage coastal erosion of public land.	**Current:** · routine inspections; · resource consent management; · application of NZCPS 2010. **Proposed:** · ongoing coastal hazard modelling will provide the Council with a clearer picture of where issues may exist and prepare for sea level change; · increase number of routine inspections and scheduling of maintenance programme.

Table 9.4: Significant Risks and Control Measures

9.5 Asset Criticality

In 2014 the Council developed a draft coastal structures critical asset framework to identify the critical asset hierarchy of an asset. Assets are classified as either primary or secondary criticality, or non-critical. The framework is largely complete but is yet to be finalised and implemented. It is planned to implement the framework during 2015 to test the draft weightings and respective scores. It is likely that the framework will be refined after this initial test run.

The critical asset hierarchy will be a key input that informs asset life-cycle decisions, especially when considering how much the Council should prolong the life of an asset

9.6 Improvement Plan

This Activity Management Plan document was subject to a peer review in its draft format by Waugh Infrastructure Management Ltd in February 2015. The document was reviewed for compliance with the requirements of the LGA 2002. The findings and suggestions were assessed and prioritised by the asset management team and either implemented for the final version of the document or added to the Improvement Plan.

The Improvement Plan is currently under development and will be included in Appendix V in the final version of this document.

10 SUMMARY OF COST FOR ACTIVITY

The following figures have been generated from the Funding Impact Statement held in Appendix L and the Public Debt and Loan Servicing Cost information held in Appendix K. Further detail is held in Appendix E, F and I for operating and maintenance, new capital and renewal costs respectively. All of the following graphs include inflation. For ease of reporting the Council has included Port Tarakohe in the Funding Impact Statement for Coastal Assets and will therefore also be included in some of the following figures.

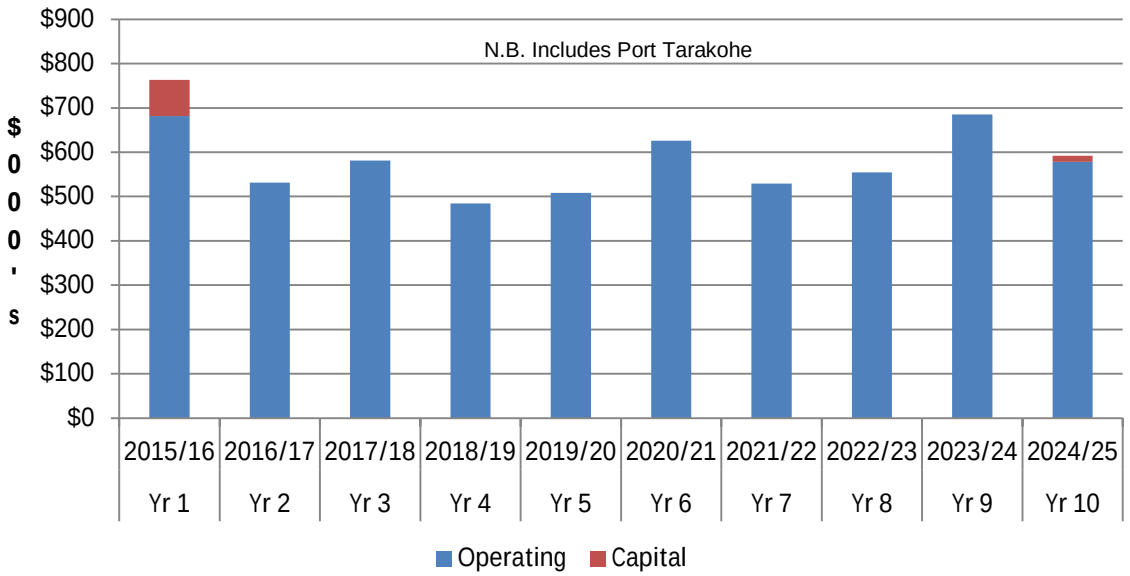


Figure 10-1: Total Expenditure

The operating expenditure fluctuates over the next 10 years. This is associated with routine structure removal and Torrent Bay beach replenishment.

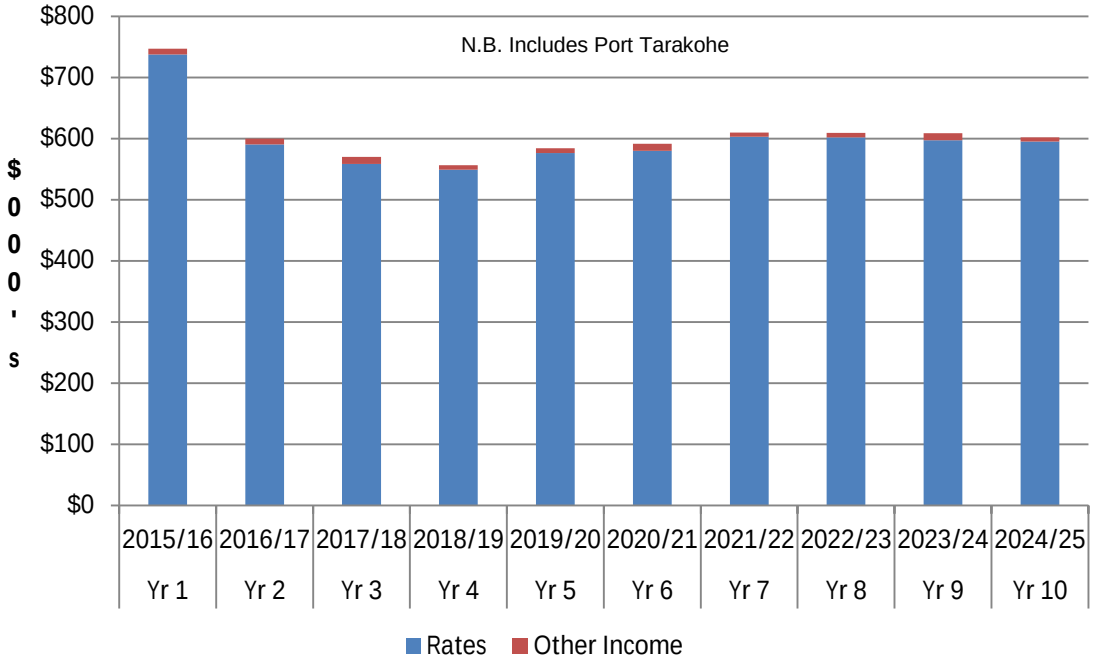


Figure 10-2: Total Income

The income proposed for the next 10 years corresponds with the proposed expenditure in Figure 10-1

Rates fluctuate in accordance with operating expenditure.

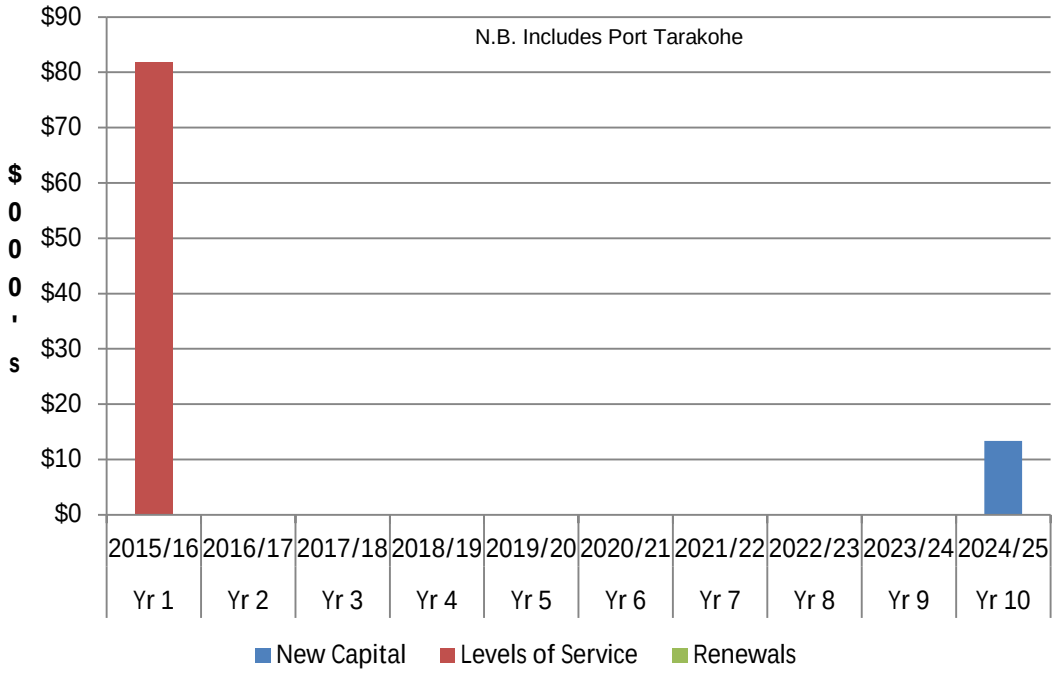


Figure 10-3: Capital Expenditure

The peak in new capital expenditure relates to the upgrade of the boat ramp at Grossi Point.

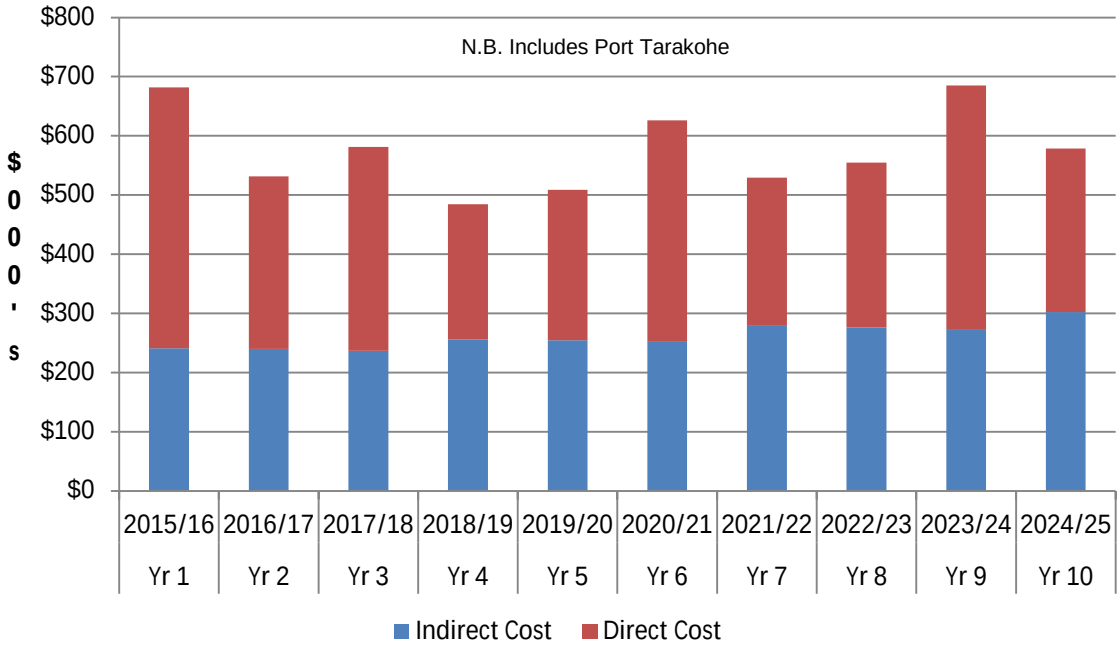


Figure 10-4: Operating Expenditure

Indirect costs relate to staff overheads and professional service fees. Direct costs relate to maintenance costs.

Finance costs show an initial increase and then decrease over the next 10 years due to a similar pattern in the level of debt shown in Figure 10-5.

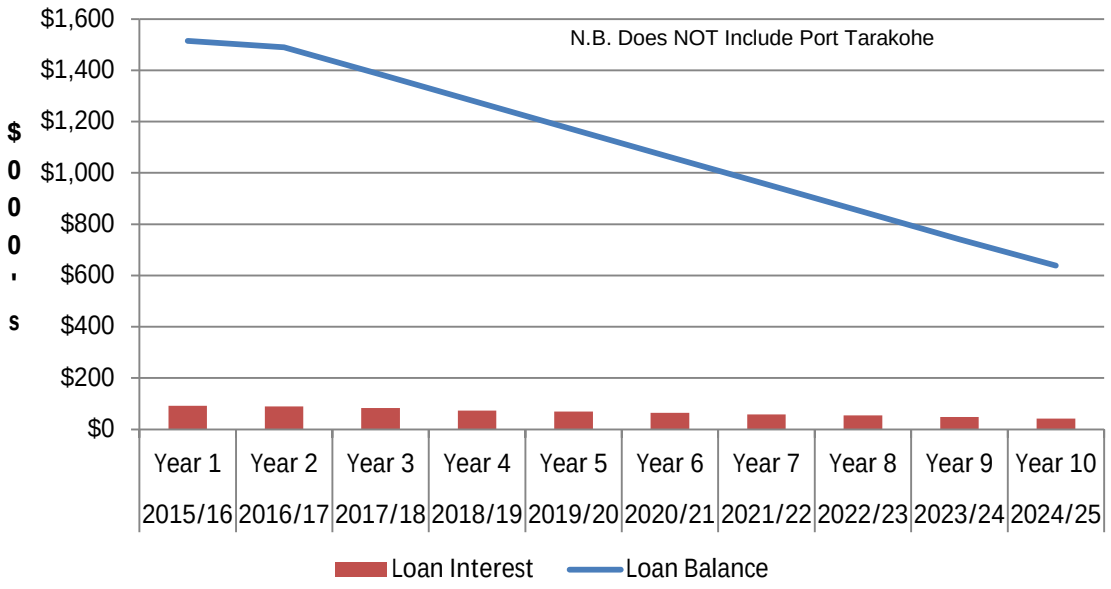


Figure 10-5: Debt

Council's debt associated with the Coastal Structures activity shows a peak in 2015/2016 of $1.5 million, decreasing after that to be $0.6 at the end of the 10 year period.

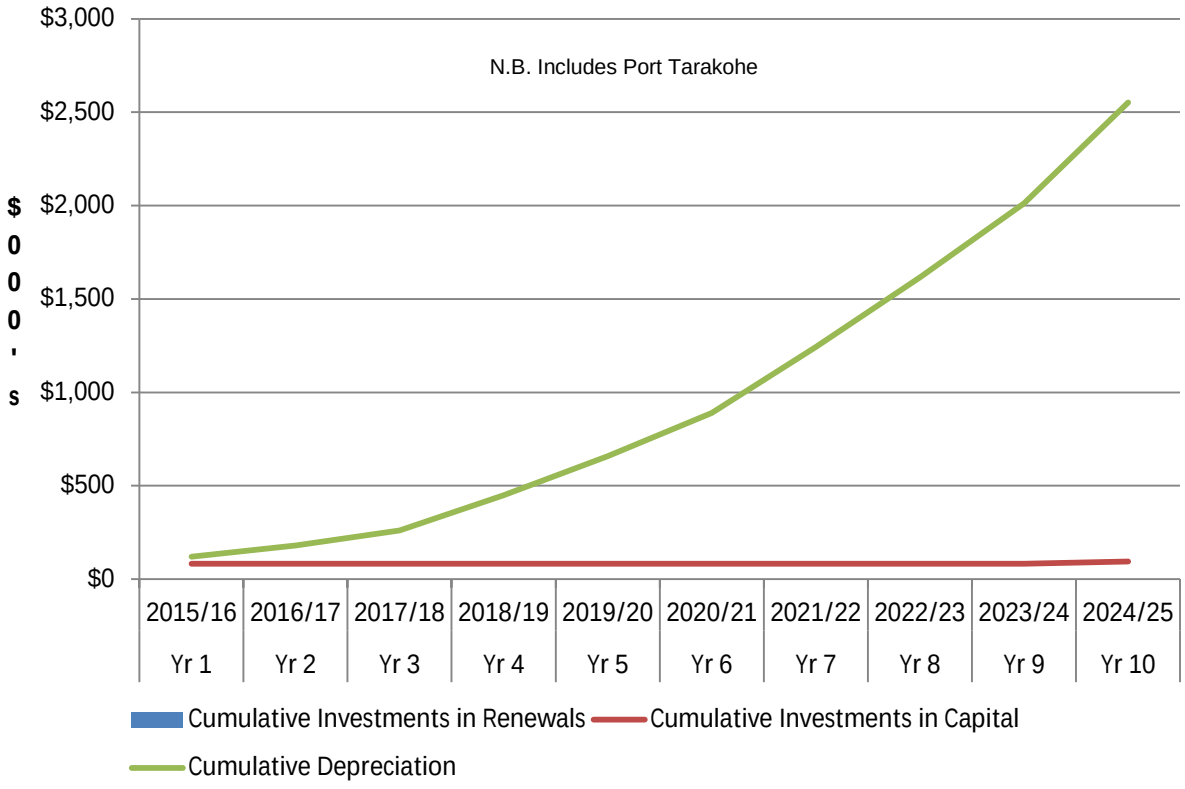


Figure 10-6: Investment in Renewals

The above figure covers a relatively short time period when compared with the useful life span of the coastal structures assets. The lack of renewals will be further investigated when the Council reviews its renewals strategy. This is discussed further in Appendix I.

APPENDIX A LEGISLATIVE AND OTHER REQUIREMENTS AND RELATIONSHIPS WITH OTHER PLANNING DOCUMENTS AND ORGANISATIONS

A.1 Introduction

The purpose of this activity management plan is to outline and summarise in one place, the Council's strategic and long-term management approach for the provision and maintenance of its coastal structures assets.

The AMP demonstrates responsible management of the District's assets on behalf of customers and stakeholders and assists with the achievement of strategic goals and statutory compliance. The AMP combines management, financial, engineering and technical practices to ensure that the levels of service required by customers is provided at the lowest long-term cost to the community and is delivered in a sustainable manner.

Coastal structures provide many public benefits including provision of access to the coastal environment and coastal protection structures. The Council has a responsibility as a regional authority to manage coastal structures that it owns or that have no other identifiable owner. It is therefore necessary that the Council undertakes the planning, implementation and maintenance of coastal structures within the District in accordance with its respective legislation requirements and responsibilities.

The target audience of this AMP is the Tasman District community, Tasman District Councillors and Council staff. The appendices provide more in-depth information for the management of the activity and are therefore targeted at the Activity Managers. The document is publicly available on the Council's website.

In preparing this AMP the project team has taken account of:

- **National Drivers** – for example the drivers for improving Asset Management through the Local Government Act 2002
- **Local Drivers** – community desire for increased level of service balanced against the affordability
- **Industry Guidelines and Standards**
- **Linkages** – the need to ensure this AMP is consistent with all other relevant plans and policies
- **Constraints** – the legal constraints and obligations the Council has to comply with in undertaking this activity.

The main drivers, linkages and constraints are described in the following sections.

A.2 Key Legislation, Industry Standards and Statutory Planning Documents

A.2.1. Acts of Parliament

The Acts below are listed by their original title for simplicity however all Amendment Acts shall be considered in conjunction with the original Act, these have not been detailed in this document.

- The Local Government Act 2002 – especially Schedule 10 and the requirement to consider all options and to assess the benefits and costs of each option, and the consultation requirements
- The Local Government Act (Rating) 2002
- The Local Government Act 1974 (Retained sections)
- The Biosecurity Act 1993
- The Building Act 2004
- The Bylaws Act 1910
- The Civil Defence Emergency Management Act 2002 (Lifelines)
- The Climate Change Response Act 2002

- The Construction Contracts Act 2002
- The Electricity Act 1992
- The Health and Safety in Employment Act 1992
- The Land Drainage Act 1908
- The Land Transport Act 1998
- The Land Transport Management Act 2003
- The Maritime Transport Act 1994
- The Public Works Act 1981
- The Railways Act 2005
- The Reserves Act 1927
- The Resource Management Act 1991
- The Soil Conservation and River Control Act 1941
- The Summary Offences Act 1981
- The Telecommunications Act 1987
- Transport Act 1962
- Utilities Access Act 2010.

A.2.2. National Policies, Regulations and Strategies

- Ministry for Environment 2004 – Preparing for Climate Change
- The New Zealand Coastal Policy Statement 2010 http://www.rma.co.nz
- The National Energy Efficiency and Conservation Strategy http://www.eeca.govt.nz
- The Building Regulations http://www.legislation.govt.nz/
- The Local Government (Financial Reporting) Regulations 2011 http://www.legislation.govt.nz/
- The New Zealand Transport Strategy http://www.transport.govt.nz
- Ministry of Transport Statement of Intent http://www.transport.govt.nz
- The Government's Sustainable Development Programme of Action http://www.beehive.govt.nz
- NAMS Manuals and Guidelines http://www.nams.org.nz
- Office of the Auditor General's Publications http://www.oag.govt.nz.

A.2.3. Standards New Zealand (for all refer to http://www.standards.co.nz)

- AS/NZS ISO 31000:2009 Risk Management Principles and Guidelines
- NZS 4404:2010 Land Development and Subdivision Infrastructure
- AS/NZS ISO 9001:2008 Quality Management Systems
- AS/NZS 4801:2001 Occupational Health and Safety Management Systems
- SNZ HB 2002:2003 Code of Practice for Working in the Road

A.2.4. Local Policies, Regulations, Standards and Strategies

- Council's District Plan – Tasman Resource Management Plan (TRMP) http://www.tasman.govt.nz
- Tasman Regional Policy Statement (TRPS) http://www.tasman.govt.nz
- Tasman District Council Engineering Standards and Policies 2013 http://www.tasman.govt.nz

- NIWA – Climate Change and Variability for Tasman District 2008
- Council's Procurement Strategy
- any existing established policies of the Council (outside those contained in this Activity Management Plan itself) regarding this activity.

Some of the legislative requirements that the Council must act within are discussed in more detail below.

Comment [s1]: Jenna to send out new comment

A.2.5. NZ Coastal Policy Statement 2010

The purpose of the New Zealand Coastal Policy Statement is to state national policies in order to achieve the purpose of the Resource Management Act (RMA) in relation to the coastal environment of New Zealand. The purpose of the RMA is to promote the sustainable management of natural and physical resources including, "avoiding, remedying, or mitigating any adverse effects of activities on the environment". Also some matters are considered of national importance and include:

- the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes, and rivers and their margins, and the protection of them from inappropriate subdivision use and development;
- the maintenance and enhancement of public access to and along the coastal marine area, lakes and rivers;
- the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga. In addition to provide for the special context of the coastal environment.

The Council is required to have regard to a number of general principles particular to this activity including:

- some uses and developments which depend on the use of natural and physical resources in the coastal environment are important to 'the social, economic and cultural well-being' of 'people and communities'. Functionally, certain activities can only be located on the coast or in the coastal marine area;
- the protection of the values of the coastal environment need not preclude appropriate use and development in appropriate places;
- the coastal environment is particularly susceptible to the effects of natural hazards;
- Cultural, historical, spiritual, amenity and intrinsic values are the heritage of future generations and damage to these values is often irreversible;
- the tangata whenua are the kaitiaki of the coastal environment;
- it is important to maintain biological and physical processes in the coastal environment in as natural a condition as possible, and to recognise their dynamic, complex and interdependent nature;
- the ability to manage activities in the coastal environment sustainably is hindered by the lack of understanding about coastal processes and the effects of activities. Therefore, an approach which is precautionary but responsive to increased knowledge is required for coastal management.

A.2.6. Resource Management Act

The Council has several statutory planning documents implementing its responsibilities under the RMA. Those which impact on the provision of the Council's coastal activities are:

- Tasman Regional Policy Statement (TRPS) – an overview of significant resource management issues with general policies and methods to address these. In particular under Section 9 Coastal Environment, the Council has developed specific objectives and policy statements for a number of areas including:
  - navigation and safety
  - effects of activities in the Coastal Marine Area
  - private and public rights of access to coastal space
  - identifying and maintaining the natural character of the coastal environment
  - public interest in access to and along the coast.

- Tasman Resource Management Plan (TRMP) – a combined Regional and District Plan with statements of issues, objectives, policies, methods and rules addressing the use of land, water, the coastal marine area and discharges into the environment.
- Tasman District Council Engineering Standards and Policies.
- the Council Navigation Safety Bylaws and Policy Resolutions relating to Coastal Structures (a file of District Council resolutions relating to the coastal structures is held by the Council).

A.3 Links with Other Documents

This AMP is a key component in the Council's strategic planning function. Among other things, this plan supports and justifies the financial forecasts and the objectives laid out in the Long Term Plan (LTP). It also provides a guide for the preparation of each Annual Plan and other forward work programmes.

Figure A-1 depicts the links between the Council's AMPs to other corporate plans and documents.

STRATEGIC HIERARCHY GRAPH

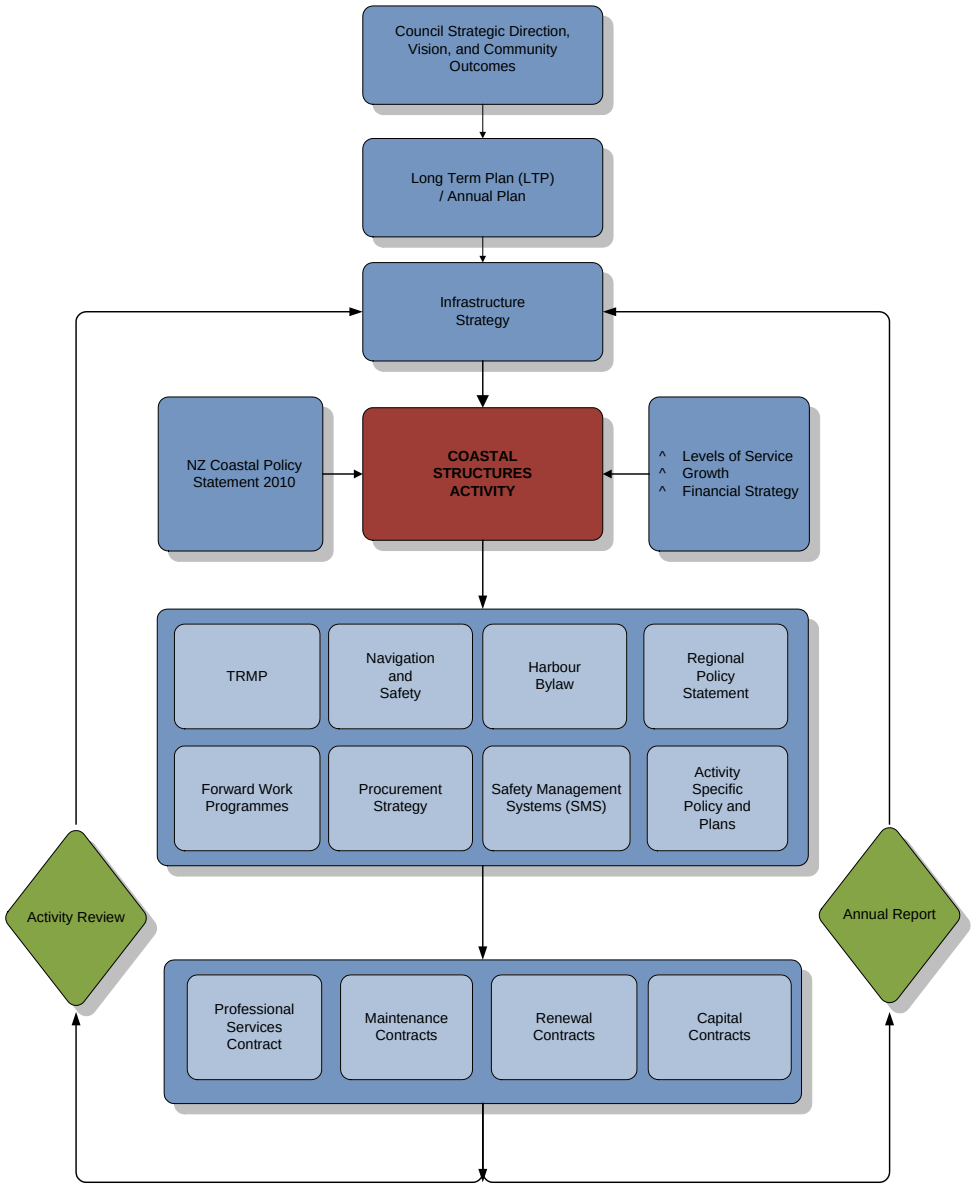


Figure A-1: Hierarchy of Council Policy, Strategy and Planning

A.4 Strategic Direction

The Council's strategic direction is outlined in the Vision, Mission and Community Outcomes.

Vision: Thriving communities enjoying the Tasman lifestyle.

Mission: To enhance community well-being and quality of life.

Community Outcomes:

Table A-1 outlines the strategic documents utilised by the Council as part of the planning process.

Table A-1: Strategic Documents in the Planning Process

Document	Description
Long Term Plan (LTP)	The LTP is the Council's 10-year planning document. It sets out the broad strategic direction and priorities for the long term development of the District; identifies the desired community outcomes; describes the activities the Council will undertake to support those outcomes; and outlines the means of measuring progress.
Activity Management Plan (AMP)	AMPs describe the infrastructural assets and the activities undertaken by the Council and outline the financial, management and technical practices to ensure the assets are maintained and developed to meet the requirements of the community over the long term. AMPs focus on the service that is delivered as well as the planned maintenance and replacement of physical assets.
Annual Plan	A detailed action plan of the Council's projects and finances for each financial year. The works identified in the AMP form the basis on which annual plans are prepared. With the adoption of the LTP, the Annual Plan mainly updates the budget and sources of funding for the year.
Financial and Business Plans	The financial and business plans requirement by the Local Government Amendment Act. The expenditure projections will be taken directly from the financial forecasts in the AMP.
Contracts and agreements	The service levels, strategies and information requirements contained in the AMP are the basis for performance standards in the current Maintenance and Professional Service Contracts for commercial arrangements and in less formal "agreements" for community or voluntary groups.
Operational plans	Operating and maintenance guidelines to ensure that the asset operates reliably and is maintained in a condition that will maximise useful service life of assets within the network.
Corporate information	Quality asset management is dependent on suitable information and data and the availability of sophisticated asset management systems which are fully integrated with the wider corporate information systems (eg, financial, property, GIS, customer service, etc). The Council's goal is to work towards such a fully integrated system.

