



Maritime Asset Management Plan

2018-2028

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1. Introduction

This Asset Management Plan (AMP) Executive Summary describes how the Bay of Plenty Regional Council (BOPRC) currently manages and maintains approximately \$686,000 worth of Maritime assets on behalf of the Bay of Plenty region. These assets include moorings and specific navigational aids (beacons, buoys, markers and signs).

The Maritime Operations Activity ensures navigation safety and maritime oil spill response is provided 24/7 in the Bay of Plenty region as required by regulations and Council requirements.

Table 1: Assets covered under the Maritime Activity

Asset type	No.	Carrying value
Beacons	260	\$348,228
Buoys	373	\$147,620
Markers	75	\$24,159
Signs	130	\$166,321
Total	838	\$686,388

2. Asset management objectives

The overall goal of asset management is 'to provide the required level of service in the most effective and efficient manner for present and future customers'.

In order to fulfil the Community Outcomes, Vision, Goals and Objectives outlined in the Management Overview (next section), BOPRC have adopted a systematic approach to the long-term management of its assets and services by preparing this AMP.

Council is committed to best **appropriate** practice asset management in order to achieve the following key objectives:

- ▶ Meet the service expectations of stakeholders.
- ▶ Ensure capital projects and maintenance activities achieve efficient results that align with required outcomes.
- ▶ Demonstrate Council's approach to managing risk and working towards a sustainable future.
- ▶ Comply with all statutory requirements.

3. Purpose of this plan

The purpose of this Asset Management Plan (AMP) is to outline and summarise the Regional Council's long-term asset management approach for the delivery and maintenance of Maritime Operations Activity. The AMP also demonstrates compliance with respective legislation requirements and responsibilities. It aims to:

- ▶ Ensure environmental, economic and financial sustainability.
- ▶ Recognise and balance risk.
- ▶ Ensure the appropriate level of service required is provided at the lowest long-term costs.
- ▶ Improve knowledge of the Maritime assets and its service.

This AMP should be read in conjunction with the Bay of Plenty Regional Council's Long-Term Plan (LTP) and fulfils the requirements of Schedule 10 of the Local Government Amendment Act 2002.

4. Plan timeframe

This AMP covers a 10-year timeframe. It assumes that plant and equipment have a life of between 3 - 25 years. The plan documents the strategies required for maintaining, rehabilitating and renewing components over the next 10 years as well as planning for future capital works. This AMP provides the detail underlying the LTP, and ideally will also be completed or updated every three years.

5. Management overview

The navigable waters of the Bay of Plenty region includes the coastal areas stretching 12 nautical miles out to sea, the navigable stretches of rivers, harbours, estuaries and the Rotorua Lakes. Within these waters the Regional Council is the statutory and regulatory harbour authority, with responsibility for navigation safety managed by the Harbourmaster and the Maritime Team. These responsibilities include:

- ▶ Maritime emergency response.
- ▶ Marine oil pollution response, mitigation and clean up at Tier II level.
- ▶ Tsunami response.
- ▶ Oversight of commercial shipping and recreational boating safety.
- ▶ Navigational aids.
- ▶ Patrol of waterways to educate the boating public and ensure compliance with the bylaws.
- ▶ Navigation Safety Bylaws including issuing of warnings and infringements for breach of the bylaws.
- ▶ Incident response.
- ▶ Pilotage, licensing and exemptions.
- ▶ Administration of the swing moorings.
- ▶ Education including boat shows and aquatic events displays, publications and brochures.
- ▶ Removal of hazards to navigation including driftwood and logs.
- ▶ Facilitating the volunteer wardens.
- ▶ Maintaining the Tauranga Port and Harbour Safety Management System.
- ▶ Administration of all the legislation governing use and behaviour on the regional waters. These are; the local bylaws, Maritime Transport Act 1994, Resource Management Act 1991 and the Local Government Amendment Act.

The region's harbours and navigable waterways include:

- ▶ Tauranga Harbour
- ▶ Ōhiwa Harbour
- ▶ Whakatāne Harbour
- ▶ The Rotorua Lakes
- ▶ The Rangitāiki, Kaituna, Whakatāne, Tarawera, Waioeka and Mōtū Rivers
- ▶ Aniwhenua and Matahina Dams (Rangitāiki River)
- ▶ The Pacific Ocean out to the regional boundary

6. Infrastructure assets included in this plan

The physical assets managed by the Maritime Operation Activity include:

