



# Maritime Asset Management Plan 2021-2031

Bay of Plenty Regional Council  
5 Quay Street  
PO Box 364  
Whakatāne  
New Zealand

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# Part 1:

## Executive summary

This Asset Management Plan (AMP) describes how the Bay of Plenty Regional Council (BOPRC) currently manages and maintains approximately \$1,781 million worth of Maritime assets on behalf of the Bay of Plenty Region. These assets include specific navigational aids (lights, 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.

*Assets covered under this AMP*

<b>Asset type</b>	<b>No.</b>	<b>Value (ORC)</b>
Beacons	270	\$610,104
Buoys	416	\$833,626
Markers	83	\$99,582
Signs	122	\$237,711
<b>Total</b>	<b>891</b>	<b>\$1,781,023</b>

# Part 2:

## Introduction

### 2.1 Purpose and scope of the AMP

The purpose of this 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 focus of this AMP is primarily the Regional Council owned aids to navigation (beacons, buoys, markers and signs) assets, with references made to the wider activity to provide context for the reader. The AMP is not written to capture how the full breadth of the Maritime Operations Activity is managed. 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 BOPRC's Strategic Asset Management Plan (SAMP) and Long Term Plan (LTP), and fulfils the requirements of Schedule 10 of the Local Government Amendment Act 2002.

This AMP provides the detail underlying the LTP, and ideally will also be completed or updated every three years.

This AMP covers a 10-year timeframe.

### 2.2 Overview of services covered

#### 2.2.1 What do we do?

The navigable waters of the Bay of Plenty region includes the coastal areas to 12 nautical miles out to sea, the navigable waters 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. Management of Tier I sites.
- ▶ Support Civil Defence response.
- ▶ Regulation of commercial shipping and recreational boating safety through the Maritime Transport Act, and Bay of Plenty Regional Navigation Safety Bylaw.
- ▶ Provision and maintenance of aids to navigation.
- ▶ 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.
- ▶ 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 are shown in Figure 1 below.