A.5 How Do Our Coastal Structures Activities Contribute to the Community Outcomes?

Through consultation, the Council identified eight Community Outcomes. These Community Outcomes are linked to the four wellbeings and Council Objectives as shown in Table A-2.

Table A-3 details the levels of service and associated performance measures for the coastal structures activity. The table sets out the Council's current performance and the targets they aim to achieve within the next three years and by the end of the next 10 year period.

Table A-3: Community Wellbeings, Outcomes, Council Objectives, Groups and Activities.

Community Outcomes	Council Objectives	Council Groups of Activities	Council Activities
Community Well-being – Social and Cultural			

Community Outcomes	Council Objectives	Council Groups of Activities	Council Activities
Our communities are healthy, resilient and enjoy their quality of life.	To enhance community development and the social, natural, cultural and recreational assets relating to Tasman district.	Cultural services and grants.	· Cultural services and community grants
Our communities respect regional history, heritage and culture.		Recreation and leisure	· Community recreation · Camping grounds · Libraries · Parks and Reserves
Our communities have access to a range of cultural, social, educational and recreational services.			
Our communities engage with Council's decision-making processes.		Community support services	· Community facilities · Emergency management · Community housing · Governance

Community Outcomes	Council Objectives	Council Groups of Activities	Council Activities
Community Well-being – Economic			
Our developing and sustainable economy provides opportunities for us all.	To implement policies and financial management strategies that advance. To promote sustainable development in the Tasman district.	Council enterprises	· Forestry · Property · Council controlled organisations.

The table below (Table A-3) describes how the coastal structures activities contribute to the Community Outcomes.

Table A-3: How Coastal Structures Activities Contribute to Community Outcomes

Community Outcomes	How Our Activity Contributes to the Community Outcome
Our unique natural environment is healthy and protected.	Coastal structures can be managed so their impact does not affect the health and cleanliness of the receiving environment.
Our urban and rural environments are pleasant, safe and sustainably managed.	The coastal structures activity ensures our built environments are functional, pleasant and safe by ensuring the coastal structures are operated without causing public health hazards and by providing attractive recreational and commercial facilities.
Our infrastructure is safe, efficient and sustainably managed.	The coastal structures activity provides commercial and recreational facilities to meet the community needs at an affordable level. The facilities are also managed sustainably.

A.6 Our Goal

The Council aims to maintain its coastal infrastructure and those that protect critical assets to achieve the vision of both the Council and the community, taking into account affordability and sustainability.

APPENDIX B OVERVIEW OF THE COASTAL STRUCTURES IN THE DISTRICT

B.1 Introduction

The Coastal Structures activity comprises the provision and maintenance of some of the district wharves, jetties and associated buildings, as well as navigation aids, boat ramps, road access and parking that provide safe access to significant parts of the district's coastal facilities for recreation and commercial users. The provision of some of the structures for coastal protection also forms part of this activity. Some previously Council-owned structures have been transferred to other parties such as the wharf at Motueka to the Talleys Group and other minor structures such as wharves/jetties at Collingwood, Milnthorpe, Waitapu and Mangarakau which currently belong to the Department of Conservation (DoC).

To date the collection and recording of coastal asset data has been poor. Some work has been done recently to identify Council-owned assets and this information has been updated in the Confirm database, this can also be shown as a GIS layer in Explore Tasman. Further work is currently being undertaken to improve the data in Confirm and collect data which is yet to be captured, specifically coastal protection assets.

There are a number of wharves/jetties which are not owned or maintained by the Council, and are no longer used commercially. In some instances these assets are in derelict condition and have no clear owner. As these pose a threat to public safety, the Council has planned to divest these assets. How this is managed, is still to be decided.

Key coastal structures are:

- wharves;
- jetties;
- coastal protection;
- boat ramps;
- aids to navigation (structures).

There are a number of work activities excluded from this AMP which relate to coastal structures as they are managed by Community Development Services or Corporate Services eg, Mapua Wharf and Port Tarakohe. This includes regulatory activities such as the management and maintenance of:

- moorings;
- buoys;
- aids to navigation (non-structures).

B.2 Port Motueka

B.2.1. Overview

Port Motueka first started operating in the early 1900s from the old wharf on Motueka Quay. The wharf was moved to its existing location to the main Moutere inlet in 1916.

The original port authority was the Motueka Harbour Board which was constituted in 1905 and was endowed in lands surrounding the area. They handed their authority and lands to the Waimea County Council in 1968, but the Nelson Harbour Board fought the decision and was empowered to act as Harbour Authority (though Waimea County Council retained control over the endowment land). The Nelson Harbour Board invested very little in the Motueka Wharf during their period of authority from 1968 to 1989 and it was in poor condition when it was handed over to Tasman District Council in 1989.

The Talleys Group has been the major operator in Port Motueka since the early 1970s. They own part of the port area south of Everett Street (where their office and processing factory is located) and lease further land for staff car parking.

In 1994 the Council embarked on the Port Motueka Improvement Project aimed to improve access through the harbour to the port. A groyne was constructed to protect the main channel and dredging of the channel completed. The groyne was removed in 2012.

The Motueka Yacht Club constructed a jetty in the estuary in 1994 and in 1997 the Motueka Power Boat Club received resource consent to reclaim land for development of a boat ramp/car parking area. The Council holds further consents for the jetty and other area development works.

These recent developments caused concern that the port area was being developed in a piecemeal fashion and a Task Force of Councillors and Council staff was set up to determine a future development concept and improve port management. The Task Force prepared a 10-year development plan which described in more detail the history, current land uses/zonings and set out a future development plan for the port area.

The Council has transferred the ownership of the wharf and its facilities to the Talleys Group. The Council is no longer responsible for the maintenance of this asset. Sections of the Navigation Safety Bylaw relating to navigational safety are managed by the Council's Harbourmaster. Endowment land is managed through the Council's Property Services Manager.

As part of the ownership agreement a fishing platform was constructed by the Talleys Group next to the main wharf for public use. This structure was divested to the Council and the Council is responsible for its maintenance.

B.2.2. Asset Condition

The Council does not undertake inspections of the structures at Port Motueka due to the ownership and management having been transferred to other parties, with the exception of the public fishing platform. There has been no recent inspection of the public fishing platform; this will be undertaken in 2015/16.

B.2.3. Key Issues and Strategic Management

The primary issue at the port is the lack of draught that is affected by the build up from the littoral drift process. Talleys, as owners of the wharf and primary operators through the port, are continuing attempts to manage these processes. For the Council the issue is the need to ensure navigational aids are properly located and adequately maintained so recreational users have the appropriate notice and guidance.

The Council will continue to manage the navigation aids, moorings, fishing platform and general safety by the port users through its Harbour Bylaw and the Tasman Resource Management Plan for specific activities and structures.

B.3 Waitapu Wharf

B.3.1. Overview

The Waitapu Wharf and access causeway are believed to have been constructed in the late 19th century with extensions to the seaward end in the late 1970s. The wharf structure is predominantly timber except for the deck on the seaward end which has been overlaid with concrete.

The Council carried out some maintenance on the sea wall and wharf during the early 1990's. This included laying new cables to the lead lights which were being damaged by marine vessels. Otherwise little maintenance has been carried out for many years and the wharf is in poor condition.

There is no significant activity by users at the wharf apart from a couple of live-aboard yachts. The wharf itself is currently the responsibility of DoC.

There is no provision for wharf maintenance under this activity plan.

There are generally no issues for the Council as the wharf is the responsibility of DoC. However, the Council may need to consider public safety as discussed below in Section B.5 - Other Wharves.

B.4 Riwaka Wharf

B.4.1. Overview

The wharf consists of an earth-filled concrete retaining wall which now has a solely recreational value. The west wall was reconstructed in 1995. The walls are in relatively poor condition.

The structure is very rarely used by the public as a wharf and is typically used as a parking area for recreational use and access to the coastal area. Considering the change in use of this structure, it is to be managed as a transportation asset; therefore this asset is no longer included as a coastal structure.

B.5 Other Wharves

B.5.1. Overview

Some previously Council-owned structures have been transferred to other parties such as wharves/jetties at Collingwood, Milnethorpe and Mangarakau, which currently belong to DoC. These structures are in significantly poor condition and pose a risk to public safety. Although the Council is not the owner of these assets they have a responsibility to ensure the assets are safe as they are in the public arena.

B.6 Jetties

B.6.1 Overview

A summary of the Council-owned jetties is listed below in Table B-1. The Marahau jetty is maintained by the Council and the Torrent Bay jetty is maintained and funded by the local residents with some financial support from the Council.

Figure B-1: Best Island Jetty

There is a seawall and landing adjacent to the jetty at Torrent Bay.

Table B-1: Inventory of Jetties

Coastal Area	Location Description	Type	Condition
Marahau	Next to boat ramp	Timber	Very Good
Torrent Bay	South end of Lagoon Street	Timber	Excellent

B.6.1. Compliance with Levels of Service

There are no levels of service specific to jetties.

B.6.2. Asset Condition

Both jetties were last inspected in 2009. A summary of their condition is included in Table B-1 above. The Marahau jetty was constructed in 2004 and was well designed and built with good materials. Torrent Bay jetty was reported in 2009 as being in very poor condition. The jetty was renewed in 2012 and is in an excellent condition. However, the timber pole retaining wall is only in average condition. The seawall is in average condition and the concrete landing is in reasonable condition.

Further inspections are planned to be undertaken at five-yearly intervals with the next inspection in 2015/16.

B.6.3. Resource Consents

Resource consents are not required for the ongoing management of the jetties. Resource consent would be required for any new or replacement works.

B.6.4. Current and Future Demand

The Marahau jetty has high use due to tourism operators using the boat ramp and jetty. The demand for the jetty is not expected to grow significantly and therefore no projects have been identified to address growth.

The primary use of Torrent Bay jetty is recreational and is used by the local residents of Torrent Bay and visitors to the area. There is no growth expected.

B.6.5. Key Issues and Strategic Management

The Torrent Bay jetty will have a detailed inspection and agreement of its future levels of service with the local community.

B.7 Coastal Protection

B.7.1. Overview

There are significant lengths of coastal protection works in Tasman. Some of these are private works constructed with or without the appropriate consents, usually with the intent to protect built environments such as housing. Others are protecting the adjoining road asset that provides necessary access along the coast and therefore included in the transportation activity. It is noted that a substantial portion of these works are above Mean High Water Spring (MHWS) and not in the Tasman Coastal Marine Area.

From 2003 – 2007, the Council, in conjunction with the local community, has completed substantial coastal protection at Marahau and Ruby Bay (Broadsea Avenue and Old Mill Walkway). These have been constructed to protect existing urban development and built to a higher standard than earlier works. Earlier protection works are yet to be included in the Confirm database.

The asset data relating to coastal protection has been poorly captured until now. The Council plans to address this issue by identifying all coastal protection assets and recording them in the Confirm database. An improvement plan was identified in 2012. Budgets have been set aside in 2015/16 and 2016/17 to address this issue.

Figure B-2: Mapua Sea Wall

B.7.2. Compliance with Levels of Service

The Council-owned coastal protection is to be maintained to its original design standard at Marahau and Ruby Bay (Broadsea Avenue and Old Mill Way). There are no expected issues related to compliance with this level of service.

B.7.3. Asset Condition

The Ruby Bay and Marahau coastal protection is in fairly good condition due to the age of the assets. The seawalls were inspected in 2009 and both were in good condition. These assets will be inspected five-yearly along with other coastal assets; the next inspection is planned for 2015/16.

Earlier protection works were not generally to a high standard. Continued renewal of the protection works will be required especially as storm events and other natural coastal processes change.

B.7.4. Resource Consents

Consents are required for any new coastal protection works.

B.7.5. Current and Future Demand

Coastal protection may be required during the development of subdivisions to protect the new built environment. The Council will manage the standard of protection provided via the TRMP. It is expected the maintenance of these assets will be the responsibility of the private parties involved.

A decision by the Environment Court in January 2014 requires the Council to maintain the geotextile coastal protection on Jackett Island. This decision is relevant until 9 January 2017. The decision may at that point be subject to an extension.

B.7.6. Key Issues and Strategic Management

The Council has set out its objectives and policies (refer Appendix A) which provide guidance to manage the conflicts of the need to protect and enhance the natural coastal environment while allowing and protecting existing and possibly some future built development adjacent to the coast.

The natural coastal processes are complex and not well understood. Protection works to mitigate erosion need to be carefully designed and located to mitigate adverse effects from the structures themselves. The Council is continuing to research and monitor the dynamics of its coast line so as to provide appropriate solutions and decide whether to protect or leave areas to natural processes.

B.8 Boat Ramps

B.8.1. Overview

Boat ramps include concrete and gravel constructions and vary considerably in user demand. A summary of the boat ramps is below in Table B-2. This summary has been compiled from information from the Confirm database, the Coastal Structures Inspections Report completed in September 2009, and the Harbourmaster.

Nine boat ramps are concreted, the balance are gravel/unformed. There are other boat ramps within the district, however these are privately owned and operated; this includes the Kaiteriteri Beach boat ramp which is under management of the Kaiteriteri Domain Board, and the Port Motueka boat ramp which is under management of the Motueka Power Boat Club.

Figure B-3: Rabbit Island Boat Ramp

Table B-2: Inventory of Boat Ramps

Coastal Area	Location Description	Type	Condition
Mapua	Beside main wharf	Concrete	Good
Mapua	Grossi Point	Gravel	Reasonable
Marahau	Foreshore opposite 193 Sandy Bay-Marahau Road	Concrete	Good
Murchison	At Riverview Holiday Park	Concrete	Unknown
Pohara	Boat ramp 1 – opposite the Pohara Tennis Club	Concrete	Average
Pohara	Boat ramp 2 – at the Pohara Camping Ground	Concrete	Average
Rabbit Island	End of Boat Ramp Road	Concrete	Good
Riwaka	End of peninsula off Green Tree Road	Concrete	Average
Rough Island	Hunter Brown Reserve	Gravel	Reasonable
Port Tarakohe	Southern seawall	Concrete	Good
Tata Beach	Foreshore at the end of Peterson Road	Concrete	Reasonable

B.8.2. Compliance with Levels of Service

There are no levels of service specific to boat ramps.

B.8.3. Asset Condition

Coastal structure inspections were undertaken in 2008/09 which included the Council-owned wharves, jetties and boat ramps; a summary of the condition is included above in Table B-2. Assets where conditions are unknown were not included in these inspections due to a poor asset database at the time. The report highlighted that there has historically been very little maintenance, and what maintenance was undertaken appeared to be reactive.

Structural inspections of formed boat ramps are planned to continue at five yearly intervals with the next inspection due in 2015/16. Unformed boat ramps will be routinely inspected by the Harbourmaster in conjunction with his other duties.

B.8.4. Resource Consents

There are no consents relating to boat ramps.

B.8.5. Current and Future Demand

The current and future demand for boat ramps within the district is not well known as there is no record of use for any of the above ramps. The Council plans to reconstruct a number of existing formed ramps over the next 20 years, as and when appropriate funds are available, or as and when existing ramps require reconstruction.

B.8.6. Key Issues and Strategic Management

The boat ramps provide necessary access to the coastal marine area. The primary issue is safety and management of demand at the ramps. While management could be funded by user pays this will not be practicable for most locations.

The Council will continue to maintain the existing ramps at their current level of service and review the need for any substantial upgrades through inspections.

An improved ramp at Grossi Point has been scheduled in 2016. This aims to remove vehicles from Mapua Wharf which has increased commercial value. The Wharf precinct area is now pedestrianised at weekends and during the summer months (Traffic Control Bylaw 2013). Vehicles with boats and trailers cause a conflict within the precinct especially at the boat ramp.

Figure B-4: Grossi Point Boat Ramp

B.9 Aids to Navigation

B.9.1. Overview

As a Harbour Authority, the Tasman District Council is responsible for navigational safety and the provision of navigational aids for access into local ports. The Maritime Safety Authority provides navigational aids

marking significant geographical features for coastal navigation and to mark more significant dangers to regional navigation.

There are formal lease arrangements for some navigational aids located on private property. There have been some minor issues to date with access to those navigational aids on properties where no formal easement or agreement of entry has been negotiated.

The Council owns and maintains a number of lead lights and marker buoys. Recently, the Council has undertaken work to develop an asset register which is held in the Confirm database. The information is now up to date.

B.9.2. Compliance with Levels of Service

There are no levels of service specific to aids to navigation as these are managed by the Harbourmaster, works under the Maritime Act.

B.9.3. Asset Condition

Since the Tasman District Council inherited the Harbour Authority role in 1992, inspections have been ad hoc and maintenance or renewals on navigational aid structures is generally in response to failure.

Inspections are generally undertaken by the Harbourmaster and repairs are generally undertaken in a reactive manner. The aids are in fair to good condition.

B.9.4. Resource Consents

The TRMP classifies installation of aids to navigation as a permitted activity; therefore resource consents are not required. Installation or removal of any aid to navigation requires permit from MaritimeNZ.

B.9.5. Current and Future Demand

The Council will continue to maintain or renew using new technology on an as required basis and to meet the appropriate MaritimeNZ requirements for safety in the ports and bays.

B.9.6. Key Issues and Strategic Management

Safety within the coastal marine area and in particular the safety of users of the ports, bays and coastal areas is a responsibility of the Council.

The demand for recreational use of the coastal area is increasing. There are also continuing changes in natural coastal processes.

The Council will continue to monitor the aids and safety practices of the users at the ports and bays.

The lead lighting for Collingwood, Mapua, Riwaka and Waitapu are now situated incorrectly due to winding and changing channels. The leads will either need to be relocated or removed. Due to the cost of relocating the leads, the Council has removed them as there is no legal requirement to have them in place.

APPENDIX C PRIVATE ASSETS

The Tasman Resource Management Plan and the resource consent process define the acceptable standards for Council and privately owned coastal structures.

There are a number of private coastal protection structures within the district which the Council does not maintain. The exact extent is unknown as the Council does not currently hold a register of private assets. It is intended to capture these assets whilst updating the existing database.

The Council does not provide protection for private assets. The protection of Council-owned assets is considered a priority. Consideration will be given to individual situations to facilitate the resource consent process for residents wishing to protect their own assets.

APPENDIX D ASSET VALUATIONS

D.1 Background

The Local Government Act 1974 and subsequent amendments contain a general requirement for local authorities to comply with Generally Accepted Accounting Practice ("GAAP").

The Financial Reporting Act 1993 sets out a process by which GAAP is established for all reporting entities and groups, the Crown and all departments, Offices of Parliament and Crown entities and all local authorities. Compliance with the New Zealand International Public Sector Accounting Standard 17; Property, Plant and Equipment (PBE IPSAS 17) and PBE IPSAS 21 (Impairment of Non Cash Generating Assets) is the one of the current requirements of meeting GAAP.

The purpose of the valuations is for reporting asset values in the financial statements of Tasman District Council.

The Council requires its infrastructure asset register and valuation to be updated in accordance with Financial Reporting Standards and the AMP improvement plan.

The valuations summarised below have been completed in accordance with the following standards and are suitable for inclusion in the financial statements for the year ending June 2012.

- NAMS Group Infrastructure Asset Valuation Guidelines – Edition 2.0;
- New Zealand International Public Sector Accounting Standard 17; Property, Plant and Equipment (PBE IPSAS 17) and PBE IPSAS 21 (Impairment of Non Cash Generating Assets).

D.1.1. Depreciation

Depreciation of assets must be charged over their useful life.

- *Depreciated Replacement Cost* is the current replacement cost less allowance for physical deterioration and optimisation for obsolescence and relevant surplus capacity. The *Depreciated Replacement Cost* has been calculated as:

$$\frac{\text{Remaining useful life}}{\text{Total useful life}} \times \text{Replacement cost}$$

- *Depreciation* is a measure of the consumption of the economic benefits embodied in an asset. It distributes the cost or value of an asset over its estimated useful life. Straight-line depreciation is used in this valuation.
- *Total Depreciation to Date* is the total amount of the asset's economic benefits consumed since the asset was constructed or installed.
- The *Annual Depreciation* is the amount the asset depreciates in a year. It is defined as the replacement cost minus the residual value divided by the estimated total useful life for the asset.
- The *Minimum Remaining Useful Life* is applied to assets which are older than their useful life. It recognises that although an asset is older than its useful life it may still be in service and therefore have some value. Where an asset is older than its standard useful life, the minimum remaining useful life is added to the standard useful life and used in the calculation of the depreciated replacement value.

D.1.2. Revaluation

The revaluations are based on accurate and substantially complete asset registers and appropriate replacement costs and effective lives.

- The lives are generally based upon NZ Infrastructure Asset Valuation and Depreciation Guidelines – Edition 2. In specific cases these have been modified where in our, and the Council's opinion a different life is appropriate. The changes are justified in the valuation report.
- The component level of the data used for the valuation is sufficient to calculate depreciation separately for those assets that have different useful lives.

D.2 Overview of Asset Valuations

Assets were previously valued every three years, but the Council has now moved to a two year revaluation cycle. Historic asset valuations reports are held with the Council.

The Council was due to revalue the assets as at end June 2011, however due to the small number of changes made to the networks since the 2009 valuations, the decision was made to defer the valuation until the end of June 2012.

D.3 2012 Valuation – Ports / Wharves / Coastal Structure

The ports/wharves/coastal structure assets were last re-valued in June 2009 and are reported under separate cover[1]. Key assumptions in assessing the asset valuations are described in detail in the valuation report.

D.3.1. Asset Data

The majority of information for valuing the assets was obtained from the Council's Confirm database. This is the first time the database has been used to revalue the Council's assets. In the past, asset registers based on Excel spreadsheets have been used. The data confidence is detailed in Table D-1 below.

Table D-1: Data Confidence

Asset Description	Confidence	Comments
Ports/Wharves/Coastal Structures Assets	B/C – Reliable/ Uncertain	All assets are listed; however condition assessment of structures should be captured to provide a more reliable asset valuation. Approximately half of the assets do not have recorded installation dates. MWH New Zealand Ltd has assumed that these assets are half way through their design lives.

Based on NZ Infrastructure Asset Valuation and Depreciation Guidelines – Edition 2, Table 4.3.1: Data confidence grading system.

D.3.2. Asset Lives

The *Base Useful Lives* for each asset type as published in the NZ Infrastructure Asset Valuation and Depreciation Guidelines Manual was used as a guideline for the lives of the assets in the valuation. Generally lives are taken as from the mid-range of the typical lives indicated in the Valuation Manual where no better information is available. Lives used in the valuation are presented in Table D-2 below.

[1] Infrastructural Asset Revaluation, June 2009 – MWH New Zealand Ltd report for Tasman District Council

Table D-2: Asset Lives

Item	Life (years)	Minimum Remaining Life (years)
Ports/Wharves/Coastal Structure Assets		
Wharf structure, breakwaters (some assets have an indefinite life and therefore not depreciated)	Variable - dependant on specific asset	5
Jetty, boat ramp (concrete)	50	5
Navigational aids	25	2

D.3.3. 2012 Valuation

The Optimised Replacement Value, Annual Depreciation and Optimised Depreciated Replacement Value of the ports/wharves/coastal structure assets are summarised in Table D-3.

Table D-3: Ports / Wharves / Coastal Structures Asset Valuation Summary

	Optimised Replacement Value ($)	Optimised Depreciated Replacement Value ($)	Total Depreciation to Date ($)	Annual Depreciation ($/yr)
Marine Structures 2007	22,470,644	12,158,071	10,312,573	194,813
Marine Structures 2009	**17,802,145**	**11,909,039**	**5,893,105**	**281,384**
% Increase	-20.78%	-2.05%	-42.86%	44.44%

The Optimised Replacement Value has decreased by 20.78%. This is due to the audit of the Tarakohe Wharf asset which reduced the valuation by approximately $5m since the 2012 valuation. This figure will alter again at the next valuation, as Port Tarakohe has now been removed from the Coastal Structures AMP.

Annual depreciation has increased by 44.44%. This is due to the change in average design lives.

An item has been included in the Improvement Plan (Appendix V) to list the replacement value and depreciation for each asset group.

APPENDIX E MAINTENANCE AND OPERATION

E.1 Overview

The Council has management and operational roles as a Harbour Authority, Regional Authority and Local Territorial Authority.

The Council carries out the following roles in the management of coastal assets. Coastal structures management is provided for "in-house" by the Council's staff. This follows the Engineering Department's reorganisation in 2013. Prior to the reorganisation, management was largely provided by external consultants.

Occasionally, there is the need to engage consultants to provide specialist professional services when the scope of the work exceeds the Council's available resources.

Engineering Services

- Management of coastal structures owned by the Council.

Community Services

- Management of physical structures on coastal reserves (for example boat ramps at Rabbit and Rough Islands and the reserves themselves).

Environment and Planning

- Implementing aspects of the Navigation Safety Bylaw relating to navigational safety, designated marine activities, and commercial operators.
- Implementing the Resource Management Act (TRMP and TRPS) including setting coastal planning policy and processing resource consents.
- Routine maintenance of regulatory assets such as moorings, buoys and aids to navigation (excluding the structures which the aids are mounted on).

Corporate Services

- Implementing aspects of the Navigation Safety bylaw relating to the collection of wharfage/berthage fees.
- Management of the Council-owned property on wharves.
- Port Tarakohe.

E.1.1. Structures

Routine maintenance of structures (eg, wharves, jetties and light towers) is not currently undertaken on a programmed basis. Reactive maintenance of these assets is undertaken on an as required basis. The work may be negotiated with the Council's existing contractors (eg, transportation and/or bridging maintenance contractors). Significant works will be tendered as individual contracts in accordance with the Council's procurement strategy.

The Council has allocated funds to allow for heavy maintenance of formed boat ramps. However, this work is yet to be procured. The Council is putting together an updated and detailed inventory of coastal structures including ownership details and the physical condition of the structure. It is hoped that this will lead to the development of a regular maintenance and inspection routine that is aligned with budgets for this activity.

Maintenance of coastal rock protection is undertaken in a reactive manner. The Council engages an experienced and approved contractor for site specific works as required.

E.1.2. Regulatory Assets

Regulatory assets such as signs and aids to navigation are routinely maintained by the Council's Harbourmaster.

E.2 Maintenance Standards

All work is undertaken in accordance with best practice, site specific design, site specific resource consents where applicable, and the TRMP. Suppliers are selected on their proven ability to provide best practice.

E.2.1. Deferred Maintenance

Deferred maintenance is:

- the shortfall in rehabilitation or refurbishment work required to maintain the service potential of the asset;
- maintenance and renewal work that was not performed when it should have been, or when it was scheduled to be and which has therefore been put off or delayed for a future period.

The current budget levels are believed to be just sufficient to provide the proposed levels of service and therefore no maintenance work has been deferred. However this is subject to the changes in levels of service and expectations of customers. An interim coastal structure policy statement has been adopted by the Council in 2014 stating that only Council-owned coastal structures will be maintained by the Council.

E.2.2. Increase in Network Size through Development

Coastal protection may be required during the development of subdivisions to protect the new built environment at a cost to the developer. The Council will manage the standard of protection provided via the TRMP. It is expected the maintenance of these assets will be the responsibility of the private parties involved, therefore no additional maintenance expenditure associated with this private coastal protection is allowed for.

E.2.3. Database

The coastal structures contracts are not managed using a database, and therefore live updating is not undertaken. Work is underway so that future contracts (where applicable) collect asset data to enable updating from the Confirm database. It is hoped that this work and new system will be in operation by 2018.

E.3 Engineering Studies

The studies which have been allocated to the Operations and Maintenance budget are summarised in Table E-1 below.

Table E-1*:* Summary of Engineering Studies included in this AMP

Study Name	Brief Description
Coastal Asset Information Improvement	Create data base of coastal assets.

E.4 Forecast Operations and Maintenance Expenditure

Figure E-1 and Table E-2 detail the project operations and maintenance expenditure for the next 30 years.