Table 2: *Maritime Operations asset summary*

Asset group	No.	Carrying value
Beacons	260	\$348,288
Piles – Railway Iron	176	\$83,472
Piles - Galvanised	28	\$33,375
Piles – I beam	5	\$24,249
Piles – Steel	39	\$188,347
Piles – Other	12	\$18,845
Markers	75	\$24,159
Markers	75	\$24,159
Signs	130	\$166,321
3 Panel Metal Frame	20	\$25,908
3 Panel Wooden Pole	5	\$15,312
Large Wooden Poles	23	\$58,633
Single Sign Metal Frame	82	\$66,468
Buoys	373	\$147,620
5 Knot Buoy	181	\$75,694
Isolated Danger Buoy	1	\$1,698
Channel Buoy	20	\$5,935
Lateral Buoy	20	\$9,638
Ski lane Buoy	72	\$25,665
Other Marker Buoys	79	\$28,989
Grand total	838	\$686,388

Notes

Maritime New Zealand owns most of the oil spill response equipment which Council stores and maintains.

In total there are 492 moorings of which Council owns five. The majority of the remainder moorings are privately owned with Council issuing the mooring licences.

Maritime also have a number of vessels and jet skis which are held under the Property Plant Register.

7. Linkages – Community Outcomes and Maritime

The latest Community Outcomes were adopted for the LTP 2018-2028 and support Council's Vision and Mission. The Community Outcomes are shown in Figure 1. The levels of service for the Maritime Operations Activity links to the Safe and Resilient communities' community outcome.

Figure 1: Community Outcomes



To support this Community Outcome, the Maritime Operations Activity contributes in the following ways:

Table 3: How the Maritime Operations Activity supports Council's Community Outcomes

Community Outcomes	How the Activity contributes to Community Outcomes	Objectives
Safe and resilient communities	<ul style="list-style-type: none">Minimise risks and effects of maritime oil spills and navigation hazards	<ul style="list-style-type: none">We provide systems and information to increase understanding of natural hazard risks and climate change impactsWe support community safety through navigation safetyWe work with our partners to develop plans & policies, and we lead & enable our communities to respond and recover from an emergency

8. Funding

Operational funding for the Maritime Operations Activity is sourced 60 - 80% from general funds, 20 - 40% from fees and charges and 0 – 20% Operating grants. User fees for mooring charges were set at the level that fully recovered the costs of the activity, however this is under review. Port levies are set to recover approximately 40% of the cost of the Maritime Operations Activity in Tauranga, estimated to be the percentage of the activity related to the commercial activity.

Capital funding is required when purchasing and maintaining maritime safety equipment to provide the services of the programme.

Operational costs for Maritime Operations are estimated to be around \$3.2 million per annum. Detailed breakdowns are provided in financial forecasts section.

9. Levels of service

Council consults with its community and customers on the Maritime Operations Activity every three years through the Long Term Plan (LTP) and annually under the Annual Plan (AP) processes. More targeted consultation and engagement is also carried out to determine the customers' needs and wants. These consultation methods are used to form the basis of Customer Levels of Service.

This Asset Management Plan (AMP) considers that a customer is anyone who uses or is impacted by the Maritime Operations Activity. Customers receive a direct benefit from the Maritime assets while stakeholders share an interest in the assets and/or services they provide.

A key Level of Service (LoS) for the Maritime Operations Activity is that navigation hazards and risks in the aquatic environment are minimised. The Key Performance Indicator for this LoS is to have 90% of the percentage of navigation aids rated as being good quality (3 for us) or higher.

The LoS along with customer and technical performance measure are reported in the full AMP.

10. Risk management

BOPRC has a Risk Management Framework and Policy. The risk criteria and matrices established as the basis for risk evaluation were developed in accordance with the AS/NZ4360 and the IOS 31000 Risk Management Standard.

A Risk Register of possible risks affecting the Maritime Operations Activity has been developed in consultation with key staff and is contained in the full AMP. The register highlights the most significant residual risks faced by the Activity. Actions that are required to achieve the desired improvements are indicated along with how progress on these actions will be monitored and reported. Where applicable, action tasks will detail timeframes for achievement, and responsibility for these actions.

Figure 2: Risk Management



11. Lifecycle management

The Lifecycle Management (LCM) section of the AMP provides the broad strategies and work programmes required to achieve the goals and objectives set out earlier in the AMP.

To manage the Maritime assets to best meet levels of service at an optimised (minimised) whole of life cost, Council needs to balance three different work programmes, namely:

- Operations and maintenance programmes for lakes assets: Reactive and proactive maintenance and day to day operations to ensure efficient operation and serviceability of the assets.
- The Asset Renewals Programme: Renewal programmes allow for the progressive replacement of the asset base to restore assets to their original LoS.
- The Development Works Programme: Involves the augmentation of assets to improve system capacity and performance.

The right combination of these three works programmes will assist with attaining an optimal level of asset management for the Maritime Operations Activity, given current resources.

