Tasman District Council

Coastal Structures
Activity Management Plan

2009 - 2019

August 2009

Quality Assurance Statement		
Tasman District Council 189 Queen Street Private Bag 4 Richmond 7050 Telephone: (03) 543 8400 Fax: (03) 543 9524	**Version:**	5 (August 2009)
	Status:	Final Plan Adopted by Council
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For full Quality Assurance Statement, Refer Appendix Z

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1. INTRODUCTION

1.1 The Coastal Structures Activity Management Plan: What is it and why is it produced?

The Coastal Structures Activity is one of the eight engineering activities addressed in the Tasman District Council Long Term Council Community Plan (LTCCP). This Coastal Structures Activity Management Plan (AMP) is, therefore, strongly linked to the overall strategic direction for the district. The LTCCP is the document and process that alerts the community to the key issues and strategies contained in this document.

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

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 Level of Service required by the customers is provided at the lowest long term cost to the community and is delivered in a sustainable manner.

This AMP is based on existing Levels of Service, currently available information and the existing knowledge and judgement of Council staff.

A programme of AM improvement (see Appendix V) is planned to improve the quality of decision making (eg. predictive modelling, risk management, optimised renewal decision making) and improve the knowledge of Council's assets and customer expectations. These future enhancements will enable Council to better optimise life cycle AM activities and provide a greater degree of confidence in financial forecasts.

Figure 1-1 depicts the activity management planning process for infrastructure assets, with fundamental links to customer expectations, legislative requirements and corporate visions and strategies.

This plan has been prepared in line with the requirements of the Local Government Act 2002 and the International Infrastructure Management Manual, Australia/New Zealand Edition, version 3.0, 2006.

The key drivers, linkages with other plans and legislative requirements that all feed into the development of the plans, are discussed in Appendix A.

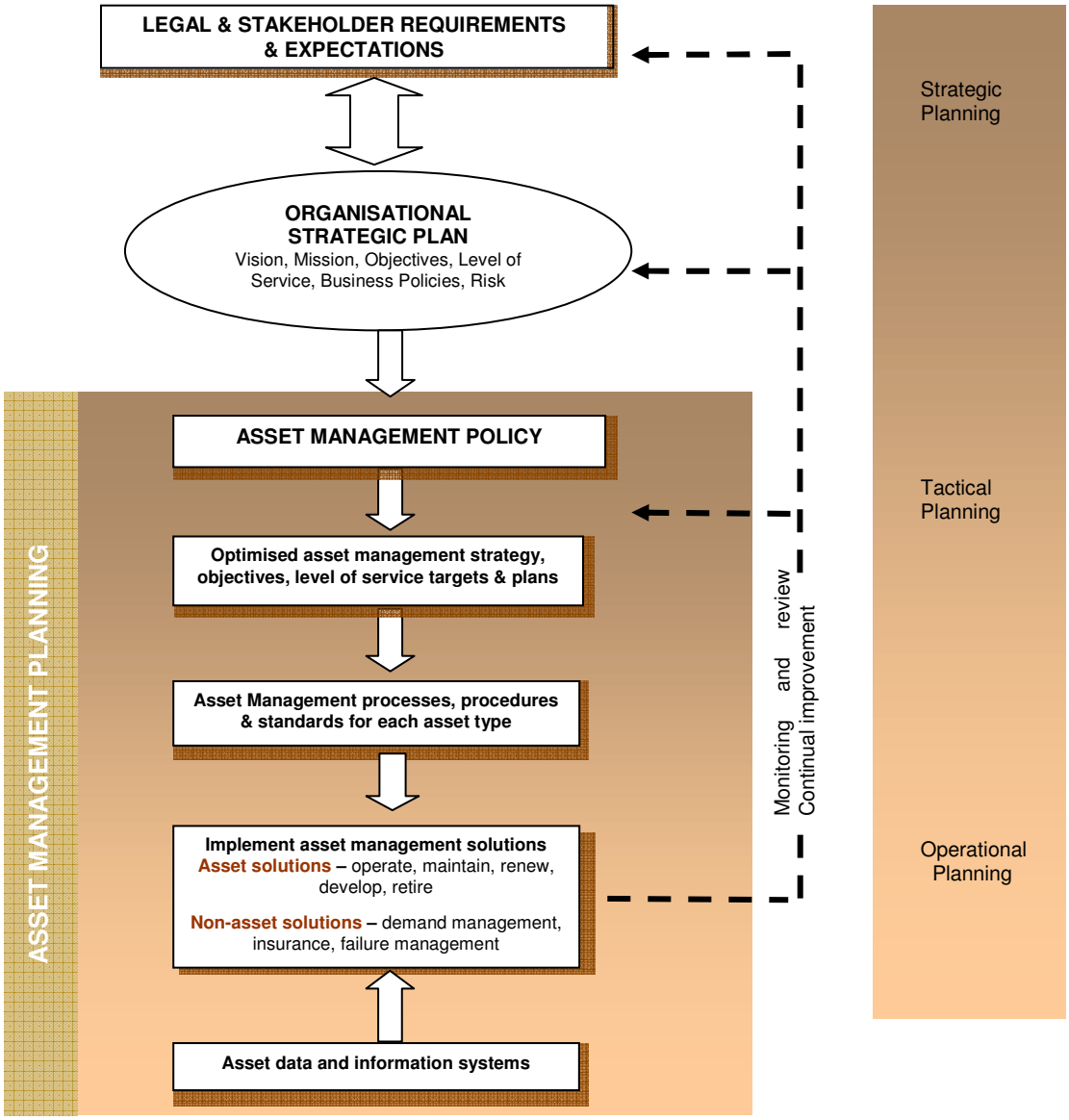


Figure 1-1: The Total Asset Management Process (Source IIMM)

1.2 Rationale For Council's Involvement In Coastal Structures Management

Council has a responsibility as a Regional Authority to manage coastal structures that they own or that have no other identifiable owner/operator. Council has further responsibilities as a Harbour Authority.

Council considers its involvement in the continued ownership and responsibility for the coastal assets is justified because its assets and associated activities have a public value. The community preference is for Council to retain management of assets that are important to them. Additionally, Council has access to more favourable financing options for this particular activity. The provision of coastal assets and services which have a high community value are considered to be a core function of Local Government.

Statutory obligations that Council must meet include:

- Local Government Act 2002
- Resource Management Act 1991
- Maritime Transport Act
- Occupational Health and Safety Act.

Relevant Policy and Management Documents include:

- Tasman Resource Management Plan
- Port Motueka Management Plan
- Tasman District Council Standards
- Navigation Safety Bylaw

1.3 Justification of Asset Ownership

The provision of coastal assets and services that have a high community value is considered to be a core function of Local Government. This is particularly so for coastal protection works and boat ramps. Wharves also have a public good value, but as usage changes, ownership and management is reconsidered. Council will continue to lease out the ancillary buildings such as at Mapua Wharf and utilise agents such as the boat clubs to assist in the day to day management of some of the wharf assets.

Benefits to the community and individuals are:

- The management of the harbours and their development is important to both business and recreation needs of the community. The coastal protection has been required to protect property and assets on the coastline. Continued planning for this activity will ensure the coastal resources are available for all and the need for coastal protection structures are minimised.
- The beaches and environs are enjoyed by all. Management of access and use through the coastal activity will assist in the protection of the coastal environment.
- Through this activity safe access for recreational and commercial uses is managed efficiently and at an affordable cost to the community.
- Encouragement of safe and efficient use of harbours, a clean and healthy marine environment
- Raising community awareness of safe practices in and on the water
- Having the capacity to respond to oil spills.

1.4 Overview of the Coastal Structures Management Activity

This activity comprises the provision and maintenance of some of the wharves, jetties and associated buildings, as well as the navigational aids, boat ramps, road access and parking to provide safe access to significant parts of the District 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 District owned structures have been transferred to other parties such as the wharf at Motueka to Talleys Industries and other minor structures such as the wharves at Collingwood, Milnethorpe and Waitapu belong to the Department of Conservation.

Assets currently in this activity include:

- Ownership of wharves at Mapua and Riwaka
- Responsibility for ports at Motueka
- Jetties (such as at Torrent Bay), boat ramps, navigational aids and moorings.
- Coastal protection works at Ruby Bay and Marahau
- The navigation aids associated with harbour management
- Port Tarakohe is reported on separately through the Enterprise Sub-committee of Council, but is included in this activity for ease of reporting. A detailed asset Management Operational Plan for Port Tarakohe (also known as Port Golden Bay) will be available from November 2009.

The coastal structures activity is described in more detail in Appendix B.

1.5 Key Issues and Strategic approach

The key issues for the coastal structures activity over the coming years are:

- Growth throughout the District and the need to meet the demand for public access to and along the coast for recreational use
- The demand for urban development along or near the coast
- The likely increase of coastal erosion and the predicted adverse effects of climate change
- Council is responsible under the NZ Coastal Policy Statement to control coastal development and protect or mitigate the effects on the natural character of the coastal environment
- Control of navigation and associated safety issues
- Control and management of boat moorings
- Continued management of the wharves and ports at a cost affordable to the community while meeting the recreational and commercial areas needs.

2. LEVELS OF SERVICE, PERFORMANCE MEASURES, AND RELATIONSHIP TO COMMUNITY OUTCOMES

2.1 Introduction

A key objective of this AMP is to match the Level of Service provided by the Coastal Structure 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 works 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

2.2 How Do Our Coastal Structures Activity Contribute to the Community Outcomes?

A full summary of the Community Outcomes is included in Appendix R. Table 2-1 describes how the coastal structures activities contribute to the Community Outcomes.

Table 2-1: How Coastal Structures Activities Contribute to 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 sustainably managed.

2.3 What Level of Service Do We Seek to Achieve?

Table 2-2 sets out the Levels of Service that Council has adopted. It also shows:

- the Community Outcome from which each Level of Service has been developed,
- how we will know if we are successful in delivering the Level of Service.

Table 2-2: Levels of Service – Coastal Structures

Community Outcomes	Levels of Service	We will know we are meeting the Level Of Service if…..

Community Outcomes	Levels of Service	We will know we are meeting the Level Of Service if…..
Our unique and special natural environment is bountiful, healthy, clean and protected	1. Our Coastal Systems are Sustainable	All coastal protection systems have Resource Consents with appropriate conditions which we consistently meet.
Our built urban and rural environments are functional, pleasant, safe and sustainably managed.	2. Our coastal activities are managed at a level that satisfies the community.	Our three yearly surveys show that 80% of customers are satisfied with the service of the coastal activity they receive.
		The marina at Tarakohe is operating at 90% capacity or greater.
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 and fix faults (e.g. localized damage to rock protection works, damage to navigational aids) within the timeframes we have agreed with our suppliers and operators
	4. Our Navigational Aid systems are built so that failures can be prevented. If failures do occur they can be responded to quickly.	We have a facility for receiving and handling emergency calls after office hours.
		Our access and navigational systems meet the appropriate Maritime Transport standards and guidelines.
	5. Our coastal structures are built so that failures can be prevented. If failures do occur, they can be responded to quickly.	We have operative risk management in place and planned mitigation measures completed.

The Levels Of Service that the Council has adopted for this AMP have been developed from the Levels of Service prepared in the July 2006 AMP, however after taking into account feedback from various parties including Audit New Zealand, the Council has decided to reduce the number of Levels of Service so there is more focus and clarity, and to make sure that the link between the Levels of Service adopted and the Community Outcomes is clear.

2.4 What Performance Are We Achieving and What Do We Plan to Achieve?

The Levels of Service that Council is currently achieving is shown in Table R-1 in Appendix R. This table also includes the Levels of Service that Council plans to achieve within the next 3 years, and at the end of 10 years.

2.5 What Plans Have Council Made to Meet The Levels of Service?

In preparing the future financial forecasts, Council have included the following specific initiatives to meet the current or intended future Levels of Service:

- Implementation of a detailed inspection programme
- Implementation of a renewals programme for coastal protection and wharves
- Implementation of a risk management plan.

3. THE EXISTING SITUATION DESCRIBED

A detailed history and description of the coastal assets is described in Appendix B.

3.1 Asset Condition

Mapua Wharf
The main wharf structure was reviewed in 2004 and a renewal programme implemented. There are piles and adjoining access structures that are in only fair condition and some renewals are programmed.

Riwaka Wharf
The earth-filled structure is in fair to poor condition. Council intend to maintain it to provide its current Level of Service and add some protection works.

Torrent Bay
This jetty is in poor condition and will be subject to detailed review.

Boat Ramps and Navigational Aids
Boat ramps and navigational aids are in fair condition. Renewals are programmed.

Coastal Protection
These are in good condition and a maintenance renewal programme is planned.

Port Tarakohe
The substantial developments works including the rock arms and recreational boat 62 berth marina recently constructed are in very good condition. The aged wooden wharf is in fair condition. A detailed maintenance management plan for the Port structures is proposed to be developed.

4. OPERATIONS AND MAINTENANCE

4.1 Council 'Ownership' Of Operations and Maintenance

Council has roles as Harbour Board, Regional Authority and Territorial Authority.

Council is responsible for:

- Managing coastal structures that they own or that have no other identifiable owner/operator.
- Implementation of the Harbour Act 1950 (through the Tasman District Council Bylaw 1994).
- Implementation of the Resource Management Act (RMA) through the Tasman District Council Regional Policy Statement (TRPS) and Tasman Resource Management Plan (TRMP).

Many of Council's roles cross between regulatory, corporate and asset management. For example, the Harbour Master is responsible for controlling harbour activities, the asset management department for maintaining wharves under Tasman District Council operation/control and corporate services for charging wharf fees and managing wharf/port associated properties.

Council employs a Harbour Manager at Port Tarakohe

Council has a register of the concrete and gravel ramps it maintains. Council accepts responsibility for these. Other ramps and beach accesses are privately owned and maintained. Council does have a regulatory role in assessing any new applications and protecting its own assets and the wider community and environmental interests.

4.2 Maintenance Strategy

The Councils strategy is to maintain the coastal structures with associated boat ramps, jetties, buildings and parking facilities so that they meet the specific objectives to provide facilities suitable for the recreational and commercial users at the least long term cost to Council. This may result in some facilities being maintained at a decreasing level or disposed of.

4.3 Control and Management of Operations and Maintenance

A detailed explanation of how Council manages the coastal structures activity is in Appendix E.
Maintenance of the ports, wharves, jetties and associated structures is on an as required basis. Periodic inspections by the Harbour Master and reports from the user groups identify issues for attendance.

As required, detailed specific investigations and reports are carried out where significant repairs are likely to be required.

For minor maintenance, preferred Contractors are used. Significant repairs are competitively tendered.
Building maintenance is normally the responsibility of the lessees other than structural.

4.4 Estimated Operation and Maintenance Costs for Next Twenty Years

The estimated costs to operate and maintain the coastal activities over the next twenty years are detailed in Appendix E.

The operating costs are predicted to remain relatively constant over the next 20 years.

4.5 Maintenance and Operating Issues

At present the maintenance and operations are based on the current Levels of Service.
The maintenance of boat ramps is based on some minor maintenance annually. Storm conditions or high usage may affect the Level of Service available.

The maintenance of coastal protection structures are very much dependent of the frequency of significant storm events.

A review of the navigational aids for Mapua and Port Motueka is required. The review may require changes to reflect the varying channel conditions. The Changes in technology are monitored to maintain or replace the navigational aids at the least long term cost to Council.

4.6 Business Continuity / Emergency Management

The Council has a commitment to ensure the provision of goods and services during hazard events. The wharves and boat ramps will continue to be invaluable in Civil Defence emergencies. The sites will be available for search and rescue operations.

Recreational users may be restricted or curtailed during hazard events.

Council will maintain the required safety procedures required under the Local Government Act and its own Civil Defence emergency plans.

The Council has developed various plans that outlines the procedures that are to be followed to enable the coastal structures to continue to function to the fullest possible extent, even though this may be at a high capacity level during a civil emergency or major storm event.

These plans include:

- Nelson Tasman Engineering Lifelines Report 2008.
- Nelson Tasman Emergency Management Plan.
- TDC Emergency Procedures Manual – June 2005.
- MWH/TDC Emergency Procedures Manual – June 2005.
- Y2K Report.

5. FUTURE DEMAND

5.1 Factors Affecting Demand

Council recognises that future demands for infrastructure services will be influenced by:

- Population growth and demographics
- Changes in community expectations
- Industrial demand
- Recreational demand
- Technological change
- Changes in legislation

The impact of these influencing factors on the demand for coastal activities and the effect on the current asset infrastructure is discussed below.

5.2 Population Growth

5.2.1. District Wide Projections

The scale of population growth anticipated in the District will not have a significant impact on the coastal structures services and assets.

The Tasman District has undergone a period of rapid growth, as shown by census population shown below.

Year	Census Population For Tasman District	% Increase since last census	Average Compound Growth Rate per Annum	New Zealand Average Growth Rate per Annum
1991	34,026			
1996	37,971	11.6%	2.22%	1.41%
2001	41,352	8.9%	1.72%	0.65%
2006	45,800	10.8%	2.06%	1.51%

This shows that Tasman District has been growing at a faster rate that the national average.

