

Tasman District Council

**Coastal Structures
Activity Management Plan**

2012 - 2022

October 2011

Quality Assurance Statement

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For full Quality Assurance Statement, Refer Appendix Z

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1 KEY ISSUES FOR THE COASTAL STRUCTURES ACTIVITY

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

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

Key Issue	Council Approach
Urban development along coastal margins increases the demand for protection.	Council controls coastal development using the TRMP and the resource consent process and in accordance with the NZ Coastal Policy Statement.
Coastal erosion and climate change.	Council currently maintains coastal protection in Ruby Bay and Marahau. Outcomes from the coastal process study will form the basis for a coastal protection strategy.
Unclear ownership and management of derelict wharves and jetties.	Council will work through issues of ownership and management of derelict wharves and jetties with appropriate agencies, with a view to them being upgraded or removed.
Incomplete asset inventory database, in particular coastal protection structures.	Council is currently updating the database with coastal protection assets. The database will be updated in an ongoing manner as inspections are completed.

2 ACTIVITY DESCRIPTION

2.1 What We Do

The activity encompasses principally:

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

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

2.2 Why We Do It

Coastal structures have significant public value, Council's ownership and management ensures the assets are retained for the community. Council also has a responsibility to manage coastal structures as a Regional Authority and a Harbour Authority.

3 COMMUNITY OUTCOMES AND OUR GOAL

The community outcomes that the coastal structures activity contributes to most are shown in Table 3-1.

Table 3-1: Community Outcomes

Community Outcomes	How Our Activity Contributes to the Community Outcome
Our unique and special natural environment is bountiful, healthy clean and protected.	All coastal structures can be managed so their impact does not affect the health and cleanliness of the receiving environment.
Our built urban and rural environments are functional, 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 transport and essential services are sufficient, 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.

Table 3-2: Our Goal

Coastal infrastructure is developed to achieve the visions of both Council and the community.

4 OPERATIONS, MAINTENANCE AND RENEWALS STRATEGY

4.1 Operations and Maintenance

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 Council's existing contractors (eg. transportation and/or bridging maintenance contractors). Significant works will be tendered as individual contracts.

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

Maintenance of coastal rock protection is undertaken in a reactive manner eg. when rock protection has been damaged as a result of a storm event. Council engages an experienced contractor for site specific works as required.

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

Operation and maintenance is discussed in detail in Appendix E.

4.2 Renewals

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.

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 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 (ie. three yearly), and every year the annual renewal programme is reviewed and planned with the input of the consultant.

The work is undertaken in accordance with best practice, site specific design, site specific resource consents where applicable, 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 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 (GDSDM or growth model) has been developed to provide predictive information for population growth and business growth, and from that, information about dwelling and building development across the district and demand for infrastructure services. The GDSDM underpins the Council's long term planning through the Activity Management Plans, Long Term Plans and supporting policies (eg. Development Contributions Policy).

The 2011 GDSDM is a third generation growth model with previous versions being completed in 2005 and 2008.

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 port, wharf, mooring, marina and boat ramp facilities for recreation
- possible need for further coastal protection of properties if not fully allowed for in assessing the suitability of development.

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.

Growth and demand for the coastal structures activity is discussed in detail in Appendix F.

5.2 Sustainability

The Local Government Act 2002 requires local authorities to take a sustainable development approach while conducting its business, taking into account the social, economic and cultural well-being of people and communities, the need to maintain and enhance the quality of the environment; the reasonably foreseeable needs of future generations.

Sustainable development is a fundamental philosophy that is embraced in Council's Vision, Mission and Objectives, and that shapes the 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 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 20 year forecast in the Activity Management Plans to ensure the long term financial implications of decisions made now are considered.

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

- ensuring minimal impact on the environment by the activity
- 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.

Table 6-1: Levels of Service

ID	Levels of Service (we provide)	Performance Measures (We will know we are meeting the level of service if...)	Current Performance (as at end Yr 2 2010/11)	Future Performance			Future Performance (targets) by Year 10 2021/22
				Year 1	Year 2	Year 3	
				2012/13	2013/14	2014/15	
Community Outcome: Our unique and special natural environment is bountiful, healthy, clean 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.	<i>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.</i>	Actual = Nil	<i>No abatement notices issued</i>	<i>No abatement notices issued</i>	<i>No abatement notices issued</i>	<i>No abatement notices issued</i>
2		Council owned coastal protection is maintained to its original constructed standard. As measured by routine inspections.	Actual = Not currently measured	100%	100%	100%	100%
Community Outcome: Our transport and essential services are sufficient, efficient and sustainably managed.							
3	Faults in the coastal assets 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.	Actual = 100%	90%	90%	90%	90%

7 CHANGES MADE TO ACTIVITY OR SERVICE

Table 7-1 summarises the key changes for the management of the coastal structures activity since the 2009 AMP.