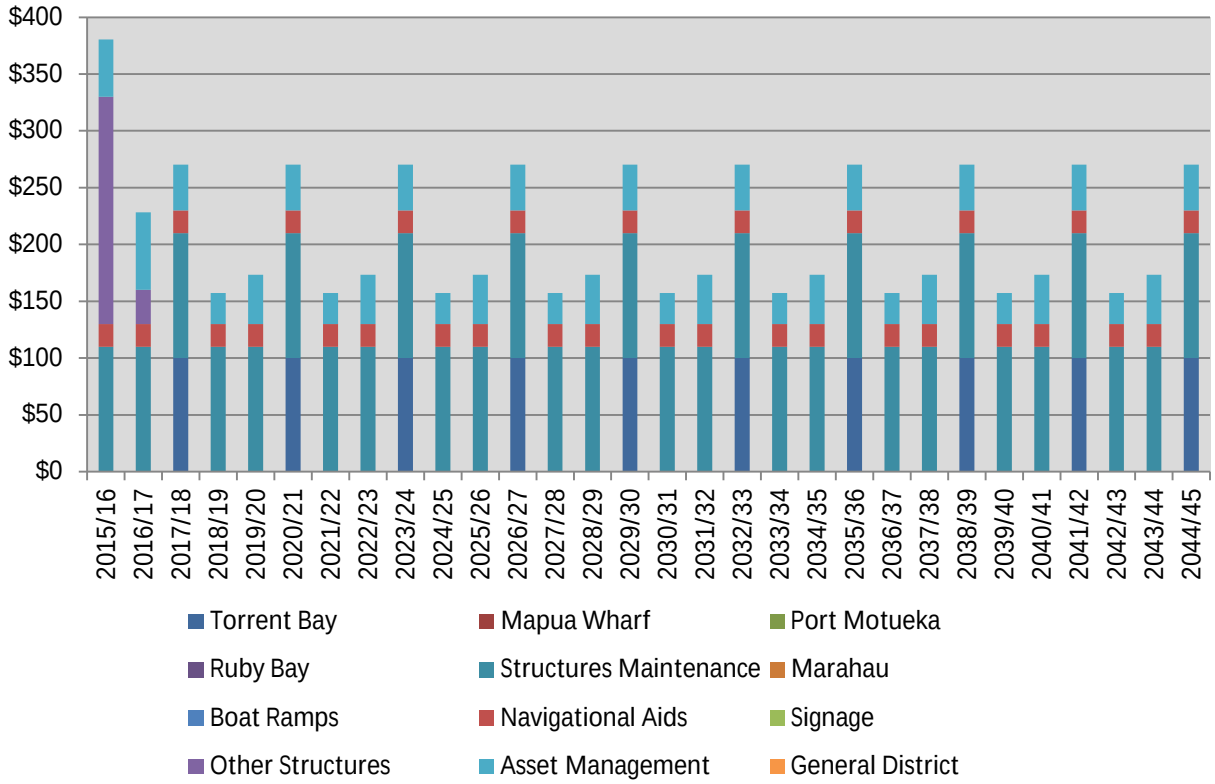


Figure E-1: Coastal Structures 30 Year Operating and Maintenance Expenditure ($000)

Table E-2: Coastal Structures 30 Year Operations and Maintenance Expenditure Forecast ($000)

ID	Project Name	Project Description	Category	GL Code	% O&M	O&M Estimate	Total Project Estimate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21 to Year 30	Beyond Year 30
								2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35		
120001	AMP update	Activity Management Plan update	Asset Management	1002220301	100%	260	260	-	13	13	-	13	13	-	13	13	-	13	13	-	13	13	-	13	13	-	13	13	-
120002	Asset Revaluation	Asset revaluation	Asset Management	1002220304	100%	30	30	-	3	-	-	3	-	-	3	-	-	3	-	-	3	-	-	3	-	-	3	-	-
120003	Coastal Asset Information Improvement	Create data base of coastal assets	Asset Management	1008220301	100%	50	50	25	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120004	Professional Services	Professional Service Fees	Asset Management	10022203	100%	600	600	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
120005	Improvement Plan	Maintenance of Improvement Plan	Asset Management	1002220305	100%	58	58	-	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
120006	Asset Management	Coastal Protection LAPP Insurance	Asset Management	10022506	100%	162	162	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
120009	Navigational Aid Maintenance	Routine Maintenance of Navigation Aids	Navigational Aids	1002240105	100%	600	600	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
120010	Jackett Island	Jackett Island Remediation - O&M only	Other Structures	1013240101	100%	100	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120011	Jackett Island	Jackett Island monitoring	Other Structures	1013220301	100%	60	60	30	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120012	Jackett Island	Jackett Island legal fees	Other Structures	1013220302	100%	50	50	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120013	Jackett Island	Jackett Island Interim Works Professional Services	Other Structures	1013240104	100%	20	20	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120015	Coastal Protection	Routine Maintenance and Renewal of Rock Walls	Structures Maintenance	1015240104	100%	2,100	2,100	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
120016	Coastal Structures Operations and Maintenance	Operations and Maintenance of Existing Coastal Structures	Structures Maintenance	1013240105	100%	1,200	1,200	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
120019	Torrent Bay Beach Replenishment	Sand replenishment and plantings	Torrent Bay	1004240101	100%	1,000	1,000	-	-	100	-	-	100	-	-	100	-	-	100	-	-	100	-	-	100	-	-	100	-
	TOTALS					260	260	-	13	13	-	13	13	-	13	13	-	13	13	-	13	13	-	13	13	-	13	13	-

Note: Does not include inflation

APPENDIX F DEMAND AND FUTURE NEW CAPITAL REQUIREMENTS

F.1 Growth Demand and Supply Model (GDSM)

F.1.1. Model Summary

A comprehensive Growth Demand and Supply Model (GDSM or growth model) has been developed for Tasman District. The growth model is a long-term planning tool providing population and economic projections district-wide. The supply potential is assessed as well as demand, and a development rollout for each settlement is then examined. The development rollout from the Growth Model informs capital budgets (new growth causes a demand for network services) which feed into the AMPs and in turn underpin the Long Term Plan and supporting policies eg. Development Contributions Policy.

The 2014 growth model is a fourth generation model with previous versions being completed in 2005, 2008 and 2011. In order to understand how and where growth will occur, the growth model is built up of a series of Settlement Areas which contain Development Areas. A Settlement Area (SA) is defined for each of the main towns and communities in the district. There are 17 Settlement Areas for the present version of the growth model. Each Settlement Area is sub-divided into a number of Development Areas. Each Development Area is defined as one continuous polygon within a Settlement Area that if assessed as developable, is expected to contain a common end-use and density for built development.

The growth model organises and integrates the assessments of demand and supply of built development. The development is categorised as residential or business demand and supply, with business including all industrial, commercial and retail uses.

For residential demand and supply:

- the ‘demand’ for residential buildings (dwellings) is assessed from population and household growth forecasts based on Statistics New Zealand’s latest Census release;
- the ‘supply’ of lots for future dwellings is assessed from analysis of the Development Areas in each Settlement Area and how many lots could feasibly be developed for residential end use over a 20 year time period, after accounting for a number of existing characteristics of the Development Area.

For business demand and supply:

- the ‘demand’ for business premises is assessed from economic and employment growth forecasts, and associated land requirements;
- the ‘supply’ of lots for future business premises is assessed from analysis of the Development Areas in each Settlement Area over time in a similar way as that for future dwellings.

The Development Areas and Settlement Areas are the building blocks that allow the growth model to spread demand for new dwellings and business premises, and assess where there is capacity to supply that demand.

The growth model is not just an isolated tool that calculates a development forecast. It is a number of linked processes that involve assessment of base data, expert interpretation and assessment, calculation and forecasting. The key input data, assessment and computational processes and outputs of the growth model are captured in a database called the Growth Model Database.

The outputs of the growth model are located on a shared browser site that all Council staff has access to. The browser contains:

- all the various input data sets and calculated outputs;
- maps defining the Settlement Areas and Development Areas within those;
- an updated model description describing the model working in detail, assumptions and planned improvements.

The review process is also mapped in ProMapp.

F.1.2 Overall Population Growth and Trends

Richmond is the largest and fastest growing town in the district with an estimated 13,606 residents, as at 2014. Motueka is the next largest town, with 6,687 residents. Another five settlements are relatively small, with populations ranging from 1239 in Takaka up to 2,498 in the Coastal Tasman area. Nine have populations of less than 500 people.

Tasman District is a popular destination for older age group or "retirees". A high proportion of population growth results from people moving to the Tasman District from elsewhere, rather than from current residents having children. The growth modelling shows that older people moving to the Tasman District are choosing to live in larger areas with easier access to services, hence the larger settlements are growing and the smaller ones are not. As shown in Table F-1, Richmond, Brightwater and Wakefield are predicted to grow by 500 people or more over the next 25 years. Overall, Tasman's population is expected to increase by 7,700 people by 2039. The Council's planning also takes into consideration the decrease in the number of persons per household and provides for an increase in the number of holiday homes. The latter is particularly important for holiday settlements such as Kaiteriteri and Pohara/Ligar Bay.

The population projection in the growth model has been taken from Statistics New Zealand population projections derived from the 2013 census data, using a "medium" growth rate projection for all settlement areas (refer Table F-1). The population projections are used to determine a demand for new dwellings in each settlement area.

Table F-1: Population Projections Used in the Growth Model

Settlement Area	Population in 2014	Population projection for 2039	Increase or decrease in people by 2039
Brightwater	1835	2412	577
Coastal Tasman Area	2498	2903	405
Collingwood	232	250	18
Kaiteriteri	377	382	5
Mapua/Ruby Bay	2028	2506	478
Marahau	119	120	1
Motueka	6687	6810	123
Murchison	413	365	-48
Pohara/Ligar/Tata	543	583	40
Richmond	13606	16396	2790
Riwaka	591	636	45
St Arnaud	101	93	-8
Takaka	1239	1056	-183
Tapawera	284	320	36
Tasman	189	210	21

Settlement Area	Population in 2014	Population projection for 2039	Increase or decrease in people by 2039
Upper Moutere	148	177	29
Wakefield	1939	2471	532
Ward Remainder (Area Outside Ward Balance)	282	303	19
Ward Remainder Golden Bay	3023	3248	225
Ward Remainder Lakes Murchison	2418	2722	304
Ward Remainder Motueka	3096	3597	501
Ward Remainder Moutere Waimea	4248	4937	689
Ward Remainder Richmond	1612	2704	1092
Total for District	**47508**	**55201**	**7693**

Projected Population data derived from Statistics NZ 2013 Census Data (adjusted for Growth Model). Base projection series applied = medium

Table F-2 summarises some key statistics for Tasman's population, based on Statistics New Zealand medium growth projections (2006 base, updated in June 2013).

Table F-2: Population Change in Tasman District

Key Statistics	2006	2013	2031
Population	45,800	48,800	53,900
Median age (years)	40.3	44.2	47.3
Proportion of population aged over 65	13.6%	17.9%	29.1%
Number of households	17,900	18,261	23,500
Working age population	29,810	30,500	29,170

Additional information from the 2013 census about Tasman District:

- Tasman's population is 1.1% of New Zealand's total population;
- 93.1% of the population is European;
- 7.6% of the population is Māori;
- 20% of the population aged under 15 years;
- 75% of the households in occupied private dwellings owned the dwelling or held it in a family trust (this is the highest rate of home ownership in New Zealand).

As shown in Table F-2, Tasman's population is expected to be about 53,900 by 2031. Like the rest of New Zealand, the median age of Tasman's population is also increasing. The first of the baby boomers

(those born between 1946 and 1964) commenced retiring in 2011 and fertility rates have also decreased over the last 20 years. The median age is projected to increase from 44.2 in 2013 to 47.3 in 2031. By 2031, the number of people aged over 65 in Tasman is projected to comprise 29.1 percent of the population, compared to 17.9 percent in 2013. Twenty years ago the figure was less than 10 percent. These demographic changes raise a number of challenges for the Council.

As Tasman's population increases, the Council needs to provide more services. However, many of the retired population will be on fixed incomes and unable to pay for increases in services (rates are a tax on property, not income, and if a property value is high the rates can take a significant portion of this fixed income payment). The Council's Growth Strategy considers whether our community can afford to support growth in all 17 settlements and what form this growth will take.

Communities with an older population are likely to have different aspirations to the communities with a younger median age. This may include:

- where they wish to live, possibly closer to main settlement areas where medical and social services are more readily available;
- an increase in the demand for smaller properties and a decrease in the demand for lifestyle or larger properties, particularly given the projected increase in the number of single households;
- the type of facilities and the levels of service requested, including more informal recreation facilities and the increased demand for "free" or low cost services such as libraries;
- their ability and willingness to pay for services and facilities may be lower, given that incomes are expected to be lower;

The Council has taken these factors into account in the development of this AMP and the LTP.

F.2 Projection of Demand for Coastal Structure Services

F.2.1. Effect of Population Growth on Coastal Structures

The link between population growth and the demand for coastal activities is not as direct as it is for water supply or transportation. However, population growth does lead to the intensification of the use of existing facilities for recreation and demand for further housing development close to the coast. The potential effects of this on the coastal activities are:

- increased use of port, wharf, mooring, marina and boat ramp facilities for recreation;
- increased community expectation to provide coastal protection.

The Council has encouraged the use of the coastal wharves and boat ramp facilities together with the opportunity to lease buildings for associated activities (boat clubs) and commercial users.

The Council will continue to allow the use of the assets for coastal related activities and other compatible uses in a manner that minimises conflict with the local community and the coastal environment, serves the needs of the district and is self-supporting.

No additional boat ramps are currently programmed.

Coastal protection work will be programmed as required and whether it is affordable for the community. Currently there is no new coastal protection programmed. No further work will be programmed until the modelling of the Tasman coastline has been completed and a formal policy on coastal hazard protection has been developed.

F.2.2. Implications of Changes in Community Expectations

Community expectations vary geographically and over time key trends in community expectations that the Council recognises include:

- environmental awareness is leading to demand for more sustainable development and use of the district coastlines and environs;
- the effects of climate change could be very significant;
- increasing demand for higher levels of coastal protection as property values increase;
- increasing expectation that the Council should take a greater role in control of coastal development;

- changes in the aquaculture and fishing industries could affect the demand for facilities at Port Motueka.

A coastal process study is underway to help better understand some of these issues. No new assets are identified at this stage to address the above.

The Council has to date facilitated and assisted the improvements at the ports, with the provision of boat ramps and coastal protection. Each proposal has been considered on its merits.

Ownership of wharf structures and associated facilities will continue to be reviewed as changes in the required Level of Service occur. A project is underway (and it is aimed that it will be completed by 2017) that will help determine the ownership of coastal structures including the wharves around the district.

F.2.3. Implications of Technological Change

Technology change has the ability to impact on the demand for a service. There are no predicted technological changes that will have a significant effect on the assets in the medium term.

F.2.4. Implications of Legislative Change

Changes to coastal activity policies may be driven from a number of directions. They could be internally driven with greater emphasis on the objective of self-supporting, or externally (eg. changes driven by national organisations such as the MaritimeNZ and Government Policy Statements.)

The Council will continue to monitor these factors when reviewing and developing forecasts and strategies. Currently no financial allowance has been made for any legislative changes.

F.3 Assessment of New Capital Works

During May to July 2014, a workshop with the project team was held to identify new works requirements.

New works were identified by:

- reviewing levels of service and performance deficiencies;
- reviewing risk assessments;
- reviewing previously completed investigation and design reports;
- using the collective knowledge and system understanding of the project team.

Each project identified was developed with a scope and a project cost estimate. Common project estimating templates were developed to ensure consistent estimating practices and rates were used. This is described in Appendix Q.

The project estimate template includes:

- physical works estimates;
- professional services estimates;
- consenting and land purchase estimates;
- contingencies for unknowns.

All estimates are documented and filed in an Estimates file to be held by the Council. The information from the estimates has then been entered into the Capital Forecast spreadsheet/database that enables listing and summarising of the Capital Costs per project, per scheme, per project driver and per year. This has been used as the source data for input into the Council's financial system for financial modelling.

An upgrade to the boat ramp at Grossi Point was the only project that was identified through this process. This has been estimated to cost $80,000 and is scheduled for being upgrade in 2015/16.

F.4 Determination of Project Drivers and Programming

All expenditure must be allocated against at least one of the following project drivers.

Operation and Maintenance:	operational activities which have no effect on asset condition but are necessary to keep the asset utilised appropriately and on-going day-to-day work required keeping assets operating at required service levels[1].
Renewals:	significant work that restores or replaces an existing asset towards its original size, condition or capacity[2].
Increase Level of Service:	works to create a new asset to upgrade or improve an existing asset beyond its original capacity or performance to improve the level of service provided to existing customers.
Growth:	works to create a new asset to upgrade or improve an existing asset beyond its original capacity or performance to provide for the anticipated demands of future growth.

This is necessary for two reasons as follows:

- Schedule 13(1) (a) of the Local Government Act requires the local authority to identify the total costs it expects to have to meet relating to increased demand resulting from growth when intending to introduce a Development Contributions Policy.
- Schedule 10(2)(1)(d)(l)-(iv) of the Local Government Act requires the local authority to identify the estimated costs of the provision of additional capacity and the division of these costs between changes to demand for, or consumption of, the service, and changes to service provision levels and standards.

All new works have been assessed against these project drivers. Some projects may be driven by a combination of these factors and an assessment has been made of the proportion attributed to each driver. A guideline was prepared to ensure a consistent approach to how each project is apportioned between the drivers.

Some projects may be driven fully or partly by needs for renewal. These aspects are covered in Appendix I.

The projects have been scheduled out across the 30 year period, primarily based on their drivers. They were then loaded into Mapinfo along with projects from all other engineering activities to allow programme managers to assess any programme clashes or optimisation opportunities.

F.5 Project Prioritisation

All projects identified as potential solutions to meet future demand, increase levels of service, or as renewal were discussed in workshops during May to July 2014. The workshop was attended by key Council staff.

Each project identified was assigned an initial project priority of either non-discretionary or discretionary where:

A non-discretionary investment is one that relates to:

- a critical asset, that without investment is likely or almost certain to fail within the next three years, with a medium, major or extreme impact;
- any asset that has a regulatory requirement to make the proposed investment.

A discretionary investment is one that relates to:

- a non-critical asset with no regulatory requirement to make the proposed investment;
- a critical asset where asset failure is possible, unlikely or very unlikely to occur within the next three years with no regulatory requirement to make the proposed investment;
- a critical asset where asset failure has only a negligible or minor impact with no regulatory requirement to make the proposed investment.

The Council is currently reviewing the way that they prioritise their work programmes. This review is reflected in this AMP. Further development will occur over the next three years and be implemented during the next AMP update.

[1] Definition from International Infrastructure Management Manual – Version 3.0, 2006, pg 3.114
[2] Definition from International Infrastructure Management Manual – Version 3.0, 2006, pg 3.114

F.6 Forecast of New Capital Work Expenditure

The capital programme that has been forecast for this activity for the next 30 years where the primary driver is classed as new works (ie, growth or levels of service) is shown in Figure F-1 and Table F-1.

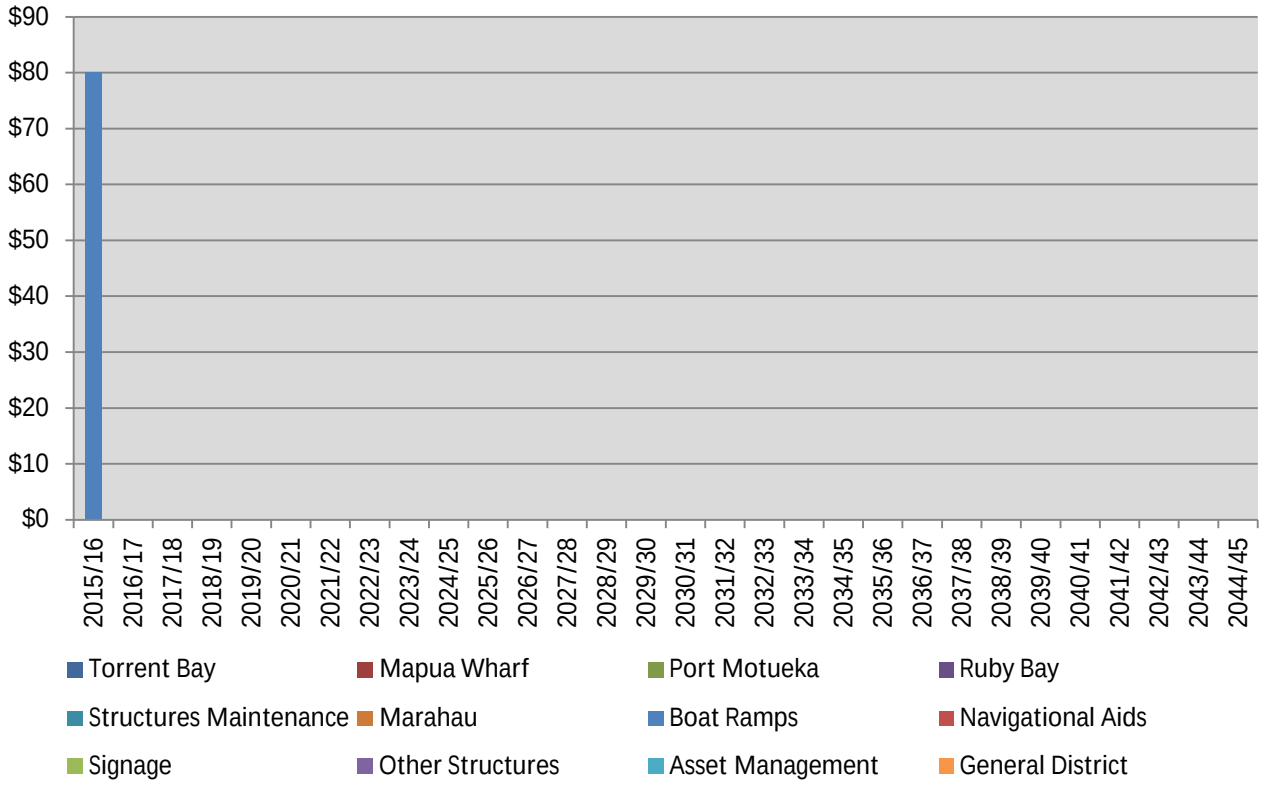


Figure F-1: Coastal Structures 30 Year New Capital Expenditure by Scheme Driven by an Increase in Levels of Service ($000)

Table F-1: Coastal Structures 30 Year New Capital Works Expenditure Forecast ($000)

ID	Project Name	Project Description	Category	GL Code	% Growth	% LOS	New Capital Estimate	Total Project Estimate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21 to Year 30	Beyond Year 30
									2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35		
120007	Coastal Structure Asset Improvement	Improvement of Grossi Point Boat ramp	Boat Ramps	10036211	0%	100%	80	80	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTALS						80	7,945	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Does not include inflation

APPENDIX G DEVELOPMENT CONTRIBUTIONS / FINANCIAL CONTRIBUTIONS

Tasman District Council's full Development Contribution Policy can be found on our website at http://www.tasman.govt.nz/policy/policies/development-contributions-policy.

The Policy was adopted in conjunction with the Council's Long Term Plan (LTP) and will come into effect on 1 July 2015.

The Policy sets out the development contributions payable by developers, how and when they are to be calculated and paid, and a summary of the methodology and rationale used in calculating the level of contributions.

The key purpose of the Development Contribution Policy is to ensure that growth, and the cost of infrastructure to meet that growth, is funded by those who cause the need for and benefit from the new or additional infrastructure, or infrastructure of increased capacity.

There are no specific development contributions applicable to the coastal structures activity. Coastal development is considered on a case-by-case basis with appropriate consents and consultation which will include the basis of funding requirements.

APPENDIX H RESOURCE CONSENTS

H.1 Introduction

The statutory framework defining what activities require resource consent is the Resource Management Act (RMA) 1991. The RMA is administered locally by Tasman District Council, a Unitary Authority, through the Tasman Resource Management Plan (TRMP).

Resource consents for structures, occupation or activities in the coastal marine area held by Engineering Services are listed in Table H.1 below. Please note that the list may not be exhaustive and is subject to change. Short-term consents are required from time to time for construction activities and are not included in Table H.2.

Table H.1 Resource Consents relating to Coastal Structures

Consent No	Consent Type	Description	Expiry Date
NN950365	Coastal Occupation	seawall, Ward St, Port Motueka	31/12/2030
NN990189	Coastal Occupation	CST 1358 - fishing platform, Port Motueka	1/10/2034
NN010293	Coastal Structure	CST 1200 - seawall & groyne, Marahau	8/02/2037
NN010295	Coastal Occupation	CST 1071 & 1193 - boat ramp/jetty, Marahau	8/02/2037
030917	Coastal Disturbance	CST 1272 & 1273 - seawall, Able Tasman Drive, Pohara	10/05/2039
030973	Coastal Occupation	CST 1272 & 1273 - seawall, Able Tasman Drive, Pohara	10/05/2039
030974	Coastal Discharge	CST 1272 & 1273 - seawall, Able Tasman Drive, Pohara	10/05/2039
031345	Coastal Discharge	CST 1272 & 1273 - seawall, Able Tasman Drive, Pohara	10/05/2039
060842	Coastal disturbance	rock protection, Kina Peninsula Road	11/12/2041
070172	Coastal Occupation	CST 1314 - seawall, Old Mill walkway, Ruby Bay	8/05/2042
070321	Land Use	CST 1314 - seawall, Old Mill walkway, Ruby Bay	unlimited
080885	Coastal Disturbance	rock protection, Kina Peninsula Road	11/12/2041
080893	Coastal Occupation	CST 1315 - seawall, Old Mill Walkway, Ruby Bay	20/03/2044
080953	Coastal Disturbance	CST 1315 - seawall, Old Mill Walkway, Ruby Bay	23/03/2044
080954	Land Use	CST 1315 - seawall, Old Mill Walkway, Ruby Bay	unlimited
090265	Coastal Disturbance	CST-1263 & 1264 - rock protection, Collingwood	unlimited
110062	Coastal Occupation	CST 1297 - floating pontoon, Mapua Wharf	14/11/2046
110937	Coastal Occupation	CST 1175 - jetty, Torrent Bay	22/12/2046
110943	Land Use	CST 1175 - jetty, Torrent Bay	unlimited

CST = Coastal Structure register reference

Coastal structures for other infrastructure adjacent to the coastline (such as roads and stormwater) are managed under their respective activity management plan, including any required consents.

H.2 Resource Consent Reporting and Monitoring

The Council aims to achieve minimum compliance with all consents and/or operating conditions.

The use of a monitoring database allows the accurate programming of all actions required by the consents including renewal prior to consent expiry. The database is actively updated to ensure all consent conditions are complied with and that all relevant reporting requirements are adhered to.

The extent to which the Council has been able to meet all of the conditions of each permit is reported in its Annual Report each year.

H.3 Property Designations

There are no current designations in place for coastal structures.

APPENDIX I CAPITAL REQUIREMENTS FOR FUTURE RENEWALS

I.1 Introduction

Renewal expenditure is major work that 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 original capacity is new capital expenditure.

I.2 Renewal Strategy

Assets are considered for renewal as they near the end of their effective working life or where the cost of maintenance becomes uneconomical and when the risk of failure of critical assets is sufficiently high.

The renewal programme has been developed by.

- taking asset age and remaining life predictions from the valuation database, calculating when the remaining life expires and converting that into a programme of replacements based on valuation replacement costs;
- reviewing and justifying the renewals forecasts using the accumulated knowledge and experience of asset operations and asset management staff. This incorporates the knowledge gained from tracking asset failures through the Customer Services System;
- undertaking an optimising review to identify opportunities for bundling projects across assets, optimised replacement, timing across assets and smoothing of expenditure.

The renewal programme is reviewed in detail during each AMP update (ie, every three years), and every year the annual renewal programme is reviewed and planned with the project team.

I.3 Delivery of Renewals

Minor renewal projects are typically carried out by the relevant maintenance contractor. Contracts for larger value renewal projects are tendered in accordance with the procurement strategy. Prior to the asset being renewed, the maintenance contractor or consultant will inspect these assets to confirm whether renewal is actually necessary. In the event it does not need to be renewed, a recommended date of renewal is then entered back into the Confirm database. This new date will then be included in the next AMP update.

I.4 Renewal Standards

The work is undertaken in accordance with best practice, site specific design, site specific resource consents where applicable, Tasman District Council's Engineering Standards and Policies and the TRMP. Contractors are selected on their proven ability to provide best practice on an as required basis.

Regulatory assets such as signs and aids to navigation are renewed by the Council's Harbourmaster as required.

I.5 Deferred Renewals

Deferred renewals is the shortfall in renewals required to maintain the service potential of the assets. This can include:

- renewal work that is scheduled but not performed when it should have been and which is has been put off for a later date (this can often be due to cost and affordability reasons);
- an overall lack of investment in renewals that allows the asset to be consumed or run-down, causing increasing maintenance and replacement expenditure for future communities.

I.5.1. Assessment of Deferred Renewals

The extent of deferred renewals can be identified by comparing the accumulated investment in renewals with accumulated annual depreciation. This information then forms the basis of a renewals strategy. The Council is yet to complete the process for this activity and hence it has been included in the improvement plan.