For the purpose of projecting population growth and related property / dwelling growth in the district for the next 20 years and beyond, a comprehensive growth modelling analysis has been undertaken. This is summarised in Appendix F, and reported in more detail in a separate document (Refer to Appendix F for details). The resulting population projection that Council has adopted for the purposes of its infrastructure planning and financial planning is shown in Figure 5-1.

Council have adopted population projections that are consistent with Statistics New Zealand growth projections. Council has assumed medium growth for all areas except Motueka and Richmond where a high growth rate has been adopted.

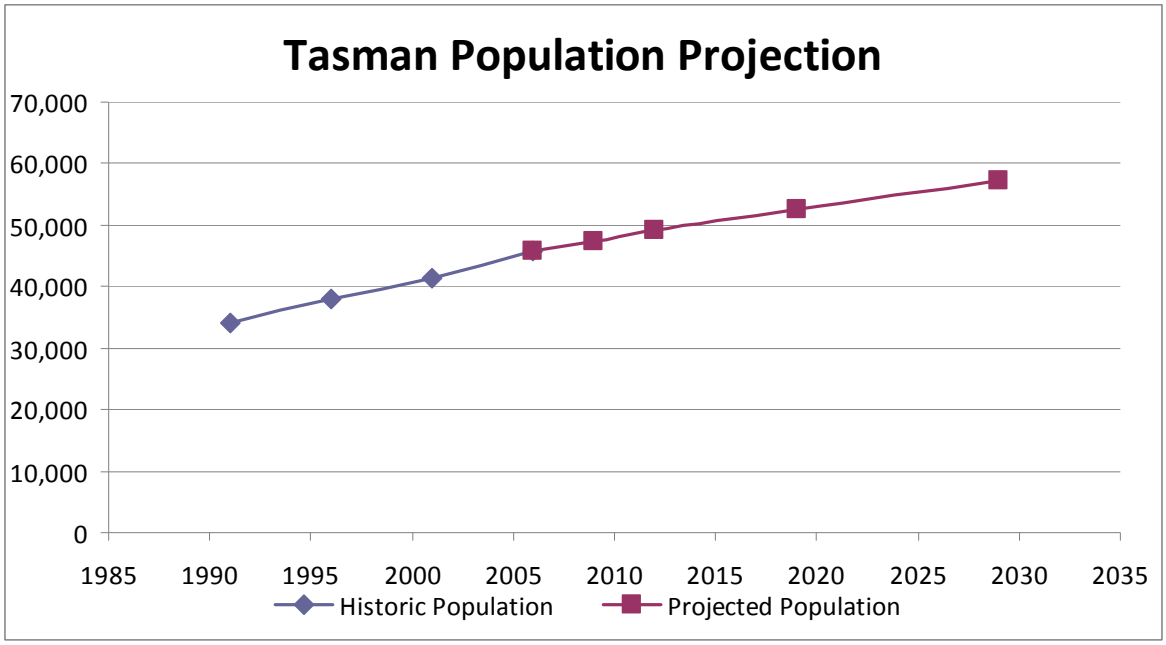


Figure 5-1: Council's Desired Population Growth

The growth analyses have included projecting growth across the District, on a settlement by settlement basis, balancing demand and supply factors to get a distributed growth forecast.

5.2.2. Effects 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 say water supply or roading, 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 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.

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 presently programmed.

A new marina at Port Tarakohe is programmed to meet projected demand.

Coastal protection work will be programmed as required and affordable to the community.

Coastal protection for any future development has not been allowed for in the planned improvements outlined in Section 6.

5.2.3. Trends in Community Expectations

- 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 Council should take a greater role in control of coastal development.
- Changes in the aquaculture and fishing industry could affect the demand for facilities at Port Motueka.

5.3 Technological Change

Technology change has the ability to impact on the demand for a service. There is no predicted technological changes that will have a significant effect on the assets in the medium term. A possible lesser example is changes in navigational aids to better, more reliable systems.

5.4 Changes in Legislation and Policies

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

Council will continue to monitor these factors when reviewing and developing forecasts and strategies.

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. Council will continue to meet the reasonable customer needs subject to its management objectives.

Ownership of wharf structures and associated facilities will continue to be reviewed as changes in the required Level of Service occur.

6. NEW CAPITAL EXPENDITURE

6.1 Future Capital Works Programme

Capital projects are those projects that create new assets or increase the capacity of the existing coastal assets beyond their current service potential. New assets such as improvement to buildings on the wharves created by lessees are not included in the new capital expenditure.

Council have developed 20 year capital works programmes. Only the first 10 years of the capital works programme are reported in Council's LTCCP, however Council have decided that there is benefit in planning over a 20 year horizon to ensure the level of expenditure over the long term is financially sustainable, and that a long term view is taken on the infrastructure planning.

The Council's 20 year capital programme is included in Appendix F.

6.2 Development Standards

All new assets constructed by Council or acquired from developments will be constructed in accordance with the latest edition of the Council Engineering Standards.

The standards will be updated regularly to incorporate relevant experience and changes in best practice.

6.3 Deferred Capital Projects

In developing their financial forecasts, Council has prepared a full schedule of capital projects and has programmed them in order to meet the levels of service, or to meet the needs of population growth. Initially Council adopted an optimistic growth forecast which drove significant capital expenditure. When new information became available from Statistics New Zealand on the 2006 census and their population projections, Council reviewed their growth forecast and adopted a more moderate growth in alignment with Statistics New Zealand projections. This has meant that some growth driven projects have been moved back, however these have moved because Council considers the need for them will arise later, rather than because of affordability issues. Thus it is expected that with these movements in the programme, the levels of service can still be met

The Council has considered the financial affordability of the coastal structures capital forecasts together with forecasts from all other Council activities, and has concluded that the coastal structure capital forecast as provided is affordable, and has thus approved the capital programme without amendment.

The Inundation Bund – Mapua project has been deferred. This is the provision of an earth bund above the rock revetment. The project has been deferred on the basis of affordability. It was deferred from the 2014/ to 2020 and will not affect the level of service of the existing rock protection.

6.4 Funding of Future Capital Works

Council funds the significant works initially from loan. Loan charges are met from funds generated from:

- Endowment income
- Fee recovery (fees from berthage, leases and rentals)
- The general rate.

6.5 Other Capital Works Policies

Coastal protection works have to date been considered on their merits, as and when the need arises with those directly affected properties sharing in the costs and benefits and the balance being seen as a public good.

Council's involvement in boat ramps will continue to be limited.

Future development of coastal areas needs to fully consider any potential for future coastal protection because of the potential for very high future costs to the District and local community.

Restricting development on the shorelines was one of the responses to consultation with the community in the "Have Your Say on Tasman Districts Future" survey questionnaire, in November 2005.

7. RENEWALS CAPITAL EXPENDITURE AND DEPRECIATION

Details outlining the Council's renewal policy are listed in Appendix I.

Council's asset management databases and inspection regimes will be used to assist in decisions of whether or not renewing the asset is the most cost effective solution. The aim is to achieve a solution with the lowest long-term costs.

The projected expenditure on renewals for the next 20 years is in Appendix I.

Ports and Wharves
Council has renewed the wharf structures based on the needs of the community and users. All renewals on ancillary buildings are the responsibility of the lessees.

Boat Ramps and Jetties
Council will continue to have a limited involvement in these assets but will renew as the needs and Levels of Service demand.

Navigational Aids
These are renewed on an as required basis.

Coastal Protection
Significant works following a storm event would be considered a renewal.

7.1 Deferred Renewal Projects

Renewal works identified may be deferred if the cost is beyond the community's ability to fund it. This can occur when higher priority works are required on other infrastructure assets, or there are short term peaks in expenditure or if an inadequate rating base exists.

When renewal work is deferred the impact of the deferral on economic inefficiencies and the system's ability to achieve the required service standards will be assessed. Although the deferral of some renewal works may not impact significantly on the operation of assets, repeated deferral will create a liability in the longer term.

7.2 Depreciation and Decline of Service Potential

As assets age they deteriorate and the efficiency and effectiveness of the service they provide can erode. This "decline of service potential" can be very minor and take a long time, or it can be quick depending on the type of asset. Depreciation is the mechanism by which this is accounted for, and renewals are the means by which assets are restored to providing an acceptable level of service. Key assumptions on the Depreciation and Decline in Service Potential are included in Appendix J. The actual value of depreciation accounted for is included in the future overall financial requirements in Appendix L.

7.3 Asset Disposals

When an asset reaches the end of its useful life and renewal or replacement is decided against, Council may elect to decommission and dispose of an asset. The Council does not have a formal strategy relating to asset disposals. Council's approach to asset disposals is summarised in Appendix W.

There are no plans to decommission and dispose of any assets in the Coastal Structures activity in the period of this AM Plan.

8. SUMMARY OF THE OVERALL FINANCIAL POSITION INCLUDING EXPENDITURE, INCOME & EXISTING ASSET VALUES

8.1 Overview

The Council's funding strategy is detailed in Appendix M.

There is limited ability for user-pays in the coastal activities. However separate rating is needed to obtain a share for coastal protection works.

8.2 A Statement of Financial Performance for the Next Ten Years

The statement of financial performance for the coastal structures for the next 10 years is included in Appendix L. Only the first 10 years of the financial performance are reported in Council's LTCCP, however Council have decided that there is benefit in planning over a 20 year horizon to ensure the level of expenditure over the long term is financially sustainable, and that a long term view is taken on the infrastructure planning.

It should be noted that the financial projections in this AMP, Appendix L, do not include inflation and are assessed on current value terms. The financial information presented in the LTCCP does include for inflation.

8.3 An Explanation of the Council's Funding Policy for the Activity

The net cost for the activity is funded from general rates. Other funds are generated from:

- Endowment income
- Fee recovery – berthage, leases and rentals
- Specific targeted rates on coastal protection

A schedule of fees and charges is included in Appendix M.

9. RESOURCE CONSENTS AND PROPERTY DESIGNATIONS

Coastal permits are required for all structures and occupation in the coastal marine area. Some users or activities associated with coastal structures may also require resource consent.

Council will ensure that the process/programme for lodging applications for the renewal of resource consents will be undertaken in plenty of time before they expire, and for monitoring and reporting the Councils actual performance against the relevant conditions of each consent.

Each of the consents has relevant reporting requirements that will be adhered to.

Council will develop a full comprehensive list of all consents held and a reporting programme covering all consents. A current listing can be found in the TRMP.

There are no property designations pertaining to coastal structures owned or managed by Council.

10. DEMAND MANAGEMENT

Council's approach to demand management is detailed in Appendix N.

As a Harbour Authority Council has a statutory obligation to manage the activities within the Ports. As a Regional Authority Council is obligated to undertake its responsibilities within the coastal marine area. As a Local Authority Council works with its community to provide safe and reasonable access to the coast and where applicable to protect public or private assets on or along the coast.

Improving our demand management will:

- Achieve more sustainable access and use of the coast in line with Councils Level of Service and the community outcomes;
- Optimise the capacity and performance of existing assets;
- Reduce or defer the need for new assets;
- Meet the Councils policy to ensure that access to and use of the coastal area is undertaken in a sustainable manner;
- Demonstrate that Council can "walk the talk" on demand management, particularly when undertaking development or increased pressure for access and use of the coast conflicts with the sustainable management and need to protect the coastline
- Respond to the user's needs in a sustainable and affordable manner.

11. SIGNIFICANT NEGATIVE EFFECTS

There are a number of significant negative effects from undertaking coastal activities. These are detailed out in Appendix P and include:

- Changes in the natural coastal environment with development and use of existing facilities
- Structures out of character with the natural coastal environment
- Loss of natural dune environments with heavy rock for coastal protection.

Mitigation measures are detailed in Appendix P.

12. SIGNIFICANT ASSUMPTIONS, UNCERTAINTIES AND RISK MANAGEMENT

12.1 Assumptions and Uncertainties

The most significant assumptions and uncertainties that underlie the approach are described in Appendix Q and summarised as follows;

- ***Asset data knowledge:*** Assumptions have been made on the locations, condition and performance of the assets because the asset data register is not complete.
- ***Growth Forecasts:*** Assumptions have been made on future population growth. These assumptions greatly influence the financial forecasts.
- ***Asset Capacity:*** Assumptions are made to estimate the capacity of the assets.
- ***Timing of Capital Projects:*** Many factors influence when projects can be implemented, some of these beyond the Council's control. This will impact on the year to year budget, but in the long term this will not have a significant effect.
- ***Funding of Capital Projects:*** Funding is critical to new water supply projects and assumptions have been made about how this will be achieved, especially in terms of subsidies, major users contributions, development contributions, Council subsidy and community contributions. These have significant contributions to the financial forecasts.
- ***Accuracy of Capital Project Cost Estimates:*** All projects in the capital forecasts have been estimated. A 15% contingency has been added to construction costs to reflect uncertainties in unit rates used. A further provision has been added to the project estimate to reflect uncertainty in project scope. The amount added depends on the amount of work already done on the project. It is not feasible to have all projects in the next 20 years advanced to a high level of accuracy. However, it is preferable to have projects in the next 3 years advanced to a level that provides reasonable confidence about the accuracy of the estimate.

12.2 Risk Management

Council is adopting an Integrated Risk Management (IRM) framework and processes to manage risk within the organisation. Appendix Q contains a brief description of the IRM framework. The IRM process and framework is intended to:

- Demonstrate responsible stewardship by TDC on behalf of its customers and stakeholders.
- Act as a vehicle for communication with all parties with an interest in TDC's organisational and asset management practices.
- Provide a focus within TDC for ongoing development of good management practices.
- Demonstrate good governance.
- Meet public expectations and compliance obligations.
- Manage risk from an organisational perspective.
- Facilitate the effective and transparent allocation of resources to where they will have most effect on the success of the organisation in delivering its services.

The risk assessment is considered at 3 levels:

Level 1 – Organisational Risk

Level 2 – Asset Group Risk

Level 3 – Critical Asset Risk

At this point, Council has undertaken the Risk Assessments for Level 1 and 2, but have yet to complete determining the appropriate risk treatment strategies for either. This has been included in the Improvement Plan. The level 3 assessment has not been started but has been planned for in the Improvement Plan.

13. BYLAWS

There is one current bylaw enacted by Council in direct relevance:

- Navigation Safety Bylaws January 2005 and as amended September 2006, being part of the Consolidated Bylaw; chapter 5. This can be found at Tasman records and available at Council offices and on the web site.

14. PLAN REVIEW AND PUBLIC CONSULTATION

14.1 Review Process for This Activity Management Plan

This section details the programme of ongoing monitoring of AMP effectiveness and review. The AMP is a living document that is relevant and integral to daily AM activity. To ensure the plan remains useful and relevant the following ongoing process of AMP monitoring and review activity will be undertaken:

- A comprehensive review at intervals of not less than three years via the Special Consultative Procedure. Each review will be completed to coincide with the next review of the LTCCP.
- Between three yearly reviews, various asset management improvement initiatives will be undertaken as listed in the improvement plan (Appendix V). The AMP will be amended to incorporate the outcomes of these at each review.
- Quality assurance audits (Appendix Z) of AM information to ensure the integrity and cost effectiveness of data collected.

14.2 Public Consultation

The Council consults the public through various mediums as outlined in more detail in Appendix U.

There was no specific reference to the coastal structures activity in the 2008 Communitrak Survey. Future surveys will need to be more directly targeted to coastal structures to enable an assessment of the whole community's satisfaction with this activity.

14.3 Intentions for Future Consultation

The Draft Long Term Council Community Plan outlines the Council's intent for public consultation around the LTCCP and this AMP.

In the three years between July 2009 and July 2012 Council also plans to review the community outcomes in the latter half of 2010 (refer LTCCP) and subsequently the Levels of Service for all Council activities in 2011 (refer Improvement Plan and LTCCP). The outcome of these will feed into the next revision of the AMPs and LTCCP.

15. SUSTAINABLE DEVELOPMENT

Council's Vision, Mission and Objectives (refer Appendix A) demonstrate the Council's commitment to sustainable development at an organisational level. This is in line with the community wishes and the legislative requirements of the Local Government Act 2002 to promote the social, economic, environmental and cultural well beings of communities in the present and for the future.

At an organisational level, Council has:

- incorporated the 4 well beings into the community outcomes, which flow into the Levels of Service and performance measures
- incorporated the 4 well beings in the integrated risk management approach
- incorporated environmental, social and cultural considerations in the growth planning and modelling

In the coastal structures activity specifically, a sustainable development approach is demonstrated in the following aspects:

- When considering possible protection of existing built development or allowing further use and access to the coastal area Council will consider the conflicts of the need to protect and enhance the coastal environment with meeting the community and user expectations.

16. IMPROVEMENT PLAN

The development of this plan is based on existing Levels of Service, the best available current information and the knowledge and judgement of Council staff. The AMP will be the subject of on-going monitoring, review and updating to improve the quality of AM planning and accuracy of the financial projections. This process will use improved knowledge of customer expectations and enhanced AM systems and data to optimise decision-making, review outputs, develop strategies, and extend the planning horizon.

The AM improvement process involves:

- The cycle of AM plan monitoring, review, revision and audit to improve the effectiveness of AMP outputs and compliance with audit criteria, legal requirements and good practice.
- The definition of service standards reflecting community desires through public consultation (service level review). The AMP is used to identify service standard options and costs, and the delivery of the service standards adopted is a key objective of Asset Management planning.
- The corporate Asset Management co-ordination role by the Asset Management team, which guides and audits the development of the AMP within the framework of Council's strategic direction.