Table 7-1: Key Changes

Key Change	Reason for Change
Removal of redundant navigational aids.	Council plans to remove aids to navigation which are no longer appropriate nor a regulatory requirement, eg. lead lights on winding channels. These have therefore been excluded from this AMP.

8 KEY PROJECTS

Table 8-1 details the key capital and renewal work programmed for years 2012 to 2022.

Table 8-1: Significant Projects

Project Name	Description	Year 1 (\$)	Year 2 (\$)	Year 3 (\$)	Years 4 to 10 (\$)	Project Driver ¹
Boat Ramp Reconstruction	Renewal and upgrading of formed boat ramps.	0	0	0	200,000	LOS/R
Mapua Wharf – New Building	Development of a new building within wharf area, approx 1,000m ² .	0	1,500,000	0	0	G/LOS
Mapua Wharf – Streetscape Wharf Area	Upgrade to wharf area including lighting, toilets and street furniture.	40,000	100,000	0	200,000	G/LOS
Marahau – Coastal Protection	Renewal of sections of support.	0	0	0	81,200	R

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

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 Council.

¹ LOS = Levels of Service, R = Renewal, G = Growth

Community Services

- Management of physical structures on coastal reserves (for example boat ramps at Rabbit Island and Tata Beach and the reserves themselves).
- Management of Council owned property on wharves.

Environment and Planning

- Implementing aspects of the Harbour 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.

Corporate Services

- Implementing aspects of the Harbour Bylaw relating to collection of wharfage/berthage fees.

There are a number of work activities excluded from this AMP which relate to coastal structures and are managed by Community Services due to them being regulatory activities. These are management of moorings, buoys and some other aids to navigation. Aids to navigation assets are jointly managed by Engineering and Community Services as the structures are maintained by Engineering.

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: Significant Negative Effects

Effect	Council's Mitigation Measure
Inappropriately built urban environment may have a negative visual impact.	Council controls this through bylaws and the TRMP, and may impose conditions on lessees to improve the amenity value of existing buildings.
Increased traffic and noise from both commercial and recreational users of coastal facilities.	Council controls the use of coastal areas and facilities through Bylaws, the TRMP, restriction of access, and education.
Increased rates to fund works.	Council's management of the coastal structures activity using best practice and competitive tendering aims to provide the economic efficiency (ie. best value for money) for the ratepayers.
Potential changes to the natural coastal process due to placement of structures, this may include loss of natural sand dunes.	Council manages changes to the natural environment through bylaws and the TRMP.
Potential to affect wahi tapu sites relating to the local iwi.	Council undertakes consultation with affected parties prior to undertaking works. Council also maintains a record of known cultural heritage sites.

Table 9-2: 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.
Safety and personal security	Provision and maintenance of coastal protection schemes improves protection of some residents and the built environment.
Community value	The provision and maintenance of the coastal structures is of community value as it contributes to tourism, recreation, education and business within the communities.
Environmental sustainability	Council aims to achieve environmental sustainability whilst managing the coastal structures activity.
Economic efficiency	Council's management of the coastal structures activity using best practice and competitive tendering aims to provide economic efficiency (ie. best value for money) for the ratepayers.

9.3 Assumptions

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 briefly outlines the impact of the assumption.

Table 9-3: Major Assumptions

Assumption Type	Assumption	Discussion
Financial Assumptions	That all expenditure has been stated in 1 July 2011 dollar values and no allowance has been made for inflation.	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 Council is using the best information practically available from Business and Economic Research Limited (BERL).
Asset Data Knowledge	That Council has sufficient knowledge of the assets and their condition so that the planned renewal work will allow Council to meet its levels of service.	There are several areas where 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.
Major Events	That a major storm event will not occur.	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. 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. 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.

Assumption Type	Assumption	Discussion
Funding of Capital Projects	That the projects identified will receive funding.	The risk of 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.
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 Council may not be able to afford the true cost of the projects. Council tries to reduce the risk by including a standard contingency based on the projects lifecycle.
Changes in Legislation and Policy	That there will be no major changes in legislation or policy.	The risk of major change is high due to the changing nature of the government and politics. If major changes occur it is likely to have an impact on the required expenditure. 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

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

This approach includes risk management at an organisational level (Level 1). The treatment measures and outcomes of the organisational level risk management are included within the LTP.

The asset group level (Level 2) risk assessment was carried out at the same time as the Level 1 assessment due to the small number of assets managed within the activity.

Council has also identified and assessed critical assets (Level 3), the physical risks to these assets and the measures in place to address the risks to the asset. The specific risk mitigation measures that have been planned within the 20 year coastal structures programme include:

- an allowance for routine maintenance of structures
- routine structural inspections.

