



Asset Management Plan

Beach Access, Walkways & Viewing Platforms

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TABLE OF CONTENTS

1.	EXECUTIVE SUMMARY	1
	Context	1
	What does it Cost?.....	1
	What we will do	2
	What we cannot do	2
	Managing the Risks	2
	Confidence Levels	2
	The Next Steps	2
2.	INTRODUCTION.....	4
	2.1 Background.....	4
	2.2 Goals and Objectives of Asset Management.....	20
	2.3 Plan Framework.....	20
	2.4 Core and Advanced Asset Management	23
	2.5 Community Consultation.....	23
3.	LEVELS OF SERVICE	23
	3.1 Customer Research and Expectations.....	23
	3.2 Strategic and Corporate Goals	26
	3.3 Legislative Requirements	27
	3.4 Community Levels of Service.....	27
	3.5 Technical Levels of Service	29
4.	FUTURE DEMAND	32
	4.1 Demand Drivers.....	32
	4.2 Demand Forecast	32
	4.3 Demand Impact on Assets.....	35
	4.4 Demand Management Plan.....	39
	4.5 Asset Programs to meet Demand.....	40
5.	LIFECYCLE MANAGEMENT PLAN.....	41
	5.1 Background Data	41
	5.2 Infrastructure Risk Management Plan.....	48
	5.3 Routine Operations and Maintenance Plan	48
	5.4 Renewal/Replacement Plan	54
	5.5 Creation/Acquisition/Upgrade Plan	57
	5.6 Disposal Plan	59
	5.7 Service Consequences and Risks	59
6.	FINANCIAL SUMMARY	60
	6.1 Financial Statements and Projections	60
	6.2 Funding Strategy.....	65
	6.3 Valuation Forecasts	65
	6.4 Key Assumptions made in Financial Forecasts	67
	6.5 Forecast Reliability and Confidence	67
7.	PLAN IMPROVEMENT AND MONITORING	69
	7.1 Status of Asset Management Practices	69
	7.2 Improvement Plan	73
	7.3 Monitoring and Review Procedures	73
	7.4 Performance Measures	73
8.	REFERENCES.....	74
9.	APPENDICES.....	75
	Appendix A Projected 20 year Capital Renewal and Replacement Works Program.....	76
	Appendix B (aspirational) Upgrade/Expenditure/New 10 year Capital Works Program.....	78
	Appendix C Budgeted Expenditures Accommodated in LTFP.....	80
	Appendix D Abbreviations	81
	Appendix E Glossary	82

1. EXECUTIVE SUMMARY

Context

Ballina Shire Council is located in the Northern Rivers of the Far North Coast of New South Wales. It covers an area of 485 km² with a shire population of 41,335 (as of 30th June 2013).

This AMP shall encompass assets along the coastal foreshore that promote the enjoyment & use of the ocean and beaches.

The AMP shall also 'note' the possible future adoption & creation of the Sharpe's Beach Master Plan (SBMP) but until approval, the plan is based on scenario 1.

Scenario 1: SBMP 2012 concept is not adopted

Scenario 2: SBMP 2012 concept is fully adopted

Scenario 3: SBMP 2012 concept is selectively adopted

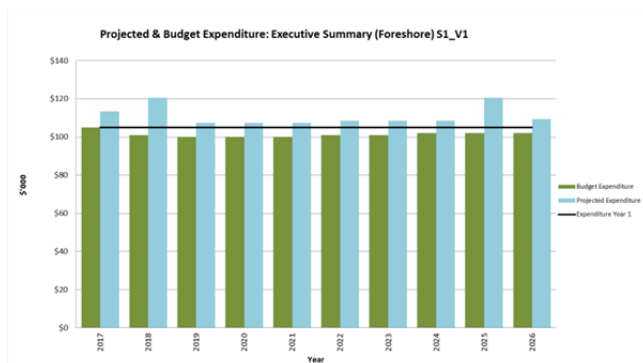
The existing infrastructure assets have a replacement value of \$1,066,000.

What does it Cost?