The specific planned improvements to coastal structures activity are detailed in Appendix V.

17. SCHEDULE OF KEY PROPOSED NEW CAPITAL AND RENEWAL WORKS

17.1 Schedule of Work for Next 10 Years

Table 17-1 below details the significant capital and renewal work programmed for years 2009 to 2019. A full list of all capital projects over the 20 year period is included in Appendix F.

Table 17-1: Schedule of Work for Next 10 Years

Activity	2009/10 to 2011/12 Years 1 to 3	2012/13 to 2018/19 Years 4 to 10	Project Driver
Riwaka Wharf Rock Treatment	$36k	$144k	I
Marahau Coastal Protection		$80k	R
Torrent Bay Beach Replenishment	$100k	$200k	R
Port Tarakohe Marina	$1.63m	$3.5m	G
Port Tarakohe Wharf Replacement	$1.20m	$500k	G

N.B. Does not include inflation
Project Drivers: G = Growth, I = Increased Level of Service, R = Renewal

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

A.1 Introduction

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 – for example the Community Outcomes determined through consultation with the public.
- Linkages – the need to ensure this AMP is consistent with all other relevant plans and policies.
- Constraints – the legal constraints and obligations 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 and Industry Standards, and Statutory Planning Documents

- Local Government Act 2002.
  Especially
  - Schedule 10.
  - The requirement to consider all options and to assess the benefits and costs of each option.
  - The consultation requirements.
- Maritime Transport Act 1994 and amendments
- The Land Transport Act 1998.
- Land Transport Management Act 2003
- Public Works Act 1981
- Reserves Act 1927
- Soil Conservation & River Control Act 1941
- Bylaws Act 1910.
- Climate Change Response Act.
- Ministry for Environment 2004 – Preparing for Climate Change
- NIWA – Climate Change and Variability for Tasman District 2008
- New Zealand Coastal Policy Statement 1994.
- Civil Defence Emergency Management Act 2002.
- Government's Sustainable Development Action Plan.
- Resource Management Act 1991.
- Health and Safety in Employment Act 1999.
- Building Act 2004
- Tasman Resource Management Plan.
- Council's Engineering Design Standards for Subdivisions and Development.
- Any existing strategies or policies (or requirements) of the Regional Council that might impinge on the activity.
- Building Regulations 1992.

Some of the legislative requirements that the Council must act within which are discussed in more detail as follows:

- *NZ Coastal Policy Statement 1994 and the Resource Management Act*: 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 Maori 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 upon 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.

Council has several statutory planning documents implementing its responsibilities under the Resource Management Act 1991. Those which impact on the provision of Council Coastal Activities are:

- Tasman Regional Policy Statement Operative 2001 – An overview of significant resource management issues with general policies and methods to address these. In particular under Section 9 Coastal Environment, Council has developed specific objectives and policy statements for a number of areas including:
    - Navigation and Safety
    - Adverse effects of activities in the Coast 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 – A combined Regional and District Plan with statements of issues, objectives, policies, methods and rules addressing the use of land, water, coastal marine area and discharges into the environment.
- Port Tarakohe Management Plan
- Tasman District Council Engineering Standards
- Council Harbour Bylaws and Policy Resolutions relating to Coastal Structures

A.3 Key Stakeholders

Stakeholders are those individuals and organisations that have an interest in the management and/or operation of the assets. Stakeholders include, but are not limited to:

National Industry Organisations:

- Maritime Safety Authority
- National Institute of Water and Atmosphere (NIWA)
- Ministry for the Environment
- The Department of Conservation
- Hydrographic Office of the Royal New Zealand Navy
- Local Government New Zealand
- New Zealand Transport Agency

Local Stakeholders:

- The elected representatives (Councillors and Community Boards)
- The TDC Community of owners, residents and ratepayers
- Recreational and industry users
- Tangata Whenua
- Regulatory and monitoring bodies
- Environmental and Recreational Interest Groups including Fish and Game New Zealand, Royal Forest and Bird Protection Society and Tasman Environmental Society
- Tasman District Council employees
- Consultants and contractors

A.4 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 Council Community Plan (LTCCP). It also provides a guide for the preparation of each Annual Plan and other forward work programmes.

Council Resolutions

A file of District Council resolutions relating to the coastal structures are held by Council.

Figure A-1 depicts the links between Council's Activity Management Plans to other corporate plans.

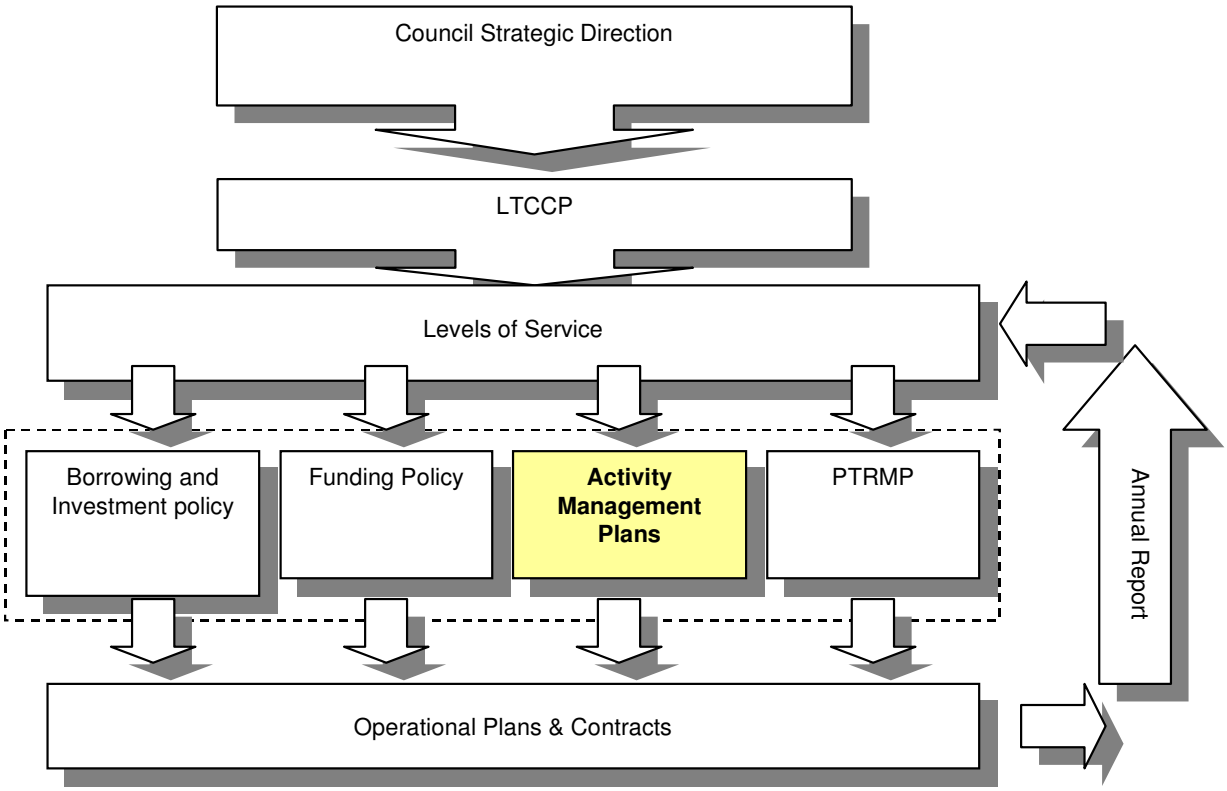


Figure A-1: Hierarchy of TDC Policy, Strategy and Planning

Council Strategic Direction is outlined in the Vision, Mission and Objectives of the Council:

Vision: An interactive community living safely in the garden that is Tasman District.

Mission: To enhance community wellbeing and quality of life.

Objectives:

Objective 1:
To implement policies and financial management strategies that advance the Tasman District.

Objective 2:
To ensure sustainable management of natural and physical resources, and security of environmental standards.

Objective 3:
To sustainability manage infrastructural assets relating to Tasman District.

Objective 4:
To enhance community development and the social, natural, cultural and recreational assets relating to Tasman District.

Objective 5:
To promote sustainable economic development in the Tasman District.

Table A-1: Strategic Documents Utilised as Part of the Planning Process

LTCCP	The Long-term Council Community Plan. The primary instrument for the Council to report on its intentions on delivering its services to the community. The LTCCP supersedes the Long Term Financial Strategy (LTFS) and traditional Annual Plan.
Strategic Plan	This is the broad strategic direction of Council set in the context of current and future customer requirements. The AM plan is the tactical plan with a view to achieving the strategic targets.
Annual Plan	The service level options and associated costs developed in the AM plan will be fed into the Annual Plan consultation process. The content of the Annual Plan will feed directly from the short term forecasts in the LTCCP.
Financial and Business Plans	The financial and business plans requirement by the Local Government Amendment Act (3). The expenditure projections will be taken directly from the financial forecasts in the AM plan.
Contracts	The service levels, strategies and information requirements contained in the AM plan are the basis for performance standards in the current Maintenance and Professional Service Contracts.
Operational Plans	Operating and maintenance guidelines to ensure that the schemes operate reliably and equipment and plant is maintained in a condition that will maximise their useful service life.
Corporate Information	Quality AM is dependent on suitable information and data and the availability of sophisticated AM systems which are fully integrated with the wider corporate information systems (e.g. financial, property, GIS, customer service, etc.). Council's goal is to work towards such a fully integrated system.

A.5 Key Activity Drivers

Key drivers in the Coastal Structure activity include:

- Growth throughout the District and the need to meet the demand for continued public access to and along the coast for recreational use
- The demand for urban development along or near the coast
- Coastal erosion and likely increase of it from predicted adverse effects of climate change
- Council responsibilities under the NZ Coastal Policy Statement to control coastal development and protect or mitigate the effects on the natural character of the coastal environment
- Control of navigation and associated safety issues
- Control and management of boat moorings.

APPENDIX B. OVERVIEW OF THE COASTAL STRUCTURES IN THE DISTRICT

This 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 Districts 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 District owned structures have been transferred to other parties such as the wharf at Motueka to Talley's Industries and other minor structures such as wharves/jetties at Collingwood, Milnethorpe, Waitapu and Mangarakau, which currently belong to the Department of Conservation (DOC).

Assets currently in this activity include:

- Ownership of wharves at Mapua, Riwaka and Tarakohe
- Responsibility for ports at Motueka and Tarakohe

The coastal structures associated with this activity are described in more detail below.

B.1 Port Motueka

B1.1 Overview

Port Motueka first started operating around the turn of the century 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 WCC 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.

Talley's have been the major operator in Port Motueka since the early 1970's. They own part of the port area south of Everett Street (where their office buildings 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 is no longer operational.

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

There is also a jetty constructed by the Motueka Yacht Club and a boat ramp with car parking area.

Council have transferred the ownership of the wharf and its facilities to Talley's. Council are no longer responsible for the maintenance of this asset. Sections of the Harbour Bylaw relating to navigational safety are managed by Council's Harbour Master. Endowment land is managed through the Council's Manager Property Services.

B1.2 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. Talley's, as owners of the wharf and primary operators through the port, are continuing attempts to manage these processes. For 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 and general safety by the port users through its Harbour Bylaws and the Proposed Tasman Resource Management Plan for specific activities and structures.

B.2 Port Tarakohe

B2.1 Overview

Port Tarakohe was originally constructed by the Golden Bay Cement Company who ceased operating in the area in 1989. Council became involved when the golden Bay community requested assistance to develop and maintain this asset. Council purchased the rights to operate the port in June 1994 and initiated a Local Members bill which gave Tasman District Council port ownership.

B2.2 Key issues and Strategic Management

Substantial development works including rock arms, dredging and the 62 berth marina have been constructed in the period 2002/04. Significant development work for Port Tarakohe in the ten year period includes a proposed wharf to replace the aged wooden wharf and a new marina to meet the high demand for this recreational facility. This work is to be done as part of a fee payment agreement with the marine farm industry.

B.3 Mapua Wharf

B3.1 Overview

The Mapua Wharf is now predominantly used for activities associated with tourism and recreation.

The Mapua Wharf includes a timber wharf structure and floating pier. Wharf buildings are leased and include restaurants and boat club facilities. There are also concrete boat ramps with associated parking.

A partial re-piling and re-decking was completed in 1997/98 and the balance of the wharf was re-piled and re-decked in 2003/04. Some upgrade of piles and sub-floor members under the existing buildings were also included.

B3.2 Key Issues and Strategic Management

The tourism and recreation use of the wharf is likely to continue to grow.

There is likely in the medium term to be the need to upgrade further piling under the existing building on the wharf. Council will continue to monitor the condition of the wharf through regular 6 yearly inspections by a Structural Engineer.

The navigational aids and moorings are managed through the Council Harbour Bylaws, by Council's Harbour Master.

Upgrades and renewals are programmed on an as required basis with regular inspections to set priorities.

B.4 Waitapu Wharf

B4.1 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 1970's. The wharf is predominantly timber structure except for the deck on the seaward end which has been overlaid with concrete.

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 a poor condition.

There is no significant activity by users at the wharf. Council has recently reviewed the management of the wharf. The wharf itself is currently the responsibility of DOC.

Council receives income from lease of the land on the causeway, which may be legal road. There is no provision for wharf maintenance under this activity plan.

B4.2 Key issues and Strategic Management

There are no issues for Council, that is now the responsibility of the Department of Conservation.

B.5 Riwaka Wharf

B5.1 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

B5.2 Key issues and Strategic Management

The increase in recreational use of the wharf and the demand for public access to this area of the coast does mean Council will need to manage the safety of users and continue to protect the asset and adjoining coast line.

Council will therefore maintain the wharf structure and undertake appropriate coastal protection works either side.

B.6 Coastal Protection

B6.1 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 MHWS and not in the Tasman Coastal Marine Area.

Council, in conjunction with the local community, has recently (2003-2007) completed substantial coastal protection at Marahau, Ruby Bay – Broadsea Ave and Old Mill Way. These have been constructed to protect existing urban development and built to a higher standard that earlier works.

B6.2 Key Issues and Strategic Management

Council has set out its objective and policies (refer Appendix A) which provides 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. Council is continuing to research and monitor the dynamics of its coast line so as to provide appropriate solutions and whether to protect or leave areas to the natural processes.

At Torrent Bay Council is proposing beach replenishment and has also allowed to renew part of these works in the next ten years.

Regular inspections and renewals for all the coastal protection works will continue.

B.7 Boat Ramps and Jetties

B7.1 Overview

The Torrent Bay jetty and landing is still operational.

Boat ramps include concrete and gravel construction and vary considerably in user demand. The ramps include those at Pohara, Tarakohe, Tata Beach, Mapua (wharf and Grossi Point), Marahau, Rabbit Island, Rough Island and Torrent Bay.

Seven are concreted, the balance are gravel. Other boat ramps are private and include the Kaiteriteri Beach, under management of the Kaiteriteri Beach Domain Board.

B7.2 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.

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

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

No new ramps are programmed in the next 10 years.

B.8 Navigational Aids

B8.1 Overview

As a Harbour Authority Tasman District Council are 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.

Since 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.

There are formal lease arrangements for some navigational aids located on private property. There has been

no problem to date with access to those navigational aids on properties where no formal easement or agreement of entry has been negotiated.

B8.2 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 Council.

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

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

Council will maintain, adjust and renew the navigational aids so as to provide an adequate guide for all coastal marine area users.

B.9 Asset Condition

B9.1 Wharves

Mapua wharf is a timber structure with concrete and paved connections to the access road. Significant renewal work has been completed however work under the buildings such as re-piling is likely to be a medium term requirement. The buildings themselves are maintained by the Lessees.

Riwaka wharf is in fair condition and does require some renewal work to provide a safe level of service to meet likely demands.

B9.2 Coastal Protection

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.

B9.3 Boat Ramps and Jetties

The concrete ramps are in fair to good condition and require maintenance and upgrade in the short to medium terms.

The gravel accesses are generally in a fair to good condition and are maintained on an as required basis.

The Torrent Bay jetty is in fair to poor condition. A full assessment of its needs is to be completed.

B9.4 Navigational Aids

The aids are in fair to good condition.

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

APPENDIX C. PRIVATE COASTAL STRUCTURES - NOT RELEVANT TO THIS ACTIVITY

APPENDIX D. ASSET VALUATIONS – COASTAL STRUCTURES

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 Equivalent to International Accounting Standard 16; Property, Plant and Equipment (NZ IAS 16) and IAS 36 (Impairment of 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 TDC.

TDC requires its infrastructure asset register and valuation to be updated in accordance with Financial Reporting Standards and the AMP improvement plan (i.e. three yearly updates)

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 ended June 2007.

- NAMS Group Infrastructure Asset Valuation Guidelines – Edition 2.0
- New Zealand Equivalent to International Accounting Standard 16; Property, Plant and Equipment (NZ IAS 16) and IAS 36 (Impairment of Assets

D1.1 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.

D1.2 Revaluation

The revaluations are based on accurate and substantially complete asset registers and appropriate replacement costs and effective lives. The basis of the data inputs used is described in detail in the attached report.

