

# Asset Management Plan

## Coastal Infrastructure

### DOCUMENT CONTROL

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### INTRODUCTION

Whitsunday Regional Council is committed to providing sustainable, efficient and cost-effective services to its community. These services are essential for the maintenance of the lifestyle, economy, affordability and public health of the region. Through the adoption of a Strategic Asset Management Plan, Council recognises the importance of its role and is striving to further improve its service capacity through the establishment of sound, long term planning for the communities' assets.

This Asset Management Plan (AMP) identifies the specific service requirements for Coastal Infrastructure assets, and the expectations of those accountable for the asset performance outcomes, planning, acquisition, operations maintenance and renewal of the assets.

The Whitsunday Region Coastal Infrastructure is comprised of over 14 assets with a replacement value of over \$4,515,000. Whilst small in number, coastal infrastructure plays a vital role in providing tourism and industry access to the Whitsunday Region and recreational access for water related activities on behalf of the community in the Whitsunday Region. Given the harsh conditions of coastal environments, there is a significant cost of providing and maintaining marine infrastructure, and public expectation is that budgets will be spent responsibly in accordance with the Local Government Act 2009.

Council's coastal assets increase the liveability of the region and as such, are an important component in supporting the economic prosperity of the region. Boat ramps, jetties and pontoons, as well as the protective seawall structures, are a well utilised feature that require regular maintenance and renewal to ensure a safe and fit-for-use standard of infrastructure is provided.

All assets within the Coastal Infrastructure AMP will be assessed for gaps in the provision of infrastructure and services, as budget and resources allow.

The key assets covered by this AMP are sea walls, breakwaters, boat ramps, pontoons, jetties and boat ramp infrastructure.

### Service Planning Alignment

Planning for the delivery and management of Council's coastal infrastructure will be undertaken in parallel to Council's strategic and economic visions. The establishment, maintenance and upgrade of infrastructure gains justification from economic drivers such as tourism related industries and supporting marine based recreational activities in the community.

To better understand the infrastructure needs of the region, Council is progressively undertaking consultation with user groups to understand their future needs from the assets and liaising with internal and external stakeholders that influence and inform strategic transport planning for our Region.

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Forefront of strategic planning for the Whitsunday Region is Council's Corporate Plan. The Corporate Plan objectives represent the desired outcomes for the delivery of coastal infrastructure, and are listed as follows:

- Our built environment is well planned, effectively managed and protects our region's heritage and character;
- Our region is accessible and connected;
- Our infrastructure supports our region's current and future needs; and
- Our infrastructure enables economic development and facilitates investment opportunities.

To meet these objectives, this AMP will continuously strive to achieve:

- Assets are managed to conditions which are appropriate for intended use in terms of legislation and community expectations;
- The delivery of infrastructure represents the needs of the region, with a strong economic development influence;
- Operational plans are working towards the most sustainable level of service and whole of lifecycle management;
- The immediate and long-term budget requirements, together with the consequences of budget variations, are explicit; and
- Risks associated with asset use are managed, recognising the duty of care owed to the public, with emphasis given to safety and minimising environmental impacts.

### Overview of the Assets Included in the Plan

Economic drivers of the region, such as tourism, generate a significant proportion of user demand, integrating with community recreational demand.

Council is preparing to deliver and maintain an appropriate range of coastal infrastructure that supports the services required by industry and the community. This AMP details all existing assets within the region, as well as a brief commentary on future requirements. These assets include:

- Boat Ramps
- Pontoons
- Jetties
- Sea Walls
- Breakwater
- Other Marine Structures

Assets that are not covered by the AMP are as follows:

1. Coastal assets that are owned by other entities
2. Shute Harbour facilities (covered under the Shute Harbour AMP)
3. Private ramps, pontoons, jetties etc that are privately owned

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### FINANCIAL OVERVIEW

The current coastal infrastructure assets, replacement value and written down value in the table below are correct as of 30<sup>th</sup> June 2018.