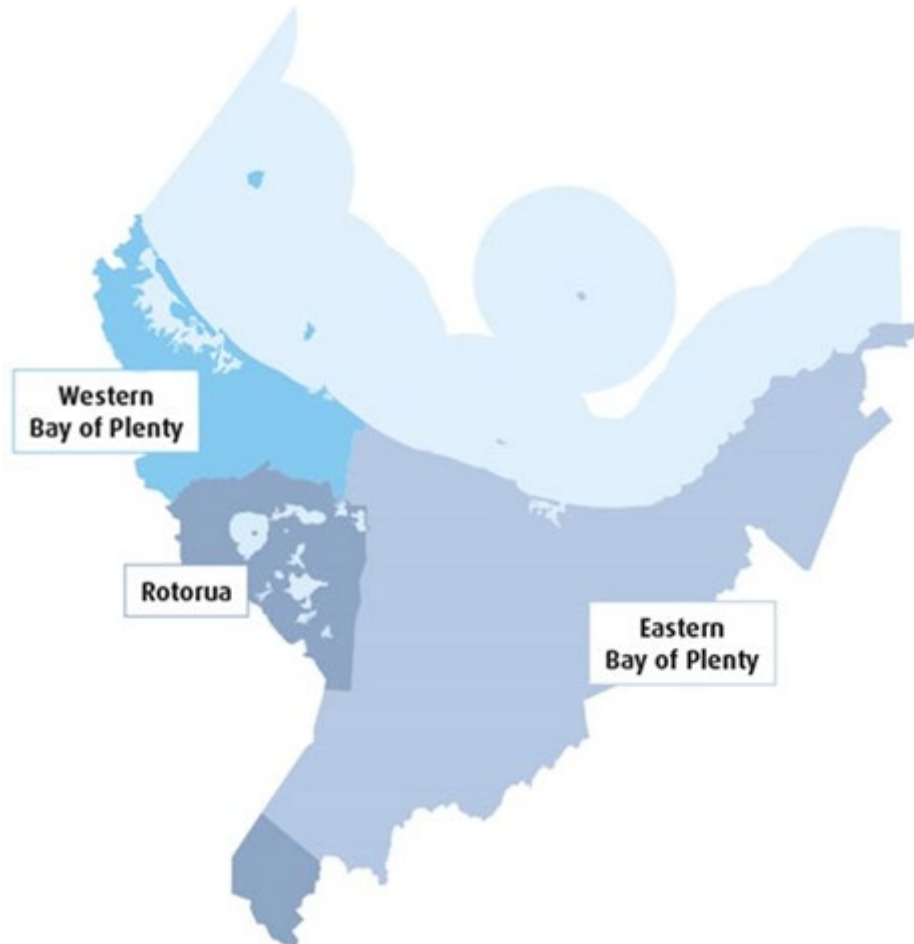


Figure 1 Map of Bay of Plenty Region

### 2.2.2 Why do we do it?

The Maritime Operations Activity is an important service provided to the community, for both the recreation and economic activity that it helps promote. 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. This ensures that maritime related recreational and commercial activities are able to be safely undertaken.

The latest Community Outcomes were adopted for the LTP 2021-2031 and support Council's Vision and Mission. The levels of service for the Maritime Operations Activity links to the Safe and Resilient Communities Community Outcome.

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

*Table 1: How the Maritime Operations Activity supports Council's Community Outcomes*

Community Outcomes	How the Activity contributes to Community Outcomes	Objectives
<p><b>Kia haumarū, kia pakari te hāpori</b></p> <p>Safe and Resilient Communities</p>	<p>Maritime users and the maritime environment are kept safe, by:</p> <ul style="list-style-type: none"> <li>• Safe navigation</li> <li>• Education and enforcement</li> <li>• 24/7 Emergency response to spills</li> </ul>	<ul style="list-style-type: none"> <li>• We provide systems and information to increase understanding of natural hazard risks and climate change impacts</li> <li>• We ensure our navigation aids are in good condition and maintained</li> <li>• We support community safety through navigation safety and safe boating practices</li> <li>• Ensure compliance with the Navigation Safety Bylaws through education and enforcement</li> <li>• We work with our partners to develop plans and policies. We lead and enable our communities to respond and recover from an emergency</li> </ul>

# Part 3:

## Assets we own

### 3.1 Overview

Bay of Plenty Regional Council currently manages and maintains approximately \$1,770,364 worth of maritime assets on behalf of the Bay of Plenty region. The figure presented is the optimised replacement cost for the assets and is sourced from the 2021 Maritime Asset Revaluation. These assets include moorings and specific aids to navigation (beacons, buoys, markers and signs). A detailed description of each of the asset types can be found in Appendix 1.

Table 2: Maritime Operations Asset Summary

Maritime Assets	Optimised Replacement Cost (ORC)	Optimised Depreciated Replacement Cost (ODRC)	Annual Financial Depreciation	No. of Assets
Western Bay - Beacons Total:	\$594,432	\$400,808	\$24,744	267
Western Bay - Buoys Total:	\$344,256	\$278,889	\$16,036	98
Western Bay – Markers Total	\$28,073	\$21,449	\$1,129	15
Western Bay - Signs Total:	\$103,520	\$53,489	\$6,924	49
<b>WESTERN BOP TOTAL:</b>	<b>\$1,070,281</b>	<b>\$744,982</b>	<b>\$48,144</b>	<b>429</b>
Rotorua Lakes – Beacons Total	\$15,672	\$14,468	\$388	3
Rotorua Lakes - Buoys Total:	\$489,370	\$414,783	\$14,480	318
Rotorua Lakes - Markers Total:	\$71,509	\$60,033	\$2,270	68
Rotorua Lakes - Signs Total:	\$116,948	\$76,488	\$7,649	66
<b>ROTORUA LAKES TOTAL:</b>	<b>\$693,498</b>	<b>\$565,771</b>	<b>\$24,786</b>	<b>455</b>
Whakatāne - Signs Total:	\$17,244	\$10,932	\$1,195	7
<b>EASTERN BOP TOTAL:</b>	<b>\$17,244</b>	<b>\$10,932</b>	<b>\$1,195</b>	<b>7</b>
<b>BOP REGION TOTAL</b>	<b>\$1,781,023</b>	<b>\$1,321,685</b>	<b>\$74,125</b>	<b>891</b>

Source: 2021 Maritime Asset Revaluation



### 3.2 **Additional notes on assets not listed above**

Bay of Plenty Regional Council is one of the key providers of aids to navigation in the region. However, it is important to note that other providers of aids to navigation include port companies, marina operators, marine farms and other facility providers such as city and district councils.