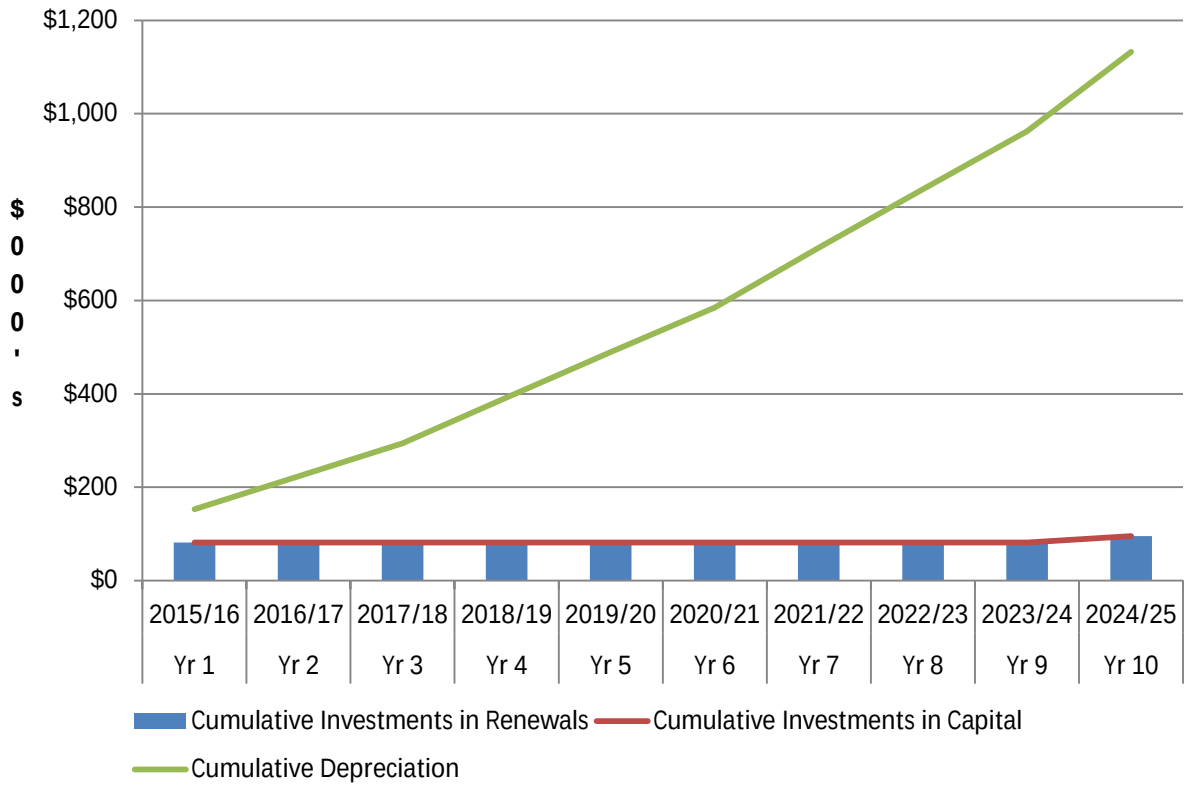


Figure I-1: Comparison of Accumulative Renewal Expenditure versus Annual Depreciation

This graph shows that Cumulative Depreciation is significantly in excess of cumulative investment. Reasons for this discrepancy are:

- many Coastal Assets have a very long life and renewal is required due to specific damaging events rather than progressive deterioration;
- the appropriate level of renewal investment is not fully understood and studies during this AMP period will allow future AMPs to better reflect the required level of investment.

I.5.2. Management and Mitigation of Deferred Renewals

Whilst the exact extent of deferred renewals is not identified, the Council can manage potential effects on levels of service by routinely undertaking condition rating and reviewing the renewals programme.

I.6 Forecast of Renewals Expenditure

Figure I-2 and Table I-1 show the projected renewal costs for the next 30 years.

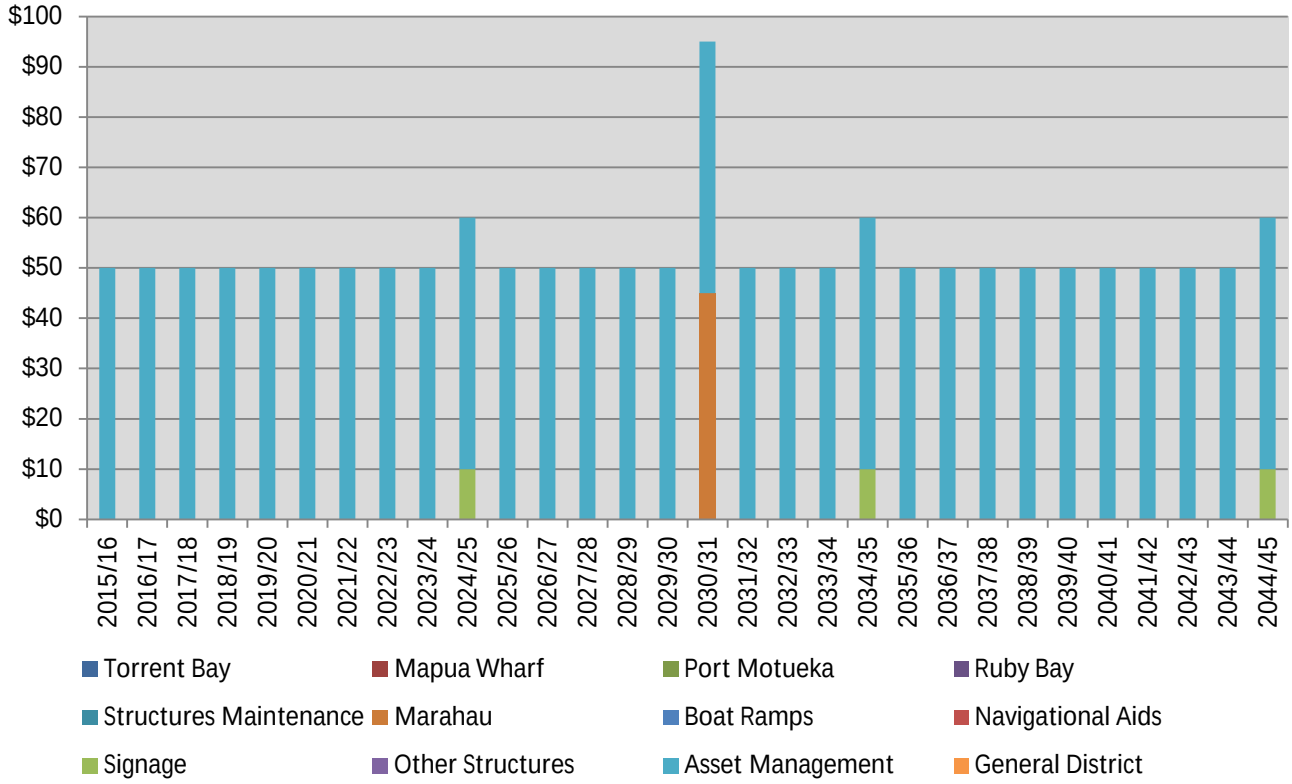


Figure I-2: Coastal Structures 30 Year Renewal Expenditure ($000)

Table I-1: Coastal Structures 30 Year Renewal Expenditure Forecast ($000)

ID	Project Name	Project Description	Category	GL Code	% Renewal	Renewal Estimate	Total Project Estimate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21 to Year 30	Beyond Year 30
								2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35		
120008	Jetty Renewal Marahau	Jetty Renewal	Marahau	10156210003	100%	45	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-
120014	Sign Renewal	District wide sign renewals	Signage	1002621005	100%	30	30	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	10	10	-
120017	Coastal Structures Repairs	Adverse Event Costs	Asset Management	1002240111	100%	1,500	1,500	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	500	-
120018	Marahau Sea Wall	Address new erosion and erosion of existing wall	Marahau	0	10%	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTALS					1,575	7,945	50	50	50	50	50	50	50	50	50	60	50	50	50	50	50	95	50	50	50	60	510	-

Note: Does not include inflation

APPENDIX J DEPRECIATION AND DECLINE IN SERVICE POTENTIAL

J.1 Depreciation of Infrastructural Assets

Depreciation is provided on a straight line basis on all infrastructural assets at rates which will write off the cost (or valuation) of the assets to their estimated residual values over their useful lives.

The total useful lives for coastal structures infrastructure has been summarised in Appendix D – Asset Valuations.

J.2 Decline in Service Potential

The decline in service potential is a decline in the future economic benefits (service potential) embodied in an asset.

It is a Council policy to operate the coastal structures activity to meet a desired level of service. The Council will monitor and assess the state of the coastal infrastructure and upgrade or replace parts over time to counter the decline in service potential at the optimum times.

J.3 Council's Borrowing Policy

The Council's borrowing policy was that it only funds capital and renewal expenditure through borrowing, normally for 20 years, but shorter terms are used for some assets depending on how long they are expected to last before they need to be replaced.

The Council has now made a decision to start phasing-in the funding of depreciation, effectively this will create a reserve to fund the replacement of assets. This method means that debt will not be raised to fund asset replacement. This is being phased in over ten years and is more fully explained in the Financial Strategy which is part of Supporting Information associated with the 2015 LTP.

This method of funding capital expenditure provides intergenerational equity. This means that those people that receive the benefit from the asset generally pay for the asset.

APPENDIX K FUTURE DEBT REQUIREMENTS FOR THE ACTIVITY

K.1 General Policy

The Council borrows as it considers prudent and appropriate and exercises its flexible and diversified funding powers pursuant to the Local Government Act 2002. The Council approves, by resolution, the borrowing requirement for each financial year during the annual planning process. The arrangement of precise terms and conditions of borrowing is delegated to the Corporate Services Manager.

> The Council has significant infrastructural assets with long economic lives yielding long term benefits. The Council also has a significant strategic investment holding. The use of debt is seen as an appropriate and efficient mechanism for promoting intergenerational equity between current and future ratepayers in relation to the Council's assets and investments. Debt in the context of this policy refers to the Council's net external public debt, which is derived from the Council's gross external public debt adjusted for reserves as recorded in the Council's general ledger.

Generally, the Council's capital expenditure projects, with their long term benefits, are debt funded. The Council's other district responsibilities have policy and social objectives and are generally revenue funded.

The Council raises debt for the following primary purposes:

- capital to fund development of infrastructural assets;
- short term debt to manage timing differences between cash inflows and outflows and to maintain the Council's liquidity;
- debt associated with specific projects as approved in the Annual Plan or LTP. The specific debt can also result from finance which has been packaged into a particular project.

In approving new debt, the Council considers the impact on its borrowing limits as well as the size and the economic life of the asset that is being funded and its consistency with the Council's long term financial strategy.

The Borrowing Policy is found in Volume 2 of the Council's LTP.

K.2 Loans

Loans to fund capital works over the next 10 years are projected to add up to the following costs detailed in Table K-1.

Table K-1: Projected Capital Works Funded by Loan for Next 10 Years

Rivers & Flood Protection	2015/16 Year 1 $	2016/17 Year 2 $	2017/18 Year 3 $	2018/19 Year 4 $	2019/20 Year 5 $	2020/21 Year 6 $	2021/22 Year 7 $	2022/23 Year 8 $	2023/24 Year 9 $	2024/25 Year 10 $
Loans Raised	0	0	0	0	0	0	0	0	0	0
Opening Loan Balance	844	739	634	529	424	319	306	293	280	267

Note: Figures do not include for inflation and are in thousands of dollars (ie. x 1000)

K.3 Cost of Loans

The Council funds the principal and interest costs of past loans and these are added to the projected loan costs for the next 10 years as shown in Table K-2.

Table K-2: Projected Annual Loan Repayment Costs for Next 10 Years

Coastal Structures	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	$	$	$	$	$	$	$	$	$	$
Loan Interest	55	48	41	34	28	21	20	19	18	17
Principal Repaid	105	105	105	105	105	13	13	13	13	13

Note: Figures do not include for inflation and are in thousands of dollars (ie. x 1000)

APPENDIX L SUMMARY OF FUTURE OVERALL FINANCIAL REQUIREMENTS

Table L-1 presents a summary of the overall future financial requirements for the coastal structures activity in the Tasman district.

Tasman District Council
Funding Impact Statement - Coastal Structures
For the Long Term Plan 2015-25

	2014/15 Budget $000	2015/16 Budget $000	2016/17 Budget $000	2017/18 Budget $000	2018/19 Budget $000	2019/20 Budget $000	2020/21 Budget $000	2021/22 Budget $000	2022/23 Budget $000	2023/24 Budget $000	2024/25 Budget $000
SOURCES OF OPERATING FUNDING											
General rates, uniform annual general charges, rates penalties	988	634	489	459	452	481	487	510	520	518	516
Targeted rates (other than a targeted rate for water supply)	113	104	102	99	97	96	93	93	82	79	79
Subsidies and grants for operating purposes	390	0	0	0	0	0	0	0	0	0	0
Fees, charges and targeted rates for water supply	0	0	0	0	0	0	0	0	0	0	0
Internal charges and overheads recovered	0	0	0	0	0	0	0	0	0	0	0
Local authorities fuel tax, fines, infringement fees, and other receipts	1,039	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING FUNDING	**2,530**	**738**	**590**	**558**	**549**	**576**	**580**	**603**	**602**	**597**	**595**
APPLICATIONS OF OPERATING FUNDING											
Payments to staff and suppliers	826	464	316	369	254	280	401	278	307	442	308
Finance costs	394	92	90	83	73	70	64	58	54	48	42
Internal charges and overheads applied	184	67	68	69	76	78	76	84	84	82	91
Other operating funding applications	0	0	0	0	0	0	0	0	0	0	0
TOTAL APPLICATIONS OF OPERATING FUNDING	**1,404**	**624**	**473**	**521**	**403**	**429**	**542**	**420**	**446**	**572**	**441**
SURPLUS (DEFICIT) OF OPERATING FUNDING	**1,127**	**114**	**117**	**37**	**146**	**148**	**38**	**182**	**156**	**25**	**154**

	2014/15 Budget $000	2015/16 Budget $000	2016/17 Budget $000	2017/18 Budget $000	2018/19 Budget $000	2019/20 Budget $000	2020/21 Budget $000	2021/22 Budget $000	2022/23 Budget $000	2023/24 Budget $000	2024/25 Budget $000
SOURCES OF CAPITAL FUNDING											
Subsidies and grants for capital expenditure	0	0	0	0	0	0	0	0	0	0	0
Development and financial contributions	0	0	0	0	0	0	0	0	0	0	0
Increase (decrease) in debt	(319)	(23)	(107)	(107)	(107)	(107)	(107)	(107)	(107)	(102)	(88)
Gross proceeds from sale of assets	0	0	0	0	0	0	0	0	0	0	0
Lump sum contributions	0	0	0	0	0	0	0	0	0	0	0
TOTAL SOURCES OF CAPITAL FUNDING	**(319)**	**(23)**	**(107)**	**(107)**	**(107)**	**(107)**	**(107)**	**(107)**	**(107)**	**(102)**	**(88)**
APPLICATIONS OF CAPITAL FUNDING											
Capital expenditure											
- to meet additional demand	0	0	0	0	0	0	0	0	0	0	0
- to improve the level of service	1,222	82	0	0	0	0	0	0	0	0	0
- to replace existing assets	261	0	0	0	0	0	0	0	0	0	13
Increase (decrease) in reserves	(675)	9	10	(70)	39	41	(69)	76	49	(77)	53
Increase (decrease) in investments	0	0	0	0	0	0	0	0	0	0	0
TOTAL APPLICATIONS OF CAPITAL FUNDING	**808**	**91**	**10**	**(70)**	**39**	**41**	**(69)**	**76**	**49**	**(77)**	**66**
SURPLUS (DEFICIT) OF CAPITAL FUNDING	**(1,127)**	**(114)**	**(117)**	**(37)**	**(146)**	**(148)**	**(38)**	**(182)**	**(156)**	**(25)**	**(154)**
FUNDING BALANCE	**(0)**	**0**	**0**	**(0)**	**0**	**0**	**0**	**0**	**0**	**(0)**	**0**

L.2 Total Expenditure

Figure L-1 and L-2 show the total expenditure for the coastal structures activity for the first 10 and 30 years respectively.

Year 1 shows the largest capital expenditure owing to the upgrade of the boat ramp at Grossi Point

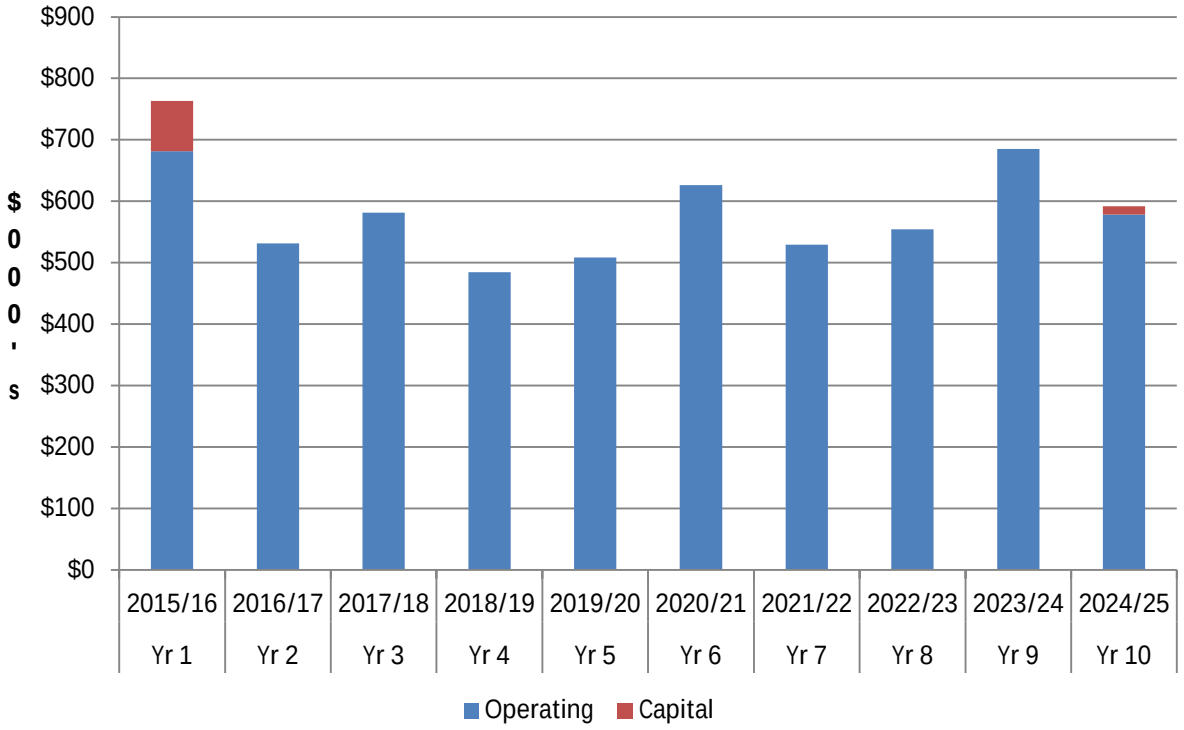


Figure L-1: Total Annual Expenditure Years 1 to 10

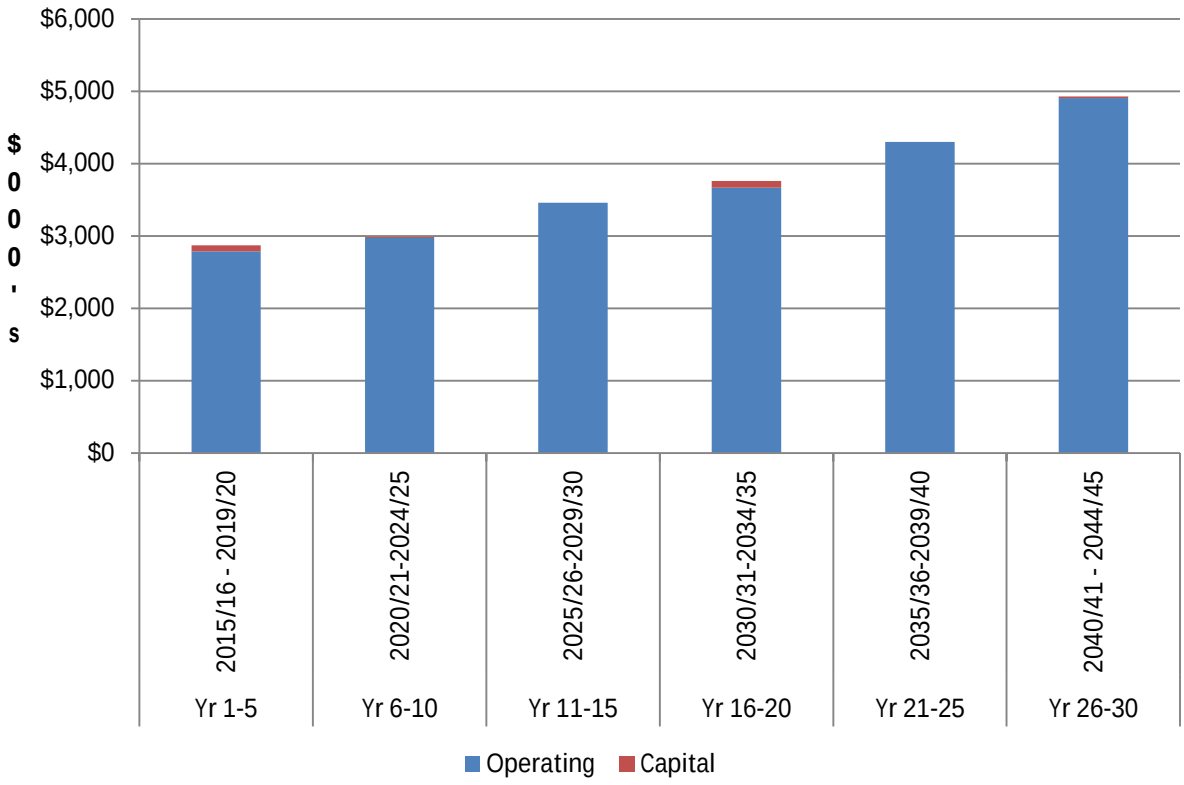


Figure L-2: Five Yearly Total Expenditure Years 1 to 30

L.3 Total Income

Figure L-3 and Figure L-4 show the total income for the coastal structures activity for the first 10 and 30 years respectively.

Income matches total expenditure over the first ten years and any increase is through an increase in rates.

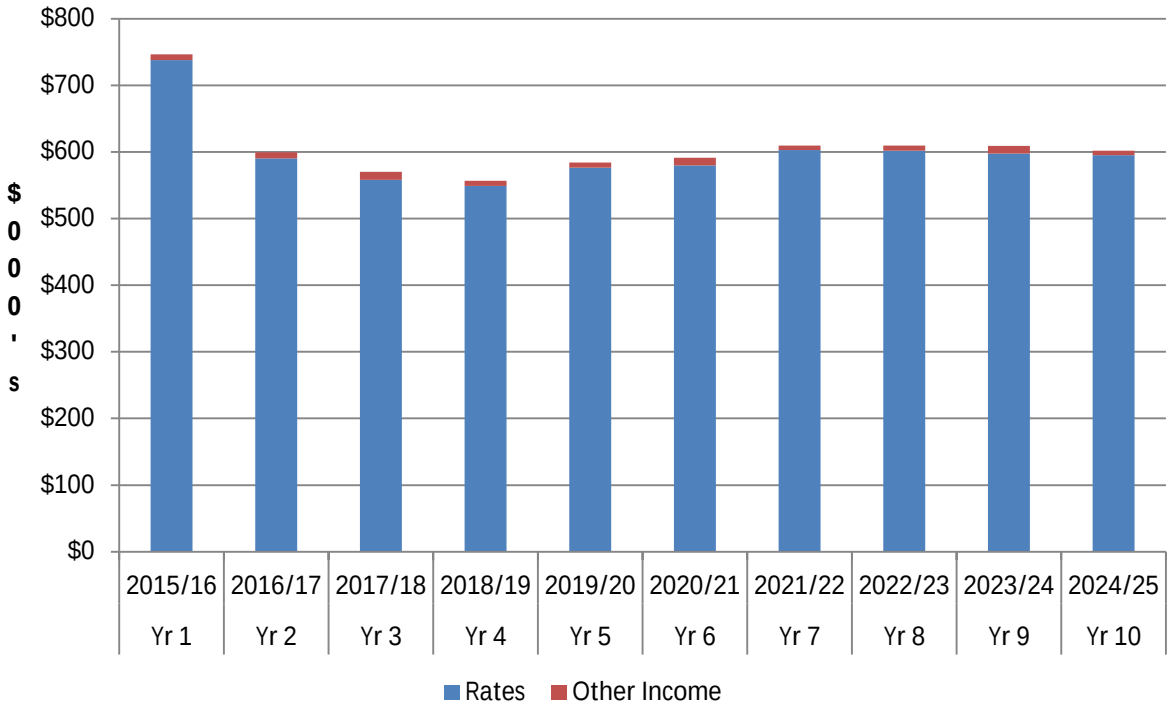


Figure L-3: Total Annual Income Years 1 to 10

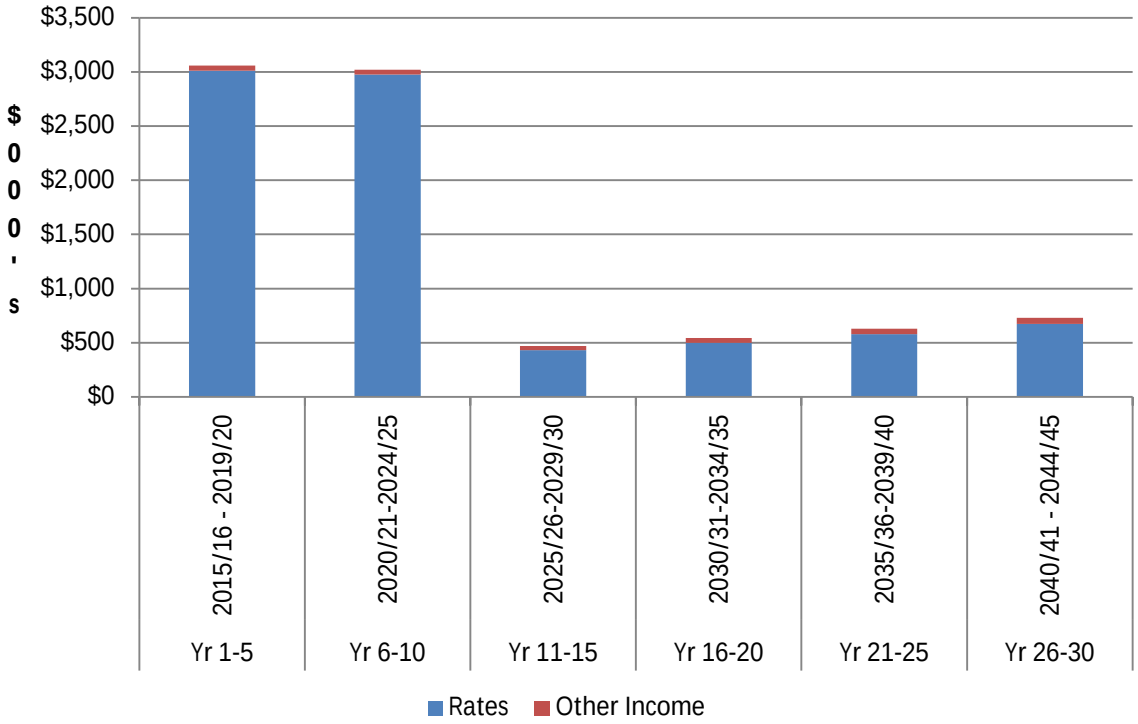


Figure L-4: Five Yearly Total Income Years 1 to 30

L.4 Operational Costs

Figure L-5 and Figure L-6 show the total operating expenditure for the coastal structures activity for the first 10 and 30 years respectively.

Operating costs increase with inflation.