Marine Portfolio						
Asset Category	No of Assets	Replacement Value	Written Down Value	Written Down Value	Ave Useful Life (years)	Average Remaining Life (years)
Marine - Pontoon	4	\$ 924,321	\$ 686,226	\$ 238,096	47.50	31.61
Marine - Boat Ramp	3	\$ 1,184,487	\$ 669,706	\$ 514,781	40.00	18.57
Marine - Seawall	7	\$ 2,787,403	\$ 2,654,109	\$ 133,294	57.14	49.67
	<b>14</b>	<b>\$ 4,896,211</b>	<b>\$ 4,010,040</b>	<b>\$ 886,171</b>		

Table 1 - Asset Overview

### ASSET MANAGEMENT DRIVERS

#### Council Strategies and Commitments

To ensure coastal infrastructure service provision is delivered appropriately (for example, recreational boating or supporting marine tourism transportation or coastal protection), alignment to a series of strategic plans is necessary. The delivery of infrastructure for Council's coastal infrastructure network is reflective of:

- Whitsunday Regional Council Planning Scheme 2017 (including Development Manual and LGIP)
- Whitsunday 2020 Corporate Plan 2014-2019
- Proserpine Sustainability and Future Growth Master Plan
- Ernst & Young Forensic Report
- Economic Development Strategy
- Whitsunday Disaster Management Plan

The Council's strategic vision is to be captured in a range of service plans that result in a 10-year Capital Works Plan. These plans include:

- Transport Asset Management Plan
- Integrated Transport Strategy
- Stormwater Management Plan
- Bridges Asset Management Plan
- Stormwater Asset Management Plan

#### Statutory Requirements

The provision of coastal infrastructure is regulated by industry and Australian standards. As a result, there are multiple influencing statutory requirements that must be adhered to for design and construction works. Verification meeting the required standards is provided by a Registered Professional Engineer of Queensland (RPEQ) or another delegated person.

#### Statutory Documents:

- Great Barrier Reef Marine Park Act 1975
- Marine Safety (Domestic Commercial Vessel) National Law Act 2012

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- Transport Infrastructure Act 1994
- Professional Engineers Act 2002
- Australian Standards
- Local Government Act 2009
- Local Government Regulation 2012
- Disability Discrimination Act 1992
- Workplace Health and Safety Act 2011
- Sustainable Planning Act 2013
- Planning Act 2016

### Asset Management:

- Austroads Guide to Asset Management series
- International Infrastructure Management Manual (IIMM) 2015
- National Asset Management Framework Legislation 2010
- Australian Accounting Standards

### Response to Growth

In collaboration with the Department of Transport and Main Roads, who also provide coastal infrastructure within the Whitsunday Region, the Council will continue to review the need to provide further coastal infrastructure facilities to the region.

There are points of access within the region of which are not recognised as formal infrastructure but play an important role in the lifestyle of the WRC residents. Future iterations of this AMP will review the need to formalise these facilities where demand is high.

### Industry Trends

The commercial and recreational boating industry is trending to larger, faster boats that are more efficient to their commercial operations. Trailer boats are also becoming larger as vehicles are more capable of towing larger and heavy loads such as boats. These factors in turn influence planned renewal or upgrade of these assets as Council needs to consider being able to provide upgraded assets to support the demand.

### Community Expectations

Recreational boating is becoming increasingly popular which drives the demand for increased number of boat ramps, wider ramps at existing ramps as well as improvements to amenity of current facilities including lighting, wash down facilities and increased parking.

## LEVELS OF SERVICE OBJECTIVES

### Overarching Service Objective

This asset management plan is prepared under the direction of the Council's vision, mission, values and objectives. Council's vision is "Natural beauty, global attraction. We have it all." Council's mission is "We are committed to providing the Whitsunday region with strong and responsive local government and achieving an innovative, efficient and sustainable organisation."

Council's values are:

- **Accountability** – being open, diligent and ethical in our decisions and actions

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- **Unity** – working together to get things done
- **Trust** – in our team mates, our service partners and our customers
- **Community** – building pride, strength and confidence amongst our region, residents and ratepayers
- **Continuous Improvement** – always looking for solutions and ways to do things better

Council will continue to provide and maintain coastal infrastructure that aims to meet the expectations of the community.