Figure 3: 5 knot navigational buoy



12. Asset groups

Beacons

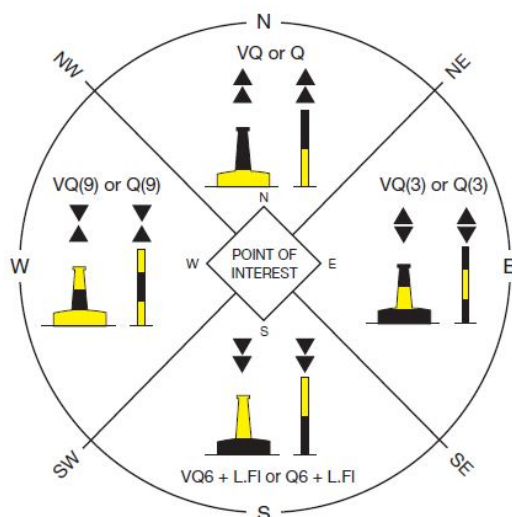
Beacons are navigational markers fixed to the ocean or lake floor. Beacons can be lighted or unlighted. They mark channels for vessels to assist with safe navigation.

There are three different types of beacons that are managed by Bay of Plenty Regional Council. These are:

- ▶ Lateral beacons.
- ▶ Cardinal beacons.
- ▶ Virtual navigation aids.

Lateral beacons are upright posts consisting of either railway iron or H-Beams. These are either painted or topped with a PVC sleeve and some have solar power lighting. **Cardinal beacons** indicate the position of a hazard and the direction of safe water. The mark is named after the quadrant in which it is placed.

Figure 4: Cardinal beacon



Virtual navigation aids electronically provide navigational information for recreational and commercial boating users.

Asset summary

Beacons make up the largest proportion of the Maritime Group assets by value and number. The total replacement cost for beacon assets is \$774,221. Channel beacons make up the largest proportion of assets.

Table 4: Beacons asset summary

Beacon	No.	Carrying Value	Replacement value
Piles - Galvanised	28	\$33,375	\$63,817
Piles – I Beam	5	\$24,249	\$30,302
Piles – Railway Iron	176	\$83,472	\$375,757
Piles - Steel	39	\$188,347	\$229,646
Other	12	\$18,845	\$74,699
Grand total	260	\$348,288	\$774,221

Signs

There are a number of advisory notices around the region:

- ▶ Advisory notices contained within a galvanised steel frame and mounted on a concrete base. These can be 1, 2 or 3 panelled signs.
- ▶ “Coroplast” information signs are not included in the GIS database and therefore were excluded from the valuation as they were considered to be temporary.
- ▶ “Old nav” are navigational signs that are due to be replaced and have been assigned a condition Grade 4 to prioritise renewal.

Figure 5 Pilot Bay navigational and safety sign



Asset summary

There are 130 signs recorded across the region. On average these assets are around three years old.. Three part signs make up the largest proportion of assets.

Table 5: Signs assets summary

Sign	No.	Carrying value	Replacement cost
3 Panel Metal Frame	20	\$25,908	\$51,449
3 Panel Wooden Poles	5	\$15,312	\$15,312
Large Wooden Poles	23	\$58,633	\$58,633
Single Sign Metal Frame	82	\$66,468	\$133,478,
Total	130	\$166,321	\$258,872

Buoys

Council own and maintain 373 buoys. These are used to indicate a number of things including:

- ▶ 5 knot limits.
- ▶ Channels.
- ▶ Special marks.
- ▶ Safe water.
- ▶ Isolated danger.
- ▶ Ski lanes.
- ▶ Reserve areas.

Buoys are moored to the ocean or lake bed using a concrete block and line. Some buoys have solar lighting.

Figure 6: Special mark buoy



Asset summary

On average these assets are around 20 years old. The total replacement costs for buoy assets are \$434,720. 5 knot buoys make up the largest proportion of assets.

Table 6: Buoys asset summary

Buoys	No.	Carrying value	Replacement Value
5 Knot Buoy	181	\$75,694	\$205,146
Channel Buoy	20	\$5,935	\$20,178
Ski lane Buoy	72	\$25,665	\$79,162
Lateral Buoy	20	9,638	\$38,806
Isolated Danger Buoy	1	\$1,698	\$1,940
Other Buoys	79	28,989	89,488
Total	373	\$147,620	\$434,720

Markers

Council own and maintain 75 markers for ski lanes. On average these assets are around 19 years old.

Table 7: Marker asset summary

Markers	No.	Carrying value	Replacement Value
Markers	75	\$24,159	\$83,474

Moorings

The Maritime Operations Team manages a moorings database and keeps eight moorings for the Harbourmaster to assist with navigational safety.