(a) 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 Council's opinion a different life is appropriate. The changes are justified in the valuation report.

(b) 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 are valued every three years, and historic asset valuations reports are held with Council.

The Coastal Structures assets were last re-valued in June 2007 and the data are reported under separate cover[1]. The total replacement value of the coastal structures as of 30 June 2007 is given in the Table D-1 below.

Key assumptions in assessing the asset valuations are described in detail in the valuation report.

The Coastal Structures also encompasses Ports and Wharves within the Tasman District. However as Port Tarakohe is reported on through the Community Services Activities then it has been excluded from the Coastal Structures Activities.

2007 Valuation

The optimised replacement value, annual depreciation and optimised depreciated replacement value of the ports/wharves/coastal /structures assets are summarised in Table D-1.

Table D-1: Ports/Wharves/Coastal Structures Asset Valuation Summary

	Optimised Replacement Value ($)	Optimised Depreciated Replacement Value ($)	Total Depreciation to Date ($)	Annual Depreciation ($/yr)
Marine Structures	2,519,571	1,608,050	911,460	41,279
Port Tarakohe	19,951,133	10,550,020	9,401,112	153,533

[1] Infrastructural Asset Revaluation, June 2007 – MWH report for Tasman District Council

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 management of coastal assets:

Engineering Services:

- Management of coastal structures owned by Council

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
- Port Tarakohe

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 RPS) including setting coastal planning policy and processing resource consents

Corporate Services

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

Routine maintenance, reactive and proactive, on the coastal structures is undertaken by suitably experienced preferred contractors. Competitive tenders are called for significant works.

Coastal protection works and some boat ramps are subject to severe storms with potential unplanned maintenance being required.

E.2 Maintenance Standards

Suppliers are selected on their ability to provide best practice.

All work is undertaken in accordance with TDC Engineering Standards and Policies 2008

E.3 Business Continuity / Emergency Management

The Council has a commitment to ensure the provision of goods and services during hazard events. The wharves and boat ramps will continue to be invaluable in Civil Defence emergencies. The sites will be available for search and rescue operations.

Recreational use may be restricted or curtailed during hazard events.

Council will maintain the required safety procedures required under the Maritime Transport and the Local Government Act and its own Civil Defence emergency plans.

E.4 Projected Operations and Maintenance Costs

Twenty year forecasts for operations and maintenance are shown in Table E.1

Table E-1: Operation and Maintenance Forecast

Total Forecast for Operation & Maintenance - Coastal Structures

Item	Scheme	Project Name	Total Project Cost	Total O&M	2009/10 Year 1	2010/11 Year 2	2011/12 Year 3	2012/13 Year 4	2013/14 Year 5	2014/15 Year 6	2015/16 Year 7	2016/17 Year 8	2017/18 Year 9	2018/19 Year 10
2	Mapua Wharf	Inspections	$ 40,000	$ 40,000	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -
3	Riwaka Wharf	Inspections	$ 16,000	$ 16,000	$ 4,000	$ -	$ -	$ -	$ -	$ -	$ 4,000	$ -	$ -	$ -
7	Ruby Bay	Inspections	$ 20,000	$ 20,000	$ -	$ -	$ -	$ 5,000	$ -	$ -	$ -	$ -	$ 5,000	$ -
8	Marahau	Inspections	$ 15,000	$ 15,000	$ -	$ -	$ -	$ -	$ 5,000	$ -	$ -	$ -	$ -	$ -
14	Collingwood	Collingwood Jetty	$ 16,000	$ 16,000	$ 4,000	$ -	$ -	$ -	$ -	$ -	$ 4,000	$ -	$ -	$ -
17	Navigational Aids	Renewal / Upgrades Marker buoys	$ 40,000	$ 40,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000
19	Ruby Bay	Coastal Process study Ruby Bay	$ 100,000	$ 100,000	$ 10,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ -	$ -	$ -
25	Port Tarakohe	Tarakohe Wharf Maintenance	$ 140,000	$ 140,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000
26	Port Tarakohe	Tarakohe Marina Maintenance	$ 150,000	$ 150,000	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500
27	Port Tarakohe	Tarakohe Cleaning and Mowing	$ 64,000	$ 64,000	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200
28	Port Tarakohe	Tarakohe Electricity	$ 97,000	$ 97,000	$ 2,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000

Item	Scheme	Project Name	Total Project Cost	Total O&M	2019/20 Year 11	2020/21 Year 12	2021/22 Year 13	2022/23 Year 14	2023/24 Year 15	2024/25 Year 16	2025/26 Year 17	2026/27 Year 18	2027/28 Year 19	2028/29 Year 20
2	Mapua Wharf	Inspections	$ 40,000	$ 40,000	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ 10,000
3	Riwaka Wharf	Inspections	$ 16,000	$ 16,000	$ -	$ 4,000	$ -	$ -	$ -	$ -	$ -	$ 4,000	$ -	$ -
7	Ruby Bay	Inspections	$ 20,000	$ 20,000	$ -	$ -	$ -	$ 5,000	$ -	$ -	$ -	$ -	$ 5,000	$ -
8	Marahau	Inspections	$ 15,000	$ 15,000	$ 5,000	$ -	$ -	$ -	$ -	$ -	$ 5,000	$ -	$ -	$ -
14	Collingwood	Collingwood Jetty	$ 16,000	$ 16,000	$ -	$ -	$ 4,000	$ -	$ -	$ -	$ -	$ -	$ 4,000	$ -
17	Navigational Aids	Renewal / Upgrades Marker buoys	$ 40,000	$ 40,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000
19	Ruby Bay	Coastal Process study Ruby Bay	$ 100,000	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
25	Port Tarakohe	Tarakohe Wharf Maintenance	$ 140,000	$ 140,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000
26	Port Tarakohe	Tarakohe Marina Maintenance	$ 150,000	$ 150,000	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500
27	Port Tarakohe	Tarakohe Cleaning and Mowing	$ 64,000	$ 64,000	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200
28	Port Tarakohe	Tarakohe Electricity	$ 97,000	$ 97,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000

Note: Does Not Include Inflation

APPENDIX F. DEMAND AND FUTURE NEW CAPITAL REQUIREMENTS

F.1 Growth Supply – Demand Model

A comprehensive population growth supply/demand model has been developed in 2008. This replaces the previous "AMPlan/LTCCP Growth Maps – November 2005". There are now two volumes namely:

Volume 1 TDC Growth Supply - Demand Model 2009/10 to 2018/19 to 2029.
Volume 2 Infrastructure Activity Outputs

The model projects development within the time periods:

- Year 1 to 3 - term until the next LTCCP review
- Year 4 to 10 - 10 year timeframe of LTCCP
- Year 11 to 20 - for future infrastructure planning
- Year 20 plus - for future infrastructure planning.

The status of the assessments of the many Development Areas for the model process remains subservient to the TRMP.

The model projections are described in detail in both volumes and are summarised as follows:

F1.1 Volume 1

F.1.1.1 Supply

- Settlement Areas – 17 GIS Maps represent the 'urban' areas in the district which are further divided into some 258 Development Areas aligned to existing and potential new zonings. All known existing Residential dwellings and existing Business buildings are shown. The current supply of lots, dwellings and buildings are established.
- An assessment of every Development Area is then completed considering:
    - Land Use Effects – settlement form, productive land value, hazard risk exposure and environmental/social impacts.
    - Network Services Effects – stormwater, water supply, wastewater, transportation, green space.
    - Each Development Area has a net positive or negative development score assigned to it identifying where growth should be promoted or halted.
    - Using the data from the Settlement/Development Area maps and Assessments plus the Council staff knowledge the model generates the theoretical total future supply of lots.

F.1.1.2 Demand

- Residential: A district population growth projection percentage has been established for the five wards and the Settlement Areas within each ward. The population growth is based on Statistics New Zealand demographic population projections assuming medium growth for all areas except Richmond and Motueka where a high growth projection has been adopted. Initially Council adopted a higher growth projection across the district, however in the light of new information that was released by Statistics New Zealand on the 2006 census, and when the full impact of the higher growth projection was understood, Council reviewed this decision and adopted a projection in line with Statistics New Zealand projections. The population growth is converted into required dwellings assuming 2.4 persons per average household.

- Business: Council Land Management Consultants have produced a 'business land required' sub model. Three types of business are considered namely Industrial, Commercial and Retail, however the model simplifies the demand to future building sites required over three time periods.

- Supply and Demand: The model requires experienced Council staff to then decide on how the demand for future Residential and Business quantities will be satisfied. The demand is met by using either:
    - Existing available unbuilt on lots.
    - New lots created through subdivision.

  The results of this whole process are shown in the first worksheet table in Volume 1 called 'Summary of Volume 1 Outputs'.

F1.2 Volume 2

The Volume 1 summary outputs table is reproduced in Volume 2.

Volume 2 creates worksheets for the entire Engineering infrastructure activities which require a rate to be struck over the 10 year period of the LTCCP.

Volume 2 does not contain any financial figures but rather provides the numerical units required to be determined.

The starting, base data for Volume 2 is derived from Council's rating database.

F.1.2.1 Projections Beyond 20 Years

This model satisfies the requirement to project growth over a 3, 10 and 20 year time period for the LTCCP financial model.

Asset Managers however are also tasked to consider design requirements for assets with life cycles exceeding 20 years.

There is sufficient data available in both volumes to extrapolate figures to a future time requirement acknowledging the limitations of the models accuracy.

F.2 Projection of Demands for Coastal Structures

There is no direct relationship of the projected growth areas with the demand for coastal structures.
It is expected the demand for access to the coast and use of the existing coastal structures for recreational and commercial access will continue. Provision has been made for a new marina structure at Port Tarakohe in the next ten years. Improvements to the Port Tarakohe timber wharf as part of its proposed replacement in 2009/10.

The use of land in the coastal environs for urban development will be subject to the Tasman Coastal Policy Statement and Proposed Tasman Resource Management Plan which recognise Council's responsibility to protect the natural environment of the existing coast.

The existing urban developments at Mapua, Ruby Bay and Marahau already have some coastal protection works. Additional works are proposed in the next 10 years to improve the current level of service. This includes:

- Coastal protection work on east side of Riwaka wharf
- Beach replenishment at Torrent Bay

Council has undertaken a study on the likely impacts of climate change on the coastline (refer NIWA report "Climate Change & Variability for Tasman District" – 2008).

Council recognise the dynamic nature of the coastal processes and have therefore also proposed a study of the coastal process at Ruby Bay within the first 4 years.

The need for further coastal protection work may arise from time to time as a result of severe storm events. Any protection works as a result of such an event would be considered on its merits at the time. While no specific provision has been made for such works, Council do make provision for emergency management funds that may be used to assist in undertaking such works.

F.3 Future New Capital Requirements

New works are those works that create a new asset that did not previously exist, or works that upgrade or improve an existing asset beyond its existing capacity. The need for the new work could be from one of the following drivers:

- Growth – to provide infrastructure to accommodate the demand
- Increased Level of Service – to improve assets to provide a better level of service
- Backlog – to upgrade or improve an asset that should have been upgraded previously but for some reason has been deferred or not identified.

This is necessary for two reasons as follows:

a) 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.

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

The project new capital requirements for the next 20 years (including renewals) is summarised as follows:

Figure F-1: Coastal Structures Capital Forecast – By Activity

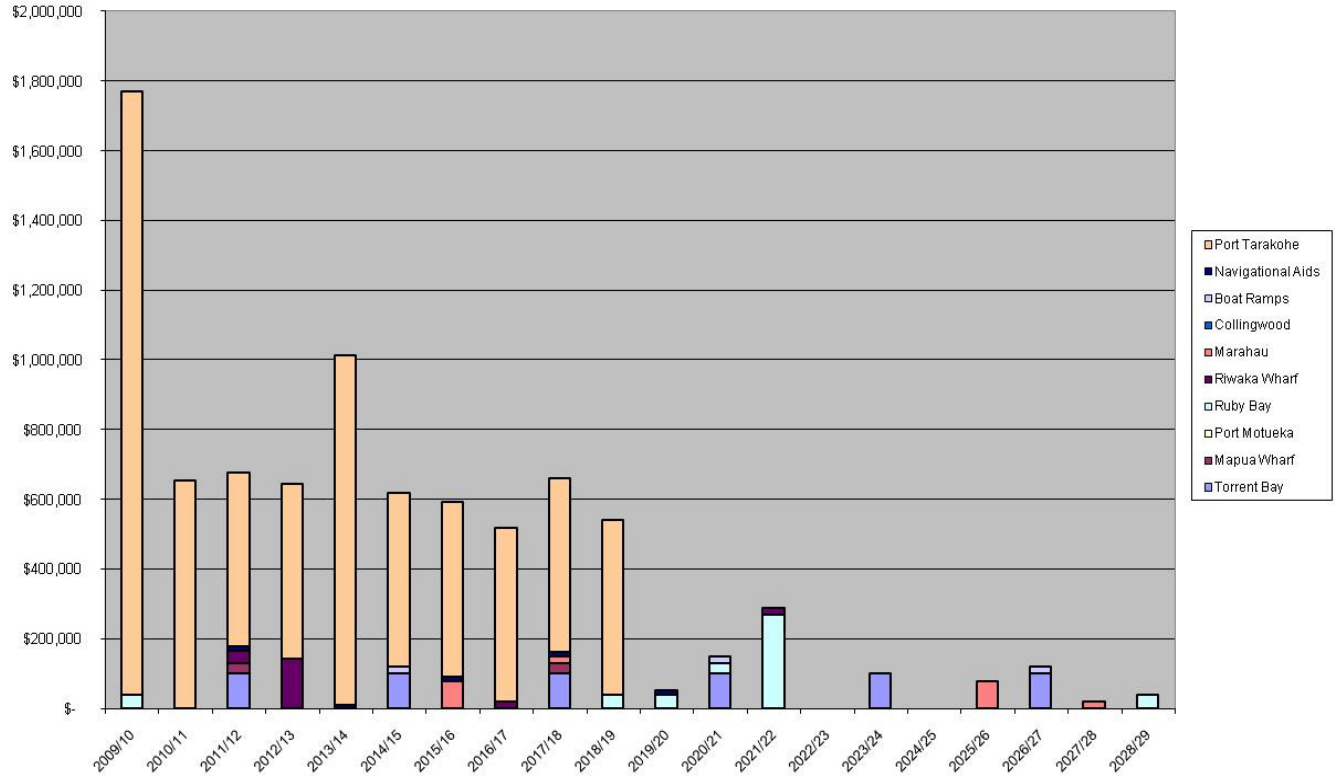
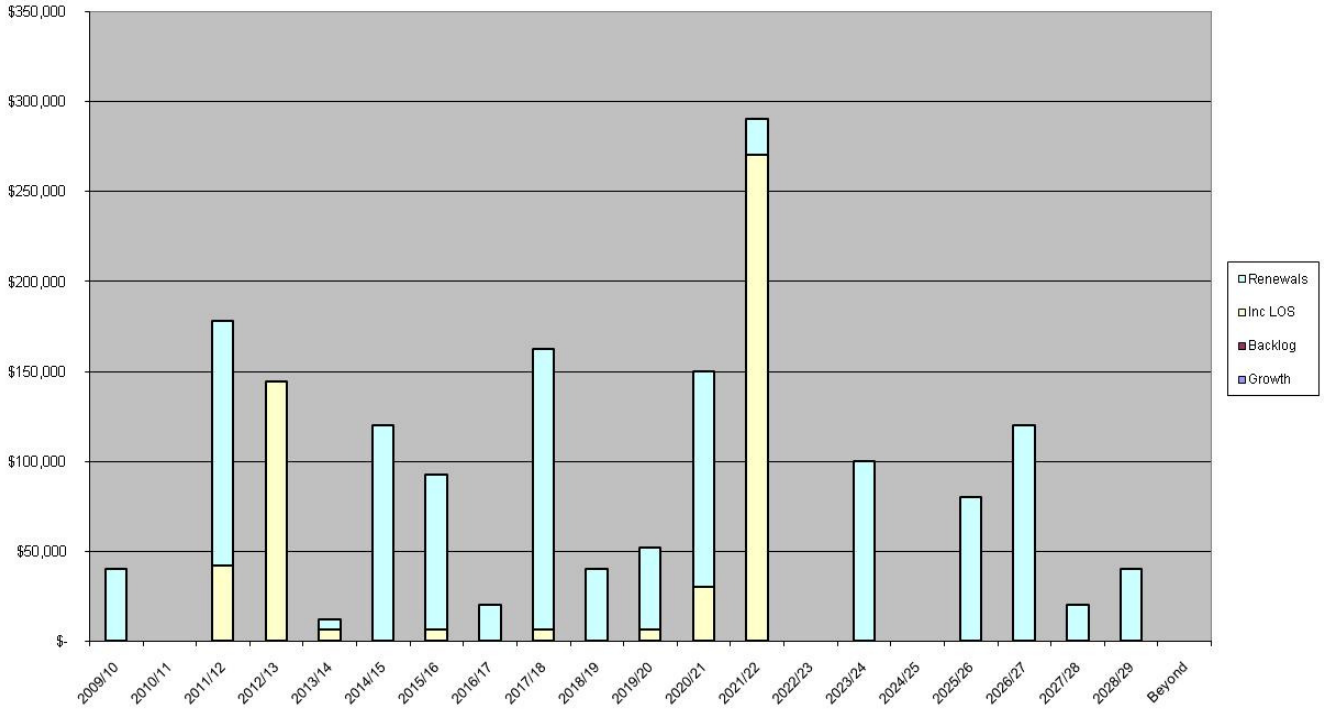


Figure F-2: Coastal Structures Capital Forecast – by Project Driver



F.4 Development of New Capital Requirement Forecasts

During April to September 2008, a number of workshops with the project team were 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 Council.