### Statutory Level of Service

Performance Measure Category	Level of Service Expectations/Outcomes	Current/Intended Performance Measure
Standard	Infrastructure is fit-for-use	Assets are designed and constructed as per Industry and Australian Standards as confirmed by a RPEQ
Assets Register	Council keeps and maintains a register of all coastal infrastructure assets within the region	Assets register is current and readily available for use

### Functional Level of Service

Performance Measure Category	Level of Service Expectation/Outcome	Current Performance Measure
Quality	<p>Infrastructure has the capability of providing safe access for boat owners in most weather and tidal conditions.</p> <p>Coastal infrastructure provides local protection to the environment and beach infrastructure during adverse tides and typical storm/weather events.</p>	<50 request / complaints per annum received or lodged to Council with respect to the coastal infrastructure asset portfolio. <i>NB: This excludes requests which are as a result of natural disaster events.</i>
Service Function	Infrastructure is suitable for its intended purpose	Audits, inspections and Asset Design As Constructed (ADAC) surveys confirm that infrastructure provided meets technical standards.
Capacity	Infrastructure is able to meet the demand during most peak usage times without excessive waiting times and traffic issues.	<150 request / complaints per annum received or lodged to Council with respect to the coastal infrastructure asset portfolio. <i>NB: This excludes requests which are as a result of natural disaster events.</i>
Safety	Infrastructure provided is safe for all users	<200 request / complaints per annum received or lodged to Council with

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	<p>Ramps are kept relatively free of marine vegetation that increase the risk of falls and slipping.</p> <p>Appropriate signage and barriers are installed on walls etc as appropriate</p>	<p>respect to the coastal infrastructure asset portfolio.</p> <p>Regular inspections and cleaning of ramps is undertaken.</p> <p>Regular inspection and risk assessment of relevant infrastructure is undertaken</p>
Accessibility and Availability	New assets will progressively incorporate improved access for all members of the community	<200 request / complaints per annum received or lodged to Council with respect to the coastal infrastructure asset portfolio. <i>NB: This excludes requests which are as a result of natural disaster events.</i>
Sustainability/ Affordable	Management of the assets is undertaken within the interests of current and future generations	Maintenance strategies are to be developed in consultation with residents and stakeholders.
Environmental	All assets comply with relevant Government Environmental related Acts	Assets are managed appropriately as per technical standards and risk to community.
Technical Level of Service		
Performance Measure Category	Level of Service Expectation/Outcome	Current Performance Measure
Ramp Safety	Ramp surfaces are cleaned regularly to prevent falls/slips by users	<p>Programmed inspections and cleaning is undertaken and recorded.</p> <p>Zero complaints per annum received or lodged to Council</p>
Condition	<p>Carry out routine maintenance</p> <p>Visual assessment of walls and ramps particular after high tides and weather events.</p>	Programmed recorded inspections targeted at key assets
Provide Signage	Appropriate signage is installed at all locations where there is a risk of falls and trips.	Undertake visual inspections during adjacent asset inspections
Provide Barriers	Appropriate safety barriers are installed in locations on coastal infrastructure where	Programmed inspections and risk assessments are undertaken and recorded.

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	fall or trip hazards have been identified	
Gaps in Level of Service		
<p><b>Known Gaps</b></p> <p>The above LOS statements are a general description of the service objectives that the Roads and Drainage department will delivery on behalf of Council. As part of the improvement plan, new LOS will be developed that are based around service levels that are prioritised by hierarchy, treatment types and response times. These will be specific to the service that we provide in terms of treatments applied and ability to respond to defects with available resources.</p> <p>There is a known gap in the customer (functional) LOS expectations in that customer research is required to determine the level of service for transport infrastructure as expected by the community. Council's CRM system can be used to gauge an understanding of the expected responses and timeframes to defects within the transport network infrastructure. However, these requests are only representative of where individuals believe a response has not been dealt with effectively within their timeframe.</p> <p>Community expectations need to be managed in line with Council's ability to provide a level of service. The development of service levels that prioritise infrastructure and response times accordingly may reduce the amount of feedback received through the CRM system, but it will also provide the Councilwith the ability to respond accordingly.</p>		
<p><b>Projected Change</b></p> <p>Development of a LOS document is required to identify how Council will respond to changes within the environment, community and response to legislative requirements.</p> <p>Council has recently undertaken an expansive amount of work in identifying how climate change will affect the community to a horizon of 2100. Until LOS are developed, it is unknown what response is required from coastal infrastructure to mitigate against sea-rise.</p>		