In the Tauranga Harbour, BOPRC and Port of Tauranga (PoT) have a Memorandum of Understanding (MOU), and this clearly defines that PoT is responsible for erecting and maintaining all aids to navigation in the commercial shipping channel. Bay of Plenty Regional Council is responsible for erecting and maintaining all other aids to navigation in Tauranga Harbour.

In Whakatāne, the Whakatāne District Council is responsible for the aids to navigation within the Whakatāne Port.

Maritime New Zealand owns most of the oil spill response equipment which Council stores and maintains. The Maritime Team own a variety of spill response equipment including a bow mounted oil skimmer which the purpose built response vessel Awanui has been specifically designed to carry.

In total there are 492 moorings of which Council owns seven (primarily for emergency situations). All of the remaining moorings are privately owned, with Council issuing the mooring licences.

Maritime own and operate a range of mobile plant equipment that is not included in the fixed assets shown above. These comprise the oil skimmer, drone, bar cameras, and Body Worn Video cameras. Further information on these can be found in Appendix 1.

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

### 3.3 **Asset condition and performance**

In late 2016 the Maritime Team started using Accela to manage infrastructure assets. Accela is a platform that streamlines the Council-wide use of application/programs, including asset management. The change to Accela involved migrating the existing BOPRC data into the new platform. The data migration process into Accela did expose minor errors which are being corrected as part of the continuous improvement process. This, combined with staff becoming more proficient with Accela, means the data robustness will continue to improve in the future.

Keeping aids to navigation operating is an important task, and Maritime Operations use best practice by following the Maritime New Zealand Aids to Navigation Guidelines. The condition of our aid to navigation assets are assessed on a six monthly rotation basis where they are given a rating of 1 to 5.

Condition Rating	Description
1	Excellent
2	Very Good
3	Good
4	Poor
5	Very Poor

The checklist below is used when assessing an aid to navigation and then an overall rating is given.

▶ Please add all maintenance required and or completed on the feature	Status: <input type="text" value="Completed"/>
▶ Light	Status: <input type="text" value="Not Assessed"/>
▶ Spikes	Status: <input type="text" value="Not Assessed"/>
▶ Solar	Status: <input type="text" value="Not Assessed"/>
▶ Fabrication	Status: <input type="text" value="Not Assessed"/>
▶ Top Mark	Status: <input type="text" value="Not Assessed"/>
▶ Label	Status: <input type="text" value="Not Assessed"/>
▶ Signs	Status: <input type="text" value="Not Assessed"/>
▶ Stickers	Status: <input type="text" value="Not Assessed"/>

Where a defect is identified and/or a lower condition score given, these are remedied as soon as practical and often immediately by Maritime staff. This is reflected in the bar graph below where the majority of assets are sitting in the 1 to 3 rating category.

The condition of the aid to navigation assets at the time of writing this plan, are displayed below in Figure 2.

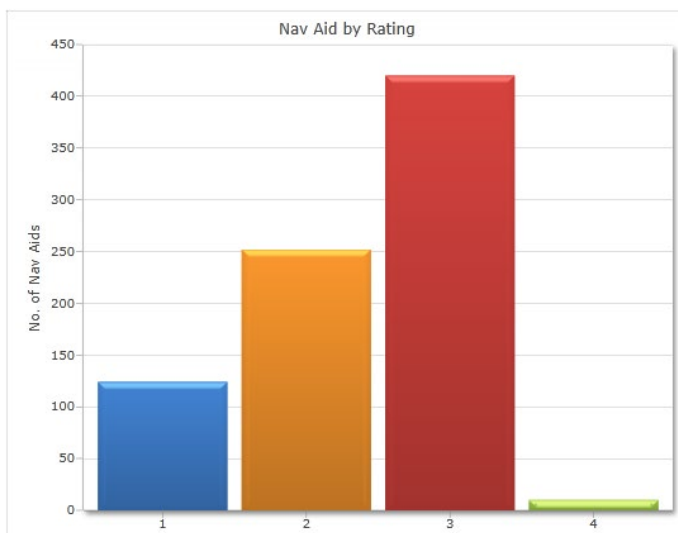


Figure 2 Navigation aid condition rating

In addition to the assessment criteria above, Maritime staff will observe environmental changes such as shifting sandbanks and ensure that any aids to navigation are correctly positioned for their intended purpose.