The information from the estimates has then been entered into the Capital Forecast spreadsheet/database that enables listing and summing 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 council's financial system for financial modelling.

The full spreadsheet of projects is included as follows:

Table F-1: Coastal Capital Works

Total Capital Forecast

Item	Scheme	Project Name	Project Estimate Excluding Inflation	2009/10 Year 1	2010/11 Year 2	2011/12 Year 3	2012/13 Year 4	2013/14 Year 5	2014/15 Year 6	2015/16 Year 7	2016/17 Year 8	2017/18 Year 9	2018/19 Year 10
1	Mapua Wharf	Deck and pile replacements	$ 60,000	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -
4	Riwaka Wharf	Rock Revetment	$ 180,000	$ -	$ -	$ 36,000	$ 144,000	$ -	$ -	$ -	$ -	$ -	$ -
5	Riwaka Wharf	Wharf structure perodic renewals	$ 40,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 20,000	$ -	$ -
6	Ruby Bay	Coastal Protection	$ 80,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 40,000
10	Marahau	Coastal Protection	$ 160,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 80,000	$ -	$ -	$ -
11	Marahau	Jetty	$ 40,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 20,000	$ -
13	Torrent Bay	Torrent Bay Beach Replenishment	$ 600,000	$ -	$ -	$ 100,000	$ -	$ -	$ 100,000	$ -	$ -	$ 100,000	$ -
15	Boat Ramps	Boat Ramp renewals	$ 60,000	$ -	$ -	$ -	$ -	$ -	$ 20,000	$ -	$ -	$ -	$ -
16	Navigational Aids	Renewal / Upgrades Marker buoys and lights	$ 60,000	$ -	$ -	$ 12,000	$ -	$ 12,000	$ -	$ 12,000	$ -	$ 12,000	$ -
18	Ruby Bay	Inundation bund Mapua	$ 300,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20	Ruby Bay	Coastal Protection	$ 80,000	$ 40,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
21	Port Tarakohe	Tarakohe Port - Cap Works Marina	$ 5,130,000	$ 530,000	$ 600,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000
22	Port Tarakohe	Tarakohe Port - Seal and Mark Hardstand Ar	$ 55,000	$ -	$ 55,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
23	Port Tarakohe	Tarakohe Wharf Replacement	$ 1,200,000	$ 1,200,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
24	Port Tarakohe	Tarakohe Wharf Replacement	$ 500,000	$ -	$ -	$ -	$ -	$ 500,000	$ -	$ -	$ -	$ -	$ -

Item	Scheme	Project Name	Project Estimate Excluding Inflation	2019/20 Year 11	2020/21 Year 12	2021/22 Year 13	2022/23 Year 14	2023/24 Year 15	2024/25 Year 16	2025/26 Year 17	2026/27 Year 18	2027/28 Year 19	2028/29 Year 20
1	Mapua Wharf	Deck and pile replacements	$ 60,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
4	Riwaka Wharf	Rock Revetment	$ 180,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Riwaka Wharf	Wharf structure perodic renewals	$ 40,000	$ -	$ -	$ 20,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
6	Ruby Bay	Coastal Protection	$ 80,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 40,000
10	Marahau	Coastal Protection	$ 160,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 80,000	$ -	$ -	$ -
11	Marahau	Jetty	$ 40,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 20,000	$ -
13	Torrent Bay	Torrent Bay Beach Replenishment	$ 600,000	$ -	$ 100,000	$ -	$ -	$ 100,000	$ -	$ -	$ 100,000	$ -	$ -
15	Boat Ramps	Boat Ramp renewals	$ 60,000	$ -	$ 20,000	$ -	$ -	$ -	$ -	$ -	$ 20,000	$ -	$ -
16	Navigational Aids	Renewal / Upgrades Marker buoys and lights	$ 60,000	$ 12,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
18	Ruby Bay	Inundation bund Mapua	$ 300,000	$ -	$ 30,000	$ 270,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20	Ruby Bay	Coastal Protection	$ 80,000	$ 40,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
21	Port Tarakohe	Tarakohe Port - Cap Works Marina	$ 5,130,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
22	Port Tarakohe	Tarakohe Port - Seal and Mark Hardstand Ar	$ 55,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
23	Port Tarakohe	Tarakohe Wharf Replacement	$ 1,200,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
24	Port Tarakohe	Tarakohe Wharf Replacement	$ 500,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

Note: Does Not Include Inflation

APPENDIX G. DEVELOPMENT CONTRIBUTIONS / FINANCIAL CONTRIBUTIONS

Information on Development Contributions and Financial Contributions can be found in the Council's Long Term Council Community Plan (LTCCP) document.

There are no specific development contributions applicable to the Coastal Structures activity. However, development within the Coastal area may require connections and upgrades of the other infrastructure such as roading, water and wastewater and could then be subject to development contributions.

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 AND PROPERTY DESIGNATIONS

H.1 Introduction

The statutory framework defining what activities require resource consents is the Resource Management Act (RMA) 1991. The RMA deals with:

- The control of the use of land;
- Structures and activities in river beds and in the coastal marine area;
- The control of the taking, use, damming and diversion of water and the control of the quantity, level and flow of water in any water body, including:
    - The setting of any maximum or minimum levels or flows of water; and
    - The control of the range, or rate of change, of levels or flows of water

The RMA is administered locally by Tasman District Council, a Unitary Authority, through the Tasman Resource Management Plan (TRMP) which sets out Policies, Objectives and Rules controlling activities to ensure they meet the Purpose and Principles of the RMA.

An important aspect of the coastal structures activity is to ensure that all activities in the coastal area are managed responsibly.

H.2 Resource Consents

A register of all active resource consents for Council's coastal activities is being developed (as detailed in the improvements list in Appendix V). The use of spreadsheets for managing consents has become inefficient. MWH are developing a database (NM2) of all engineering resource consents in 2008/09. NM2 will allow the accurate programming of all actions required by the consents including renewal prior to consent expiry. NM2 will also drive the annual monitoring programme.

Consents are required for coastal protection works. They have been obtained for planned works such as at Broadsea Ave and Old Mill Walkway – Mapua; and at Marahau.

Coastal structures for the protection of other infrastructure adjacent to the coastline (such as roads) are managed under the Transportation Activity, including any required consents. Resource consents for structures, occupation or activities in the coastal marine area are known as coastal permits.

Where permits for discharges, water or coastal activities are required the RMA restricts those consents to a maximum of 35 years only. Hence there needs to be an on-going programme of 'consent renewals' for those components of Council's coastal structures, as well as a monitoring programme for compliance with the conditions of permitted activities or resource consents.

TDC will ensure that the process / programme for lodging applications for the renewal of resource consents will be undertaken in plenty of time before they expire, and for monitoring and reporting the Council's actual performance against all of the relevant conditions of each consent.

Short-term consents are required from time to time for construction activities.

Generally there is no monitoring of resource consent conditions undertaken at present with the Council intending to initiate a programme of monitoring.

H.3 Property Designations

Designations are another way provided by the RMA of identifying and protecting lands for existing and public works.

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 works 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 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 at each AMP (i.e. 3 yearly), and every year the annual renewal programme is reviewed and planned with the input of the maintenance contractors.

Table I-1 shows the projected renewals expenditure. The renewals costs are also included in the tables and charts in Appendix F.

I.2 Forecast of Renewals Expenditure for next 20 years

Tables showing a summary and total breakdown of the expenditure forecast for renewals over the next 20 years are provided at the end of this Appendix.

Ports and Wharves

Mapua:
Renewal of sections of deck and pile support bars been allowed for in the next 20 years.

Port Motueka:
Significant issues are developing with the loss of draught at low tide. Littoral sand movement and erosion of the spit are affecting the marinas and channel. While significant matters for the commercial users, in particular, these issues are being dealt with by the wharf owners (Talley's) and Council through the consent process.

Port Tarakohe:
Renewal of the old timber wharf structure is proposed in 2009/10.

Boats Ramps and Jetties

A renewal programme is included for the renewal of the boat ramps based on one ramp every six years. A review of the Torrent Bay jetty need and level of service is required to determine any renewal or disposal strategy. No expenditure has been allowed for in the next 20 years.

Navigational Aids

A renewal programme for marker buoys and lights has been allowed for. This is subject to a review of the appropriateness of the existing aids and the required level of service to suit the user's needs and changing channels.

Coastal Protection

Renewals have been included at Riwaka, Old Mill Walkway, Broadsea Ave, Marahau and Torrent Bay

I.3 Renewal Standards

The work to be performed and materials to be used shall comply with the current TDC Engineering Standards.

I.4 Deferred Renewals

Renewal works identified may be deferred if the cost is beyond the community's ability to fund it. This can occur when higher priority works are required on other infrastructure assets, or there are short term peaks in expenditure or if an inadequate rating base exists.

When renewal work is deferred the impact of the deferral on economic inefficiencies and the system's ability to achieve the required service standards will be assessed. Although the deferral of some renewal works may not impact significantly on the operation of assets, repeated deferral will create a liability in the longer term.

There are currently no deferred renewal works for the coastal structures activity.

Table I-1: Coastal Structures 20 Year Renewals Expenditure Forecast

Total Forecast of Expenditure for Renewals - Coastal Structures

Item	Scheme	Project Name	Total Project Cost	Total Renewals	2009/10 Year 1	2010/11 Year 2	2011/12 Year 3	2012/13 Year 4	2013/14 Year 5	2014/15 Year 6	2015/16 Year 7	2016/17 Year 8	2017/18 Year 9	2018/19 Year 10
1	Mapua Wharf	Deck and pile replacements	$ 60,000	$ 60,000	-	-	30,000	-	-	-	-	-	30,000	-
5	Riwaka Wharf	Wharf structure perodic renewals	$ 40,000	$ 40,000	-	-	-	-	-	-	-	20,000	-	-
6	Ruby Bay	Coastal Protection	$ 80,000	$ 80,000	-	-	-	-	-	-	-	-	-	40,000
10	Marahau	Coastal Protection	$ 160,000	$ 160,000	-	-	-	-	-	-	80,000	-	-	-
11	Marahau	Jetty	$ 40,000	$ 40,000	-	-	-	-	-	-	-	-	20,000	-
13	Torrent Bay	Torrent Bay Beach Replenishment	$ 600,000	$ 600,000	-	-	100,000	-	-	100,000	-	-	100,000	-
15	Boat Ramps	Boat Ramp renewals	$ 60,000	$ 60,000	-	-	-	-	-	20,000	-	-	-	-
16	Navigational Aids	Renewal / Upgrades Marker buoys	$ 60,000	$ 30,000	-	-	6,000	-	6,000	-	6,000	-	6,000	-
20	Ruby Bay	Coastal Protection	$ 80,000	$ 80,000	40,000	-	-	-	-	-	-	-	-	-
23	Port Tarakohe	Tarakohe Wharf Replacement	$ 1,200,000	$ 1,200,000	1,200,000	-	-	-	-	-	-	-	-	-

Item	Scheme	Project Name	Total Project Cost	Total Renewals	2019/20 Year 11	2020/21 Year 12	2021/22 Year 13	2022/23 Year 14	2023/24 Year 15	2024/25 Year 16	2025/26 Year 17	2026/27 Year 18	2027/28 Year 19	2028/29 Year 20
1	Mapua Wharf	Deck and pile replacements	$ 60,000	$ 60,000	-	-	-	-	-	-	-	-	-	-
5	Riwaka Wharf	Wharf structure perodic renewals	$ 40,000	$ 40,000	-	-	20,000	-	-	-	-	-	-	-
6	Ruby Bay	Coastal Protection	$ 80,000	$ 80,000	-	-	-	-	-	-	-	-	-	40,000
10	Marahau	Coastal Protection	$ 160,000	$ 160,000	-	-	-	-	-	-	80,000	-	-	-
11	Marahau	Jetty	$ 40,000	$ 40,000	-	-	-	-	-	-	-	-	20,000	-
13	Torrent Bay	Torrent Bay Beach Replenishment	$ 600,000	$ 600,000	-	100,000	-	-	100,000	-	-	100,000	-	-
15	Boat Ramps	Boat Ramp renewals	$ 60,000	$ 60,000	-	20,000	-	-	-	-	-	20,000	-	-
16	Navigational Aids	Renewal / Upgrades Marker buoys	$ 60,000	$ 30,000	6,000	-	-	-	-	-	-	-	-	-
20	Ruby Bay	Coastal Protection	$ 80,000	$ 80,000	40,000	-	-	-	-	-	-	-	-	-
23	Port Tarakohe	Tarakohe Wharf Replacement	$ 1,200,000	$ 1,200,000	-	-	-	-	-	-	-	-	-	-

Note: Does Not Include Inflation

APPENDIX J. DEPRECIATION AND DECLINE IN SERVICE POTENTIAL

The scope of this information is mostly from the Long Term Council Community Plan.

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 remaining useful lives and associated rates for the significant assets have been estimated as follows:

- Ports and wharves 7 – 100 years
- Coastal Seawalls 20 – 100 years

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 Council policy to operate the coastal structure activity to meet a desired level of service. 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.

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 LTCCP. 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 (refer Section 3.2) as well as the size and the economic life of the asset that is being funded and its consistency with Council's long term financial strategy.

The detailed Borrowing Policy is found in Section 3 of Council's Treasury Management Policy that was last reviewed by Council in April 2004.

K.2 Loans

Loans to fund Capital works over the next 10 years are projected to add up to the following costs:

Coastal Structures	2009/10 Year 1	2010/11 Year 2	2011/12 Year 3	2012/13 Year 4	2013/14 Year 5	2014/15/ Year 6	2015/16 Year 7	2016/17 Year 8	2017/18 Year 9	2018/19 Year 10
Loans Raised (x 1,000)	1,770	655	536	644	1,000	500	580	500	500	540
Opening Loan Balance	6,220	7,592	7,787	7,832	7,955	8,396	8,328	8,313	8,191	8,044

Note: Figures do not include for inflation and are in thousands of dollars (i.e. x1000)

K.3 Cost of Loans

The projected annual loan repayment costs over the next 10 years are:

Coastal Structures	2009/10 Year 1	2010/11 Year 2	2011/12 Year 3	2012/13 Year 4	2013/14 Year 5	2014/15/ Year 6	2015/16 Year 7	2016/17 Year 8	2017/18 Year 9	2018/19 Year 10
Loan Interest (x 1,000)	460	516	525	531	551	564	561	556	547	557
Loan Principal	398	460	491	521	559	568	595	622	647	673

Note: Figures do not include for inflation and are in thousands of dollars (i.e. x1000)

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.

Table L-1: Summary of Projected Costs and Income for Next 10 years

Coastal Structures	2008/2009 Budget $	2009/2010 Budget $	2010/2011 Budget $	2011/2012 Budget $	2012/2013 Budget $	2013/2014 Budget $	2014/2015 Budget $	2015/2016 Budget $	20016/2017 Budget $	2017/2018 Budget $	2018/2019 Budget $
INCOME											
General Rates	288,668	361,548	393,415	408,600	384,690	442,119	442,073	406,970	367,529	364,046	252,319
Targeted Rate	63,360	129,728	129,728	129,728	129,728	129,728	115,506	115,506	115,506	115,506	117,264
Fees & Recoveries	999,923	636,702	726,702	786,702	846,702	906,702	966,702	1,026,702	1,086,702	1,146,702	1,206,702
Sundry Income	33,962	32,760	38,255	39,097	39,251	39,337	39,367	39,370	39,347	39,323	39,301
TOTAL INCOME	1,385,913	1,160,738	1,288,100	1,364,127	1,400,371	1,517,886	1,563,648	1,588,548	1,609,084	1,665,577	1,615,586
OPERATING COSTS											
Motueka	36,265	40,245	43,762	45,834	44,344	45,224	46,483	45,544	45,999	46,844	46,016
Tarakohe	236,358	159,251	154,251	154,251	194,251	194,251	194,251	194,251	194,251	194,251	194,251
District Wharves & Boat Ramp	55,545	91,138	101,153	92,905	96,665	97,406	93,458	100,682	88,054	83,760	78,077
Loan Interest	465,838	459,550	515,957	524,588	530,639	550,940	564,358	561,381	556,460	546,789	536,719
Depreciation	261,265	292,173	324,978	328,127	342,853	347,976	382,168	378,776	410,984	414,821	445,327
TOTAL OPERATING COST	1,055,271	1,042,357	1,140,101	1,145,705	1,208,752	1,235,797	1,280,718	1,280,634	1,295,748	1,286,465	1,300,390
NET COST OF SERVICE (SURPLUS	(330,642)	(118,381)	(147,999)	(218,422)	(191,619)	(282,089)	(282,930)	(307,914)	(313,336)	(379,112)	(315,196)
TOTAL FUNDS REQUIRED											
NET COST OF SERVICE (SURPLUS	(330,642)	(118,381)	(147,999)	(218,422)	(191,619)	(282,089)	(282,930)	(307,914)	(313,336)	(379,112)	(315,196)
Capital	2,163,901	1,770,000	655,000	578,000	644,000	1,012,000	520,000	592,000	520,000	562,000	540,000
Transfer to Reserves	3,284	14,239	14,251	14,258	14,264	68,188	77,255	79,847	82,477	85,090	87,680
Loan Principal	213,240	398,057	460,057	491,207	520,707	559,390	567,843	594,843	621,843	646,843	672,843
	2,049,783	2,063,915	981,309	865,043	987,352	1,357,489	882,168	958,776	910,984	914,821	985,327
SOURCE OF FUNDS											
Restricted Reserves Applied	151,006	1,742	1,331	916	499	9,513	-	-	-	-	-
Loans Raised	1,637,512	1,770,000	655,000	536,000	644,000	1,000,000	500,000	580,000	500,000	500,000	540,000
	1,788,518	1,771,742	656,331	536,916	644,499	1,009,513	500,000	580,000	500,000	500,000	540,000
NON FUNDED DEPRECIATION											
Depreciation to be funded at income statement level	261,265	292,173	324,978	328,127	342,853	347,976	382,168	378,776	410,984	414,821	445,327
	261,265	292,173	324,978	328,127	342,853	347,976	382,168	378,776	410,984	414,821	445,327
	2,049,783	2,063,915	981,309	865,043	987,352	1,357,489	882,168	958,776	910,984	914,821	985,327

N.B. Figures do not include inflation

APPENDIX M. FUNDING POLICY PLUS 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. The Council funding strategy is based on the following:

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

Table M-1 shows the targeted rates that Council has set for the Coastal Structures activities. The properties or rating units that the various rates will be applied are defined by the various Rating Areas (e.g. The Ruby Bay Stopbank Rate applies to all rating units in the Ruby Bay Stop Bank Rating Area).