LIFE CYCLE MANAGEMENT APPROACH
<p><b>Growth and Demand Management</b></p> <p>The continued population and tourism growth will place further demands on coastal infrastructure assets through increased demand on boat ramps and mooring facilities. Demand on these particular assets including increasing the levels of service will be influenced by:</p> <ul style="list-style-type: none"> <li>• Growth in number of boat registrations.</li> <li>• Growth in boat sizes (i.e. Boats on trailers are getting bigger)</li> <li>• Increased size of tourism operator boats &amp; new configurations</li> <li>• Increase in permanent population growth</li> <li>• Aging population requiring more "user friendly facilities"</li> </ul> <p>Any increased development of land in proximity to existing retaining walls and seawalls may impact on these particular assets in terms of the need for potential upgrades and or extensions.</p> <p>The coastal infrastructure assets are obviously located at the interface of the urban land and marine aquatic habitats. These assets serve the community and tourists by supporting their aquatic access and recreation, and use of the foreshore. Environmental constraints arise due to the sensitivity of habitats at</p>

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the land/aquatic interface particularly given the location of the region in the Great Barrier Reef Marine Park and its critical linkages to tourism.

Sea level rise due to global warming is unlikely to affect these structures in the life of this plan however future planning should consider this issue. The effects of adverse weather are also of key importance and past storm events have heavily impacted on this asset class.

Future tourism and recreation strategies will be also be utilised to inform planning on coastal infrastructure assets.

Future versions of this AMP will consider the impacts of growth in greater detail. This activity has been included as a priority in the improvement plan.

### Asset Criticality

An in-depth asset criticality assessment has not been undertaken at the time of writing this document. Based on the below factors, a list of the most critical assets known to the Roads and Drainage in terms of coastal infrastructure is as follows.

Assessment factors:

1. Critical to the tourism industry
2. Vital to social/economic well-being
3. Provide access to other critical infrastructure
4. Provide linkages between communities (Whitsunday Islands)
5. Critical for commercial imperatives

### Critical Assets:

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- Whisper Bay Breakwater
- Whisper Bay Rock Revetment Wall
- Ocean Road Seawall

The above assets will be noted as critical assets in the LOS document. They are designated as assets that are given the high consequences of service LOSs that could occur. Accordingly, responses to maintenance and renewals, such as early intervention or proactive monitoring, will be prioritised.

### Asset Performance / Condition

Recent condition inspections have been undertaken on a number of Council's boat ramps. The ratings (out of 6), were in the range of 4.5 to 5 which indicates that they are in overall good condition.

With the development of new levels of service, a more structured program of asset inspections will be undertaken at regular intervals on prioritised assets.

### Approach to Operations and Maintenance

Council is currently transitioning from a largely adhoc and reactive approach to maintenance scheduling and delivery, to one based on proactive identification and risk based task allocation.

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A corner stone of this initiative is the expansion of the use of software to incorporate an inspection regime into defect inspections Council's coastal infrastructure assets. The fundamental elements of this approach is a network wide, structured inspection program aimed at proactively identifying isolated defects across the various asset base. This proactive program will be supplemented by reactive inspections as a result of customer requests.

Dedicated operational staff will routinely review the risk based defect backlog and allocate works to specific crews based on risk and team specialisation. Ongoing review of the success of this approach will be based around factors such as; unit rates of completed works, response times to complete log defects and customer satisfaction.

### Capital Response

#### ***New and Upgraded Assets***

New and upgrade works are those that create an asset that did not previously exist or works which upgrade or improve an existing asset beyond its existing capacity. The requirement for new assets to be constructed will generally be dependent on the forecast growth in the region and will be identified in the 10-year capital works program with further commentary on the need for upgraded and new assets available in the Integrated Transport Strategy.

At present, the current focus is on operations and maintenance of these assets rather than renewals and upgrades.

#### ***Asset Renewals***

Renewals of coastal infrastructure will be undertaken as determined in renewal models.