9.5 Improvement Plan

Development of the improvement plan is discussed in Appendix V. It includes a table of planned improvements that are still to be implemented and information on how they have been budgeted. It is a snapshot of the improvement plan at September 2011. It is intended that the improvement plan is continually updated and monitored as a live document.

Appendix V also includes a summary of the key improvements that have been achieved since the preparation of the 2009 AMP.

10 SUMMARY OF COST FOR ACTIVITY

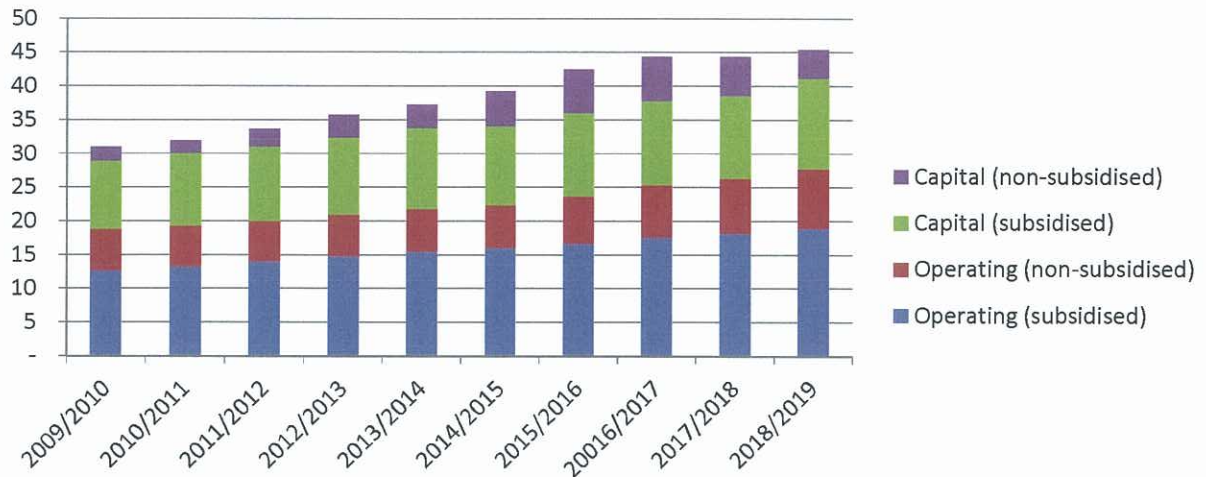


Figure 10-1: Total Expenditure (\$ million)

- **Place holder** – Discuss key features of what the data is showing and update with 2011 coastal structures data.
- Refer to Appendix E, Appendix F and Appendix I for detailed operating and maintenance, new capital, and renewal projects respectively.

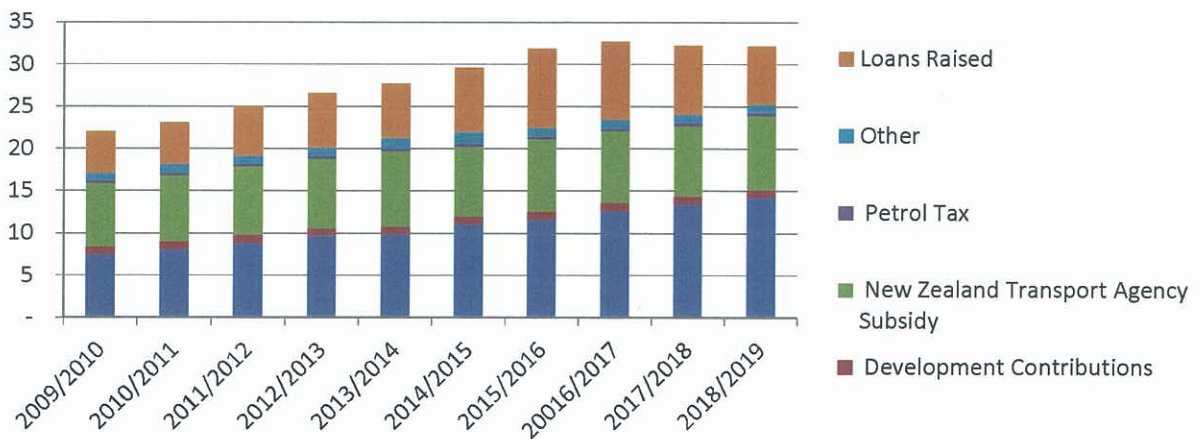


Figure 10-2: Total Income (\$ million)

- **Place holder** – Discuss key features of what the data is showing and update with 2011 coastal structures data.
- Refer to Appendix L for full income details.