The projected outlays necessary to provide the services covered by this Asset Management Plan (AM Plan) includes operations, maintenance, renewal and upgrade of existing assets over the 10 year planning period is \$111,000 on average per year. (**Scenario 1**)

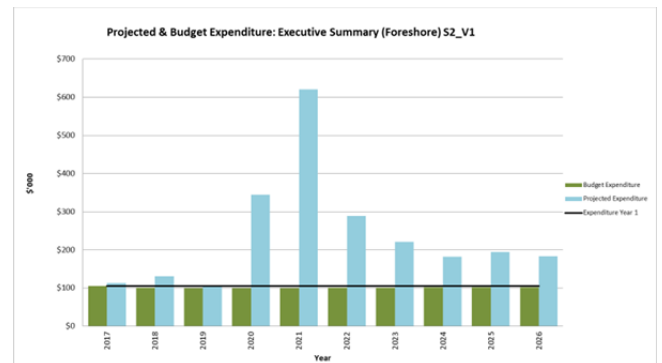
Estimated available funding for this period is \$101,000 on average per year which is 91% of the cost to provide the service. This is a funding shortfall of -\$10,000 on average per year. Projected expenditure required to provide services in the AM Plan compared with planned expenditure currently included in the Long Term Financial Plan are shown in the graph below.

Foreshore AM + NO SBMP -Scenario 1



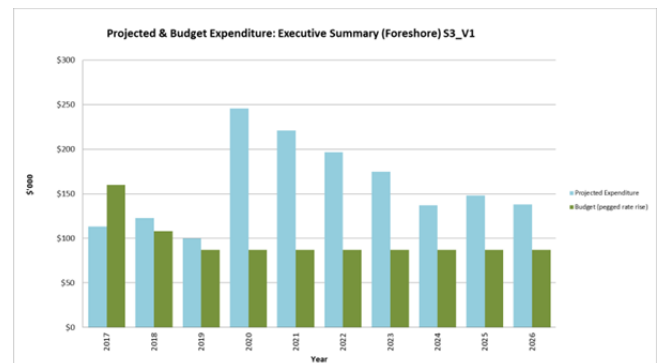
Foreshore Assets S1_V1	
Executive Summary - What does it cost?	(\$'000)
10 year total cost [O, M, R & U Expenditure]	\$1,112
10 year average cost	\$111
10 year total LTFP budget [O, M, R & U]	\$1,014
10 year average LTFP budget	\$101
10 year AM financial indicator	91%
10 year average funding shortfall	-\$10

Foreshore AM + SBMP -Scenario 2



Foreshore Assets S2_V1	
Executive Summary - What does it cost?	(\$'000)
10 year total cost [O, M, R & U Expenditure]	\$2,387
10 year average cost	\$239
10 year total LTFP budget [O, M, R & U]	\$1,014
10 year average LTFP budget	\$101
10 year AM financial indicator	42%
10 year average funding shortfall	-\$137

Foreshore AM + selected SBMP -Scenario 3



Foreshore Assets S3_V1	
Executive Summary - What does it cost?	(\$'000)
10 year total cost [O, M, R & U Expenditure]	\$1,599
10 year average cost	\$160
10 year total LTFP budget [O, M, R & U]	\$964
10 year average LTFP budget	\$96
10 year AM financial indicator	60%
10 year average funding shortfall	-\$63

What we will do

We plan to provide Foreshore services for the following:

- Operation, maintenance, renewal and upgrade of Councils infrastructure to meet service levels set by Council in annual budgets.
- Construct the following major new projects
 - Sharpe's Beach Master Plan

What we cannot do

We do **not** have enough funding to provide all services at the desired service levels or provide new services. Works and services that cannot be provided under present funding levels are:

- Construction of an Ocean Pool at Shelley Beach has not been included in this version of the AMP, but may be considered in future.

Managing the Risks

There are risks associated with providing the service and not being able to complete all identified activities and projects. We have identified major risks as:

- Injury caused by faulty / damaged play equipment

We will endeavour to manage these risks within available funding by:

- Inspections & defect recording
- Maintenance programming

Confidence Levels

This AM Plan is based on Medium level of confidence information.

The Next Steps

The actions resulting from this asset management plan are:

- Development of maintenance scheduling within the Authority Asset System, through the use of the Authority maintenance work order module.
- Continuation of the condition assessment and defect recording as detailed in section 5.
- Advance the integration of the OSR integration to the GIS platform

Questions you may have

What is this plan about?

This asset management plan covers the infrastructure assets that serve Ballina Shire Council community's Foreshore needs that enable people to enjoy the ocean foreshore area. These assets include

- Viewing Platforms & beach access structures
- beach & bush tracks
- furniture
- beach showers + drinking water bubblers
- ocean going boat ramps

This plan does not include the following assets that may exist within the foreshore areas.