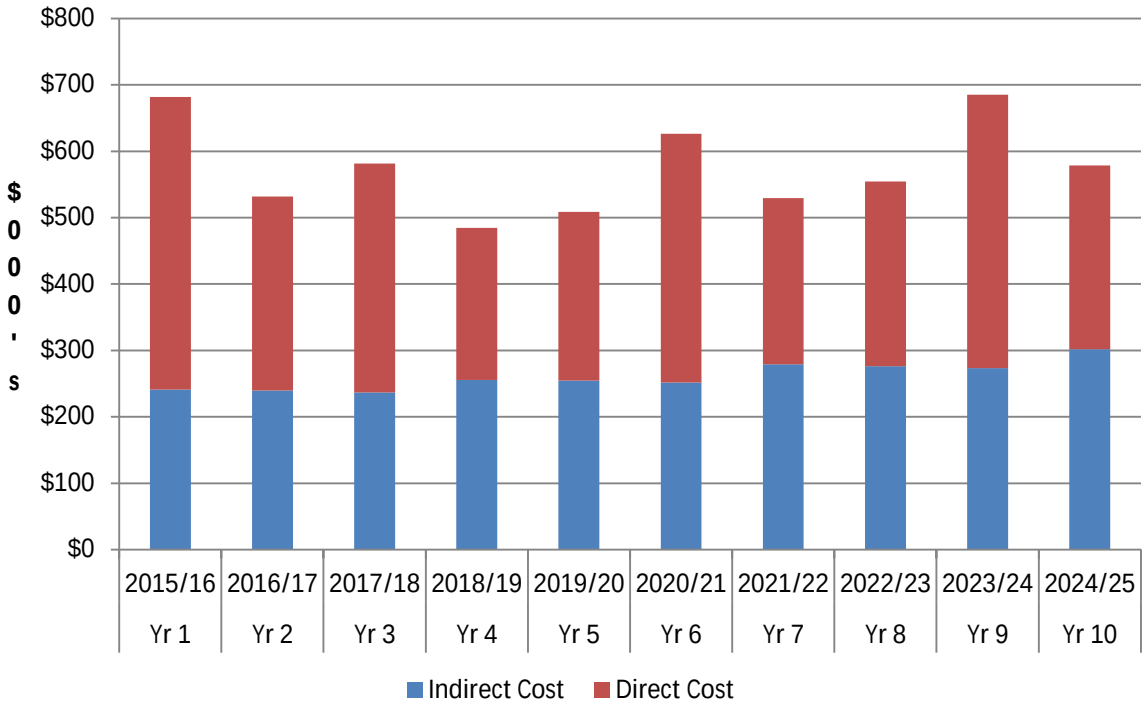


Figure L-5: Annual Operating Costs Years 1 to 10

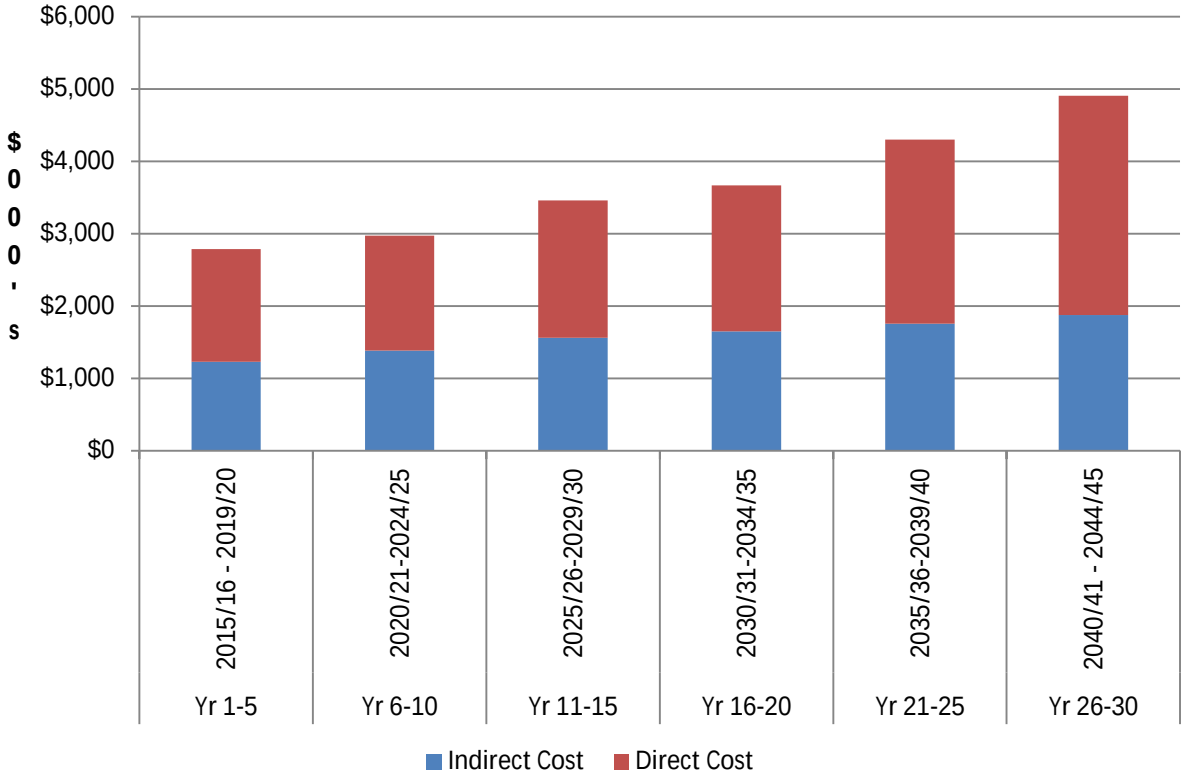


Figure L-6: Five Yearly Operating Costs Years 1 to 30

L.5 Capital Expenditure

Figure L-7 and L-8 show the total capital expenditure for the coastal structures activity for the first 10 and 30 years respectively.

Capital expenditure relates to the upgrade of the boat ramps at Grossi Point in Year 1. Other capital expenditure is related to the upgrade of jetties.

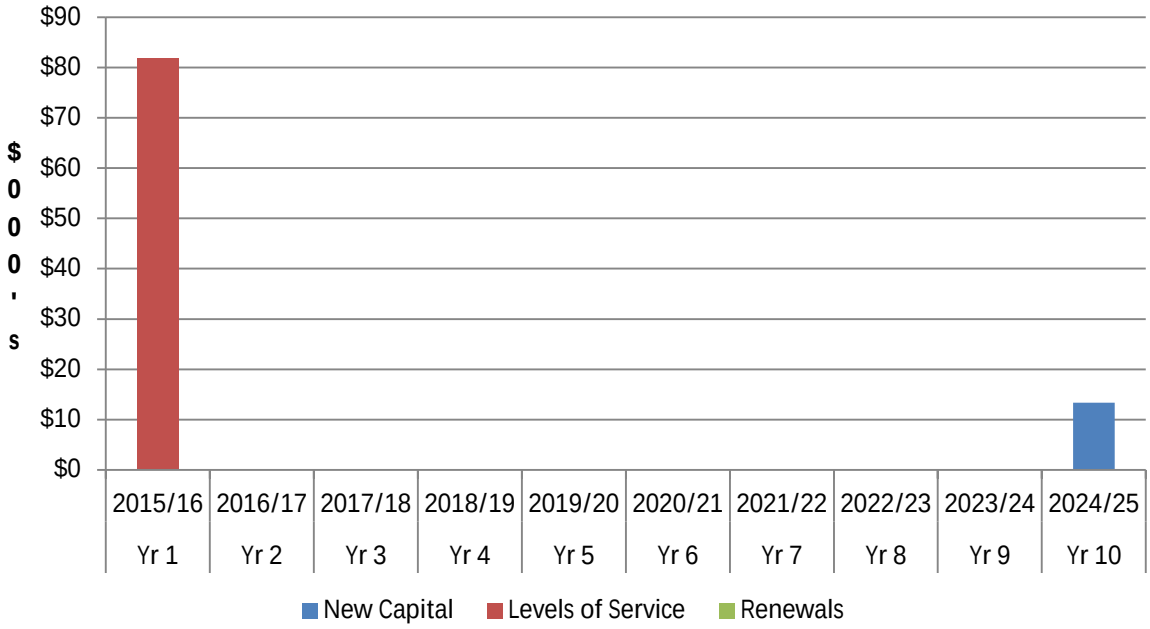


Figure L-7: Annual Capital Expenditure Years 1 to 10

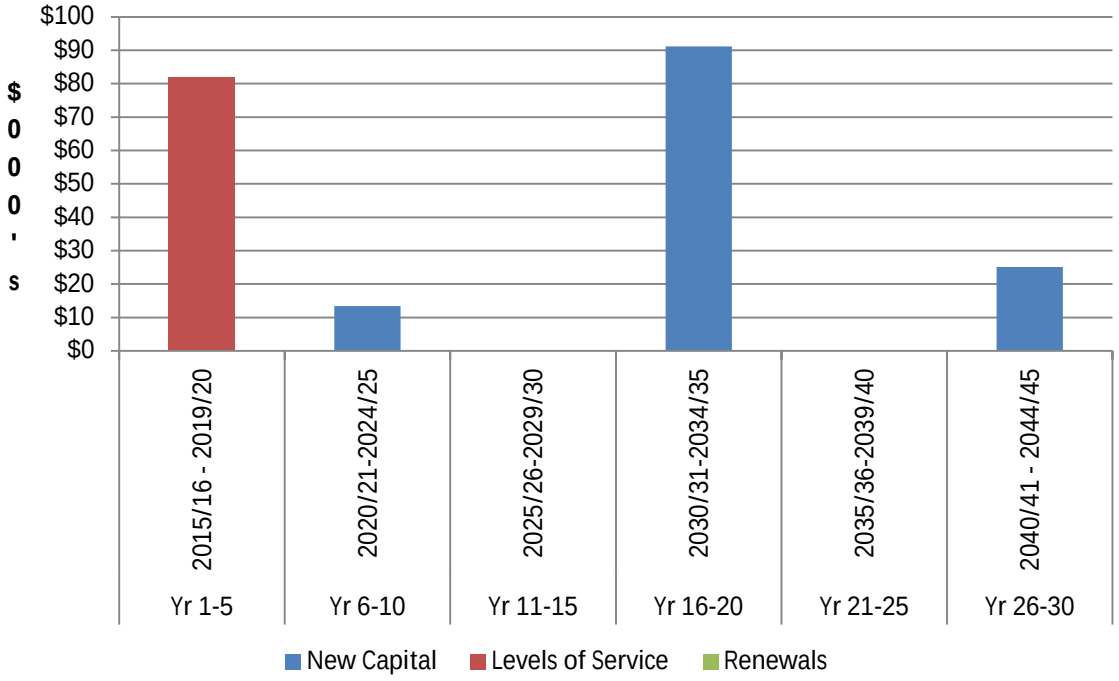


Figure L-8: Five Yearly Capital Expenditure Years 1 to 30

APPENDIX M FUNDING POLICY, FEES AND CHARGES

M.1 Funding Strategy

The focus of the AMPs has been on identifying the optimum (lowest life cycle) cost for operating, maintaining, renewing, developing and disposing of the assets necessary to produce the desired level of service.

Funding sources available for coastal structures include:

- leases and rents;
- fee recovery;
- loans raised;
- general rate;
- separate rate;
- sundry income.

Major capital projects may be loan funded. When loans are made, the loan is taken for a fixed period, usually 20-30 years, with a fixed annual principal repayment as a capital expense on the account, and interest payments as an operating expense. For the purpose of the financial forecasts, all new works and renewal work has been assumed to be loan funded.

M.2 Schedule of Fees and Charges

The Council has set some targeted rates for the coastal structures activities. The properties or rating units that the various rates will be applied are defined by the various Rating Areas (eg. The Ruby Bay Stopbank Rate applies to all rating units in the Ruby Bay Stopbank Rating Area). These can be found in the Rates Funding Impact Statement in the Long Term Plan.

Information on targeted rates for the Coastal Structures activity can be found in the Rates Funding Impact Statement in the Long Term Plan. This information will be updated on an annual basis through the Annual Plan. Targeted rates for this activity affect Ruby Bay Stopbank and the Torrent Bay Beach Replenishment Fund.

M.2.1. M2-1: Commercial Operator's Licence

An annual fee is charged along with an initial application fee, for each power-driven vessel or up to a total of 15 kayaks, waka or similar vessels that are not power-driven.

M.2.2. Berthage Charges at a Council-Owned Facility Other Than a Wharf

Daily or annual charges apply for berthage of a vessel at a council-owned facility other than a wharf (Port Golden Bay – Tarakohe Harbour). There are commercial and recreational fees applicable.

M.2.3. Riwaka Wharf Charges

Charges are based on the number of people using the wharf to embark or disembark a vessel.

M.2.4. Trans-Shipping of Cargo at Sea

This is the cost per tonne of the trans-shipment of goods, merchandise and other material.

Details on all fees and charges can be found in the Annual Plan.

APPENDIX N DEMAND MANAGEMENT

N.1 Introduction to Demand Management

The objective of demand management (sometimes called non-asset solutions) is to actively seek to modify customer demands for services in order to:

- optimise utilisation/performance of existing assets;
- reduce or defer the need for new assets;
- meet the organisation's strategic objectives;
- delivery of a more sustainable service;
- respond to customer needs.

As a harbour authority, the Council has a statutory obligation to manage the activities within the ports. As a regional authority, the Council is obligated to undertake its responsibilities within the coastal marine area. As a local authority, the Council works with its community to provide safe and reasonable access to the coast and, where applicable, to protect public assets on or along the coast.

N.2 Council's Approach to Demand Management

The coastal structures activities have significant impact on the district, local communities and the coastal environment. As demand for use of the coastal area increases, the Council will use its objectives and policies (refer Appendix A) to provide guidance to manage the conflicts of the need to protect and enhance the coastal environment along with allowing and protecting existing (eg, wharf and harbour activities). The Council recognises that the natural coastal processes are complex and not well understood and the Council will continue to research and monitor the dynamics of its coastline so as to make appropriate decisions whether to protect or leave areas to natural processes.

The Council will also continue to manage activities by others through its bylaws and the TRMP to ensure activities are undertaken in a sustainable manner which is affordable to the community.

N.2.1. Demand Management Measures

The Council will use a number of measures to assist in the management of demand for access to and use of the coastal area as well as reducing the demand for coastal protection works including:

- education of users of the coastal areas for recreational and commercial activities;
- management of coastal development through bylaws and TRMP;
- management of moorings and possible restrictions of use;
- fees and charges where practical and affordable;
- land use planning to reduce conflicts with protection of the natural coastline;
- new technology for navigational safety aids to improve effectiveness and efficiency.

N.3 Climate Change

The RMA 1991 states, in Section 7, that a local authority shall take account of the effects of climate change when developing and managing its resources. The Local Government Act 2002 also contains requirements to "to meet the current and future needs of communities for good quality local infrastructure, local public services, and performance of regulatory functions in a way that is most cost-effective for households and businesses". "Good quality" means infrastructure, services, and performance that are efficient and effective and appropriate to present and anticipated future circumstances".

This appendix summarises climate change information available to the Council for asset and activity planning. Key information sources include:

- Climate Change Effects and Impacts Assessment: A Guidance Manual for Local Government in NZ, MfE (2008);
- Climate Change and Variability in the Tasman District, NIWA (2008);
- Mean High Water Springs report, NIWA (2013);
- Fifth Assessment Report, IPCC (2013);
- Extreme sea-level elevations from storm-tides and waves: Tasman and Golden Bay coastlines, NIWA (2014).

N.3.1. Changing Climatic Patterns

To assist local authorities, the Ministry for the Environment (MfE) prepared a report[1] to support councils' assessing expected effects of climate change, and to help them prepare appropriate responses when necessary.

In 2008, Tasman District Council commissioned NIWA to provide local interpretation[2]. The report examined the impacts of expected climate changes for the Tasman-Nelson region.

Subsequently, the Intergovernmental Panel on Climate Change (IPCC) has produced its fifth assessment report AR5 (2013). The AR5 is a result of substantial collective international science over the past five years, and has synthesised the current physical science basis for climate change understanding. The report covers the scope and significance of expected impacts, vulnerabilities and adaptation challenges arising at an international level, and national level.

AR5 does not fundamentally change our understanding of how global climate impacts will manifest themselves locally in Tasman; however the Council will undertake a similar exercise to that of 2008 to commission NIWA to produce a Climate Change and Variability report specific to the Tasman District.

N.3.2. Temperature Change

Table N-1 shows that the mean annual temperatures in Tasman-Nelson are expected to increase in the future.

Table N-1: Projected Mean Temperature Change (Upper and Lower Limits) in Tasman-Nelson (in °C)

	Summer	Autumn	Winter	Spring	Annual
Projected changes 1990-2040	0.2 – 2.2	0.2 – 2.3	0.2 – 2.0	0.1 – 1.8	0.2 – 2.0
Projected changes 1990-2090	0.9 – 5.6	0.6 – 5.1	0.5 – 4.9	0.3 – 4.6	0.6 – 5.0

Source: Climate Change and Variability – Tasman District (NIWA, June 2008)

It is the opinion of NIWA[3] scientists that the actual temperature increase this century is very likely to be more than the 'low' scenario given here. Under the mid-range scenario for 2090, an increase in mean temperature of 2.0°C would represent annual average temperature in coastal Tasman in 2090.

[1] Climate Change Effects and Impacts Assessment A Guidance Manual for Local Government in NZ (MfE, May 2008)
[2] Climate Change and Variability – Tasman District (NIWA, June 2008)
[3] Climate Change and Variability – Tasman District (NIWA, June 2008)

N.3.3. Rainfall Patterns

Table N-2 shows an expected increase in mean annual precipitation in Tasman-Nelson from 1990 to 2090.

Table N-1: Projected Mean Precipitation Change (Upper and Lower Limits) in Tasman-Nelson (in %)

	Summer	Autumn	Winter	Spring	Annual
Projected changes 1990-2040	-14, 27	-2, 19	-4, 9	-8, 9	-3, 9
Projected changes 1990-2090	-13, 30	-4, 18	-2, 19	-20, 19	-3, 14

Source: Climate Change and Variability – Tasman District (NIWA, June 2008)

Table N-2 shows an expected increase in mean annual precipitation in Tasman-Nelson from 1990 to 2090.

Table N-2: Projected Mean Precipitation Change (Upper and Lower Limits) in Tasman-Nelson (in %)

	Summer	Autumn	Winter	Spring	Annual
Projected changes 1990-2040	-14, 27	-2, 19	-4, 9	-8,9	-3,9
Projected changes 1990-2090	-13, 30	-4, 18	-2, 19	-20, 19	-3, 14

Source: Climate Change and Variability – Tasman District (NIWA, June 2008)

N.3.4 Heavy Rainfall

A warmer atmosphere can hold more moisture (about 8% more for every 1^{o}C increase in temperature), so there is an obvious potential for heavier extreme rainfall under climate change. More recent climate model simulations confirm the likelihood that heavy rainfall events will become more frequent.

N.3.4. Evaporation, Soil Moisture and Drought

From their report, NIWA conclude that there is a risk that the frequency of drought (in terms of low soil moisture conditions) could increase as the century progresses, for the main agriculturally productive parts of Tasman district.

N.3.5. Climate Change and Sea Level

The MfE Report provides guidance for local government on coastal hazards and climate change. The report recommends:

For planning and decision timeframes out to the 2090s (2090–2099):

- a base value sea-level rise of 0.5 m relative to the 1980–1999 average should be used, along with;
- an assessment of the potential consequences from a range of possible higher sea-level rises (particularly where impacts are likely to have high consequence or where additional future adaptation options are limited). At the very least, all assessments should consider the consequences of a mean sea-level rise of at least 0.8 m relative to the 1980–1999 average. Guidance on potential sea-level rise uncertainties and values at the time (2008) is provided within the Guidance Manual to aid this assessment.

For planning and decision timeframes beyond the 2090s where, as a result of the particular decision, future adaptation options will be limited, an allowance for sea-level rise of 10 mm per year beyond 2100 is recommended.

Since the MfE guidance was published in 2008, the NZ Coastal Policy Statement was updated in 2010, requiring identification of areas in the coastal environment that are potentially affected by coastal hazards over at least 100 years, taking into account the effects of climate change (Policy 24).

The two values of sea-level rise to be considered as a minimum number of rises for assessing risk of 0.5 m and 0.8 m by the 2090s in the 2008 MfE guidance are equivalent to rises of 0.7 m and 1.0 m extended out to 2115, which is "at least 100 years" from the present. These projections are for mean sea levels.

In 2013 the Council commissioned NIWA to prepare a report on mean high water springs (MHWS) for Tasman District, including a range of sea level rise scenarios[4]. Ongoing sea-level rise will require updates of the MHWS levels and for projecting MHWS levels into the future, whereby the appropriate sea-level rise is simply added to the 'present day' MHWS levels. The report includes worked examples for sea-level rise magnitudes of 0.7 m and 1.0 m, which extend the equivalent tie-point values for the 2090s (0.5 m and 0.8 m) in the Ministry for the Environment (2008) guidance out to 2115 to cover at least a 100-year period.

Subsequently, Tasman District Council was granted an Envirolink medium advice grant (1413-TSDC99)[5] for NIWA to develop defensible coastal inundation elevations and likelihoods as a result of combinations of elevated storm-tide, wave setup and wave run-up, along the "open coast" of the Tasman Bay and Golden Bay coastlines. The study excludes inlets and the west coast of Tasman District. The report includes an interactive 'calculator' which allows council to accommodate various predicted sea level rise scenarios and different beach profiles.

The extent of coastal inundation in Motueka is being modelled at the time of writing this AMP (2015). The model is an extension of the modelling work undertaken on the movement of the Motueka Sandspit and impacts on Jackett Island. The Motueka modelling is expected to show the depth and extent of land affected by sea water inundation.

Mapua and Ruby Bay have also been subject to inundation modelling as a result of TRMP Plan Change 22.

Future urban locations for inundation modelling have yet to be determined.

A wider coastal hazard assessment project for Tasman District commenced in 2014. The project will consider options for risk mitigation and adaptation. The results will be integrated into land use and infrastructure planning.

N.3.6. Potential Impacts on the Council's Infrastructure and Services

Table N-3 lists the potential impacts of climate change on the Council's infrastructure and services.

Table N-3: Local Government Functions and Possible Negative Climate Change Outcomes

Function	Affected Assets of Activities	Key Climate Influences	Possible Effects
Water supply and irrigation.	Infrastructure.	Reduced rainfall, extreme rainfall events and increased temperature. Sea level rise.	Reduced security of supply (depending on water source). Contamination of water supply. Saltwater intrusion into coastal wells.
Wastewater.	Infrastructure.	Increased rainfall. Sea level rise.	More intense rainfall (extreme events) will cause more inflow and infiltration into the wastewater network. Wet weather overflow events will increase in frequency and volume. Longer dry spells will increase the

[4] NIWA Report: Mean High Water Spring (MHWS) levels including sea-level rise scenarios: Envirolink Small Advice Grant (1289-TSDC95), 4 September 2013 (revised 30 April 2014)
[5] NIWA Report: Extreme sea-level elevations from storm-tides and waves: Tasman and Golden Bay coastlines, March 2014.

Function	Affected Assets of Activities	Key Climate Influences	Possible Effects
			likelihood of blockages and related dry weather overflows. Disruption of WWTPs due to coastal inundation or erosion impacts.
Stormwater.	Reticulation. Stopbanks.	Increased rainfall. Sea-level rise.	Increased frequency and/or volume of system flooding. Increased peak flows in streams and related erosion. Groundwater level changes. Saltwater intrusion in coastal zones. Changing flood plains and greater likelihood of damage to properties and infrastructure.
Transportation.	Road network and associated infrastructure (power, telecommunications, drainage).	Extreme rainfall events, extreme winds, high temperatures. Sea-level rise.	Disruption due to flooding, landslides, falling trees and lines. Direct effects of wind exposure on heavy vehicles. Melting of tar. Increased coastal erosion or storm induced damage.
Planning/policy development.	Management of development in the private sector. Expansion of urban areas. Infrastructure and communications planning.	All.	Inappropriate location of urban expansion areas. Inadequate or inappropriate infrastructure, costly retro-fitting of systems.
Land management.	Rural land management.	Changes in rainfall, wind and temperature.	Enhanced erosion. Changes in type/distribution of pest species. Increased fire risk. Reduction in water availability for irrigation. Changes in appropriate land use. Changes in evapotranspiration.
Water management.	Management of watercourses/lakes/ wetlands.	Changes in rainfall and temperature.	More variation in water volumes possible. Reduced water quality. Sedimentation and weed growth. Changes in type/distribution of pest species.

Function	Affected Assets of Activities	Key Climate Influences	Possible Effects
Coastal management.	Infrastructure. Management of coastal development.	Temperature changes leading to sea-level changes. Extreme storm events.	Coastal erosion and flooding. Disruption in roading, communications. Loss of private property and community assets. Effects on water quality.
Civil defence and emergency management.	Emergency planning and response, and recovery operations.	Extreme events.	Greater risks to public safety, and resources needed to manage flood, rural fire, landslip and storm events.
Biosecurity.	Pest management.	Temperature and rainfall changes.	Changes in the range and density of pest species.
Open space and community facilities management.	Planning and management of parks, playing fields and urban open spaces.	Temperature and rainfall changes. Extreme wind and rainfall events.	Changes/reduction in water availability. Changes in biodiversity. Changes in type/distribution of pest species. Groundwater changes. Saltwater intrusion in coastal zones. Need for more shelter in urban spaces.
Public Transport.	Management of public transport. Provision of footpaths, cycleways etc.	Changes in temperatures, wind and rainfall.	Changed maintenance needs for public transport infrastructure. Disruption due to extreme events.
Waste management.	Transfer stations and landfills.	Changes in rainfall and temperature.	Increased surface flooding risk. Biosecurity changes. Changes in ground water level and leaching.
Water supply and irrigation.	Infrastructure.	Reduced rainfall, extreme rainfall events and increased temperature.	Reduced security of supply (depending on water source). Contamination of water supply.

Source: Climate Change Effects and Impacts Assessment (MfE, May 2008)

The Council has incorporated the potential impacts of climate change in the 2013 update of the Engineering Standards and Policies.

APPENDIX O NOT RELEVANT TO THIS ACTIVITY

APPENDIX P. POTENTIAL SIGNIFICANT EFFECTS

P.1 Potential Significant Negative Effects

Potential significant effects and the proposed mitigation measures are listed below in Table P-1.

Table P-1: Potential Significant Negative Effects

Effect	Description	Mitigation Measures
Visual pollution of coastal structures	The construction of structures that appear out of character with the coastal environment.	The Council controls this through bylaws and the TRMP, and may impose conditions on lessees to improve the amenity value of existing buildings.
Noise pollution from recreational users	Increased traffic and noise from both commercial and recreational users of coastal facilities.	The Council controls the use of coastal areas and facilities through bylaws, the TRMP, restriction of access, and education.
Cost of coastal structures	The cost of providing the services.	The Council uses competitive tendering processes to achieve best value for money for works it undertakes. It also uses priority matrices to prioritise funding allocations.
Environmental impact of coastal structures	Potential changes to the natural coastal process due to placement of structures. This may include loss of natural sand dunes.	The Council mitigates/minimises changes to the natural environment through bylaws and the TRMP.
Cultural impact of coastal structures	Potential to affect wahi tapu sites relating to the local iwi.	The Council undertakes consultation with affected parties prior to undertaking works. The Council also maintains a record of known cultural heritage sites.

P.2 Potential Significant Positive Effects

Potential positive effects are listed below in Table P-2.

Table P-2: Potential Significant Positive Effects

Effect	Description
Economic development	Provision and maintenance of coastal structures allows for the development of commercial businesses, therefore, contributing to economic growth and prosperity in the district.
Safety and personal security	Provision and maintenance of coastal protection schemes improves protection for some residents and the built environment.
Community value	Coastal structures contribute to community well-being by providing assets for recreational use of residents and visitors to the area.

Effect	Description
Environmental sustainability	The Council aims to achieve environmental sustainability whilst managing the coastal structures activity.
Economic efficiency	The Council's management of the coastal structures activity uses best practice and competitive tendering to provide value for money for the ratepayers and provides jobs for contractors.

APPENDIX Q SIGNIFICANT ASSUMPTIONS, UNCERTAINTIES, AND RISK MANAGEMENT

Q.1 Assumptions and Uncertainties

This AMP and the financial forecasts within it have been developed from information that has varying degrees of completeness and accuracy. In order to make decisions in the face of these uncertainties, assumptions have to be made. This section documents the uncertainties and assumptions that the Council considers could have a significant effect on the financial forecasts, and discusses the potential risks that this creates.

Q.1.1. Financial Assumptions

The following assumptions have been made:

- all expenditure is stated in dollar values as at 1 July 2014, with no allowance made for inflation;
- all costs and financial projections are GST exclusive.

Q.1.2. Asset Data Knowledge

While the Council has asset registers and many digital systems, processes and records, the Council does not have complete knowledge of the assets it owns. To varying degrees the Council has incomplete knowledge of asset location, asset condition, remaining useful life and asset capacities. This requires assumptions to be made on the total value of the assets owned, the time at which assets will need to be replaced and when new assets will need to be constructed to provide better service.

The Council considers these assumptions and uncertainties constitute a medium risk to the financial forecasts because:

- significant amounts of asset data is unknown;
- asset performance for the significant structures is not well known.

The assumptions that have been made that are considered significant include:

- no development adjacent to the coastline other than that programmed at Ruby Bay will require protection in the 20 year period;
- the existing asset condition is such that further deterioration will not require renewal or maintenance beyond that currently allowed for.

Q.1.3. Growth Forecasts

Growth forecasts are inherently uncertain and involve many assumptions. The growth forecasts also have a very strong influence on the financial forecasts, especially in the Tasman District where population growth has been high. The growth forecasts underpin and drive:

- the asset creation programme;
- the Council's income forecasts including rates and development contributions;
- funding strategies.

For the coastal structures activity, the growth forecasts in tourism, recreation and coastal related industry affect the demands on the coastal assets. Thus the financial forecasts are sensitive to the assumptions made in the growth forecasts.

The significant assumptions in the growth forecasts are covered in the explanation in Appendix F.

Q.1.4. Timing of Projects

The timing of many projects can be well defined and accurately forecast because there are few limitations on the implementation other than the community approval through the LTP/Annual Plan processes. However,

the timing of some projects is highly dependent on some factors which are beyond the Council's ability to fully control. These include factors like:

- obtaining resource consent especially where community input is necessary;
- obtaining community support;
- obtaining a subsidy from central government;
- securing land purchase and/or land entry agreements;
- the timing of large private developments;
- the rate of population growth.

Where these issues may become a factor, allowances have been made to complete in a reasonable timeframe, however these plans are not always achieved. The effect of this will be to defer expenditure. The impact of this on the forward projections is not considered significant.

Q.1.5. Funding of Projects

When forecasting projects that will not occur for a number of years, a number of assumptions have to be made about how the project will be funded.

Funding assumptions are made about:

- whether projects will qualify for subsidies;
- whether major beneficiaries of the work will contribute to the project, and if so, how much they will pay;
- whether the Council will subsidise the development of the project.

The correctness of these assumptions has major consequences on the affordability of new projects. The funding strategy will form one part of the consultation process as the projects are advanced toward construction.

Decisions have been made to remove some projects from the 30 year forecast. These decisions will mean that some problems may continue to exist. No remedial works or other financial provisions have been made to address these consequences.

Q.1.6. Accuracy of Project Cost Estimates

The financial forecasts have been estimated from the best available knowledge. The level of uncertainty inherent in each project is different depending on how much work has been done in defining the problem and determining a solution. In many cases, only a rough order cost estimate is possible because little or no preliminary investigation has been carried out. It is not feasible to have all projects in the next 30 years advanced to a high level of accuracy. It is general practice for all projects in the first three years and projects over $500,000 in the first 10 years to be advanced to a level that provides reasonable confidence with the estimate.