Figure 10-3: Capital Expenditure (\$ million)

- **Place holder** – Discuss key features of what the data is showing and update with 2011 coastal structures data.
- Refer to Appendix F and Appendix I for a full list of new capital and renewal projects respectively.



Figure 10-4: Operating Expenditure (\$ million)

- **Place holder** – Discuss key features of what the data is showing and update with 2011 coastal structures data.
- Appendix L for full operating expenditure detail

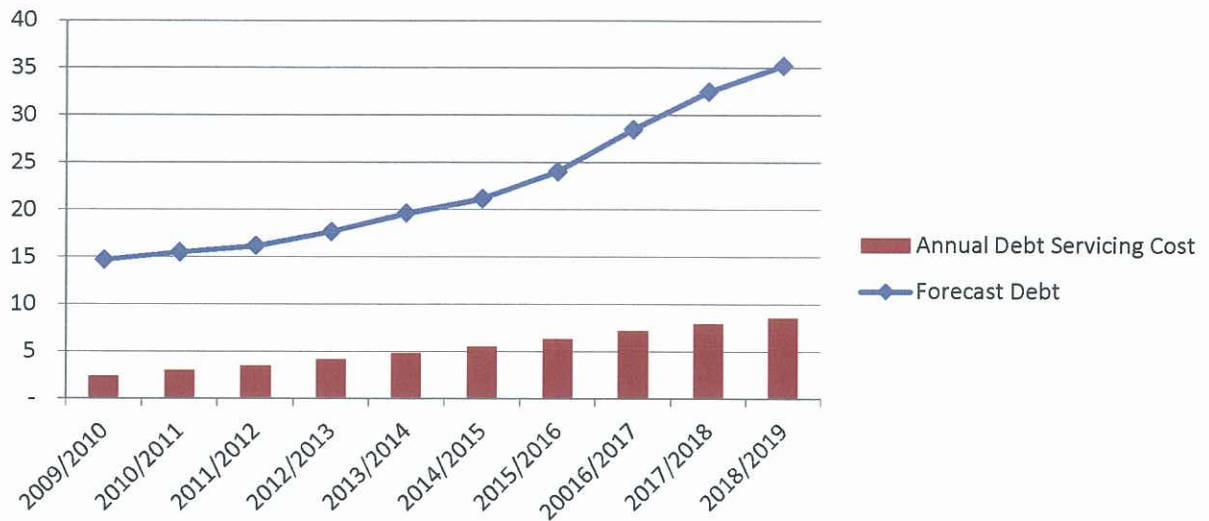


Figure 10-5: Debt (\$ million)

- **Place holder** – Discuss key features of what the data is showing and update with 2011 coastal structures data.
- Appendix L for full annual debt servicing cost detail

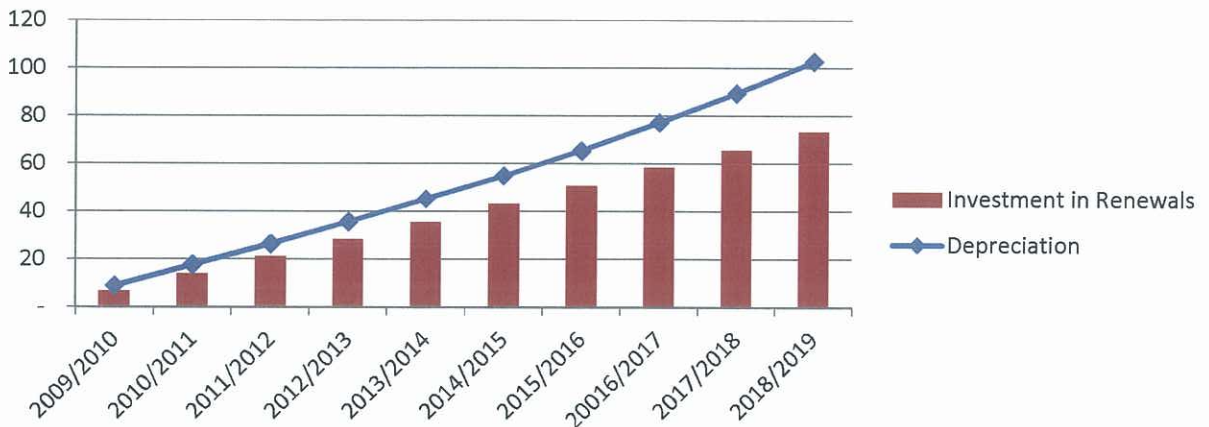


Figure 10-6: Investment in Renewals (\$ million)

- **Place holder** – Discuss key features of what the data is showing and update with 2011 coastal structures data.
- Appendix L for full investment in renewals detail