### 3.4 **Overview of issues**

There are currently no wider issues related to the overall condition and performance of the aid to navigation assets. It is expected that ongoing environmental changes, such as movement of channels, will continue, and Maritime staff will be able to respond as required.

Every year there are a small number of aids to navigation that are damaged as a result of either vandalism or poor boating practices. With continued population growth, and the popularity of recreational boating and other water based activities also increasing, this may impact on asset condition where accidental damage caused by users could increase. However, this potential increase is anticipated to be minor.

# Part 4:

## Growth and demand

### 4.1 Overview of drivers

#### 4.1.1 Population changes

An increasing population leads to more people and more variety of activities on the water. There is potential for this to result in an increase in conflict between the different water activities (jet skis, skiers, wakeboarders, yachters, fishers, commercial activities – shipping, cruise ships, ferries). To ensure that water users are following the Bay of Plenty Navigation Safety Bylaw 2017, Maritime Operations maintains a 12 hour per day, 7 day a week, on water patrol presence from mid-December to mid-February every year.

Population changes will impact the scale and breadth of education material provided by Maritime to help educate maritime users. This will impact the use of designated areas (governed by Bay of Plenty Navigation Safety Bylaw 2017) that Maritime Operations provide and maintain, and therefore impact the requirement for enforcement. As such, a general increase in population will require an appropriate increase in Maritime Operations Activity Budget over time, to respond to these impacts and maintain the level of service provided. In particular, the increased use of designated areas and navigable channels could require an increase in marker assets. Maritime Operations is currently well resourced to carry out the required patrols for bylaw enforcement and education.

#### 4.1.2 Climate Change

Climate Change is not expected to directly impact the activity. Maritime Operations are not mandated to maintain or dredge certain channels, so therefore increased sea levels and changes to the coastal environment will not have a significant impact on the activity. Maritime is however, tasked with clearing hazards in and around coastal environments. Climate Change is likely to increase the frequency and magnitude of extreme rainfall events that lead to erosion and deposition of eventual maritime hazards to coastal environments.

An increase in extreme rainfall events will likely lead to an increase in debris, such as trees, that are washed out to the coast. This therefore, will require an increase in hazard removal tasks for the Maritime Operations activity. Currently Maritime have a contract in place for 24/7 on-water response to remove navigation hazards/debris in the southern end of the Tauranga Harbour, out to the harbour limits areas if required.

#### 4.1.3 Technology

Customers are expecting better quality information when it comes to real time monitoring of conditions. This is in line with broader population expectations across all facets of modern life, when it comes to the availability of real time information. The cost of the technology that enables this is now also more affordable, and therefore both components drive the push for Maritime to include new assets such as bar cameras and wave buoys.

The scale to which this technology is implemented could have an impact on capital costs. However, it is expected that the implementation of this technology will be at a gradual pace.

The broader impact of the proliferation of new technology is that users are enabled to better make informed decisions regarding boat and water safety.

#### 4.1.4 **Motiti Protection Areas**

On 24 April 2020, the Environment Court released its [final decision](#) which directs BOPRC to implement new rules within its Regional Coastal Environment Plan to protect three reef systems near Motiti Island, and complete scientific monitoring to inform future integrated marine management solutions.

The new rules will create three protection areas (called the Motiti Protection Areas) around Motiti Island, where the taking of all plants and animals (including fish and shellfish) would be prohibited due to their significant marine biodiversity, landscape and cultural values. Those three areas comprise of Ōtaiti (Astrolabe Reef) including Te Papa (Brewis Shoal), Te Porotiti, and O karapu Reef, Motuhaku Island (Schooner Rocks) and Motunau Island (Plate Island).

The impact of this change is that there is a potential for an increase in staff requirements to meet this additional area of patrolling and associated management activities.

#### 4.1.5 **Ōpōtiki Harbour development**

The existing Ōpōtiki Harbour entrance is limited to smaller boats, which can only cross the bar in calm conditions. The Ōpōtiki Harbour Development Project will provide access for larger boats by creating an entrance that is navigable in all but the worst conditions, enabling Ōpōtiki to become a service and processing base for aquaculture and other marine related industries.