Table M-1: Targeted Rates for Coastal Structures

Rate	2008/2009 inc GST	2009/2010 Inc GST
Torrent Bay Replenishment A - per Property	-	$1,500.00
Torrent Bay Replenishment B - per Property	-	$ 450.00
Ruby Bay Stopbank - per Property	$ 1,049.00	$ 1,049.00
Mapua Stopbank - per Property	$ 63.26	$ 106.44

Table M-2 below details the current fees and charges.

Table M-2: Wharfage and Berthage

Type of Cargo		Rate
Fish and shellfish	Includes all marine animals	$9.75 per tonne
Mussel and spat	Alternative backbone levy	Subject to negotiation with aquaculture farmers but not less than $1.00/m for mussels and 30c/m for spat and $5,500 for ring road
Ring Road	Alternate to wharfage	
Other, including cargo	Rates for large bulk by negotiation	$3.70 per tonne
Fuel (other than use of fixed facility)	Fuel transfer only	1.0 cents per litre

Note: Backbone line and ring road levies are an alternative annual levy to payment of wharfage and will be subject to annual negotiation to ensure levies are comparable to relevant wharfage charges. If these levies are not agreed, berthage and wharfage charges will apply.

Commercial Operator's Licence (GST inclusive)	2009/10
Application fee Payable on initial application and in addition to the annual fee: (Plus reimbursement of any reasonable and necessary additional costs incurred by Council in assessing an application (e.g. evaluation of seaworthiness, qualifications and experience))	$185.00
Annual Fee For each multiple of: one power-driven vessel and/or up to a total of 15 kayaks, rafts, waka or similar vessels that are not power-driven with greater than 10hpw	$245.00

Fuel Facilities	2009/10
Pump sited on Council wharf, or property at Tarakohe. The lump sum charge is in lieu of wharfage	$3,600 per year
Elsewhere and excluding wharfage	$50 year

Berthage of a vessel at a Council-owned Wharf:	
Commercial vessels and private recreational vessels (including fishing vessels, marine farming vessels, commercial passenger and/or cargo vessel	
Period over which charge applies	**Rate**
Casual (daily)	$2.00 per metre

Note: the charges may be varied by the Chief Executive where special circumstances exist.

Berthage of vessel at a Council-owned facility other than a wharf:		
Type of berth and vessel	**Charge (annual unless otherwise stated)**	**Minimum length charged**
Marina: recreational	$230 per metre	8 metres
Piled walkway, commercial	$205 per metre	8 metres
Floating up to 15 metres, commercial	$255 per metre	10 metres
Floating over 15 metres, commercial	$290 per metre	16 metres
Restricted Access	$175 per metre	8 metres
Recreational visitor on mooring or marina berth, vessel 15 metres or less	$10 per day	
Recreational visitor on mooring or marina berth, vessel more than 15 metres	$15 per day	
Fore and aft mooring: Outer arm	$1,035	
Fore and aft mooring : Inner basin	$725	

Demurrage/storage* at Port Tarakohe		
Type of storage	**Period for application of charges**	**Rate**
Open storage	Daily	$1/m²
Fenced storage	Daily	$1.50/m²
Standard rubbish skip	Annual	$500
	Monthly	$25
20' TEU container	Annual	$2,000
	Monthly	$200
40' FEU container	Annual	$4,000
	Monthly	$400

Trans-shipping of cargo at sea	
Cargo, Goods, Merchandise or other Material	$0.25 per tonne

APPENDIX N. DEMAND MANAGEMENT

N.1 Introduction to Coastal Structures Demand Management

Demand Management, as a comprehensive, integrated and long term approach, seeks to improve the overall productivity of the coastal structures activity and deliver services to match the needs of the end users while being affordable to the community.

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

Improving our demand management will:

- Achieve more sustainable access and use of the coast in line with Council's level of service and the community outcomes;
- Optimise the capacity/performance of existing assets;
- Reduce or defer the need for new assets;
- Meet the Council's policy to ensure that access to and are of the coastal area is undertaken in a sustainable manner;
- Demonstrate that Council can "walk the talk" on demand management. Particularly when urban development or increased pressure for access and use of the coast conflicts with the sustainable management and need to protect the coastline;
- Respond to the needs in a sustainable and affordable manner.

N.2 Sustainable Development Issues and Demand Management Strategy

The coastal activities have significant impact on the District, local communities and the coastal environment. The key issues and strategies management for each of the coastal structures assets are detailed in Appendix B. As demand for use of the coastal area increases 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 with allowing and protecting existing (eg wharf and harbour activities) and possibly some future built development adjacent to the coast. Council recognises that the natural coastal processes are complex and not well understood and Council will continue to research and monitor the dynamics of its coast line so as to make appropriate decisions whether to protect or leave areas to the natural processes.

Council will also continue to manage activities by others through its Bylaws and the Tasman Resource Management Plan to ensure activities are undertaken in a sustainable manner affordable to the community.

N.3 Demand Management Measures

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.

APPENDIX O. NOT RELEVANT TO THIS ACTIVITY

APPENDIX P. SIGNIFICANT NEGATIVE EFFECTS

The significant negative effects on the community associated with coastal activities include:

- Increased traffic from commercial and recreational activities.
- Loss of natural dune environments with heavy rock for coastal protection.
- Buildings out of character with nearby residential development.
- Changes in the natural coastal environment with development and use of existing facilities.
- Structures out of character with the natural coastal environment.
- Potential for adverse environmental effects and the high cost of mitigation for protection of development located too close to dynamic coastal zones.
- Inappropriate urban built development can be a negative visual impact.
- An increase in community rates to fund additional protection works.

P.1 Methods of Mitigation

The building uses are changing as commercial and recreational demands change. Conditions can be imposed as appropriate on lessees to improve the amenity value. The loss of natural dune environments can be mitigated with prudent design of the rock revetment.

Resource consents are required for development in the coastal area and appropriate conditions can be imposed to mitigate the negative effects, should the development be approved.

Possible methods of mitigation measures that will be considered include:

- Imposing appropriate conditions on lessees to improve the amenity value of existing buildings
- Removal of existing buildings
- Controls through the Bylaws and TRMP on development
- Education of coastal area users
- Restriction of access
- Best practice design and management of coastal protection.

APPENDIX Q. SIGNIFICANT ASSUMPTIONS, UNCERTAINTIES, AND RISK MANAGEMENT

This appendix is in two parts:

- Assumptions and Uncertainties
- 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 Council consider could have a significant affect on the financial forecasts, and discusses the potential risks that this creates.

Q1.1 Asset Data Knowledge

While the Council has asset registers and many digital systems, processes and records, Council does not have a comprehensive database of the coastal structures. 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.

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
- Changes in the coastal environment are adversely affecting the level of service for Port Motueka, and the mitigation measures are currently 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 10 year period.
- The existing asset condition is such that further deterioration will not require renewal or maintenance beyond that currently allowed for.

Q1.2 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 Tasman District where population growth has been so high. The growth forecasts underpin and drive:

- The asset creation programme
- Council 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 Assumptions and Uncertainties in Section 12.

Q1.3 Timing of Capital Projects

The timing of many capital projects can be well defined and accurately forecast because there are few limitations on the implementation other than the community approval through the LTCCP/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
- Obtaining the community consent for projects like the construction of a new seawall where community input is necessary
- Securing land to construct new assets on

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 financials is not considered significant.

Q1.4 Funding Of Capital Projects

Funding of capital projects is crucial to a successful project. When forecasting projects that will not occur for a number of years, a number of assumptions have to be made about how the scheme will be funded. These assumptions can significantly affect the forecast cost to the public

Q1.5 Accuracy of Capital Project Cost Estimates

The financial forecasts contain many projects, each of which has been estimated from the best available knowledge. As you would expect, the quality of the knowledge available is highly variable depending on how far through the project lifecycle you are. In some cases, only a rough order cost estimate is possible because little or no preliminary investigation has been carried out.

To get some consistency and formality to cost estimating, each estimate has been assessed as being to the following project lifecycle stage and accuracy:

Stage in Project Lifecycle	Estimate Accuracy
Concept	± 50%
Feasibility	± 30%
Preliminary Design	± 20%
Detailed Design	± 15%

Q1.6 Changes in Legislation and Policy

The legal and planning framework under which Local Government operates is ever changing. This can significantly affect the feasibility of projects, how they are designed and constructed and how they are funded.

Q.2 Risk Management

Q2.1 Risk Management Framework

Council is adopting an Integrated Risk Management (IRM) framework and process as the means for managing risk within the organisation. The process integrates with the Long Term Council Community Plan (LTCCP) process as illustrated in Figure Q-1.

The strategic goal of integrated risk management is:

"To integrate risk management into Council's organisational decision making so that it can achieve its strategic goals cost effectively while optimising opportunities and reducing threats."

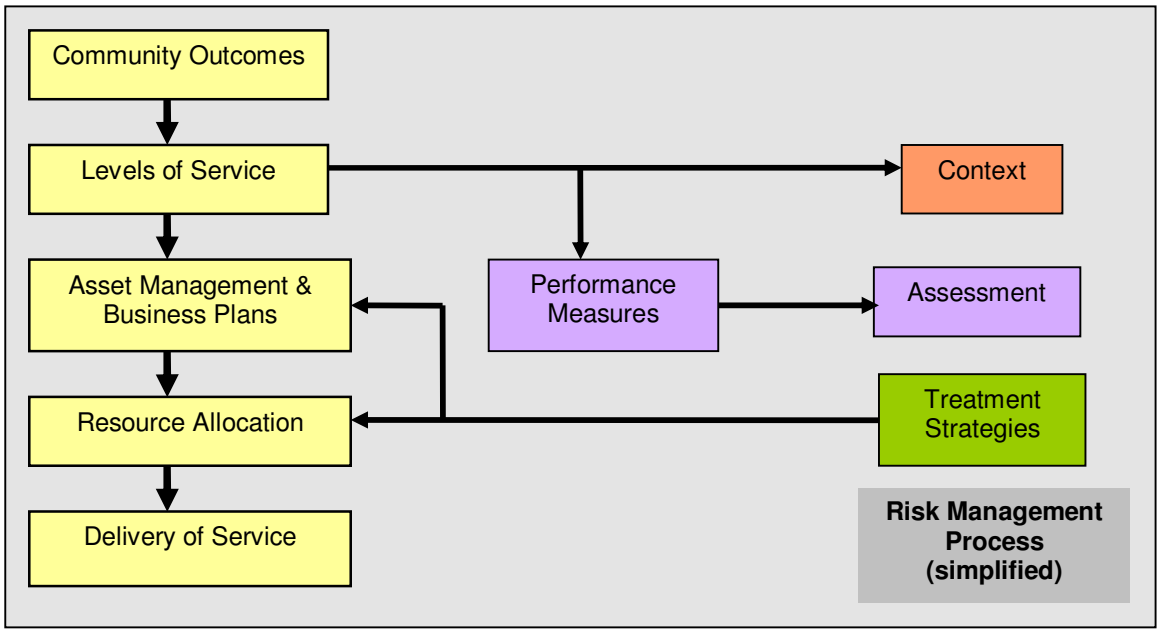


Figure Q-1: Integration of Risk Management Process into LTCCP Process

The IRM process and framework is intended to:

- To demonstrate responsible stewardship by TDC on behalf of its customers and stakeholders.
- To act as a vehicle for communication with all parties with an interest in TDC's organisational and asset management practices.
- Provide a focus within TDC for ongoing development of good management practices.
- Demonstrate good governance.
- Meet public expectations and compliance obligations.
- Manage risk from an organisational perspective.
- Facilitate the effective and transparent allocation of resources to where they will have most effect on the success of the organisation in delivering its services.

The risk management framework adopted by TDC is consistent with AS/NZS 4360:2004 Risk Management and assesses risk exposure by considering the consequence and likelihood of each risk which is identified as having an impact on the achievement of organisational objectives (Figure Q-2).

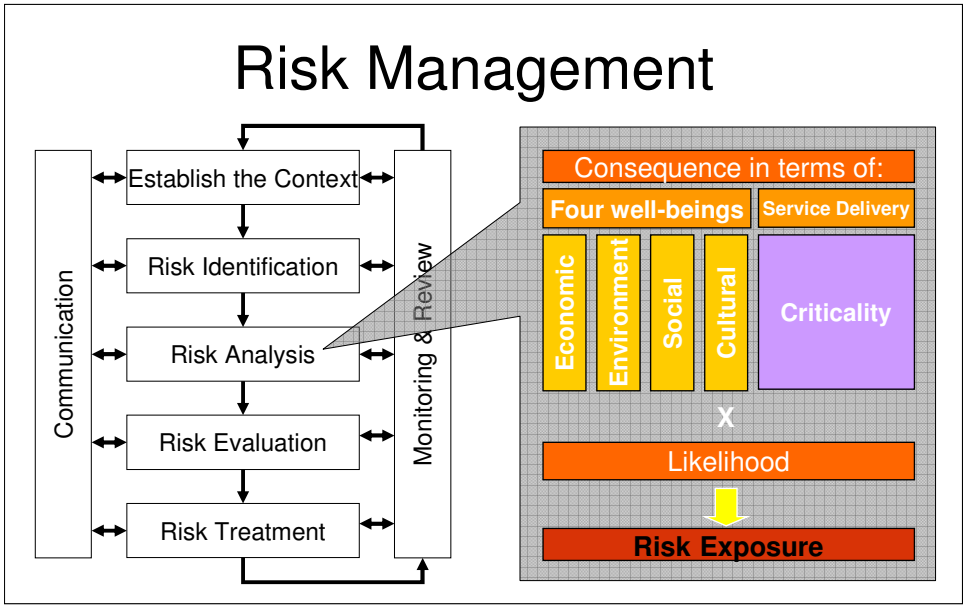


Figure Q-2: Integrated Risk Management Process

Consequence categories have been developed to reflect the impact of risk events on the four well-beings and each consequence category is scored as either "extreme", "major", "medium", "minor", or "negligible". These categories address common consequences across any asset or project, however, they do not specifically account for the differences in assets. Therefore an additional category "Service Delivery" is used to reflect the essential reason for the ownership or management of any asset within the Local Authority – the delivery of a service. This means that the consequence of failure to deliver the service in question (the criticality of the service) can be used to weight the consequences to reflect the relative importance of the asset to the community and in turn to Council.

Table Q-1: Consequence Categories

Category		Description
Service Delivery		Assessment based on the asset's compliance with Performance Measures and value in relation to outcomes and resource usage
Social/ Cultural	Health & Safety	Assessment of impact as it relates to death, injury, illness, life expectancy and health
	Community Safety & Security	Assessment of impact based on perceptions of safety and reported levels of crime
	Community / Social / Cultural	Assessment of impact based on damage and disruption to community services and structures, and effect on social quality of life and cultural relationships
	Compliance / Governance	Assessment of effect on governance and statutory compliance of Council
	Reputation / Perceptions of Council	Assessment of public perception of Council and media coverage in relation to Council
Environment	Natural Environment	Effect on the physical and ecological environment, open space and productive land
	Built Environment	Effect on the amenity, character, heritage and cultural, and economic aspects of the built environment and level of satisfaction with the amenity of the built environment
Economic	Direct Cost / Benefit	Direct cost (or benefit) to Council
	Indirect Cost / Benefit	Direct cost (or benefit) to wider community

Similarly, the likelihood of the risk occurring is scored on a scale from "almost certain" to "unlikely" with associated probabilities and frequencies provided for guidance.