The majority of the 492 are privately owned with Council managing eight. The Group manages a database of assets and issue mooring licences.

The moorings licences require that an annual fee is paid and that the licence holder has their mooring serviced every two years.

Vessels and plant

The Maritime Operations Team uses a number of vessels and trailers on a day to day basis.

These assets are currently managed by the property team and the assets sit under the Property portfolio.

13. Future capital projects

A number of future projects are likely to proceed in the next five year period to help meet levels of service obligations.

These projects include:

Table 8: *Proposed maritime projects 2018-2028 (uninflated)*

Project	Cost	Commissioning year
Navigational assets	\$104,000	2018/2019
Navigational assets	\$250,000	2019/2020
Navigational assets	\$104,000	2020/2021
Navigational assets	\$104,000	2021/2022
Navigational assets	\$250,000	2022/2023
Navigational assets	\$104,000	2023/2024
Navigational assets	\$104,000	2024/2025
Navigational assets	\$250,000	2025/2026
Navigational assets	\$104,000	2026/2027
Navigational assets	\$104,000	2027/2028

14. Improvement plan

The purpose of the improvement plan is to identify and develop improvements to the AMP processes to ensure it is fit for purpose and effective. This includes:

- The cycle of AMP monitoring, review, revision and audit to improve the effectiveness of AMP outputs and compliance with audit criteria, legislative requirements and best appropriate practice.
- The definition of service standards reflecting community outcomes through public consultation. The AMP is used to identify service level options and costs, and the delivery of services is a key objective of asset management planning.
- Identify and prioritise ways to cost-effectively improve the quality of the AMP, and therefore decision-making and service delivery.
- Identify indicative time-scales, priorities, human and financial resources required to achieve asset management planning objectives.

- The development of this AMP is based on existing LoS, the best available current information and the knowledge of BOPRC staff. It is intended that the development of this Plan is part of an ongoing process and that the document will be reviewed and updated regularly. This review process involves using improved knowledge of customer expectations (community consultation) and information from asset management systems and databases. This will enable BOPRC to optimise decision-making, review outputs, develop strategies, improve risk management and extend the planning horizon.

15. Summary financial forecasts – Maritime Operations Activity

The table below contains the Maritime statement of Financial Performance, which incorporates the projected income and funding sources to fund operational and capital expenditure for the next 10 years (2018 – 2028).

Table 9: Maritime financial estimates 2018-2028 (uninflated)

	2018/19 \$000	2019/20 \$000	2020/21 \$000	2021/22 \$000	2022/23 \$000	2023/24 \$000	2024/25 \$000	2025/26 \$000	2026/27 \$000	2027/28 \$000
Operating revenue										
Targeted rates	-	-	-	-	-	-	-	-	-	-
Operating grants and subsidies	60	60	60	60	60	60	60	60	60	60
Fees and charges	756	801	798	796	793	790	787	785	782	779
Other revenue	62	62	62	62	62	62	62	62	62	62
Total operating revenue	878	923	920	918	915	912	909	907	904	901
Operating expenditure										
Other Operating Costs	1,853	1,897	1,897	2,272	1,897	1,897	1,897	1,897	1,897	1,897
Finance costs	1	9	16	21	26	32	35	38	41	39
Depreciation and amortisation	84	89	93	66	70	64	68	72	76	78
Sub total expenditure	1,938	1,994	2,007	2,359	1,994	1,994	2,000	2,007	2,014	2,014
Overhead and corporate charges										
Corporate Costs	1,156	1,218	1,308	1,381	1,449	1,525	1,573	1,635	1,622	1,601
Total expenditure	3,094	3,212	3,315	3,740	3,443	3,518	3,574	3,641	3,636	3,615
Net deficit (surplus) to fund	2,215	2,289	2,394	2,823	2,528	2,606	2,664	2,734	2,733	2,714
Funding required										
General funding	2,215	2,289	2,394	2,845	2,576	2,697	2,774	2,876	2,895	2,860
(Increase) / decrease in reserves	-	-	-	(22)	(48)	(91)	(110)	(142)	(163)	(146)
Total operating funding	2,215	2,289	2,394	2,823	2,528	2,606	2,664	2,734	2,733	2,714
Capital										
Navigational Assets	104	250	104	104	250	104	104	250	104	104
Total capital expenditure	104	250	104	104	250	104	104	250	104	104
Capital funding										
Grants, subsidies and insurance revenue	-	-	-	-	-	-	-	-	-	-
Increase in debt	104	250	104	104	250	104	104	250	104	104
Other capital funding	-	-	-	-	-	-	-	-	-	-
Total capital funding applied	104	250	104	104	250	104	104	250	104	104