To get consistency and formality in cost-estimating, the following practices have been followed:

- a project estimating template has been developed that provides a consistent means of preparing estimates;
- where practical, a common set of rates has been determined;
- where capital items from the 2012 AMP have been retained, the estimates have not been revised in detail. Capital costs for the works have been increased by 8.5%;
- specific provisions have been included to deal with non-construction costs like contract preliminary and general costs, engineering costs, Council staff costs, resource consenting costs and land acquisition costs;
- specific provisions have been included to deal with construction contingency, project complexity and estimate accuracy as described below:

A 10% construction contingency provision has been included to get a "Base Project Estimate" to reflect the uncertainties in the unit rates used. A further provision has been added to reflect the uncertainties in the scope of the project – ie. is the solution adopted the right solution? Often detailed investigation will reveal

the need for additional works over and above that initially expected. The amount added depends on the amount of work already done on the project. Each project has been assessed as being at the project lifecycle stage as detailed in Table Q-1 below, and from this an estimated accuracy assessed. The estimate accuracy is added to the Base Project Estimate to get the Total Project Estimate – the figure that is carried forward into the financial forecasts. Project complexity ratings of "simple", "normal" or "complex" lead to different cost estimate multipliers of 0.8, 1.0 and 1.3 respectively. I

n the 2015-2025 AMP preparation cycle, contingencies were reduced to allow for the reduced risk of full cost overruns on a programme-wide basis. Individual projects are now more likely to go over budget and Council has specifically accepted this risk .

Table Q-1: Life Cycle Estimate Accuracies

Stage in Project Lifecycle	Estimate Accuracy
Concept / Feasibility	± 20%
Preliminary Design / Investigation	± 10%
Detailed Design to completion	± 5%

Q.1.7. Land Purchase and Access

The Council has made the assumption that it will be able to purchase land and/or secure access to complete projects. The risk of delays to project timing is high due to possible delays in obtaining the land or securing access. The Council works to mitigate this issue by undertaking consultation with landowners sufficiently in advance of the construction phase of a project. The consequence of not securing land or access for projects may require redesign which can have a moderate cost implication. If delays do occur, it may influence the level of service the Council can provide.

Q.1.8. Future Changes in Legislation and Policy

The legal and planning framework under which local government operates frequently changes. This can significantly affect the feasibility of projects, how they are designed, constructed and funded. The Council has assumed that there will be no major changes in legislation or policy. The risk of significant changes remains high owing to the nature of government policy formulation. If major changes occur it will impact on required expenditure and the Council has not provided mitigation for this effect.

Q.1.9. Resource Consents

The need to secure and comply with resource consents can materially affect asset activities and the delivery of projects.

Complying with resource consent conditions can affect the cost and time required to perform an activity, and in some instances determine whether or not the activity can continue. The Council has assumed that there will be no material change in operations due to consenting requirements over the period of the AMP.

There may be some risk of change in the following areas of the activity:

- maintenance of seawalls eg, Ruby Bay and Marahau;
- maintenance and renewals of jetties, boat ramps and wharves.

Securing resource consent is often a significant task in the successful delivery of a capital project or in the management of a particular activity. Consent applications may consume considerable time and resources, particularly in the instance of a publicly-notified application or where a decision is subject to appeal.

The Council has assumed that there will be no material change in the need to secure consents for activities and that consent costs for future projects will be broadly in line with the cost of consents in the past.

Q.1.10. Council's Disaster Fund Reserves

That the level of funding held in Council's disaster fund reserves and available from insurance cover will be adequate to cover reinstatement following emergency events. The risk of inadequate reserves and recovery from insurance claims would mean deferral of future capital projects to provide any financial shortfall required to cover reinstatement costs.

Q.1.11. Major Events

The financial forecasts have been prepared under the assumption that no major storm events will occur above what the coastal protection assets are able to cope with. If a major storm event does occur it may have a major effect on the operations and maintenance budgets due to the extent of reinstatement required and associated costs. The Council will need to prioritise expenditure if a situation such as this arises, the risk of which is high. For this purpose, a budget line has been included in the financial forecast of this AMP, for emergency work caused by a major storm event.

Q.2 Risk Management

Q.2.1. Why We Do Risk Management

Risk management is the systematic process of identifying, analysing, evaluating, treating and monitoring risk events so that they are mitigated as far as possible. Refer to Figure Q-1.

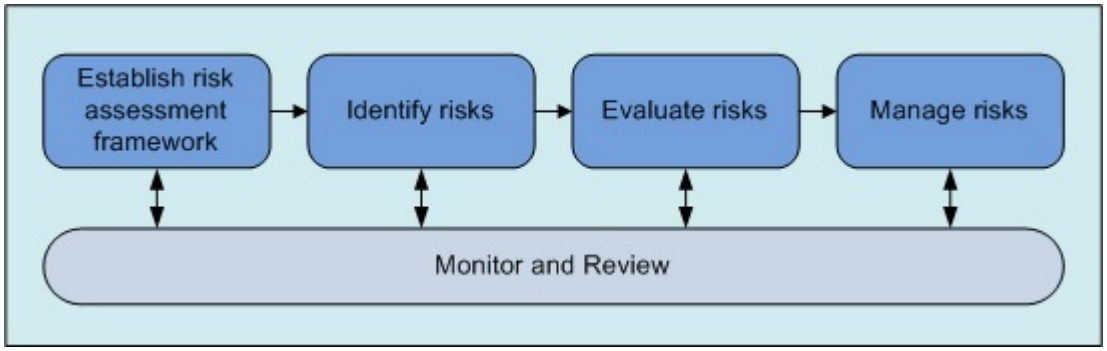


Figure Q-1: Risk Management Process

Risk management involves assessing each risk event and identifying an appropriate treatment. Treatments are identified to try and manage or reduce the risk. There are some risk events for which it is near impossible or not feasible to reduce the likelihood of the event occurring, or to mitigate the effects of the risk event e.g. extreme natural hazards. In this situation the most appropriate response may be to accept the risk as is, or prepare response plans and consider system resilience.

Well managed risks can help reduce:

- disruption to infrastructure assets and services;
- financial loss;
- damage to the environment;
- injury and harm;
- legal obligation failures.

Q.2.2. Our Approach to Risk Management

Q.2.2.1 Risk Assessment Framework

The Council's risk assessment framework was developed in 2011 to be consistent with *AS/NZS IS 4360:2004 Risk Management.* It assesses risk exposure by considering the consequence and likelihood of each risk event. Risk exposure is managed at three levels within the Council, refer to Figure Q-2:

- Level 1 – Corporate Risks;
- Level 2 – Activity Risks;

· Level 3 – Operational Risks.

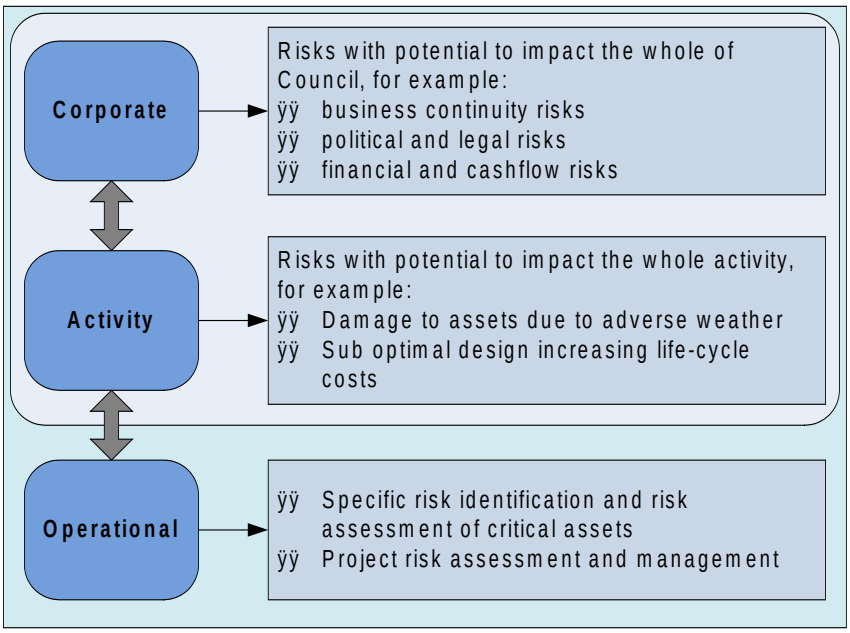


Figure Q-2: Levels of Risk Assessment

The risk assessment framework discussed in Sections Q.2.2.1 and Q.2.2.2 is applied to Corporate and Activity specific risks. There are some risk events which could be interpreted as either Corporate or Activity level risks. For example, a risk event may have the potential to impact the Council organisation as a whole or many parts of the organisation if it was to occur. In the first instance this type of risk would be classified as a Corporate risk. There is however a secondary consideration that needs to be given, that is, "is the risk best managed in different ways within the separate activities?" For example, a large seismic event will likely impact the Council organisation as a whole however each activity will prepare for and manage these risks differently; eg, water reservoirs may be strengthened to minimise the risk of collapse, or Corporate Services staff may prepare a business continuity plan.

The Council is yet to implement consistent risk management processes at the operational risk level. Development of the critical asset framework is discussed in Section Q.2.5. The Council plans to develop a framework for assessing maintenance and project risks in 2015.

Q.2.2.2 Risk Identification and Evaluation

The risk management framework requires the activity management team to identify activity risks and to then assess the risk, likelihood and consequence for each individual event. The definitions of risk, likelihood and consequence are defined in Q-3.

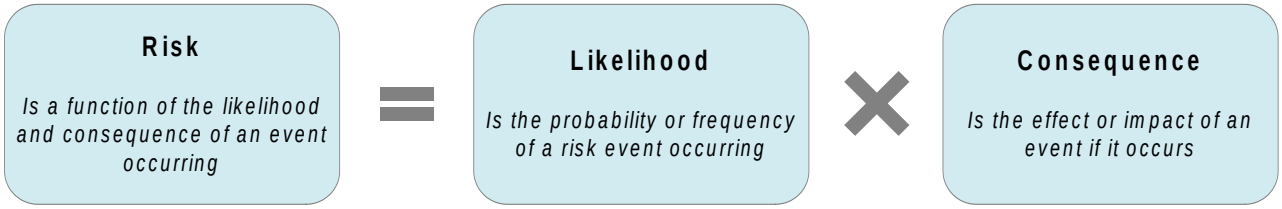


Figure Q-3: Risk Assessment Definitions

The Council has developed objective based scales to assist asset managers when determining the likelihood and consequence scores for all risk events. The consequence of each risk event is assessed on a scale of 1 to 100 for all of the consequence categories listed in Table Q-3 and the respective consequence rating score (Table Q-4) is selected.

Table Q-2: Risk Consequence Categories

	Category	Sub Category	Description
Consequence Categories	Service Delivery	N/A	Asset's compliance with Performance Measures and value in relation to outcomes and resource usage.
	Social / Cultural	Health and Safety	Impact as it relates to death, injury, illness, life expectancy and health.
		Community Safety and Security	Impact on perceived safety and reported levels of crime.
		Community / Social / Cultural	Damage and disruption to community services and structures, and effect on social quality of life and cultural relationships.
		Compliance / Governance	Effect on the Council's governance and statutory compliance.
		Reputation / Perception of Council	Public perception of the Council and media coverage in relation to the Council.
	Environment	Natural Environment	Effect on the physical and ecological environment, open space and productive land.
		Built Environment	Effect on amenity, character, heritage, cultural, and economic aspects of the built environment.
	Economic	Direct Cost	Cost to the Council.
		Indirect Cost	Cost to the wider community.

Table Q-3: Consequence Ratings

Consequence Rating					
Description	Extreme	Major	Medium	Minor	Negligible
Rating	100	70	40	10	1

Table Q-5 provides a summary of the likelihood assessment criteria.

Table Q-4: Likelihood Ratings

Likelihood Rating			
Description	**Frequency**	**Criteria**	**Rating**
Almost certain	Greater than every 2 years	The threat can be expected to occur or A very poor state of knowledge has been established on the threat	5
Likely	Once per 2-5 years	The threat will quite commonly occur or A poor state of knowledge has been established on the threat	4
Possible	Once per 5-10 years	The threat may occur occasionally or A moderate state of knowledge has been established on the threat	3
Unlikely	Once per 10-50 years	The threat could infrequently occur or A good state of knowledge has been established on the threat	2
Very Unlikely	Less than once per 50 years	The threat may occur in exceptional circumstances or A very good state of knowledge has been established on the threat	1

Using the existing risk management framework summarised in Table Q-6, the risk score is calculated by multiplying the likelihood of the risk event with the highest rated individual consequence category for that risk event to generate a risk score, as shown in Figure Q-4.

Table Q-5: Risk Scores

An example of how the risk score is calculated is below.

Risk Scoring Matrix		Consequence				
		Negligible	Minor	Medium	Major	Extreme
Likelihood	Almost Certain	5	50	200	350	500
	Likely	4	40	160	280	400
	Possible	3	30	120	210	300
	Unlikely	2	20	80	140	200
	Very Unlikely	1	10	40	70	100

Risk Score
Extreme
Very High
High
Moderate
Low
Negligible

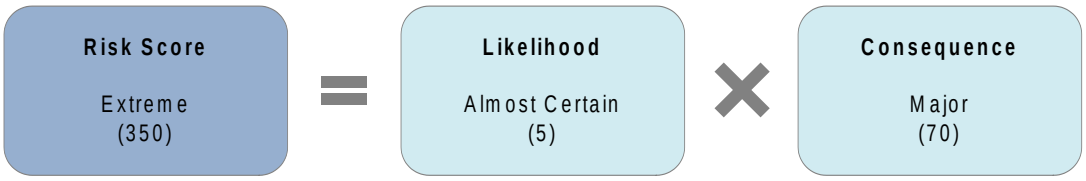


Figure Q-4: Risk Score Calculation

Risk scores are generated for inherent risk, current risk and target risk.

Inherent risk is the raw risk score without taking into consideration any current or future controls;

Current risk is the level of risk to the Council after considering the effect of existing risk management controls;

Target risk is the level of risk the Council expects and wants to achieve after applying the proposed risk management controls.

In some cases it is not feasible to reduce the inherent risk and in this case the Council would accept the inherent risk level as the current and target risk levels.

Q.2.2.3 Limitations

The processes outlined above forms a conservative approach to evaluating risk and could been seen as representing the worst case scenario. It also provides limited ability to differentiate the priority of risks due to the potential to score highly in at least one of the consequence categories; this tends to create a smaller range of results. For example two events with a likelihood of "Almost Certain (5)" have been compared below:

- **Event A** – scores "Major (70)" for one consequence category and "Negligible (1)" in all the remaining consequence categories, this will generate an inherent risk score of "Extreme (350)".
- **Event B** – scores "Medium (40)" in all 10 consequence categories, this will generate an inherent risk score of "Very High (200)".
- **Event C** – scores "Major (70)" in all 10 consequence categories, this will generate an inherent risk score of "Extreme (350)".

These examples show that there are limitations for the Council when prioritising risk events, especially those that may have a wider impact on the activity eg, Event B or C. Consequently, the Council acknowledges that there are some downfalls in its existing framework and it has proposed to undertake a full review of its risk management framework during 2015.

Q.2.3. Corporate Risk Mitigation Measures

Q.2.3.1 Asset Insurance

Tasman District Council has various mechanisms to insure assets against damage. These include:

- Tasman District Council insures it's above ground assets, like buildings through private insurance which is arranged as a shared service with Nelson City and Marlborough District Councils.
- Tasman District Council is a member of the Local Authority Protection Programme (LAPP) which is a mutual pool created by local authorities to cater for the replacement of some types of infrastructure assets following catastrophic damage by natural disasters like earthquake, storms, floods, cyclones, tornados, volcanic eruption, and tsunami. These infrastructure assets are largely stopbanks along rivers and underground assets like water and wastewater pipes and stormwater drainage.
- Taman District Council has a Classified Rivers Protection Fund, which is a form of self-insurance. The fund is used to pay the excess on the LAPP insurance, when an event occurs that affects rivers and stopbank assets.
- Tasman District Council has a General Disaster Fund, which is also a form of self-insurance. Some assets, like roads and bridges, are very difficult to obtain insurance for, or it is prohibitively expensive if it can be obtained. For these reasons the Council has a fund that it can tap into when events occur which damage the Council's assets that are not covered by other forms of insurance. Some of the cost of damage to these assets is covered by central government, for example the New Zealand Transport Agency covers around half the cost of damage to local roads and bridges (as set out in the co-investment rate/financial assistance rate).
- Refer to the Council's Financial Strategy for insurance disclosures as required under Section 31 of the Local Government Act.

Q.2.3.2 Civil Defence Emergency Management

The Civil Defence Emergency Management Act 2002 was developed to ensure that the community is in the best possible position to prepare for, deal with, and recover from local, regional and national emergencies. The Act requires that a risk management approach be taken when dealing with hazards including natural hazards. In identifying and analyzing these risks the Act dictates that consideration is given to both the likelihood of the event occurring and its consequences. The Act sets out the responsibilities for Local Authorities. These are:

- ensure you are able to function to the fullest possible extent, even though this may be at a reduced level, during and after an emergency;
- plan and provide for civil defence emergency management within your own district.

Tasman District Council and Nelson City Council jointly deliver civil defence as the Nelson Tasman Civil Defence Emergency Management (CDEM) Group. The vision of the CDEM Group is to build "A resilient Nelson Tasman community".

Civil Defence services are provided by the Nelson Tasman Emergency Management Office. Other council staff are also heavily involved in preparing for and responding to civil defence events. For example, the Council monitors river flows and rainfall and has a major role in alleviating the effects of flooding.

The Nelson Tasman Civil Defence Emergency Management Group developed a Regional Plan in 2012. The Plan sets out how Civil Defence is organised in the region and describes how the region prepares for, responds to and recovers from emergency events. A review is scheduled for 2016/2017.

Q.2.3.3 Engineering Lifelines

The Nelson Tasman Engineering Lifelines (NTEL) project commenced in 2002. The NTEL Group formed in 2003. Its report *Limiting the Impact* was reviewed in 2009. The purpose of the report was:

- to help the Nelson Tasman region reduce its infrastructure vulnerability and improve resilience through working collaboratively;
- to assist Lifeline Utilities with their risk reduction programmes and in their preparedness for response and recovery;
- to provide a mechanism for information flow during and after an emergency event.

The NTEL Group is in the process of applying for funding to hold a further review to begin in 2015.

The project was supported and funded by the two controlling authorities, Nelson City Council and Tasman District Council. Following the initial start-up forum in 2002, a Project Steering Group was formed and initial project work was completed. The initial work to investigate risks and assess vulnerabilities from natural hazard disaster events was divided amongst five task groups:

- Hazards Task Group;
- Civil Task Group;
- Communications Task Group;
- Energy Task Group;
- Transportation Task Group.

These groups were then tasked with assessing the risk and vulnerability of segments of their own networks against the impacts of major natural hazard disaster events. These natural hazards included:

- earthquake;
- landslide;
- coastal / flooding.

The Nelson Tasman region is geotechnically complex with high probabilities of earthquake, river flooding and landslides. By identifying impacts that these hazards may have on the local communities, the NTEL Group aim to have processes in place to allow the community to return to normal functionality as quickly as possible after a major natural disaster event.

To date the project has identified the impacts of natural hazards and the critical lifelines of the regions service networks including communication, transportation, power and fuel supply, water, sewerage, and stormwater networks. The initial NTEL assessment work is the first stage of an on-going process to gain a more comprehensive understanding of the impacts of natural hazards in the Nelson Tasman region.

Q.2.3.4 Recovery Plans

These plans are designed to come into effect in the aftermath of an event causing widespread damage and guide the restoration of full service.

The Recovery Plan for the Nelson Tasman Civil Defence and Emergency Management Group (June 2008) identifies recovery principles and key tasks, defines recovery organisation, specifies the role of the Recovery Manager, and outlines specific resources and how funds are to be managed.

Information about welfare provision in the Nelson-Tasman region is contained in a Welfare Plan (December 2005), which gives an overview of how welfare will be delivered during the response and recovery phases of an emergency.

The plan is a coordinated approach to welfare services for both people and animals in the Nelson Tasman region following an emergency event.

Q.2.3.5 Business Continuance

The Council has a number of processes and procedures in place to ensure minimum impact to coastal structures services in the event of a major emergency or natural hazard event.

The Council has limited business continuity plans that were developed around influenza pandemic planning in 2014;

The Council's contractors have up-to-date Health and Safety Plans in place.

Q.2.4. Coastal Structures Risks

In order to identify the key activity risks the asset management team has applied a secondary filter to the outcomes of the risk management framework. This is necessary to overcome the limitations of the framework. To apply this secondary filter the asset management team has used their coastal structures knowledge and engineering judgement to identify the key activity risks. The key risks relevant to the coastal structures activity are summarised in Table Q-7.

Table Q-2: Key Risks

Risk Event	Mitigation Measures
Catastrophic failure of a coastal structure.	**Current:** · routine maintenance is included in the coastal structures budgets; · reactive inspection following extreme weather events. **Proposed:** · develop inventory of Council owned coastal structures and their current condition; · increase the timing of routine inspections to every two years
Premature deterioration or obsolescence of an asset.	**Current:** · routine inspections. **Proposed:** · increase number of routine inspections and scheduling of maintenance programme.
Failure to adequately prepare for climate change and failure to respond to changing coastline.	**Current:** · reactive inspections and maintenance/repairs following extreme weather events; · introduction of an interim coastal policy statement which states what the Council is prepared to protect. **Proposed:** · ongoing coastal hazard modelling will provide the Council with a clearer picture of where issues may exist and prepare for sea level change; · development of a coastal hazard policy which includes the fundamentals of NZCPS 2010.
Customer perception of the Council not doing enough to protect private property and public assets.	**Current:** · introduction of the interim coastal policy statement; · regular contact with communities at risk from coastal inundation; · management of resource consents and CSRs.
Failure to manage coastal erosion of public land.	**Current:** · routine inspections; · resource consent management; · application of NZCPS 2010. **Proposed:** · ongoing coastal hazard modelling will provide the Council with a clearer picture of where issues may exist and prepare for sea level change; · increase number of routine inspections and scheduling of maintenance programme.

An asset management improvement item included in Appendix V is to review all inherent, current and target risk scores following the adoption of the amended framework.

Q.2.4.1 Other Risks Mitigation Measures

General risk mitigation is fostered by continual staff and system development to progressively improve the "what" and "how" we are undertaking the activity.

Q.2.5. Critical Assets

The draft coastal structures critical asset framework was developed in 2014. The framework is largely complete but is yet to be finalised and implemented. It is planned to implement the framework during 2015 to test the draft weightings and respective scores. It is likely that the framework will be refined after this initial test run.

Figure Q-5 represents the process used by the coastal structures activity planning team to assess coastal structures assets for criticality.

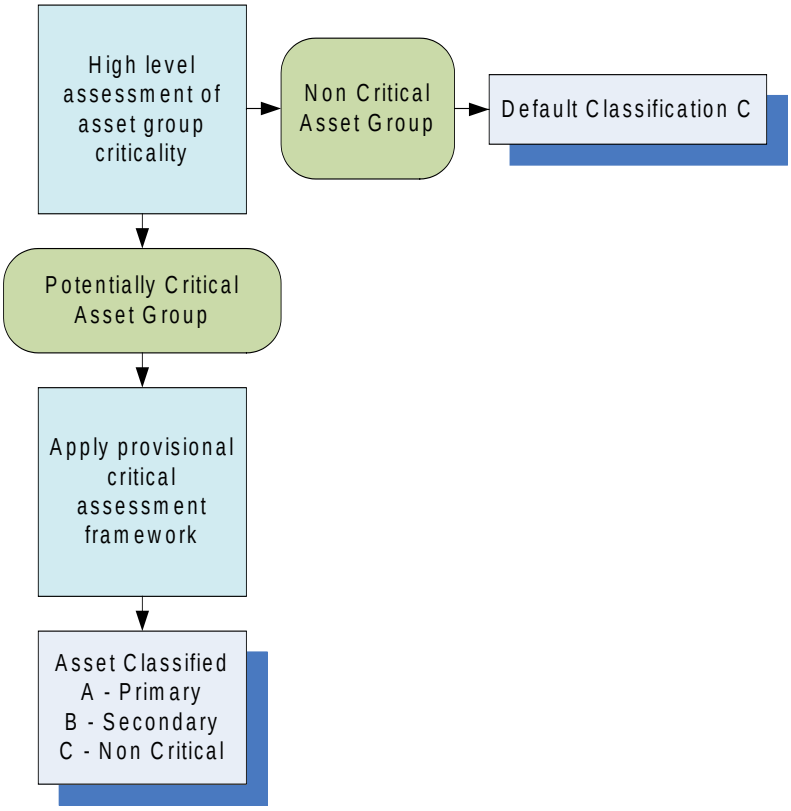


Figure Q-5: Critical Asset Assessment Process

A high level assessment was first undertaken to determine if some asset groups as a whole could be considered either critical or non-critical. This initial assessment determined that sea walls, coastal assets protecting other engineering assets, navigational aids and boat ramps were critical.

Mapua Wharf and pontoon was considered non-critical.

The key inputs into the framework and critical asset decision-making process are:

- Nelson Tasman Engineering Lifelines report;
- data held by the Council's harbourmaster;
- transportation and utilities critical assets located within the coastal margin;

· network and asset engineer's knowledge and experience.

Q.2.5.1 Critical Asset Assessment

All seawalls, boat ramps and navigational aids will be assessed for criticality. Criticality assessments will be completed using the framework set out in Table Q-8 below.

To assess for criticality, individual assets will be evaluated against all seven of the criteria categories listed below and a sub score will be selected based on the impact potential if the asset was to catastrophically fail. The sub score is then multiplied by the weighting to produce a weighted score. The final score is the total sum of the weighted scores for all seven categories.

Table Q-3: Critical Asset Framework

ID	Criteria Category	Well-being	Severity Score	Score	Weighting	Point Score
			Potential for severe impact on quality of life.	5		50
1	Quality (includes social impact and lifelines)	Social/Cultural	Potential for moderate impact on quality of life.	3	10	30
			Minimal impact.	1		10
			Severe disruption to whole community.	5		100
2	Quantity (disruption to LOS including access and number of properties affected)	All	Moderate disruption - affects a neighbourhood.	3	20	60
			Minimal impact - affects a property.	1		20
			May take longer than a week to repair.	5		50
3	Time to Repair	All	May take up to a week to repair.	3	10	30
			May be temporarily repaired within 48 hours.	1		10
			Costs greater than $50,000 to repair.	5		100
4	Cost of Repair	All	Costs between $10,000 and $50,000 to repair.	3	20	60
			Costs less than $10,000 to repair.	1		20
5	Environmental Impact	Environment	Failure of asset would have an environmental impact.	5	5	25

ID	Criteria Category	Well-being	Severity Score	Score	Weighting	Point Score
			Failure of asset would not have an environmental impact.	1		5
6	Cultural Impact	Social/Cultural	Failure of asset would have a cultural impact.	5	5	25
			Failure of asset would not have a cultural impact.	1		5
			Asset supports/protect multiple other critical assets.	5		125
7	Supports other Critical Assets	All	Asset protects one critical asset.	3	25	75
			Does not support/protect a critical asset.	1		25

Once the final score has been calculated the critical asset hierarchy can be determined as shown in Table Q-9. The critical asset hierarchy will be a key input that informs asset life-cycle decisions, especially when considering how much the Council should prolong the life of an asset.

Table Q-4: Critical Asset Hierarchy

Category	Description	Final Score
A	Primary	>300
B	Secondary	150-300
C	Non Critical	<150

APPENDIX R LEVELS OF SERVICE, PERFORMANCE MEASURES, AND RELATIONSHIP TO COMMUNITY OUTCOMES

R.1 Introduction

A key objective of this AMP is to match the level of service provided by the coastal structures activity with agreed expectations of customers and their willingness to pay for that level of service. The levels of service provide the basis for the life cycle management strategies and work programmes identified in the AMP.

The levels of service for coastal structures have been developed to contribute to the achievement of the stated Community Outcomes that were developed in consultation with the community, but taking into account:

- the Council's statutory and legal obligations;
- the Council's policies and objectives;
- the Council's understanding of what the community is able to fund.

R.2 Levels of Service

Levels of service are attributes that Tasman District Council expects of its assets to deliver the required services to stakeholders.

A key objective of this plan is to clarify and define the levels of service for the coastal structures assets, and then identify and cost future operations, maintenance, renewal and development works required of these assets to deliver that service level. This requires converting the user's needs, expectations and preferences into meaningful levels of service.

Levels of service can be strategic, tactical, operational or implementational and should reflect the current industry standards and be based on.

- ***Customer Research and Expectations:*** Information gained from stakeholders on expected types and quality of service provided.
- ***Statutory Requirements:*** Legislation, regulations, environmental standards and Council bylaws that impact on the way assets are managed (ie. resource consents, building regulations, health and safety legislation). These requirements set the minimum level of service to be provided.
- ***Strategic and Corporate Goals:*** Provide guidelines for the scope of current and future services offered and manner of service delivery, and define specific levels of service, which the organisation wishes to achieve.
- ***Best Practices and Standards***: Specify the design and construction requirements to meet the levels of service and needs of stakeholders.

R.2.1. Industry Standards and Best Practice

The AMP acknowledges the Council's responsibility to act in accordance with the legislative requirements that impact on the Council's coastal structures activity. A variety of legislation affects the operation of these assets, as detailed in **Appendix A**.

R.2.2. Prioritisation Related to Available Resources

Coastal structure assets often have higher levels of maintenance and renewal requirements proposed (increased levels of service etc) than resources allow for. Trade-offs have to be made as to what impacts on the ability of an asset to provide a service against the nice to have aspects.

R.3 What Level of Service Do We Seek to Achieve?