- Playgrounds
- Shared Footpaths
- Shade structures
- Buildings
- Carparks
- Stormwater infrastructure
- Water & Sewer infrastructure

These assets are described in a number of other Asset Management Plans.

What is an Asset Management Plan?

Asset management planning is a comprehensive process to ensure delivery of services from infrastructure is provided in a financially sustainable manner.

An asset management plan details information about infrastructure assets including actions required to provide an agreed level of service in the most cost effective manner. The plan defines the services to be provided, how the services are provided and what funds are required to provide the services.

Why is there a funding shortfall?

Most of the Council's Foreshore network was constructed from government grants, often provided and accepted without consideration of ongoing operations, maintenance and replacement needs. There currently is no funding programmed for asset renewals.

Many of these assets are approaching the later years of their life and require replacement, services from the assets are decreasing and maintenance costs are increasing.

Our present funding levels are insufficient to continue to provide existing services at current levels in the medium term.

What options do we have?

Resolving the funding shortfall involves several steps:

1. Improving asset knowledge so that data accurately records the asset inventory, how assets are performing and when assets are not able to provide the required service levels,
2. Improving our efficiency in operating, maintaining, renewing and replacing existing assets to optimise life cycle costs,
3. Identifying and managing risks associated with providing services from infrastructure,
4. Making trade-offs between service levels and costs to ensure that the community receives the best return from infrastructure,
5. Identifying assets surplus to needs for disposal to make saving in future operations and maintenance costs,
6. Consulting with the community to ensure that Foreshore asset services and costs meet community needs and are affordable,
7. Developing partnership with other bodies, where available to provide services,
8. Seeking additional funding from governments and other bodies to better reflect a 'whole of government' funding approach to infrastructure services.

What happens if we don't manage the shortfall?

It is possible that we will have to reduce service levels in some areas, unless new sources of revenue are found. For foreshore related infrastructure, the service level reduction may include

- Increasing period between maintenance of beach tracks.
- Reducing scheduled cleaning programs of picnic areas

Currently there is no planned budget for the capital renewal of existing assets or for the proposed Sharpe's Beach Master Plan. This will need to be reviewed at the next quarterly budget review meeting.

What can we do?

We can develop options, costs and priorities for future Foreshore asset services, consult with the community to plan future services to match the community service needs with ability to pay for services and maximise community benefits against costs.

2. INTRODUCTION

2.1 Background

This asset management plan is to demonstrate responsive management of assets (and services provided from assets), compliance with regulatory requirements, and to communicate funding needed to provide the required levels of service over a 20 year planning period.

The asset management plan follows the format for AM Plans recommended in Section 4.2.6 of the International Infrastructure Management Manual¹.

The asset management plan is to be read with Council's Asset Management Policy, Asset Management Strategy and the following associated planning documents:

- Community Strategic Plan
- Delivery Program & Operational Plan
- Resourcing Strategy
- BSC Long Term Financial Plan

This infrastructure assets covered by this asset management plan are shown in Table 2.1. These assets are used to provide Foreshore related services to the community.

¹ IPWEA, 2011, Sec 4.2.6, *Example of an Asset Management Plan Structure*, pp 4 | 24 – 27.1

Table 2.1.1: Assets covered by this Plan (Foreshore)