The Maritime Operations Activity is yet to determine the impact on the team and whether another vessel is required. There will be an increase in staff time required to manage the larger harbour. The current timeframe projections for this development coming online is three to five years. As such, the growth and demand impacts on the service have not been included in this AMP – the projected completion date of the project is mid to late 2023. However, as further information becomes available, Maritime will track how this may impact the activity.

#### 4.1.6 **Growth and demand summary**

The operational impact of each of the demands outlined above are predominantly on non-asset related parts of the activity. Any increases in the number of navigational aids and markers is expected to be able to be handled on an ad-hoc basis.

### 4.2 **Demand projects**

There are no projects proposed to specifically respond to any of the demands outlined above.

## 4.3 **Non-asset demand management options**

### 4.3.1 **Demand management options**

Maritime maintains a patrol presence over summer which functions as a non-asset demand management tool. This option will remain a part of Maritime's management of the service.

### 4.3.2 **Demand Management Programme**

There are no new, non-asset based, demand management projects proposed.

# Part 5:

## Levels of service

### 5.1 Customers and stakeholders

#### 5.1.1 Who are our customers and stakeholders?

The Maritime Operations' customers for aids to navigation are predominantly recreational and commercial water users, navigating the waters within the area overseen by Maritime Operations. Customers receive a direct benefit from the Maritime assets, while stakeholders share an interest in the assets and/or services they provide.

#### 5.1.2 What do they value?

Recreational and commercial boat users value the ability to confidently navigate the waters safely. They also increasingly value having real time information available, to enable them to make safe decisions before heading out on the water.

#### 5.1.3 Limitations on meeting expectations

We have a limited number of patrols available through our budget and an immense area to cover, there is often an expectation that we can be everywhere at once and this is not possible.

### 5.2 Customer Level of Service Statement and performance measures

#### 5.2.1 How we determine performance

The Level of Service (LOS) customer measures and performance targets have been developed through historical trends of the service, and staff judgement and experience. These measures are also linked into Council's wider Community Outcomes with 'Safe and resilient communities' being the sole outcome that the Maritime Operations Activity contributes to directly. The SAMP provides further detail on how LOS is determined from a Council wide organisation level.

## 5.2.2 Performance measures

The table below shows the LOS statements and associated customer measures for the Maritime Operations activity. The table outlines how the service has been performing, and also the future performance targets for the next three years.

Customer values	Service attributes	LOS (Level of Service) Statement	Customer measures	Result for 2020/21	Performance targets		
					2021/22	2022/23	2023/24
Maritime users and the maritime environment are kept safe	Emergency Response	Council will respond to spill events in a timely manner	Percentage of Tauranga spills responded to within 30 minutes	100%	95%	95%	95%
			Percentage of spills (outside Tauranga) responded to within two hours	100%	95%	95%	95%
	Enforcement and Navigation	Council will maintain navigational aids to a good standard	Percentage of navigation aids rated 'good' quality or higher	100%	90%	90%	90%

A key LOS for the Maritime Operations Activity is that navigation hazards and risks in the aquatic environment are minimised. The key Performance Target for this customer measure is to have 90% of the navigation aids rated as being good quality (rating of 3) or higher. As can be seen, this target is currently being met.

The other key LOS is in relation to spill emergency response timeliness. For spills both in Tauranga and outside of Tauranga, Maritime Operations are currently meeting and exceeding the performance target. This is the key customer measure in which the activity tracks how they are keeping the maritime environment safe.

These customer measures and performance targets have been distilled into a one page Annual Service Plan for Maritime Operations ([09-10-2020 Service Plan Maritime](#)).

## 5.3 Issues

There are no future LOS issues identified for this AMP.



# Part 6:

## Capital planning

### 6.1 Renewals and Level of Service project planning

The Maritime Operations activity is a mature activity that has a relatively static capital spending regime associated with the navigational aid assets. A number of future projects will proceed in the next five year period to help meet LOS obligations. This regime of capital spending for both renewals and LOS projects is based on historical patterns of capital expenditure, and staff experience and knowledge of the assets. The adequacy of these historic budgets is reviewed by assessing the anticipated ability of the team to continue maintaining the asset portfolio at or above the minimum condition requirements.