There are many factors that need to be considered when deciding what level of service the Council will aim to provide. These factors include:

- the Council needs to understand and meet the needs and expectations of the community;
- the services must be operated within the Council's policy and objectives;
- the community must be able to fund the level of service provided.

Levels of service are outlined in two tiers - Strategic and Operational.

The operational levels of service and performance measures are used to ensure the service and facilities are able to achieve the strategic levels of service and the Council's objectives.

Level of services need to be reviewed and upgraded on a continuous basis in line with legislative and regulatory changes and feedback from customers, consultation, internal assessments, audits and strategic objectives.

The levels of service that the Council has adopted for this AMP have been partially developed from the levels of service prepared in the July 2012 AMPs. They take into account feedback from various parties, including Audit New Zealand, industry best practice and ease of measuring and reporting of performance measures.

The Council has decided to reduce the number of levels of service reported in the LTP, showing only those that are considered to be Customer focused. The AMP extends the levels of service and performance measures to include the more technical measures associated with the management of the activity.

R.4 What Plans Have the Council Made to Meet The Levels of Service?

In preparing the future financial forecasts, the Council have included specific initiatives to meet the current or intended future levels of service.

The Council is making a capital works investment of $80,000 over the 30 year period to upgrade existing coastal structures assets and improve levels of service. This includes the boat ramp reconstruction at Grossi Point.

In addition to the capital works, the Council has allocated a budget of $2.3 million over the 30 year period for the operation and maintenance of its current and future coastal structures assets. This allocation includes professional services and investigation work and studies such as:

- coastal structures inventory;
- asset inspections.

R.5 Levels of Service Linked to Legislation

Whilst the Council is required to comply with various legislation and regulations when managing the coastal structures activity, no specific levels of service are included which relate to legislation.

Table R-1: Performance against Current Levels of Service, and Intended Future Performance

ID	Levels of Service (we provide)	Performance Measure (We will know we are meeting the level of service if…)	Current performance (as at end June 2015	Future Performance			Future Performance (targets) by Year 10 2024/25
				Year 1 2015/16	Year 2 2016/17	Year 3 2017/18	
Community Outcome: Our unique natural environment is healthy and protected.							
1	**Our works are carried out so that the impacts on the natural coastal environments are minimised to a practical but sustainable level.**	*Resource consents are held and complied with for works undertaken by Council or its contractors on Council owned coastal protection.* *As measured by the number of abatement notices issued to Council.*	**Actual** = There have been no notices issued for breach of resource consent conditions.	*No notices issued*	*No notices issued*	*No notices issued*	*No notices issued*
2		Council owned coastal protection is maintained to its original constructed standard. The Council has a detailed inventory of coastal assets and condition As measured by routine inspections after storm events.	**Actual** = Not currently measured	100%	100%	100%	100%
Community Outcome: Our infrastructure is safe, efficient and sustainably managed.							
3	**Faults in the existing council owned coastal assets managed by the Engineering department are responded to and fixed promptly**	We are able to respond to Customer Service Requests in our coastal assets within the timeframes we have agreed with our suppliers and operators, and within the available funding. Respond to CSR and begin actioning sequence within 5 days	**Actual** = 100%	70%	90%	100%	100%

APPENDIX S COUNCIL'S DATA MANAGEMENT, ASSET MANAGEMENT PROCESSES AND SYSTEMS

S.1 Introduction

The Office of the Auditor General (OAG) has chosen to use the International Infrastructure Management Manual (IIMM) as the benchmark against which New Zealand councils measure their standards. The IIMM describes the Asset Management (AM) process as a step by step process applied to an activity or network level, to manage assets from planning to disposal or renewal. This process is shown in Figure S-1 and summarised in this appendix.

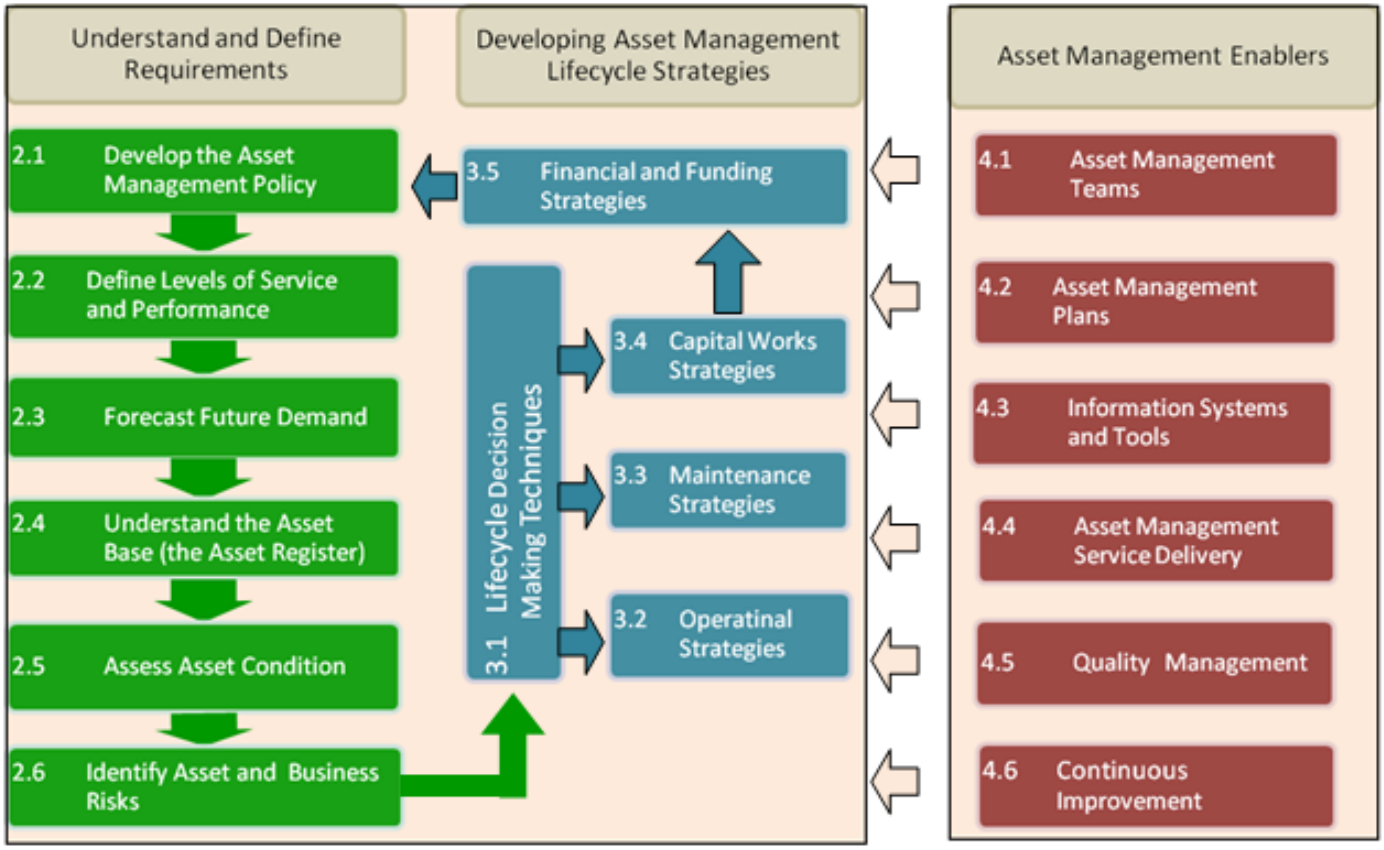


Figure S-1: The Asset Management Process (taken from IIMM 2011)

S.2 Understand and Define Requirements

This phase determines what service levels are required and how future demand might change over time, as well as the current assets' capability to deliver on those requirements.

S.2.1 Develop the Asset Management Policy

The Asset Management policy framework guides the organisation in terms of priorities and strategies, and sets out specific responsibilities, objectives, targets and plans. The Council has approached this by determining the desired and actual levels of asset management practice, and identifying the gaps between them for future improvement.

S.2.1.1 Determine the Appropriate (Desired) Level of Asset Management Practice

The level of Asset Management expected can differ between activities. The IIMM defines the standards of the Activity Management Plans (AMPs) on a scale as follows:

· Minimum	Starting point
· Core	Basic
· Intermediate (core plus)	Transition between Core and Advanced
· Advanced	Most thorough

In 2010, Waugh Infrastructure Management Ltd undertook a review of these levels and advised on target levels. A range of parameters (including populations, issues affecting the district, costs and benefits to the community, legislative requirements, size, condition and complexity of assets, risk associated with failure, skills and resources available, and customer expectation) was assessed to determine the most suitable level of asset management.

The results showed that Tasman District Council should be managing its assets at the following levels:

· Transportation	Intermediate with demand management and resource availability drivers
· Stormwater, Water, Wastewater	Intermediate with demand and risk management drivers
· Solid Waste	Core with risk management drivers
· Rivers	Core
· **Coastal Structures**	**Core (future reassessment may be required)**

S.2.1.2 Determine the Actual Level of Asset Management Practice and Identify Gaps

The Council underwent a process at the end of the 2009 AMP to undertake a high level review of the AMPs and associated activity management processes against good practice asset management as described in the IIMM and in accordance with the Office of Auditor General. During this process, the AMP and associated practices were scored to give a snapshot of the current status and then set targets as to where the Council wished to head. The 2009 AMP Improvement Plan was assessed in its effectiveness to close the gap between actual and target compliance levels and new items added to the Improvement Plan where gaps were identified.

The results of the review are detailed under separate cover (Performance Review of Stormwater Activity Management Processes, MWH February 2010).

The two reviews described above were carried out independently of each other. However, the outputs from both were compared to ensure consistency of recommendations. While both reviews focused on slightly different aspects of asset management practices, there was no conflict between the recommendations made.

This work is now somewhat dated as the AMPs have changed substantially since 2009. This area will be renewed following development of the LTP.

Table S-1 below shows analysis undertaken to link the two reviews to identify the compliance gaps and actions that should be undertaken to address them.

Table S-1: Analysis of Asset Management Reviews

	CORE	Compliance Status	Compliance Gaps to address to meet CORE
Description of Assets	Advanced (minus the systematic monitoring of performance)	Partially Compliant	**Action:** Resolve understanding of ownership. **Action:** Identify assets not performing to standard.
Levels of Service	Core	Substantially Compliant	**Action:** Include Activity in Communitrak™ surveys.
Managing Growth	Core	Partially Compliant	**Action:** Translate demand analysis into asset and non-asset solutions.
Risk Management	Core	Partially Compliant	Compliance will improve with implementation of IRM.
Lifecycle Decision Making	Core (plus identification of options for asset maintenance)	Does not Comply	**Action:** Develop a renewals and capital programme based on a risk based decision support tool.
Financial Forecasts	Advanced (with the exception of sensitivity testing of forecasts)	Substantially Compliant	
Planning Assumptions and Confidence Levels	Core (plus assumptions listed)	Partially Compliant	**Action:** Detail in AMP the strengths and weakness of systems used.
Outline Improvement Programmes	Advanced	Partially Compliant	**Action:** Identify timeframes, priorities and resources for Improvement Plan actions.
Planning by Qualified Persons	Core	Substantially Compliant	**Action:** Issues around management and operation of activity to be resolved.
Commitment	Advanced	Substantially Compliant	**Action:** More emphasis and commitment needed to Improvement Plan.

S.2.2 Define Levels of Service and Performance

The Level of Service and Performance Management frameworks will ensure that agreed stakeholder requirements are met. Levels of Service, Performance measures, and Relationship to Community Outcomes are detailed in Appendix R.

S.2.3 Forecast Future Demand

Understanding how future demand for service will change enables the Council to plan ahead to meet that demand. Demand and future new capital requirements are dealt with in Appendix F.

S.2.4 Understand the Asset Base (the Asset Register)

A robust asset register is a core requirement for asset management.

Data on the Council assets is collected via as-built plans (supplied through capital works and subdivision), maintenance contract work and field studies. Two enterprise asset systems are used to record core data:

- RAMM – Transportation excluding Streetlights;
- Confirm – Stormwater, Water, Wastewater, Solid Waste, Rivers, Coastal Structures, Streetlights.

Most data sets are viewable on the corporate GIS browser, Explore Tasman. Reporting systems summarise data for management and performance reporting, and for providing links between AM systems and GIS / financial systems. Several other standalone applications exist for specific purposes.

The Asset Register and other Information Systems are described more comprehensively in section S4.3 Information Systems and Tools.

S.2.5 Assess Asset Condition

The Council needs to understand the current condition of its assets. Monitoring programmes should be tailored to consider how critical the asset is, how quickly it is likely to deteriorate, and the cost of data collection.

An inspection of wharves, jetties and ramps was performed in September 2009; condition was assessed and this resulted in some remedial works being performed. Conditions were captured for individual assets at the time but have not since been updated. Another inspection is due in the near future (done at 5 yearly intervals).

Where condition rating is done, a 1-5 scale is used, as per the NZQQA Infrastructure Asset Grading Guidelines, as shown in Table S-4.

Table S-4: Asset Condition Rating Table

Condition Grade and Meaning	General Meaning	
1 **Very Good**	Life: Physical: Access: Security: Exposure:	10+ years. Fit for purpose. Robust and modern design. Easy; easy lift manhole lids, clear access roads. Sound structure with modern locks. Fully protected from elements or providing full protection.
2 **Good**	Life: Physical: Access: Security: Exposure:	Review in 5 – 10 years. Fit for purpose. Early signs of corrosion/wear. Robust, but not latest design. Awkward; heavy/corroded lids, overgrown with vegetation. Sound structure with locks. Adequate protection from elements or providing adequate protection.

Condition Grade and Meaning	General Meaning
3 **Moderate**	Life: Review in 5 years. Physical: Potentially impaired by corrosion/wear, old design or poor implementation. Access: Difficult: requires special tools or more than one person. Secure: Locked but structure not secure, or secure structure with no locks. Exposure: Showing signs of wear that could lead to exposure.
4 **Poor**	Life: Almost at failure, needs immediate expert review. Physical: Heavy corrosion impairing use. Obvious signs of potential failure. Access: Restricted, potentially dangerous. Secure: Locks and/or structure easily breeched. Exposure: Exposure to elements evident e.g. leaks, over heating.
5 **Very Poor**	Life: 0 years – broken. Physical: Obvious impairments to use. Heavy wear/corrosion. Outdated/flawed design/build. Access: Severely limited or dangerous. Security: No locks or easily breeched. Exposure: Exposed to elements when not specifically designed to be.

S.2.6 Identify Asset and Business Risks

A key process is assessing critical assets and risks. This feeds into all lifecycle decision-making processes.

S.2.6.1 Asset Risks - Critical Assets

All assets except roading ones are now being graded for Criticality as shown in Table S-5. This process is expected to be complete by early 2015.

Table S-5: Asset Criticality Rating Table

Condition Grade	Meaning	Significance for Future Maintenance
A	Critical	Advanced condition assessment and preventative maintenance
B	Normal	Standard condition assessment and maintenance
C	Non-critical	Reduced maintenance acceptable

Asset criticality is partially captured in Confirm; there is an ongoing project to complete this by early 2015.

Assets are created with a default value of C. An assessment is then performed to rate criticality. This is currently in progress.

S.2.6.2 Business Risks

The Council has adopted an Integrated Risk Management framework to manage risks, both at corporate and activity level. This is detailed in Appendix Q, Significant assumptions, uncertainties and risk management.

S.3 Developing Asset Management Lifecycle Strategies

S.3.1 Lifecycle Decision Making Techniques

The lifecycle decision phase looks at how best to deliver on the requirements by applying various decision-making techniques, strategies and plans. These are discussed in separate appendices as listed below.

S.3.2 Operational Strategies and Plans

Demand management strategies (reducing overall demand and / or reducing peak demands) are covered in Appendix N, Demand management.

Emergency management processes are covered in Appendix Q, Significant assumptions, uncertainties and risk management.

S.3.3 Maintenance Strategies and Plans

Optimised maintenance programmes are dealt with in Appendix E, Operations and Maintenance.

S.3.4 Capital Works Strategies

Forecast growth and demand and new asset investment programming are detailed in Appendix F, Demand and future new capital requirements.

Optimised renewal programmes and Asset investment programmes are covered in Appendix I, Capital requirements for future renewals.

S.3.5 Financial and Funding Strategies

A robust, long-term financial forecast is developed as the culmination of this phase, which identifies strategies to fund these programmes. This section covers how the resource demand of AM can be identified, disclosed and funded.

The following appendices hold this information:

- Appendix D – Asset valuations;
- Appendix G – Development contributions / financial contributions;
- Appendix K – Public debt and annual loan servicing costs;
- Appendix L – Summary of future overall financial requirements;
- Appendix M – Funding policy, fees and charges.

S.4 Asset Management Enablers

Underpinning Asset Management decision-making at each stage are the following:

S.4.1 Asset Management Teams

The Council has an organisational structure and capability that supports the AM planning process. Responsibility for asset planning across the lifecycle is delivered by teams within the Council as shown by Figure S-3 below.

Corporate and Strategic Planning is performed by the Strategic Policy team in the Community Services Department.

The Asset Management function is managed by Engineering's Activity Planning team. Operations are the responsibility of the Utilities and Transportation teams, while Projects and Contracts are managed by the Programme Delivery team.

Operations and maintenance and Contracts are externally tendered. Professional services are supplied by MWH and other consultants. Details are discussed in Section 4.4.

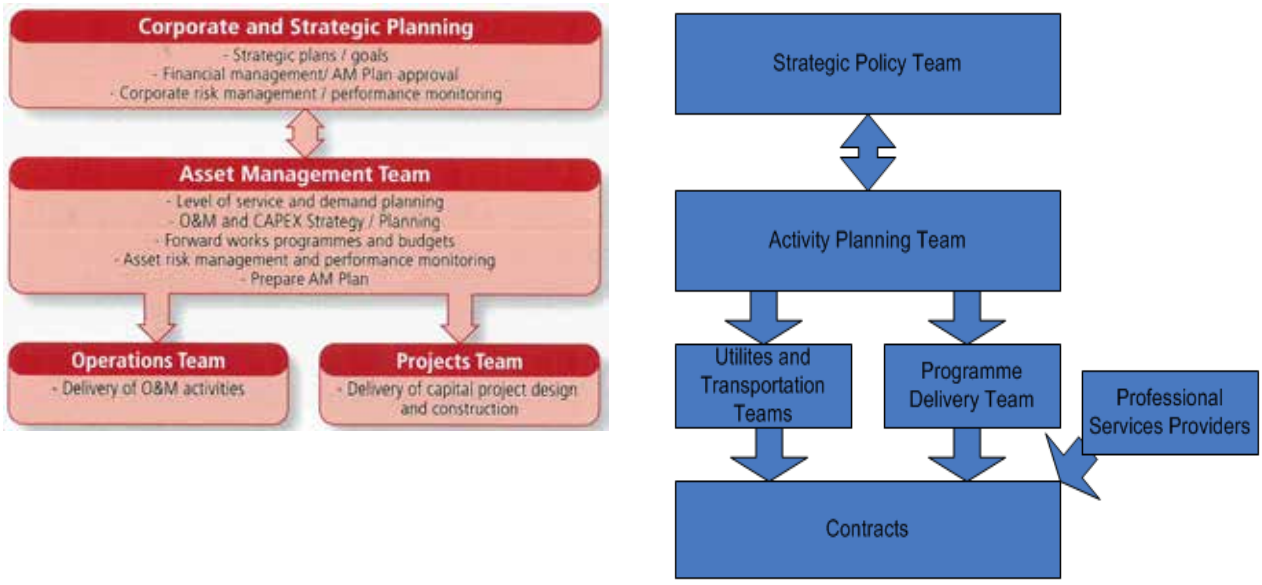


Figure S-3: Asset Management Team Roles (taken from IIMM 2011) and Asset Management Teams at Tasman District Council

S.4.2 Asset Management Plans

Asset Management plans need to be robust and set out clear future strategies and programmes. This document is a key part of the Asset Management process and will be updated on a regular basis in between AMP planning cycles.

S.4.3 Information Systems and Tools

The Council has a variety of systems and tools that support effective operation and maintenance, record asset data, and enable that data to be analysed to support optimal asset programmes. These are detailed below. There is a continual push to incorporate all asset data into the core AM systems where possible; where not possible, attempts are made to integrate or link systems so that they can be easily accessed.

Figure S-2 shows how the various systems used in the Council inter-relate.

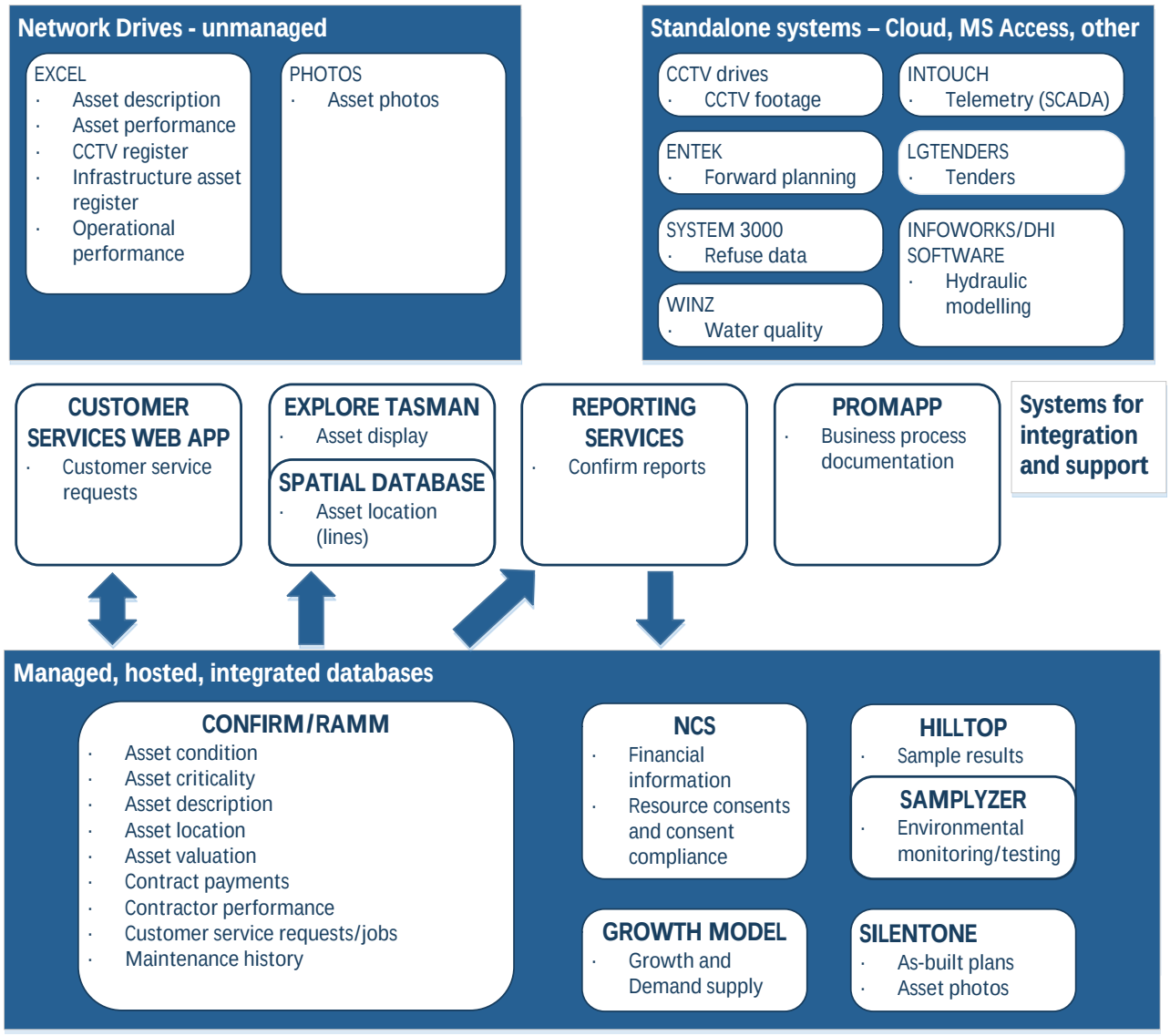


Figure S-2: Systems used for Asset Management at Tasman District Council

Table S-2 lists the various data types and systems they are held in, with a summary of how they are managed.

Table S-3 defines the Accuracy and Completeness grades applied to asset data in Table S-2

Table S-2: Data Types and Information Systems They Are Held In

Data Type	Information System	Management Strategy	Data Accuracy	Data Completeness
As-built plans	SilentOne	As-built plans are uploaded to SilentOne, allowing digital retrieval. Each plan is audited on receipt to ensure a consistent standard and quality.	2	2
Asset condition	Confirm	See discussion in section S2.5	N/A	N/A

Data Type	Information System	Management Strategy	Data Accuracy	Data Completeness
Asset criticality	Confirm	See section S2.6.1 Asset Risks - Critical assets	4	4
Asset description	Confirm	All assets are captured in Confirm's Site and Asset modules, from as-built plans and maintenance notes. Hierarchy is defined by Site and three levels of Asset ID (whole site, whole asset or asset). Assets are not broken down to component level except where required for valuation purposes. It is also possible to set up asset connectivity but this hasn't been prioritised for the future yet.	2	3
Asset location	Confirm (point data) / GIS (line data)	Co-ordinates for point data completely (NZTM) describe spatial location.	3	3
Asset valuation	Confirm	Valuation of assets done based on data in Confirm and valuation figures stored in Confirm.	3	3
Contract payments	Confirm	All maintenance and capital works contract payments are done through Confirm. Data on expenditure is extracted and uploaded to NCS.	N/A	N/A
Contractor performance	Confirm	Time to complete jobs is measured against contract KPIs through Confirm's Maintenance Management module.	N/A	N/A
Corporate GIS browser	Explore Tasman	Selected datasets are made available to all Council staff through this internal GIS browser via individual layers and associated reports.	N/A	N/A
Customer service requests	Customer Services Application / Confirm	Customer calls relating to asset maintenance are captured in the custom-made Customer Services Application and passed to Confirm's Enquiry module or as a RAMM Contractor Dispatch.	N/A	N/A
Financial information	NCS	The Council's corporate financial system is NCS, a specialist supplier of integrated financial, regulatory and administration systems for Local Government. Contract payment summaries are reported from Confirm and imported into NCS for financial tracking of budgets.	N/A	N/A

Data Type	Information System	Management Strategy	Data Accuracy	Data Completeness
Infrastructure Asset Register	Spreadsheet	High level financial tracking spreadsheet for monitoring asset addition, disposals and depreciation. High level data is checked against detail data in the AM system and reconciled when a valuation is performed.	2	2
Forward planning	Entek TPM (Time and space Project Management)	Forward programmes for the Council activities, and reseal / footpath renewal programmes, are uploaded to TPM in order to identify clashes and opportunities. The strength of this module relied on buy in from Utilities Companies and Local Contractors (neither of which occurred).	N/A	N/A
Growth and Demand Supply	Growth Model	A series of linked processes that underpin the Council's long term planning, by predicting expected development areas, revenues and costs, and estimating income for the long term.	2	2
Maintenance history	Confirm	Maintenance history not stored against asset as no specific contract is responsible for maintenance. Some notes have been added where information was found.	3	5
Photos	Network drives / SilentOne	Electronic photos of assets are mainly stored on the Council's network drives. Coastal Structures and Streetlight photos have been uploaded to SilentOne and linked to the assets displayed via Explore Tasman.	N/A	N/A
Processes and documentation	Promapp	Promapp is process management software that provides a central online repository where the Council's process diagrams and documentation is stored. It was implemented in 2014 and there is a phased uptake by business units.	2	5
Resource consents and consent compliance	NCS	Detail on Resource Consents and their compliance of conditions (e.g. sample testing) are recorded in the NCS Resource Consents module.	2	2
Reports	Confirm Reports	Many SQL based reports from Confirm and a few from RAMM are delivered through Confirm Reports. Explore Tasman also links to this reported information to show asset information and links (to data in SilentOne and NCS)	N/A	N/A

Data Type	Information System	Management Strategy	Data Accuracy	Data Completeness
Tenders	LGTenders	Almost all New Zealand councils use this system to advertise their tenders and to conduct the complete tendering process electronically.	N/A	N/A

Table S-3: Asset Data Accuracy and Completeness Grades

Grade	Description	% Accuracy	Grade	Description	% Completeness
1	Accurate	100	1	Complete	100
2	Minor inaccuracies	± 5	2	Minor gaps	90 – 99
3	50% estimated	± 20	3	Major gaps	60 – 90
4	Significant data estimated	± 30	4	Significant gaps	20 – 60
5	All data estimated	± 40	5	Limited data available	0 – 20

S.4.4 Asset Management Service Delivery

The Council has opted to tender Capital Works and Operations and Maintenance externally to obtain more cost-effective service delivery.

The Council has adopted effective procurement strategies, such that AM activities are being delivered in the most cost-effective way (value for money rather than lowest cost).

S.4.4.1 Procurement Strategy

Tasman District Council has a formal Procurement Strategy for its Engineering Services. This Strategy has been prepared to meet New Zealand Transport Agency's (NZTA) requirements for expenditure from the National Land Transport Fund, and it describes the procurement environment that exists within the Tasman District. It has been developed following a three-year review of the Strategy and approved in November 2013. It principally focuses on Engineering Services activities but is framed in the NZTA procurement plan format, which is consistent with whole of government procurement initiatives.