Asset Group	Site	Description	UOM	Quantity	Replacement Value	AM #
Viewing Platforms	Angels Beach Foreshore	Viewing Platform: 01 -Structure	sq.m	17	\$17,000	31212
Viewing Platforms	Angels Beach Foreshore	Viewing Platform: 02 -Structure	sq.m	17	\$16,500	31214
Viewing Platforms	Angels Beach Foreshore	Viewing Platform: 02 -Walkway	sq.m	102	\$102,400	31321
Viewing Platforms	Angels Beach Foreshore	Viewing Platform: 03 -Structure	sq.m	11	\$11,000	31217
Viewing Platforms	Angels Beach Foreshore	Viewing Platform: 03 -Walkway	sq.m	42	\$42,000	31259
Viewing Platforms	Angels Beach Foreshore	Viewing Platform: 04 -Structure	sq.m	12	\$12,000	31220
Viewing Platforms	Flat Rock Foreshore	Viewing Platform: 01 -Structure	sq.m	15	\$15,000	31254
Viewing Platforms	Flat Rock Foreshore	Viewing Platform: 02 -Structure	sq.m	15	\$15,000	31255
Viewing Platforms	Lighthouse Lookout Reserve	Viewing Platform: 01 -Structure	sq.m	13	\$13,000	31260
Viewing Platforms	Richmond Park	Norman Sharpe Rotary Lookout: Floor 1	sq.m	80	\$4,128	31300
Viewing Platforms	Richmond Park	Norman Sharpe Rotary Lookout: Floor 2	sq.m	80	\$4,128	31301
Viewing Platforms	Richmond Park	Norman Sharpe Rotary Lookout: Foundations	sq.m	80	\$4,128	31298
Viewing Platforms	Richmond Park	Norman Sharpe Rotary Lookout: Railing	sq.m	80	\$4,128	31302
Viewing Platforms	Richmond Park	Norman Sharpe Rotary Lookout: Structure	sq.m	80	\$24,767	31299
Viewing Platforms	Seven Mile Beach Foreshore	Walkway: Lennox Point: Structure	sq.m	18	\$18,000	160413
Viewing Platforms: sub-total					\$303,179	
TRACK -Beach Access	Angels Beach	TRACK : 4x4: # 23-47A	m	84	\$3,150	32542
TRACK -Beach Access	Angels Beach	TRACK : 4x4: # 23-47B	m	23	\$863	32546
TRACK -Beach Access	Lighthouse Beach	TRACK : 4x4: # 23-66	m	24	\$900	32510
TRACK -Beach Access	7 Mile Beach	TRACK : 4x4: # 30-02B	m	225	\$8,438	32646
TRACK -Beach Access	7 Mile Beach	TRACK : 4x4: # 30-02B (4WD polymer track)	m	40	\$24,544	62665
TRACK -Beach Access	7 Mile Beach	TRACK : 4x4: # 30-7	m	23	\$863	32574
TRACK -Beach Access	Sharpe's Beach	TRACK : 4x4: # 32-42	m	44	\$1,650	32690
TRACK -Beach Access	Robins Beach	TRACK : 4x4: # 50-74	m	620	\$23,250	32706
TRACK -Beach Access	Patches Beach	TRACK : 4x4: # 50-75	m	210	\$7,875	32710
TRACK -Beach Access	Flat Rock	TRACK : Beach: # 23-43	m	75	\$2,813	32442
TRACK -Beach Access	Flat Rock	TRACK : Beach: # 23-44	m	136	\$5,100	32446
TRACK -Beach Access	Angels Beach	TRACK : Beach: # 23-48	m	62	\$2,325	32450
TRACK -Beach Access	Angels Beach	TRACK : Beach: # 23-49	m	63	\$2,363	32454
TRACK -Beach Access	Angels Beach	TRACK : Beach: # 23-50	m	121	\$4,538	32458
TRACK -Beach Access	Angels Beach	TRACK : Beach: # 23-54	m	172	\$6,450	32474
TRACK -Beach Access	Shelly Beach	TRACK : Beach: # 23-58	m	16	\$600	32494