These projects include:

Table 3: Proposed maritime projects 2021-2031 (uninflated)

Project	Cost	Commissioning year
Navigational assets	\$111,000	2021/2022
Navigational assets	\$266,000	2022/2023
Navigational assets	\$110,000	2023/2024
Navigational assets	\$110,000	2024/2025
Navigational assets	\$265,000	2025/2026
Navigational assets	\$110,000	2026/2027
Navigational assets	\$110,000	2027/2028
Navigational assets	\$264,000	2028/2029
Navigational assets	\$110,000	2029/2030
Navigational assets	\$107,000	2030/2031

The above projects are all renewals-based capital expenditure. Any LOS related capital expenditure is likely to be for assets such as new bar cameras. This is currently not an area that requires investment.

### 6.2 Growth project planning

Growth project planning is not applicable, as it is not a driver for implementing capital investment in the Maritime activity.

# Part 7:

## Operational and maintenance planning

The Maritime Operations Team undertakes regular operations and maintenance activities across the navigational aid assets. As outlined earlier in Section 3.3, a six monthly inspection regime is undertaken by the team. This ensures that each of the assets is regularly inspected for condition defects, with any required maintenance usually being undertaken on-site. Any additional maintenance over and above that which can be immediately remedied, will be carried out on an ad-hoc basis. We also respond to information provided by the boating public when aids to navigation are deficient.

Staff use experience and judgement to determine what type of maintenance is required based on the outcome of the inspection. Buoys require regular maintenance including water blasting to remove growth from the buoy and chain/rope. In addition, buoys are lifted to inspect for wear, and if required the shackles, chain, or chafed rope are replaced. The fixed beacons and signs require minimal maintenance with the main focus being keeping the signage information and top of the beacon, whether painted or solar lighting, clean and visible.

### 7.1 Operational and maintenance projects

There is no programme of operational and maintenance projects proposed for this activity.

# Part 8:

## Risk

### 8.1 Tactical risk register

A Risk Register of risks affecting the Maritime Operations Activity has been developed in consultation with key staff. The Port and Harbour Safety Code risks are available through Quantate, operational risks are detailed in Vault and the BOPRC Maritime Transport Operator Plan. The registers highlight the most significant residual risks faced by the Activity.

### 8.2 Critical assets

The criticality of aids to navigation has been assessed based on the traffic each navigable channel experiences. Based on the Maritime New Zealand Aids to Navigation Guidelines, this has resulted in a two-tiered criticality system where higher priority/higher traffic density navigation aids have a next day repair target, whereas all other assets have a two to three day repair target. Both Mayor Island and Motiti Island light beacon navigation aids also have a next day repair target, owing to the importance of these locations for commercial activity.

### 8.3 Business continuity

Maritime Operations maintains a Business Continuity Plan (BCP) that is updated periodically. The latest 2020 BCP was modified for the Covid-19 pandemic response during the different levels of lockdown imposed by Central Government.

Business Continuity Plans encompass planning, preparedness and related activities to ensure that an organisation's critical business functions will either continue to operate despite serious incidents or disasters that might otherwise have interrupted them, or will be recovered to an operational state within a reasonably short period.

The base BCP states the priority levels for different tasks undertaken by the Maritime Operations Team. In terms of assets, this means that maintenance and repair of navigation aids is considered a high priority with a 24 hour response timeframe at all times. This task was also considered an 'essential service' during the recent Covid-19 lockdown. A skeleton crew was maintained to provide this service, while approximately half of the team assisted Civil Defence during the incident response.

### 8.4 Emergency management

Maritime Operations provides assistance to emergency services (predominantly Police and Fire) to any maritime related emergency. The Harbourmaster has legislative responsibility to respond to port emergencies as well. As part of this service, a harbourmaster is on call 24/7 to respond as required.

# Part 9:

## Financial planning

### 9.1 Financial plans

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 (2021–2031). This table includes both operations and maintenance funding as well as capital funding.