### Operational Maintenance Response

Over time, minor faults can occur with Council's coastal infrastructure assets. The repairs and maintenance of these faults are addressed based on defined intervention levels and response times, (subject to when safe access is available after storm events).

Immediately after a natural disaster such as flooding or cyclones, Council has a developed a procedure whereby all assets within the municipality are inspected to ensure that they are safe. Assets which are identified as hazardous or defected are made safe and programmed for permanent repair at a later stage once human and financial resources and weather permits.

### Disposal Strategy

Roads and Drainage have not identified any coastal infrastructure assets within its network that are excess to requirements or not required for possible decommissioning and disposal at this stage. However, this is a continuous process which will be reviewed on an as required basis.

### Key Roles and Responsibilities

**Director of Engineering Services** – provide strategic direction and approve allocation of resources for the Transport Asset Management Plan

**Executive Manager Roads and Drainage** - management of the assets and its associated budget.

**Manager Road Assets and Strategy** – co-ordinate asset management program and direct resources for the delivery of the renewals program.

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**Specialist Transport Infrastructure Systems** – manage transport infrastructure asset and network data to enable effective decision making relating to; whole of life costing, asset renewal programs, long term financial forecasting, 10-year capital works program development and service level agreements.

### FINANCIAL IMPLICATIONS

<b>Forecast 10 Year Capital Expenditure</b>	Not Available
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### MONITORING AND IMPROVEMENT

#### Monitoring Approach

The Asset Management Leadership Advisory Group (AMLAG) leads the monitoring and reporting on the performance of Council's asset management system, including the delivery of adopted asset management plans and the achievement of established levels of service. The AMLAG will provide regular summary performance reports to the Council.

Internal and external auditors will assess and report on the performance of the asset management plans.

Asset custodians are responsible for ongoing monitoring of asset performance against the established levels of service.

#### Improvement Initiatives

Task No	Task	Responsibility	Timeline
1	Assess the structure and resources within Council to ensure the TAMP can be effectively implemented.	Executive Manager Roads & Drainage	End Dec 2018
2	Develop a Level of Service document to ensure all assets are accounted for, have defined thresholds to determine response times and treatment types based on hierarchy classifications for asset type.	Specialist Transport Infrastructure Systems	End June 2019
3	Establish an ongoing cyclic testing regime to collect condition information for the entire road network to refine prediction models, utilising Council's data collection manuals.	Specialist Transport Infrastructure Systems	End June 2019
4	Review componentisation of assets for relevance to current operations.	Specialist Transport Infrastructure Systems	End June 2019
5	Undertake assessment of critical coastal infrastructure assets.	Engineer – Network Strategy & Major Projects	End Dec 2019
6	Modify/Review finance system to capture expenditure against all types of maintenance – whether proactive or reactive.	Executive Manager Roads & Drainage	End Dec 2019
7	Develop Coastal Infrastructure Management Plan.	Engineer – Network Strategy & Major Projects	End Dec 2019

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<b>8</b>	Interface/Integrate AM and Financial system for valuation and annual depreciation purposes.	Specialist Transport Infrastructure Systems	End Dec 2019
<b>9</b>	Test the current levels of service, to determine 'a confidence level' for reasonableness.	Specialist Transport Infrastructure Systems	End June 2020
<b>10</b>	Test the current levels of service to determine if they are achievable for current budgets.	Specialist Transport Infrastructure Systems	End June 2020
<b>11</b>	Undertake a review of all coastal infrastructure asset detail in the corporate asset register and update where data is considered to be lacking.	Specialist Transport Infrastructure Systems	End June 2020
<b>12</b>	Review prediction modelling and lifecycle costing analysis to inform this plan.	Specialist Transport Infrastructure Systems  Asset Coordinator	Ongoing
<b>13</b>	Utilise the myData Asset Register to continue to address the accuracy of coastal infrastructure assets and identify and record their various sub-components.	Specialist Transport Infrastructure Systems  Asset Coordinator	Ongoing
<b>14</b>	Review demand management plan and incorporate into future revisions of this TAMP.	Specialist Transport Infrastructure Systems	Ongoing