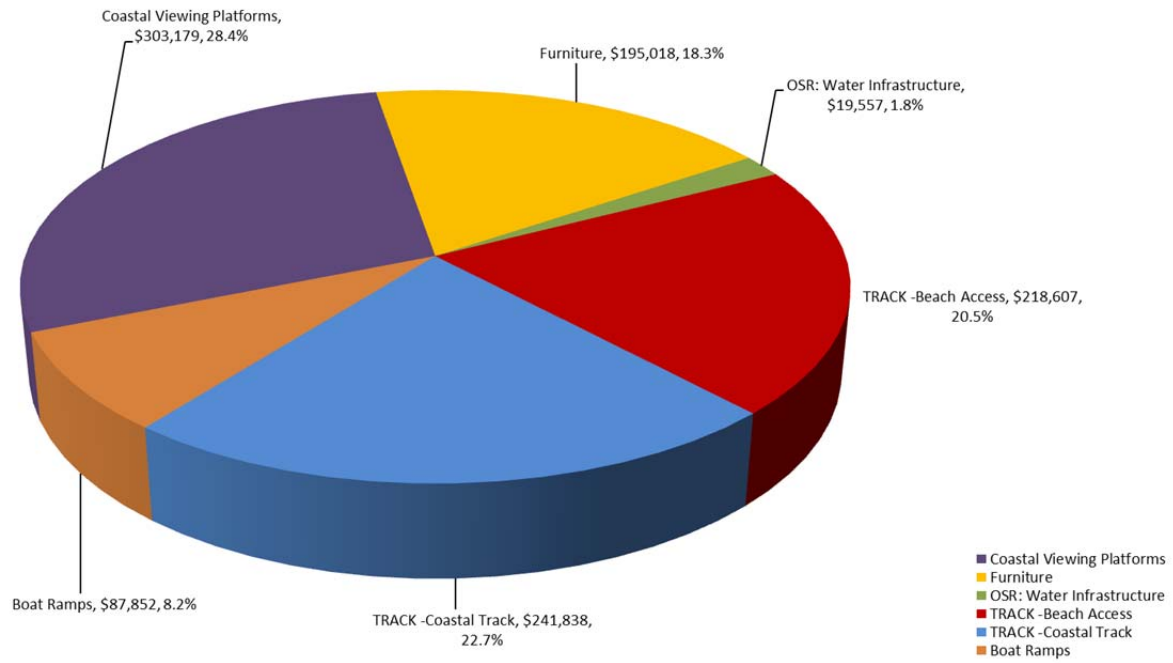
Asset Group	Site	Description	UOM	Quantity	Replacement Value	AM #
TRACK -Beach Access	Shelly Beach	TRACK : Beach: # 23-59B	m	91	\$3,413	32550
TRACK -Beach Access	Shelly Beach	TRACK : Beach: # 23-60	m	36	\$1,350	32498
TRACK -Beach Access	Shelly Beach	TRACK : Beach: # 23-61	m	35	\$1,313	32502
TRACK -Beach Access	Shelly Beach	TRACK : Beach: # 23-64	m	27	\$1,013	32506
TRACK -Beach Access	Lighthouse Beach	TRACK : Beach: # 23-67	m	90	\$3,375	32514
TRACK -Beach Access	Lighthouse Beach	TRACK : Beach: # 23-68	m	95	\$3,563	32518
TRACK -Beach Access	Lighthouse Beach	TRACK : Beach: # 23-69	m	98	\$3,675	32522
TRACK -Beach Access	Lighthouse Beach	TRACK : Beach: # 23-70	m	148	\$5,550	32526
TRACK -Beach Access	Lighthouse Beach	TRACK : Beach: # 23-71	m	37	\$1,388	32530
TRACK -Beach Access	7 Mile Beach	TRACK : Beach: # 30-1	m	79	\$2,963	32554
TRACK -Beach Access	7 Mile Beach	TRACK : Beach: # 30-02A	m	87	\$3,263	32642
TRACK -Beach Access	7 Mile Beach	TRACK : Beach: # 30-3	m	99	\$3,713	32558
TRACK -Beach Access	7 Mile Beach	TRACK : Beach: # 30-4	m	87	\$3,263	32562
TRACK -Beach Access	7 Mile Beach	TRACK : Beach: # 30-5	m	35	\$1,313	32566
TRACK -Beach Access	7 Mile Beach	TRACK : Beach: # 30-6	m	25	\$938	32570
TRACK -Beach Access	7 Mile Beach	TRACK : Beach: # 30-8	m	17	\$638	32578
TRACK -Beach Access	7 Mile Beach	TRACK : Beach: # 30-9	m	25	\$938	32582
TRACK -Beach Access	7 Mile Beach	TRACK : Beach: # 30-10	m	27	\$1,013	32586
TRACK -Beach Access	7 Mile Beach	TRACK : Beach: # 30-11	m	47	\$1,763	32590
TRACK -Beach Access	7 Mile Beach	TRACK : Beach: # 30-12	m	41	\$1,538	32594
TRACK -Beach Access	7 Mile Beach	TRACK : Beach: # 30-13	m	38	\$1,425	32598
TRACK -Beach Access	7 Mile Beach	TRACK : Beach: # 30-14	m	28	\$1,050	32602
TRACK -Beach Access	7 Mile Beach	TRACK : Beach: # 30-15	m	23	\$863	32606
TRACK -Beach Access	7 Mile Beach	TRACK : Beach: # 30-16	m	19	\$713	32610
TRACK -Beach Access	7 Mile Beach	TRACK : Beach: # 30-17	m	16	\$600	32614
TRACK -Beach Access	7 Mile Beach	TRACK : Beach: # 30-18	m	15	\$563	32618
TRACK -Beach Access	7 Mile Beach	TRACK : Beach: # 30-21	m	27	\$1,013	32622
TRACK -Beach Access	Boulder Beach	TRACK : Beach: # 31-37	m	288	\$10,800	32670
TRACK -Beach Access	Boulder Beach	TRACK : Beach: # 31-38B	m	14	\$525	32682
TRACK -Beach Access	Sharpe's Beach	TRACK : Beach: # 32-41	m	31	\$1,163	32686
TRACK -Beach Access	Angels Beach	TRACK : Bush: # 23-45A	m	622	\$23,325	32534
TRACK -Beach Access	Angels Beach	TRACK : Bush: # 23-45C	m	49	\$1,838	32538
TRACK -Beach Access	Angels Beach	TRACK : Bush: # 23-51	m	317	\$11,888	32462
TRACK -Beach Access	Angels Beach	TRACK : Bush: # 23-53	m	168	\$6,300	32470