The risk exposure is then determined for each identified risk by multiplying the consequence and likelihood, and is presented using semantic descriptions ranging from “extreme” to “negligible”

Treatment strategies, or strategic plans, that mitigate each risk can then be identified, and prioritised based on the risk exposure.

The consequence, likelihood scoring and risk matrix tables are all located in a separate report, TDC Integrated Risk Management - Engineering Activities. This document also contains the outputs from the Level 1 and Level 2 Risk Assessments.

There are essentially three levels of risk assessment that should be considered for each activity within Council:

Level 1 - Organisational Risk Assessment

Level 2 - Asset Group Risk Assessment

Level 3 - Critical Asset Risk Assessment

Q2.2 Level 1 - Organisational Risk Assessment

The Organisational Risk Assessment focuses on identification and management of significant operational risks that will have an impact beyond the activity itself and will affect the organisation as a whole. This approach allows the Integrated Risk Management framework to address risks at the organisational level, as well as at both the management and operational levels within the particular Council activities.

During the process of developing the integrated risk management process, Council identified a number of risk events and issues at organisational level. These are relatively generic across all activities, but have been reviewed against each particular activity to ensure relevance and adjusted to suit. The decision to implement the treatment measures identified will be at an organisational level, not activity level.

Q2.3 Level 2 - Asset Group Risk Assessment

The same principal and consequence tables have been applied, but the focus has been at an Activity Level.

Major asset groups within the activity have been identified. An analysis of risk events was then undertaken to determine the issues arising that may prevent the assets delivering the required service. At this level of risk assessment, the risk events considered are physical events only as management and organisational risk events formed part of the earlier organisational risk assessment. Treatment strategies that mitigate each risk for asset groups have been identified.

The outcome from this process is summarised in Table Q-2, a checklist of mitigation measures that should be considered for each type of asset group.

Table Q-2: Mitigation Measures to be Considered

	Mitigation Measures to be Considered					
Asset Group	**Wharves**	**Jetties**	**Boat Ramps**	**Navigational Aids**	**Moorings**	**Coastal protection / Sea Walls**
Emergency Response Plan	✓	✓		✓	✓	
Communication Plan	✓	✓	✓	✓	✓	
Vulnerability Checks	✓	✓	✓		✓	✓
Structural Checks	✓	✓			✓	✓
Maintenance Regime	✓	✓	✓		✓	✓
Increase Size of Sea Wall						✓
Improve Profile of Sea Wall						✓
Improve Fuel Storage Facilities	✓					
Re-direction Capabilities	✓	✓	✓			✓

Q2.4 Level 3 - Critical Assets Risk Assessment

The next step in the Integrated Risk Management Approach will be to consider each of the individual critical assets within the asset groups of an activity. Each asset will be reviewed in terms of the consequences initially identified and mitigation measures required. The output from the process will be a recommendation of projects or operational strategies to address shortfalls.

At this time, the level of risk management has not been implemented but has been included in the Improvement Plan.

Q2.5 Projects to address Risk shortfalls

The Risk Assessment Process is not complete at this Stage. It is not planned to start the Level 3 assessments until Level 1 and 2 are complete.

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

R.1 Community Outcomes

Through consultation, the Council identified eight Community Outcomes. These Community Outcomes are linked to the four well beings and Council Objectives as shown in Table R-1.

R.2 Levels of Service

Levels of service are described in Section 2, Table R-2.

R.3 Performance Measurement

Table R-2 contains an assessment of current performance against the levels of service, and a forecast of the performance planned for within the next 3 years, and within the next 20 years.

Table R-1: The Four Wellbeings, Interim Community Outcomes, Council Objectives, Groups and Activities

Community Wellbeing	Community Outcomes	Council Objectives	Council Groups and Activities	Council Activities
Environmental wellbeing	1. Our unique and special natural environment is bountiful, healthy, clean and protected. 2. Our built urban and rural environments are functional, pleasant, safe and sustainably managed. 3. Our transport and essential services are sufficient, efficient and sustainably managed.	To ensure sustainable management of natural and physical resources and security of environmental standards. To sustainably manage infrastructural assets relating to Tasman District.	Environment and Planning Transportation Sanitation, drainage and water supply	Resource Policy Resource Information Resource Consents and Compliance Environmental Education, Advocacy and Operations Regulatory services Mapua Rehabilitation Regional Cycling and Walking Strategy. Land Transportation Coastal Structures, Aerodromes Refuse Aerodromes Stormwater management Rivers Water Supply
Social and Cultural Wellbeing	4. Our vibrant community is safe, well, enjoys an excellent quality of life and supports those with special needs. 5. Our community understands regional history, heritage and culture. 6. Our diverse community enjoys access to a range of spiritual, cultural, social, educational and recreational services. 7. Our participatory community contributes to district-decision making and development.	To enhance community development and the social, natural, cultural and recreational assets relating to Tasman District.	Cultural services and grants. Recreation and leisure. Community support services.	Libraries Cultural services and community grants Community recreation Camping grounds Parks and Reserves Development impact levies Community facilities Emergency management Community housing Governance
Economic Wellbeing	8. Our growing 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.

Table R-2: Levels of Service

Levels Of Service	We will know we are meeting the Level Of Service if…..	Current Performance	Forecast Performance by Year 3	Forecast Performance by Year 10
1. Our Coastal systems are sustainable	All coastal protection systems have Resource Consents with appropriate conditions which we consistently meet	A current resource consent is in place for each coastal protection structure. No abatement notices have been received in the last 3 years for breach of Resource Consent	100%	100%
2. Our coastal activities are managed at a level that satisfies the community	Our three yearly surveys show that 80% of customers are satisfied with the service of the coastal activity they receive.	At present no specific survey has been undertaken	70%	80%
	The Marina at Tarakohe is operating at 90% capacity or greater.	At present the Tarakohe Marina operates at 90-95% capacity at all times.	95%	95%
3. Faults in the coastal assets are responded to and fixed promptly	We are able to respond to and fix faults (e.g. localised damage to rock protection works, damage to navigational aids) within the timeframes we have agreed with our suppliers and operators.	There are at present no specific performance targets set for response to faults in the Coastal Structures activities within the Council Enquiry systems. Response times will be set in 2009 for response to faults in the appropriate coastal assets.	90%	90%
4. Our Navigational Aid systems are built so that failures can be prevented. If failures do occur they can be responded to quickly.	We have a facility for receiving and handling emergency calls after office hours.	Council has an after hours call centre that receives calls 24/7 and contractors and system managers have duty staff who are contactable to respond to emergencies	continue to do the same	continue to do the same
	Our access and navigational systems meet the appropriate Maritime Transport standards and guidelines.	All Navigational systems meet the standards appropriate for the use of the specific area. Audits are complied with the required response time.	100%	100%
5. Our coastal structures are built so that failures can be prevented. If failures do occur they can be responded to quickly.	We have operative risk management process in place and planned mitigation measures completed.	Council does not have a risk management plan	In place and operating	In place and operating

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

This appendix gives an overview of:

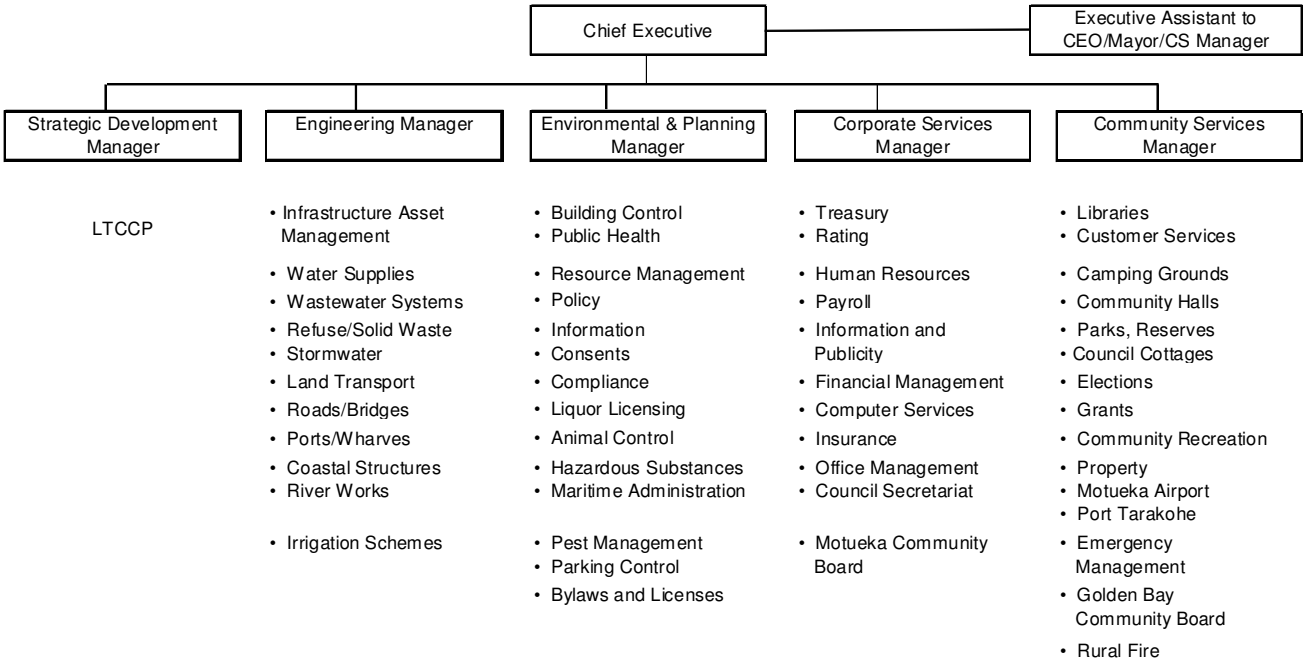
- Council's organisational structure
- How asset data is managed
- What asset management systems and processes are used
- How decisions are made.

S.1 Organisational Structure

The Engineering Manager is principal advisor to the Engineering Services Committee that has delegated powers from the Council. The Engineering Services Committee has responsibility for roads and bridges, footpaths, car parks, water supplies, refuse collection and disposal, wastewater treatment and disposal, stormwater, river works, ports and wharves, and aerodromes.

The Tasman District Council organisational structure is shown in Figure S-1. As the chart shows, the asset management function for the Coastal Structure Activity Management Plan falls under the Engineering Manager.

Figure S-1: Tasman District Council Organisation Structure



S.2 Asset Data

The Council's corporate Asset Management System (AMS) is Confirm Enterprise. The Engineering Department uses it to record and track customer enquiries, maintain its asset register, and for tracking non-routine maintenance of assets. Valuations of all assets other than Roading will be done from Confirm.

The Asset Information team, Asset Managers, TDC's consultants and contractors all have access to the system with levels of access appropriate to their needs. Asset information is delivered to the Council via Explore Tasman, TDC's web-based GIS browser application. Performance and operational reports are delivered via a web-based reporting system.

Confirm has links to other core Council applications:

- SilentOne document management system for construction and As-built plans.

Table S-3 summarises the various data sources and how they are managed. It also provides a grading on the data accuracy and completeness where this is appropriate. The accuracy grade is based on the IIMM grading as shown in Table S-1, the completeness grade is based on the grading as shown in Table S-2.

Table S-1: Asset Data Accuracy Grade

Grade	Description	Accuracy
1	Accurate	100%
2	Minor inaccuracies	± 5%
3	50% estimated	± 20%
4	Significant Data estimated	± 30%
5	All data estimated	± 40%

Table S-2: Asset Data Completeness Grade

Grade	Description	Completeness
1	Complete	100%
2	Minor Gaps	90 – 99%
3	Major Gaps	60 – 90%
4	Significant Gaps	20 – 60%
5	Limited Data Available	20% or less

Table S-3: Council Asset Data Types and Confidence

Data Type	Data Storage	Management Strategy	Data Confidence	
			Accuracy	Completeness
Asset location	GIS (line data)	GIS is being compiled from As-built data and is the first port of call for asset location, but not the last word – refer As-builts below.	3	3
	Confirm (point data)	Point data is provided in Confirm	3	3
	As-built Plans	As-builts are the primary source of asset location data. As-built plans of all new assets are scanned and incorporated into SILENTONE. This allows digital retrieval of as-builts from GIS system. Early as-builts are to a lesser quality, however in recent years as-builts quality has been significantly improved and are now prepared to specific standards and reviewed/audited on receipt.	2	3
Asset description (size, age, material)	Confirm	Confirm is the primary source for asset data. The intention is to over time migrate all data into Confirm.	2	3
	Asset Register	The asset register prepared for valuation purposes contains information on asset extent, age, remaining life, condition etc. It has been spreadsheet based but it is being transferred into Confirm in a controlled manner so that future valuations can be done from Confirm.	2	3
Maintenance History	Confirm	All unplanned maintenance activities (such as those arising from notification by the public & contractors) are recorded in Confirm	2	2
Financial Information	NCS	Council Accounting and Financial systems are based on Napier Computer Systems (NCS) software and GAAP Guidelines. Long term financial decisions are based on the development of 10-year financial plans.	n/a	n/a
Resource Consents	Resource Consent Database	A database containing details and copies of all resource consents associated with the water, wastewater and solid waste assets was developed in 2008. This will be expanded to include the stormwater, roading, river and coastal assets in the near future. The database is administered by the Council's professional services provider. Management processes have been developed to ensure all consent conditions are complied and any new or changed consents is updated in the database.	1	5
Asset Operation		Day to day operational, inspection & management of the maintenance of		

Data Type	Data Storage	Management Strategy	Data Confidence	
			Accuracy	Completeness
		the assets is carried out by Council staff and its consultants.		
Reports		A variety of investigative and design reports have been prepared and are held by various asset managers as appropriate.		
System Records		Council paper records are kept in files in the Records Room. These are classified by utility type and area. Files are kept for Roads, Bridges, Utilities and Resource Consents.		

S.3 Asset Management Processes and Systems

The way the Council develops its Asset Management Strategies is in general alignment with the IIMM manual as diagrammatically shown in
Figure S-2 below:

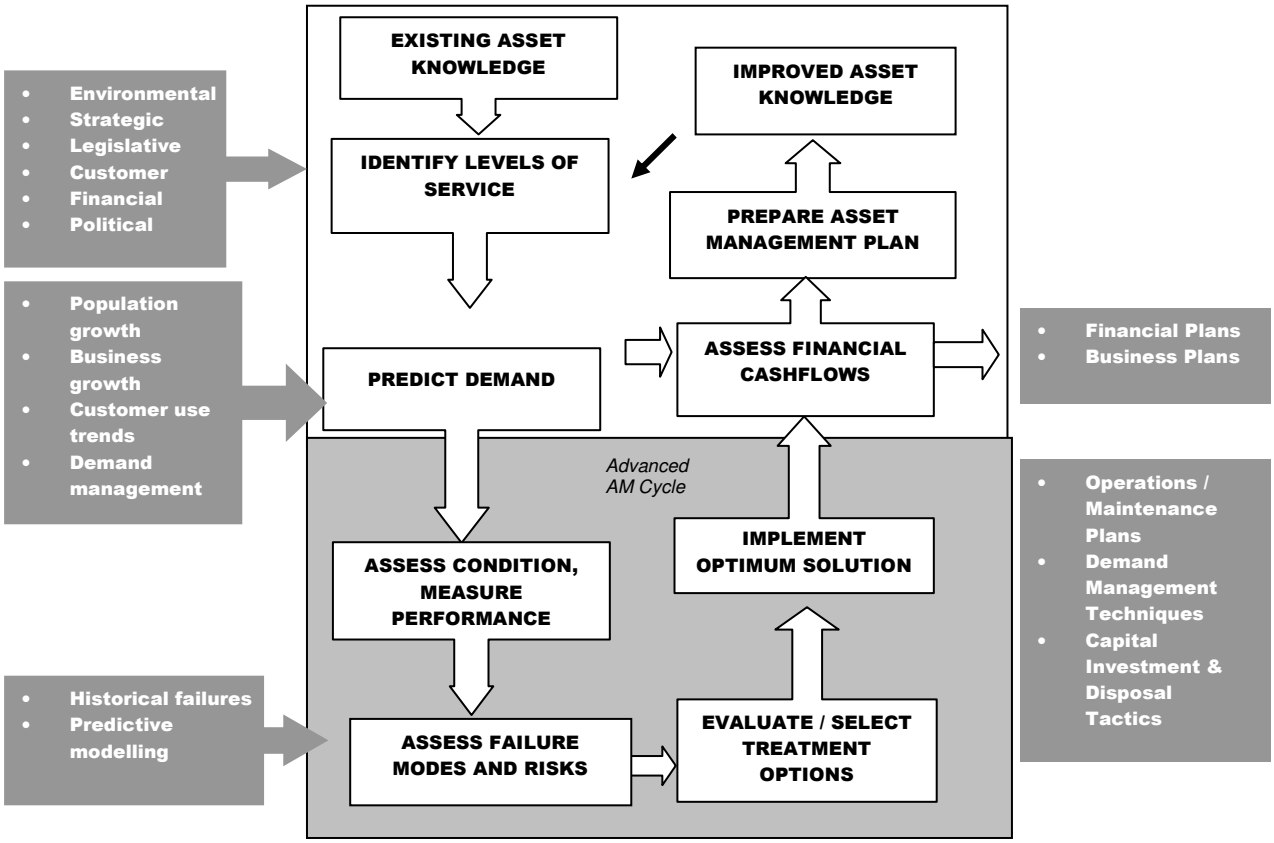


Figure S-2: Asset Management Process and Developing Asset Management Strategies (Source IIMM)