The Council's objectives are to:

- implement policies and financial management strategies that advance the Tasman District;
- ensure sustainable management of natural and physical resources, and security of environmental standards;
- sustainably manage infrastructure assets relating to Tasman District;
- enhance community development and the social, natural, cultural and recreational assets relating to Tasman District;
- promote sustainable economic development in the Tasman District.

The Council have recently implemented a procurement and tender award governance gateway process. This is shown in Figure S-3 below.

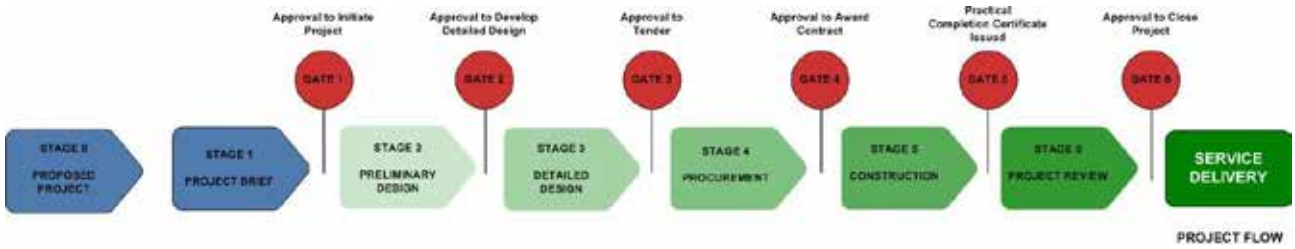


Figure S-3: Gateway Process Used by Programme Delivery Team for Project Delivery

At the Approval to Tender gate (Gate 3), the Tender Evaluation Team:

1 Carefully reviews the specifications, drawings, detailed design.

2 Reviews estimate against allocated budget and checks availability of funds.

3 Assesses/ reviews project-specific risks and critical success factors.

4 selects the evaluation method (supplier panel or direct to market; Price/Quality, Lowest Price Conforming, Weighted Attributes, Target Price, Brooks Law, etc) – check best suited to project's scope and risk levels.

5 Checks peer review of design.

6 Checks status of required Consents and Land Issues.

7 Reviews Price/ Non-Price weightings, risk review and quality premium they are prepared to pay.

8 Reviews attributes (including pass/ fail and/ or weightings) and targeted questions in RFT to check for relevance to project-specific success factors and differentiators.

9 Reviews the response period (relative to RFT requirements) to ensure there is sufficient time for quality responses.

At the Approval to Award gate (Gate 4), the Programme Delivery Manager:

10 Reviews the tender process to check relevance/ effectiveness.

11 Reviews the recommendation.

12 Checks if Tender Panel approval is required.

13 Awards the Contract.

S.4.4.2 Professional Services Contract

The Engineering Services Department has a need to access a broad range of professional service capabilities to undertake investigation, design and procurement management in support of its significant transport, utilities, coastal management, flood protection and solid waste capital works programme. There is also a need to access specialist skills for design, planning and policy to support the in-house management of the Council's networks, operations and maintenance.

To achieve this the Council went to the open market in late 2013 for a primary professional services provider as a single preferred consultant to undertake a minimum of 60% in value of the Council's infrastructure professional services programmes. The contract was awarded to MWH Consulting following a 6 month tender selection process and commenced on 1 July 2014 with an initial three year term and two three-year extensions to be awarded at the Council's sole discretion.

S.4.5 Quality Management

This section outlines quality management approaches that support the Council's AM processes and systems.

Approach	Description
Process documentation	This is being phased in across the Council with the implementation of Promapp. Over time business units are capturing organisational knowledge in an area accessible to all staff, to ensure business continuity and consistency. Detailed documentation, forms and templates can be linked to each activity in a process. Processes are shown in flowchart or swim lane format, and can be shared with external parties.
Quality Management systems	Tasman District Council does not have a formal Quality Management system across the Council; quality is ensured by audits and checks that are managed in individual teams. Quality checks are done at many stages throughout the Asset Management process.
Planning	The planning process is formalised across the Council, with internal reviews and the Council approval stages. Following completion of the AMPs, a peer review is done. From that a comprehensive Improvement Plan is drawn up. Actions are discussed at regular meetings and progress noted. These will be incorporated into the following round of AMPs.
Programme Delivery	This follows strictly a gateway system with inbuilt checks and balances at every stage. Projects can't proceed until all criteria of a certain stage have been completely met and formally signed off.
Subdivision works	Subdivision sites are audited for accuracy of data against the plans submitted. CCTV is performed on all subdivision Stormwater and Wastewater assets at completion of works and again before the assets are vested in the Council, so that defects can be repaired.
Asset creation	As-built plans are reviewed on receipt for completeness and adherence to the Engineering Standards and Policies. If anomalies are discovered during data entry, these are investigated and corrected. As-built information and accompanying documentation is required to accompany maintenance contract claims.
Asset data integrity	Monthly reports are run to ensure data accuracy and completeness. Stormwater, Water, Wastewater, Coastal Structures, Solid Waste and Streetlight assets are shown on the corporate GIS browser, Explore Tasman, and viewers are encouraged to report anomalies to the Activity Planning Data Management team.
Asset performance	Audits of reticulation flows are done regularly to ensure that system performance is optimal.
Operations	Audits of a percentage of contract maintenance works are done every month to ensure that performance standards are maintained. Failure to comply with standards is linked to financial penalties for the contractor.
Levels of Service	KPIs are reported regularly in Engineering Services council meetings and then again annually and audited by the OAG.
Customer Service Requests (CSRs)	Asset based CSRs (in Confirm and RAMM) are checked monthly for outstanding items via a customised report that is e-mailed to action officers. Non-asset based CSRs (in NCS) are checked for compliance weekly at Senior Management Teams, via a dashboard reporting system.
Reports to Council	All reports that are presented to the Council are reviewed and edited by the Executive Assistant prior to approval by the Engineering Manager and the Senior Management Team.

S.4.6 Continuous Improvement

Processes are in place to monitor the adequacy, suitability and effectiveness of all AM planning activities to drive a continuous cycle of review, corrective action and improvement. These are covered by Appendix V, Improvement programme.

APPENDIX T BYLAWS

The following bylaws have been adopted by Council:

- Consolidated Bylaws 2013 – Introduction
- Control of Liquor in Public Places 2012
- Dog Control Bylaw 2014
- Freedom Camping Bylaw 2011
- Freedom Camping (Motueka Beach Reserve) Bylaw 2013
- **Navigation Safety Bylaw 2014***
- Speed Limits Bylaw 2013
- Stock Control and Droving Bylaw 2005
- Wastewater Bylaw 2015
- Trading in Public Places Bylaw 2010
- Traffic Control Bylaw 2013
- Water Supply Bylaw 2009.

In accordance with the Local Government Act 2002, these bylaws will be reviewed no later than 10 years after they was last reviewed.

***Bylaws of direct relevance to this activity.**

APPENDIX U STAKEHOLDERS AND CONSULTATION

U.1 Stakeholders

There are many individuals and organisations that have an interest in the management and/or operation of the Council's assets. The Council has a Stakeholder and Engagement Policy which is designed to guide the expectations with the relationship between the Council and the Tasman community. The Council has made a promise to seek out opportunities to ensure the communities and people it represents and provides services to have the opportunity to:

- be fully informed;
- provide reasonable time for those participating to come to a view;
- listen to what they have to say with an open mind;
- acknowledge what we have been told;
- inform contributors how their input influenced the decision the Council made or is contemplating.

Engagement or consultation:

- is about providing more than information or meeting a legal requirement;
- aids decision-making;
- is about reaching a common understanding of issues;
- is about the quality of contact not the amount;
- is an opportunity for a fully informed community to contribute to decision-making.

The key stakeholders the Council consults with about the Coastal Structures activity are:

- Elected members (Councillors and Community Board members);
- Iwi/Maori (Tiakina te Taiao and Manawhenua ki Mohua, iwi monitors);
- Regulatory (Consent compliance);
- Fisheries organisations;
- Heritage New Zealand;
- Service providers / suppliers;
- Civil Contractors (Nelson-Marlborough);
- Affected or interested parties (when applying for resource consents);
- Neighbours.

U.2 Consultation

U.2.1. Purpose of Consultation and Types of Consultation

The Council consults with the public to gain an understanding of customer expectations and preferences. This enables the Council to provide a level of service that better meets the community's needs.

The Council's knowledge of customer expectations and preferences is based on:

- feedback from surveys;
- public meetings;
- feedback from elected members, advisory groups and working parties;
- analysis of customer service requests and complaints;
- consultation via the Annual Plan and Long Term Plan (LTP) process.

The Council commission's customer surveys on a regular basis (since 2008) from the National Research Bureau Ltd. These Communitrak™ surveys assess the levels of satisfaction with key services and the willingness across the community to pay to improve services.

From time to time the Council undertakes focused surveys to get information on specific subjects or projects.

U.2.2. Consultation Outcomes

The most recent NRB Communitrak™ survey was undertaken in May 2014. This asked whether residents were satisfied with the management of Coastal Structures. The results from this survey are summarised in Figure U-1.

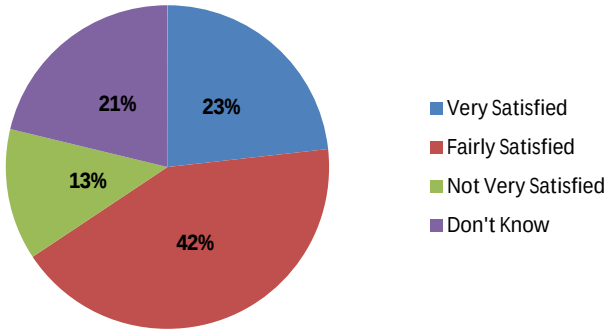


Figure U-1: Satisfaction with Management of Coastal Structures

Comment [s1]: Need to update

The survey showed that 65% of residents are satisfied with the Council's management of coastal structures.

The main reasons residents are not very satisfied with the Council's management of coastal structures are:

- more coastal protection is required and not enough is being done;
- works on coastal structures take too long;
- coastal erosion issues.

Of the 13% showing dissatisfaction, 41% resided in Golden Bay.

Twenty one percent of residents surveyed were unable to comment on their satisfaction with the Council's coastal structures. This is probably owing to the distance they live from the coast.

APPENDIX V IMPROVEMENT PLAN

To be provided in final document.

APPENDIX W ASSET DISPOSAL

The Council does not have a formal strategy on asset disposal. It will treat each asset individually on a case-by-case basis when the asset reaches a state that disposal needs to be considered.

Asset disposal is generally a by-product of renewal or upgrade decisions that involves the replacement of assets.

Assets may become redundant for any of the following reasons:

- under-utilisation;
- obsolescence;
- provision of the asset exceeds the required level;
- uneconomic to upgrade or operate;
- policy change;
- the service is provided by other means (e.g. private sector involvement);
- potential risk of ownership (financial, legal, social, vandalism).

Depending on the nature, location, condition and value of an asset it is either:

- made safe and left in place;
- removed or disposed of;
- removed and sold;
- ownership is transferred to other stakeholders by agreement.

In most situations, assets are replaced at the end of their useful life and are generally in poor physical condition. In some situations an asset may require removal or replacement prior to the end of its useful life. In this circumstance, the Council may hold the asset in stock for reuse elsewhere. If this is not appropriate, the asset could be sold off, transferred or disposed of.

When asset sales take place, the Council aims to obtain the best available return from the sale and any net income will be credited to that activity. The Council follows practices that comply with the relevant legislative requirements for local government when selling assets.

The Council has identified a number of historic wharf and jetty structures which the Council does not own (the Department of Conservation is understood to be the owner). These structures are typically in a derelict condition and public access is not restricted. As this poses a threat to public safety, the Council intends to reduce the risk by isolating or removing these assets. A process is to be developed to address this issue.

APPENDIX X GLOSSARY OF ASSET MANAGEMENT TERMS

Acronyms and Abbreviations

AMP	Activity Management Plan
LGA	Local Government Act
LTP	Long Term Plan
TRMP	Tasman Regional Management Plan

Term	Description
Activity	An activity is the work undertaken on an asset or group of assets to achieve a desired outcome.
Activity Management Plan (AMP)	Activity Management Plans are key strategic documents that describe all aspects of the management of assets and services for an activity. The documents feed information directly in the Council's LTP, and place an emphasis on long term financial planning, community consultation, and a clear definition of service levels and performance standards.
Advanced Asset Management	Asset management that employs predictive modelling, risk management and optimised renewal decision-making techniques to establish asset lifecycle treatment options and related long term cash flow predictions. (See Basic Asset Management).
Annual Plan	The Annual Plan provides a statement of the direction of Council and ensures consistency and co-ordination in both making policies and decisions concerning the use of Council resources. It is a reference document for monitoring and measuring performance for the community as well as the Council itself.
Asset	A physical component of a facility that has value enables services to be provided and has an economic life of greater than 12 months.
Asset Management (AM)	The combination of management, financial, economic, engineering and other practices applied to physical assets with the objective of providing the required level of service in the most cost-effective manner.
Asset Management System (AMS)	A system (usually computerised) for collecting analysing and reporting data on the utilisation, performance, lifecycle management and funding of existing assets.
Asset Management Plan	A plan developed for the management of one or more infrastructure assets that combines multi-disciplinary management techniques (including technical and financial) over the lifecycle of the asset in the most cost-effective manner to provide a specified level of service. A significant component of the plan is a long-term cash flow projection for the activities.
Asset Management Strategy	A strategy for asset management covering, the development and implementation of plans and programmes for asset creation, operation, maintenance, renewal, disposal and performance monitoring to ensure that the desired levels of service and other operational objectives are achieved at optimum cost.

Term	Description
Asset Register	A record of asset information considered worthy of separate identification including inventory, historical, financial, condition, construction, technical and financial information about each.
Basic Asset Management	Asset management which relies primarily on the use of an asset register, maintenance management systems, job/resource management, inventory control, condition assessment and defined levels of service, in order to establish alternative treatment options and long term cashflow predictions. Priorities are usually established on the basis of financial return gained by carrying out the work (rather than risk analysis and optimised renewal decision making).
Benefit Cost Ratio (B/C)	The sum of the present values of all benefits (including residual value, if any) over a specified period, or the life cycle of the asset or facility, divided by the sum of the present value of all costs.
Business Plan	A plan produced by an organisation (or business units within it) which translate the objectives contained in an Annual Plan into detailed work plans for a particular, or range of, business activities. Activities may include marketing, development, operations, management, personnel, technology and financial planning.
Capital Expenditure (CAPEX)	Expenditure used to create new assets or to increase the capacity of existing assets beyond their original design capacity or service potential. CAPEX increases the value of an asset.
Condition Monitoring	Continuous or periodic inspection, assessment, measurement and interpretation of resulting data, to indicate the condition of a specific component so as to determine the need for some preventive or remedial action
Critical Assets	Assets for which the financial, business or service level consequences of failure are sufficiently severe to justify proactive inspection and rehabilitation. Critical assets have a lower threshold for action than non-critical assets.
Current Replacement Cost	The cost of replacing the service potential of an existing asset, by reference to some measure of capacity, with an appropriate modern equivalent asset.
Deferred Maintenance	The shortfall in rehabilitation work required to maintain the service potential of an asset.
Demand Management	The active intervention in the market to influence demand for services and assets with forecast consequences, usually to avoid or defer CAPEX expenditure. Demand management is based on the notion that as needs are satisfied expectations rise automatically and almost every action taken to satisfy demand will stimulate further demand.
Depreciated Replacement Cost (DRC)	The replacement cost of an existing asset after deducting an allowance for wear or consumption to reflect the remaining economic life of the existing asset.
Depreciation	The wearing out, consumption or other loss of value of an asset whether arising from use, passing of time or obsolescence through technological and market changes. It is accounted for by the allocation of the historical cost (or revalued amount) of the asset less its residual value over its useful life.
Disposal	Activities necessary to dispose of decommissioned assets.

Term	Description
Economic Life	The period from the acquisition of the asset to the time when the asset, while physically able to provide a service, ceases to be the lowest cost alternative to satisfy a particular level of service. The economic life is at the maximum when equal to the physical life however obsolescence will often ensure that the economic life is less than the physical life.
Facility	A complex comprising many assets (eg. swimming pool complex, etc.) which represents a single management unit for financial, operational, maintenance or other purposes.
Geographic Information System (GIS)	Software which provides a means of spatially viewing, searching, manipulating, and analysing an electronic database.
Infrastructure Assets	Stationary systems forming a network and serving whole communities, where the system as a whole is intended to be maintained indefinitely at a particular level of service potential by the continuing replacement and refurbishment of its components. The network may include normally recognised 'ordinary' assets as components.
I.M.S.	Infrastructure Management System - computer database
Level of Service (LoS)	The defined service quality for a particular activity (ie. water) or service area (ie. Water quality) against which service performance may be measured. Service levels usually relate to quality, quantity, reliability, responsiveness, environmental acceptability and cost.
Life	A measure of the anticipated life of an asset or component; such as time, number of cycles, distance intervals etc.
Life Cycle	Life cycle has two meanings. · The cycle of activities that an asset (or facility) goes through while it retains an identity as a particular asset ie. from planning and design to decommissioning or disposal. · The period of time between a selected date and the last year over which the criteria (eg. costs) relating to a decision or alternative under study will be assessed.
Life Cycle Cost	The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, rehabilitation and disposal costs.
Life Cycle Maintenance	All actions necessary for retaining an asset as near as practicable to its original condition, but excluding rehabilitation or renewal.
Long Term Plan (LTP)	The Long Term Plan is the primary strategic document through which Council communicates its intentions over the next 10 years for meeting community service expectations and how it intends to fund this work. The LTP is a key output required of Local Authorities under the Local Government Act 2002. The LTP replaces the Long Term Council Community Plan (LTCCP).
Maintenance Plan	Collated information, policies and procedures for the optimum maintenance of an asset, or group of assets.

Term	Description
Objective	An objective is a general statement of intention relating to a specific output or activity. They are generally longer-term aims and are not necessarily outcomes that managers can control.
Operation	The active process of utilising an asset which will consume resources such as manpower, energy, chemicals and materials. Operation costs are part of the life cycle costs of an asset.
Optimised Renewal Decision Making (ORDM)	An optimisation process for considering and prioritising all options to rectify performance failures of assets. The process encompasses NPV analysis and risk assessment.
Performance Indicator (PI)	A qualitative or quantitative measure of a service or activity used to compare actual performance against a standard or other target. Performance indicators commonly relate to statutory limits, safety, responsiveness, cost, comfort, asset performance, reliability, efficiency, environmental protection and customer satisfaction.
Performance Monitoring	Continuous or periodic quantitative and qualitative assessments of the actual performance compared with specific objectives, targets or standards.
Planned Maintenance	Planned maintenance activities fall into three categories. · Periodic – necessary to ensure the reliability or sustain the design life of an asset. · Predictive – condition monitoring activities used to predict failure. · Preventive – maintenance that can be initiated without routine or continuous checking (eg. using information contained in maintenance manuals or manufacturers' recommendations) and is not condition-based.
Recreation	Means voluntary non-work activities for the attainment of personal and social benefits, including restoration (recreation) and social cohesion.
Rehabilitation	Works to rebuild or replace parts or components of an asset, to restore it to a required functional condition and extend its life, which may incorporate some modification. Generally involves repairing the asset using available techniques and standards to deliver its original level of service without resorting to significant upgrading or replacement.
Renewal	Works to upgrade, refurbish, rehabilitate or replace existing facilities with facilities of equivalent capacity or performance capability.
Renewal Accounting	A method of infrastructure asset accounting which recognises that infrastructure assets are maintained at an agreed service level through regular planned maintenance, rehabilitation and renewal programmes contained in an asset management plan. The system as a whole is maintained in perpetuity and therefore does not need to be depreciated. The relevant rehabilitation and renewal costs are treated as operational rather than capital expenditure and any loss in service potential is recognised as deferred maintenance.
Repair	Action to restore an item to its previous condition after failure or damage.
Replacement	The complete replacement of an asset that has reached the end of its life, so as to provide a similar or agreed alternative, level of service.

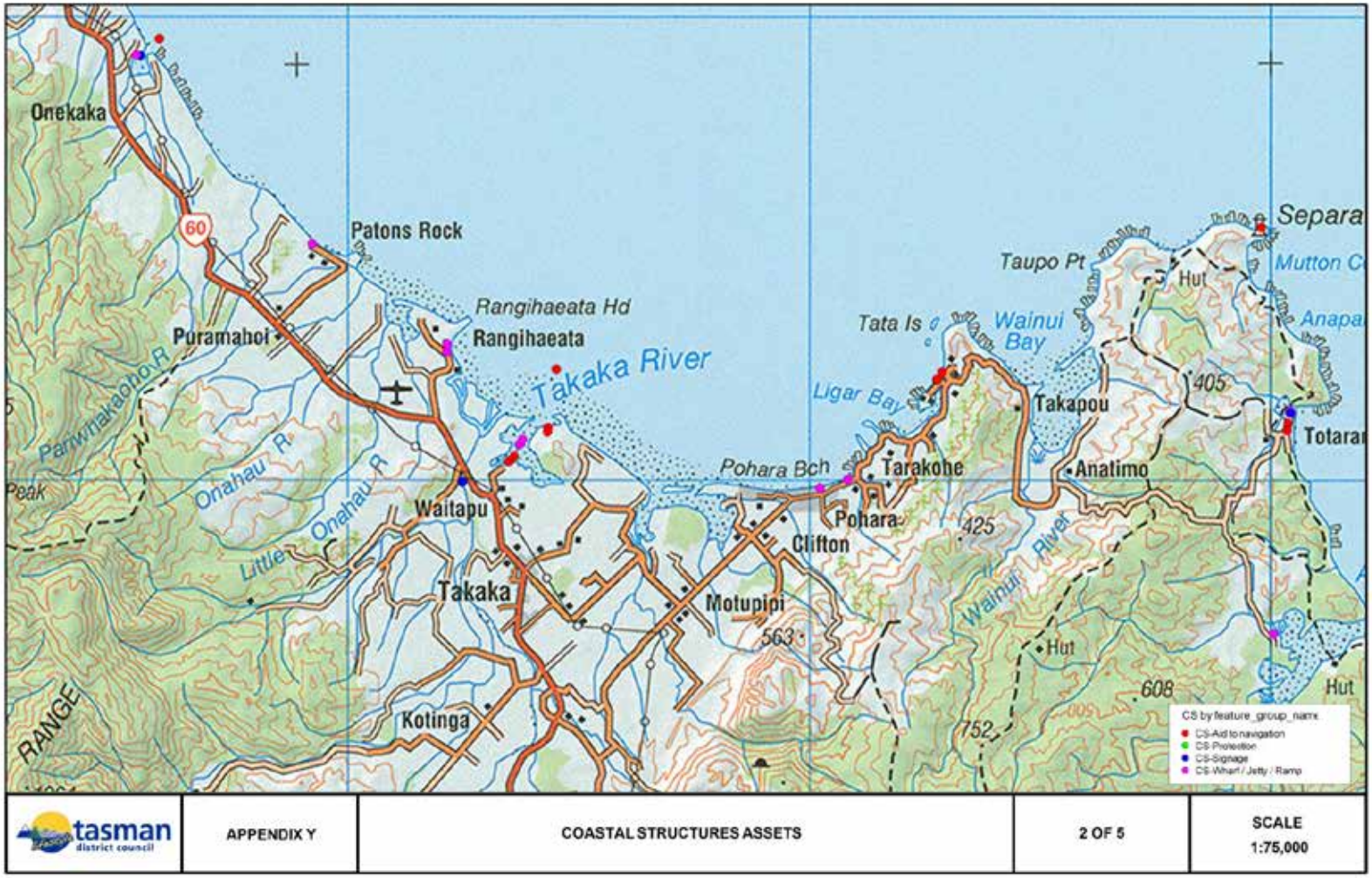
Term	Description
Remaining Economic Life	The time remaining until an asset ceases to provide service level or economic usefulness.
Risk Cost	The assessed annual cost or benefit relating to the consequence of an event. Risk cost equals the costs relating to the event multiplied by the probability of the event occurring.
Risk Management	The application of a formal process to the range of possible values relating to key factors associated with a risk in order to determine the resultant ranges of outcomes and their probability of occurrence.
Routine Maintenance	Day to day operational activities to keep the asset operating (eg. replacement of light bulbs, cleaning of drains, repairing leaks) and which form part of the annual operating budget, including preventative maintenance.
Service Potential	The total future service capacity of an asset. It is normally determined by reference to the operating capacity and economic life of an asset.
Strategic Plan	Strategic planning involves making decisions about the long term goals and strategies of an organisation. Strategic plans have a strong external focus, cover major portions of the organisation and identify major targets, actions and resource allocations relating to the long term survival, value and growth of the organisation.
Unplanned Maintenance	Corrective work required in the short term to restore an asset to working condition so it can continue to deliver the required service or to maintain its level of security and integrity.
Upgrading	The replacement of an asset or addition/ replacement of an asset component which materially improves the original service potential of the asset.
Valuation	Estimated asset value that may depend on the purpose for which the valuation is required, ie. replacement value for determining maintenance levels or market value for life cycle costing.

APPENDIX Y LOCATION PLANS

This appendix includes the following maps:

- Puponga to Parapara
- Parapara to Separation Point
- Separation Point to Marahau
- Marahau to Mapua
- Mariri to Nelson.

tasman district council	APPENDIX Y	COASTAL STRUCTURES ASSETS	1 OF 5	SCALE 1:150,000


Onekaka
60
Patons Rock
Rangihaeata Hd
Rangihaeata
Puramahoi
Takaka River
Parinuiakaoho R
Onahau R
Little Onahau R
Waitapu
Takaka
Kotinga
RANGE
Pohara Bch
Tarakohe
Pohara
Clifton
Motupipi
563
425
Ligar Bay
Tata Is
Wainui Bay
Taupo Pt
Hut
Takapou
Anatimo
405
Totaran
Wainui River
608
152
Hut
Hut
CS by feature_group_name
CS-Aid to navigation
CS-Protection
CS-Signage
CS-Wharf / Jetty / Ramp
tasman district council
APPENDIX Y
COASTAL STRUCTURES ASSETS
2 OF 5
SCALE
1:75,000

tasman district council	APPENDIX Y	COASTAL STRUCTURES ASSETS
SCALE 1:75,000	3 OF 5	

tasman district council	APPENDIX Y	COASTAL STRUCTURES ASSETS
SCALE 1:80,000	4 OF 5	


Moutere Inlet
Kina
Braeburn
Tasman
Moutere Bluff
Harakeke
Moutere R.
Ruby Bay
41° 15'
Rabbit Island
Rabbit Island
Mapua
Bronte
Upper Moutere
Mahana
115
60
Redwood Valley
Bell I
Best I
Waimea Inlet
Port Nelson
Brooklands
596
Haulashore I
NELSON
Tahunanui
147
Nelson South
Maitai River
Enner Glynn
Stoke
CS_excl_Tarakohe by feature_group_name
CS-Aid to navigation
CS-Protection
CS-Signage
CS-Wharf / Jetty / Ramp
tasman district council
APPENDIX Y
COASTAL STRUCTURES ASSETS
5 OF 5
SCALE
1:65,000

APPENDIX Z AMP STATUS AND DEVELOPMENT PROCESS – COASTAL STRUCTURES

Z.1 Quality Assurance

Quality Assurance Statement		
Tasman District Council 189 Queen Street Private Bag 4 Richmond 7050 Telephone: (03) 543 8400 Fax: (03) 543 9524	**Version:**	Draft – January 2015
	Status:	Draft
	Project Manager:	Dwayne Fletcher
	Prepared by: **AMP Author**	Sarah Downs
	Approved for issue by: **Engineering Manager**	Peter Thomson

Z.2 Quality Requirements and Issues

	Issues and Requirements	Description
1	Fitness for Purpose	The AMP has to be "fit for purpose". It has to comply with Audit NZ expectations of what an AMP should be to provide them the confidence that the Council is adequately managing the Council activities.
2	AMP Document Consistency	Council want a high level of consistency between AMPs so that a reader can comfortably switch between plans.
3	AMP Document Format	The documents need to be prepared to a consistent and robust format so that the electronic documents are not corrupted (as happens to large documents that have been put together with a lot of cutting and pasting) and can be made available digitally over the internet.
4	AMP Text Accuracy and Currency	The AMPs are large and include a lot of detail. Errors or outdated statements reduce confidence in the document. The AMPs need to be updated to current information and statistics.
5	AMP Readability	The AMPs in their current form have duplication – where text is repeated in the "front" section and the Appendices. This needs to be rationalised so that the front section is slim and readable and the Appendix contains the detail without unnecessary duplication.
6	Completeness of Required Upgrades/Expenditure Elements	The capital expenditure forecasts and the operations and maintenance forecasts need to be complete. All projects and cost elements need to be included.

	Issues and Requirements	Description
7	Accuracy of Cost Estimates	Cost estimates need to be as accurate as the data and present knowledge allows, consistently prepared and decisions made about timing of implementation, drivers for the project and level of accuracy the estimate is prepared to.
8	Correctness of Spreadsheet Templates	The templates prepared for use need to be correct and fit for purpose.
9	Assumptions and Uncertainties	Assumptions and uncertainties need to be explicitly stated on the estimates.
10	Changes Made After Submission to Financial Model	If Council makes decisions on expenditure after they have been submitted into the financial model, the implications of the decisions must be reflected in the financial information and other relevant places in the AMP – eg. Levels of service and performance measures, improvement plans etc.
11	Improvement Plan Adequate	Improvements identified, costed, planned and financially provided for in financial forecasts.