*Table 4: Maritime financial estimates 2021-2031 (uninflated)*

<b>UNINFLATED</b>	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
<b>Operating revenue</b>										
Targeted rates	-	-	-	-	-	-	-	-	-	-
General funding	2,979	2,581	2,687	2,850	2,977	3,084	3,173	3,297	3,395	3,399
Operating grants and subsidies	60	60	60	60	60	60	60	60	60	60
Fees and charges	1,058	1,054	1,051	1,048	1,045	1,044	1,042	1,043	1,045	1,025
Other revenue	66	66	66	66	66	66	65	65	65	64
<b>Total operating revenue</b>	<b>4,163</b>	<b>3,761</b>	<b>3,863</b>	<b>4,024</b>	<b>4,148</b>	<b>4,254</b>	<b>4,340</b>	<b>4,466</b>	<b>4,566</b>	<b>4,547</b>
<b>Operating expenditure</b>										
Other Operating Costs	2,773	2,030	2,028	2,028	2,026	2,025	2,024	2,022	2,022	1,998
Finance costs	7	10	14	16	19	22	24	27	30	31
Depreciation and amortisation	67	62	70	71	75	81	85	92	94	96
<b>Sub total expenditure</b>	<b>2,847</b>	<b>2,103</b>	<b>2,112</b>	<b>2,115</b>	<b>2,121</b>	<b>2,128</b>	<b>2,133</b>	<b>2,142</b>	<b>2,146</b>	<b>2,125</b>
<b>Overhead and corporate charges</b>										
Corporate Costs	1,373	1,454	1,496	1,540	1,596	1,628	1,628	1,654	1,658	1,679
<b>Total expenditure</b>	<b>4,220</b>	<b>3,557</b>	<b>3,608</b>	<b>3,654</b>	<b>3,717</b>	<b>3,756</b>	<b>3,761</b>	<b>3,796</b>	<b>3,804</b>	<b>3,804</b>
<b>Net deficit (surplus) to fund</b>	<b>57</b>	<b>(204)</b>	<b>(255)</b>	<b>(369)</b>	<b>(431)</b>	<b>(498)</b>	<b>(579)</b>	<b>(670)</b>	<b>(762)</b>	<b>(744)</b>
<b>Funding required</b>										
(Increase) / decrease in reserves	57	(204)	(255)	(369)	(431)	(498)	(579)	(670)	(762)	(744)
<b>Total operating funding</b>	<b>57</b>	<b>(204)</b>	<b>(255)</b>	<b>(369)</b>	<b>(431)</b>	<b>(498)</b>	<b>(579)</b>	<b>(670)</b>	<b>(762)</b>	<b>(744)</b>
<b>Capital</b>										
Navigational Assets	111	266	110	110	265	110	110	264	110	107
<b>Total capital expenditure</b>	<b>111</b>	<b>266</b>	<b>110</b>	<b>110</b>	<b>265</b>	<b>110</b>	<b>110</b>	<b>264</b>	<b>110</b>	<b>107</b>
<b>Capital funding</b>										
Grants, subsidies and insurance revenue	-	-	-	-	-	-	-	-	-	-
Increase in debt	111	266	110	110	265	110	110	264	110	107
<b>Total capital funding applied</b>	<b>111</b>	<b>266</b>	<b>110</b>	<b>110</b>	<b>265</b>	<b>110</b>	<b>110</b>	<b>264</b>	<b>110</b>	<b>107</b>

## 9.2 Funding strategy

Operational funding for the Maritime Operations Activity is sourced 60% to 80% from general funds, 20% to 40% from fees and charges and 0% to 20% from 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.

Note it is proposed to increase the percentage of cost recovery via port dues for Tauranga related activities in Y1, from 40% to 60%. Pending the outcome of the cost recovery effort, further increases for Y2 may be considered.

Capital funding is required when purchasing and maintaining maritime safety equipment to provide the services of the programme. The broader Council Financial Strategy for capital funding can be found in the SAMP.

Operational costs for Maritime Operations are estimated to be around \$3,900 million per annum.

# Part 10:

## Assumptions

The Maritime Operations AMP does not have any specific assumptions over and above what can be found in the SAMP.

# Part 11:

## Audit and improvement

### 11.1 Our approach to this

The purpose of the improvement plan is to identify and develop improvements to the AMP processes, to ensure the AMP is fit for purpose and effective. Our approach to this is to use the cycle of AMP monitoring, review, revision and audit every three years to formally identify any improvements. In addition, Maritime Operations identify improvements between formal reviews on an ad-hoc basis, by discussing new ideas and areas for improvement on the job.

Further detail on Council's approach to audit and improvement can be found in the SAMP.