The specific processes and systems used are summarised as follows:

Process Step	Processes and Systems
Identify Levels Of Service	• Levels of Service identified taking account of Community Outcomes, Legislative Requirements, Financial constraints (affordability) and knowledge of asset performance. • Reviewed and confirmed on a 3 year basis – when AMP and LTCCP updated
Predict Demand	• Population Forecasting undertaken as described in Section 5 and Appendix F • Demand Forecasting undertaken as described in Section 5 and Appendix F • Demand Management undertaken as described in Section 11 and Appendix N
Assess Condition, Measure Performance	• Council has yet to complete a comprehensive condition assessment of its coastal assets. Valuations have used the pre-existing condition assessment, but reviewing and amending with the asset management knowledge and experience gained through operation of the assets. This draws from knowledge based on: • Going forward an above ground asset condition assessment will be performed by the maintenance contractor on a 3 yearly basis

Process Step	Processes and Systems
	• Performance against levels of service measured through a combination of operational activities, specific technical investigations and customer surveys • NRB Communitrak customer survey run every 3 years
Renewals Management	• Renewals first identified from valuation data base – when remaining life expires • Forecast renewals then field justified by reviewing with operations staff and asset management staff to confirm renewal requirements from valuation information and add to where there is specific knowledge of additional renewal requirements • On an annual basis renewal work is programmed for implementation and managed as a programme through specific tendered contracts
Asset Creation Management	• Asset creation forecasts are developed every 3 years when updating this AMP. • The 10 year forecast from the last update of the AMP is taken as a starting point, and then the outcomes of growth and demand forecasts, level of service and performance review, the risk management and a workshop with asset managers are used to identify upgrade projects needed. • All capital projects identified are listed and a cost estimate developed. For consistency, a cost estimating spreadsheet has been developed and a series of base rates developed after consultation with suppliers and recent contract prices for the more common work elements. The cost estimating spreadsheets require: o Assessment of construction and non-construction costs (ie. Engineering, consenting costs, land costs) o An assessment of contingency needed – on a consistent basis between estimates o An evaluation of the project drivers – increased level of service, backlog, growth or renewal. o An evaluation of a programme of implementation – spanning years to ensure appropriate time allowed for developing the project o A statement of the scope of the upgrade and a statement of risks and assumptions made in preparing the estimate • Once estimated the forecasts are combined in a capital expenditure forecast database that records the outcomes of the estimate in a manner that allows summation of the work value against various criteria – scheme, project driver (growth, backlog, increased LOS or renewal), year or project. It is also used as an input into Council's financial system. • The funding of the capital forecast is modelled in Council's financial system NCS, and the implications for the forecast review at Council officer level and Councillor level. Any changes made to the projection in terms of deferring, adding or deleting projects is recorded and the implications on risk, growth or level of service stated. • The records of the individual project estimate sheets and the overall capital forecast spreadsheet are filed and retained.
Risk Assessment and Management	• Council have developed an Integrated Risk Management framework to manage risks – refer to section 13.2 and Appendix Q for description.
Optimised Decision Making	• A research project on this needs and location for coastal protection is programmed. Detailed layout plans for other coastal assets have yet to be completed. These plans will enable any development or disposal strategies to be developed.

APPENDIX T. BYLAWS

Council will prepare a programme to ensure that all bylaws are reviewed within the next 3 years.

There is one current bylaw enacted by Council in direct relevance:

- Navigation Safety Bylaws January 2005 and as amended September 2006, being part of the Consolidated Bylaw; chapter 5. This can be found at Tasman records and available at Council offices and on the web site.

APPENDIX U. STAKEHOLDERS AND CONSULTATION

U.1 Consultation

U1.1 Purpose of Consultation and Types of Consultation

Council consults with the public to gain an understanding of customer expectations and preferences. This enables 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 and
- consultation via the Annual Plan and LTCCP process.

Council commissions customer surveys on a regular basis, usually every 3 years, from the National Research Bureau Ltd[2]. These Communitrak™ surveys assess the levels of satisfaction with key services, including water supply services, and the willingness across the community to pay to improve services.

Council at times will undertake focussed surveys to get information on specific subjects.

U1.2 Consultation Outcomes

The most recent NRB Communitrak™ survey was undertaken in June/July 2008. There is no specific reference to ports or wharves and coastal protection assets in the June/July 2008 survey. From a coastal structures perspective there were no key outcomes of the June/July 2008 survey and future surveys will need to be more targeted to the coastal assets to enable an assessment of the communities satisfaction with the outcomes of this activity.

In October 2004 residents were asked "Is Tasman District generally a safe place to live" and "How satisfied are they that the natural environment in the District is being preserved and sustained for future generations".

66% of residents feel that generally Tasman District is definitely a safe place to live and 33% say is mostly.

76% of residents are satisfied that the natural environment in Tasman District is being preserved and sustained for future generations.

Specific responses relating to the coastal environment were summarised as follows:

Lakes Murchison Ward:
Respondents called for protection of our waterways and coastal areas while maintaining access to the natural environment.

Richmond Ward:

- 14% of respondents say there is a need to protect our coastal environment.
- Need to protect coastal environment from inappropriate subdivision.

[2] Communitrak™: Public Perceptions and Interpretations of Council Services / Facilities and Representation, NRB Ltd October 2005.

Waimea Moutere Ward:

- 99% commented about environmental protection and enhancement
- 44% say must preserve wetland, coastal, river and forest areas.
- 7% say development on shorelines to be restricted.
- 8% want coastal walkway from Nelson to Farewell Spit.

Motueka Ward:
50% want District natural areas protected including beaches and estuaries.

Golden Bay:

- 50% want clean, green environment, preserving natural beauty of landscape, protecting forests and foreshores.
- 9% want public access to beaches and rivers retained.

U.2 Stakeholders

A list of stakeholders is included in Appendix A, Section A.3.

APPENDIX V. IMPLEMENTATION AND IMPROVEMENT PROGRAMME

V.1 AM Improvement Process

The development of this plan is based on existing levels of service, the best available current information and the knowledge and judgement of Council staff. The AM plan will be the subject of on-going monitoring, review and updating to improve the quality of AM planning and accuracy of the financial projections. This process will use improved knowledge of customer expectations and enhanced AM systems and data to optimise decision-making, review outputs, develop strategies, and extend the planning horizon.

The AM improvement process involves:

- The cycle of AM plan monitoring, review, revision and audit to improve the effectiveness of AM plan outputs and compliance with audit criteria, legal requirements and good practice.
- The definition of service standards reflecting community desires through public consultation (service level review). The AM plan is used to identify service standard options and costs, and the delivery of the service standards adopted is a key objective of AM planning.
- The corporate AM coordination role by the AM team, which guides and audits the development of AM plans within the framework of Council's strategic direction.

V.2 AM Improvement Programme

The AM improvements are the improvements necessary to achieve the appropriate (and desired) level of AM planning sophistication. The AM Improvement Programme in the table below identifies the short to medium term AM improvements and discusses why the improvements are needed and when they intend to be achieved.

Table V-1: Planned Activity Management Improvement Programme

Item	Improvement	Benefits	Estimated Cost in 10 yr Financial Forecast	Priority
AMP Update	Review and update the AMP on a 3 year cycle. Next revision due in 2011.	Needed to comply with the LGA:2002 requirements.	$15,000 every 3 years	High
Asset Valuations	Review and update the coastal structures Asset Valuation on a 3 yearly cycle. Next review due in 2010.	Needed to comply with the LGA:2002 requirements.	$10,000 every 3 years	High
Risk Management	Council intends to apply a consistent approach to risk management across all asset groups. Three levels of risk assessment will carried out; Organisation, Asset Group and Critical Assets.	Will identify actions/improvements required to be made to the organisation or operation or provision of Councils assets in order that: ▪ Council's ability to maintain levels of service as a result of organisational change and external physical events is maximised. ▪ Council's operational systems are robust.	$4,000 2010/2011	High
Asset Management System Development	Continue to develop Council's Asset Management System and integration with its related asset information systems, GIS, SilentOne etc.	Confirm enables a 'one stop shop' for Asset Management. It increases the knowledge and understanding of the Council's asset and asset performance and assists with efficient operation and maintenance of the assets.	Ongoing, no separate budget provided. Included within general Improvement Plan Activities budget.	High
Coastal Structures Management Plans and Guidelines	Develop guidelines for the ongoing management of existing coastal Structures	Ensures the management plans are kept up to date.	$5,000	High
Coastal Structures Services Assessments	Identify areas where the community and users would benefit from a higher level of service. Include Coastal Structures in next District wide survey, and conduct specific survey with users and stakeholders	Clarify need to change any management strategies. Feed into next AMP review.	$1500 every 3 years	Medium

Item	Improvement	Benefits	Estimated Cost in 10 yr Financial Forecast	Priority
Resource Consent Database	Expand the database to include all resource consents / designations related to the Coastal Structures	This will identify any monitoring needs and ensure consents do not expire without renewal applications being lodged.	Included in the general allowance for Improvement Plan Activities	Medium
Robust Renewals & Capital Programmes	Develop renewals & capital programmes for Coastal Protection. Based on targeted areas with a risk based decision support tool.	Provides a more efficient and auditable way of establishing & renewing coastal protection structures.	$5,000 to develop programme following research project focused on Ruby Bay area. Capital expenditure identified in Financial Forecasts	Medium
Business Continuity Plan	Establish targets for cargo and revenue over Port Tarakohe	Provide more certainty to budgets	$3,000 2009	High
Emergency Plan	Establish an emergency plan for Port Tarakohe	Safety of users	$5000 2009	High
Asset Management Operational Plan	Develop operation and maintenance plan for all Port Tarakohe assets	More efficient use of resources	$10,000 2009/10	High

APPENDIX W. ASSET DISPOSAL

The Council does not have formal strategy documents relating to asset disposals.

There are no current, or planned areas of operation that TDC wishes to divest itself off. Asset disposal therefore is a by-product of renewal or upgrade decisions that involve the replacement of assets.

Depending on the nature and value of the coastal assets they are either

- Made safe and left in place
- Removed and disposed to landfill
- Removed and sold
- Transferred by agreement to other stakeholders

In all cases asset disposal processes must comply with Council's legal obligations under the Local Government Act 1974, which covers:

- public notification procedures required prior to sale
- restrictions on the minimum value recovered
- use of revenue received from asset disposal

APPENDIX X. GLOSSARY OF ASSET MANAGEMENT TERMS

Acronyms and Abbreviations

AM Plan	Activity Management Plan
LGA	Local Government Act
RMA	Resource Management Act
TRMP	Tasman Resource Management Plan

Activity	An activity is the work undertaken on an asset or group of assets to achieve a desired outcome.
Activity Management Plan	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 LTCCP, 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 coordination 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.
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.

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 data-base.
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	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 Council Community Plan	The Long Term Council Community Plan (LTCCP) 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 LTCCP is a key output required of Local Authorities under the Local Government Act 2002.
Long Term Financial Strategy	The Long Term Financial Strategy has been superseded by the Long Term Council Community Plan.
LTCCP	See Long Term Council Community Plan.

Maintenance Plan	Collated information, policies and procedures for the optimum maintenance of an asset, or group of assets.
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 3 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.
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 (replacement of light bulbs, cleaning of drains, repairing leaks, etc.) 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, i.e. replacement value for determining maintenance levels or market value for life cycle costing.

APPENDIX Y. NOT RELEVANT TO THIS ACTIVITY

APPENDIX Z. AMP STATUS AND DEVELOPMENT PROCESS – COASTAL STRUCTURE

Z.1 AMP Status

Version	Status	Document Approval	Signature	Date
1	Working Draft			
2	Draft for Council Officer Review	Name: Richard Lester Authority: Project Manager		
3	Draft for Council Review	Name: Jim Frater, David Stephenson Authority: Asset Manager		4/2/09
4	Draft for Public Consultation	Name: Peter Thomson Authority: Engineering Manager		3/2/09
5	Final Plan Adopted by Council Council Resolution	Name: Richard Kempthorne Authority: Mayor Reference: CN/09/10/15		7/10/09

Z.2 AMP Development Process

Project Sponsor: Peter Thomson
Asset Manager:
Project Manager: Richard Lester
AMP Author: Ray Firth
Project Team: Jim Frater, David Stephenson, Peter Thomson, Ray Firth

Z.3 Quality Plan

This quality plan comprises 3 parts:

1. Quality Requirements and Issues – identification of the quality standards required and the quality issues that might arise.
2. Quality Assurance – the planned approach to ensure quality requirements are pro-actively met – i.e. get it right first time
3. Quality Control – the monitoring of the project implementation to ensure quality outcomes are met.

Z.4 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	TDC 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 internet.
4	AMP Text Accuracy and Currentness	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.
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 financial model, the implications of the decisions must be reflected in the financial information and other relevant places in the AMP – e.g. Levels of service and performance measures, improvement plans etc.
11	Improvement Plan Adequate	Improvements identified, costed, planned and financially provided for in financial forecasts

Z.5 Quality Assurance

	Issues and Requirements	Quality Assurance Approach	Responsible Person
1	Fitness For Purpose	Conduct various reviews of critical elements up front and plan to up upgrade the plans to specific requirements: Scoping of AMP Upgrade Project Review Of Levels Of Service Review of Document Upgrade Needs	Richard Lester
		Conduct a Peer Review	Peter Thomson
2 3 4	AMP Document Consistency AMP Document Format AMP readability	Review documents in advance and prepare instructions to authors on how to upgrade	Becky Marsay
		Central Review Of AMP document deliverables	Becky Marsay
5	AMP Text Accuracy and Currentness	Authors to review each AMP in detail	AMP authors
6	Completeness of Required Upgrades/Expenditure elements	AMP Authors to workshop with relevant project team members to ensure all projects/cost elements covered	AMP authors
		Central list of issues (called a "Parking Lot") that need to be considered in each AMP	Becky Marsay
7	Accuracy of Cost Estimates	Independent Review of all cost estimates	AMP authors
8	Correctness Of Spreadsheet Templates	Independent Review of all templates	Richard Lester
9	Assumptions and Uncertainties and Risk Assessments	Independent Review of all cost estimates	AMP authors
10	Changes made after submission to Financial Model	Protocol prepared to ensure Quickplace is used and all parties follow instructions on how changes are made	Becky Marsay
		Ensure there is a place in the AMP documents to record any changes made and the implications of changes	Richard Lester
		AMP Authors to manage a change log for changes after submission	AMP Authors
11	Improvement Plan Adequate	Prepare template in advance to ensure consistent approach	Richard Lester
		Central Review Of Improvement Plans	Richard Lester

Z.6 Quality Control

Quality Control Checks and Reviews are scheduled on the attached Tables. These shall be progressively completed as the AMP is developed and incorporated in the final AMP Plan in Appendix Z.

Check or Review	Person Responsible	Authority	Signature	Date
Scope Of AMP Upgrade Project Complete	Peter Thomson	Engineering Manager		9/12/08
Levels Of Service prepared to Instructions	Richard Lester	Project Manager		23/12/08
Levels Of Service Asset Manager Acceptance	Jim Frater, David Stephenson	Asset Manager		4/2/09
AMP Document prepared to instructions	Becky Marsay	Assistant PM		23/12/08
AMP Text Accuracy and Currentness	Ray Firth	AMP Author		23/12/08
Capital Upgrade List Complete	Denis O'Brien	Programme Manager		23.12.08
Capital Upgrade List Complete - Asset Manager Acceptance	Jim Frater, David Stephenson	Asset Manager		4/2/09
All Issues on "Parking Lot" addressed	Ray Firth	AMP Author		23/12/08
Capex Expenditure Spreadsheet Template Reviewed	Richard Lester	Project Manager		23/12/08
Project Estimate Spreadsheet Template Reviewed	Denis O'Brien	Programme Manager		23.12.08
All Capex Estimates Reviewed and including assessment of Programme, Project Drivers, Levels of Accuracy and assumptions/uncertainty	Ray Firth	AMP Author		23/12/08
Opex Costs Spreadsheet Arithmetic Review	Ray Firth	AMP Author		23/12/08
Opex Cost forecast – fitness for purpose	Jim Frater, David Stephenson	Asset Manager		4/2/09
Improvement Plan Prepared to instructions	Richard Lester	Project Manager		23/12/08
Improvement Plan Asset Manager Acceptance	Jim Frater, David Stephenson	Asset Manager		4/2/09
Capital Forecast Accepted for Input to NCS	Jim Frater, David Stephenson	Asset Manager		4/2/09
Change log complete and changes appropriately dealt with – after Council review	Ray Firth	AMP Author		30-01-09
Change log complete and changes appropriately dealt with – after Public consultation	Jim Frater, David Stephenson	Asset Manager		13/10/09 3/10/09
Peer Review Completed	Peter Thomson	Engineering Manager		3/2/09