### 11.2 Past audits

The Maritime Operations activity undertakes informal continuous improvement audits of management processes on an ad-hoc basis. Previous improvements include bringing the majority of the aid to navigation maintenance activities in-house, whereas historically these had been contracted out. The basis for this improvement was that the Maritime Operations Team would have (and have since gained) a better hands-on understanding of the assets they manage, and to have more control over operational expenditure.

Another notable improvement that has been implemented is the standardising of material type for replacement of navigation aids. The driver for this was to streamline maintenance activities and save costs.

These improvements have not been formally audited in the past, however, the team discusses regularly how they are tracking with implementing proposed improvements, as well as how they can continuously improve in other areas.

### 11.3 Improvement plan

No improvement items have been identified for this AMP.

# Appendices

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# Appendix 1: Asset information

## Aids to Navigation Asset Description

The primary purpose of an Aid to Navigation (AtoN) is to assist the safe passage of a vessel.

The waters of New Zealand and adjacent islands are marked for safe navigation using the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) System 'A' Maritime Buoyage System.

This system uses AtoNs which have a variety of colours, shapes, and light characteristics arranged in simple ways, to show the side on which a buoy or beacon should be passed when heading in a given direction.

Types of AtoN include:

- Lateral Marks
- Cardinal Marks
- Isolated Danger Marks
- Safe Water Marks
- Special Marks
- Water Ski Access Lanes and Reserved Areas

The meaning of a mark depends on its:

- Colour, Shape, Top Mark (By day)
- Colour, Rhythm of Light (By night)

## Beacons

Beacons are poles set into the ocean/lake floor, are lighted or unlighted (unlighted beacons have reflective marking strips to aid visibility at night), and can have top shapes fitted. In the Bay of Plenty region, beacons are used to indicate Lateral Marks (define port and starboard side of a channel) and Cardinal Marks (indicate the safe side on which to pass a danger). The vast majority of beacons in the Bay of Plenty region are set in the Tauranga Harbour and consist of railway iron, galvanized poles, steel poles, wooden 2 pile and large I Beam.

Due to availability and cost of installation, railway iron beacons are being replaced with 100 mm galvanized round poles (standardising of material type) as they reach the end of their asset life or are damaged. Likewise, 2 pile wooden poles are being replaced with 150 mm square steel poles (standardising of material type) as they reach the end of their asset life or are damaged.

## Buoys

Buoys are secured or moored to the ocean/lake floor using a concrete block and either rope or chain, or a combination of rope and chain. Buoys are lighted or unlighted and can have top shapes fitted. In the Bay of Plenty region, buoys are used to indicate all of the types of marks listed above, and range from small yellow special marks in sheltered waters used to indicate 5 knot limits, to large ocean buoys set at the Bowentown Entrance, which are exposed to large breaking seas at times.

## Markers

Markers are land based and include Water Ski Access Lane Marker Poles and Reserved Area Marker Poles.

## Signage

Signs range from simple single panel signs, through to large three panel signs. These are mounted in galvanised steel frames, and in Whakatāne and Rotorua, wooden pole style frames have recently been installed.

Signs are positioned at boat ramps, giving water users key Navigation Safety information, and larger signs include maps that indicate the location of designated areas under the Bay of Plenty Navigation Safety Bylaw 2017 (such as mooring areas, reserved areas, water ski access lanes, shipping channels), location of aids to navigation, and other useful information.

The Bay of Plenty Regional Navigation Safety Bylaw 2017 came into force on 1 July 2017. There were a number of changes from the old Bylaw, and hence signage required to be updated to reflect these changes. As such, the signs around the Tauranga Harbour have been updated with new stickers using the existing frames, and Rotorua/Whakatāne have had some completely new signs and frames installed at the time.

## Moorings

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

The majority of the 492 are privately owned with Council managing seven. 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.

## Mobile plant

The Maritime Operations Team has a variety of mobile plant that are used as part of regular operations. The assets shown in the table below are the higher value mobile plant assets. These are not currently included in the Accela Asset Register as they are not fixed assets.

Asset	Value
Lamor Skimmer (LBC 6B 3850 ) and ancillaries	\$65,000
Elastec (ES-400A Helical Screw) pump	\$7,000
Kaituna Bar Camera and ancillaries	\$11,000
D5 Body Worn Video Cameras	\$18,135 (12 x cameras at \$1395 each)
Drone (DJI Phantom 4 Pro)	\$2,800