Asset Group	Site	Description	UOM	Quantity	Replacement Value	AM #
TRACK -Beach Access	Boulder Beach	TRACK : Bush: # 31-38A	m	396	\$14,850	32678
Tracks -beach: sub-total					\$218,607	
TRACK -Coastal Track	Lennox Head	TRACK : 4x4: # 31-32	m	617	\$23,138	32650
TRACK -Coastal Track	Lennox Head	TRACK : 4x4: # 31-33	m	538	\$20,175	32654
TRACK -Coastal Track	Shag Rock	TRACK : 4x4: # 31-35	m	376	\$14,100	32662
TRACK -Coastal Track	Shag Rock	TRACK : 4x4: # 31-36	m	403	\$15,113	32666
TRACK -Coastal Track	Blackhead	TRACK : Bush: # 23-52	m	29	\$1,088	32466
TRACK -Coastal Track	Blackhead	TRACK : Bush: # 23-55_1	m	145	\$5,438	32478
TRACK -Coastal Track	Blackhead	TRACK : Bush: # 23-55_2	m	418	\$15,675	32482
TRACK -Coastal Track	Blackhead	TRACK : Bush: # 23-56	m	122	\$4,575	32486
TRACK -Coastal Track	Blackhead	TRACK : Bush: # 23-57	m	129	\$4,838	32490
TRACK -Coastal Track	Lennox Point	TRACK : Bush: # 30-25B	m	443	\$16,613	32638
TRACK -Coastal Track	Lennox Point	TRACK : Bush: # 30-28	m	155	\$5,813	32626
TRACK -Coastal Track	Lennox Point	TRACK : Bush: # 30-29	m	59	\$2,213	32630
TRACK -Coastal Track	Lennox Point	TRACK : Bush: # 30-30	m	172	\$6,450	32634
TRACK -Coastal Track	Lennox Head	TRACK : Bush: # 31-31B	m	215	\$8,063	32674
TRACK -Coastal Track	Lennox Head	TRACK : Bush: # 31-34	m	1262	\$47,325	32658
TRACK -Coastal Track	Skennars Head	TRACK : Bush: # 32-39A	m	190	\$7,125	32694
TRACK -Coastal Track	Skennars Head	TRACK : Bush: # 32-39B	m	816	\$30,600	32698
TRACK -Coastal Track	Skennars Head	TRACK : Bush: # 32-39C	m	360	\$13,500	32702
Tracks -coastal: sub-total					\$241,838	
Boat Ramps	Lighthouse Beach	Boat Ramp -Lighthouse Beach	sq.m	58	\$20,969	31360
Boat Ramps	7 Mile Beach	Boat Ramp -Rutherford Street	sq.m	152	\$54,953	31372
Boat Ramps	Shelley Beach	Boat Ramp -Shelley Beach	sq.m	33	\$11,930	31374
Boat Ramps: sub-total					\$87,852	
Furniture	Lake Ainsworth Public Reserve (Lennox Head)	Bench Seat # 1 (opposite Foster St)	Item	1	\$415	32015
Furniture	Lake Ainsworth Public Reserve (Lennox Head)	Bench Seat # 2 (north of Foster St)	Item	1	\$415	32016
Furniture	Lake Ainsworth Public Reserve (Lennox Head)	Bench Seat # 3 (@ Ross St Carpark)	Item	1	\$415	32017
Furniture	Lake Ainsworth Public Reserve (Lennox Head)	Bench Seat # 4 (@ Ross St Carpark)	Item	1	\$415	32018
Furniture	Lake Ainsworth Public Reserve (Lennox Head)	Bench Seat # 5 (north of Ross St Carpark)	Item	1	\$527	160400
Furniture	Lake Ainsworth Public Reserve (Lennox Head)	Picnic Table # 1 (SLSC)	Item	1	\$831	32019
Furniture	Lake Ainsworth Public Reserve (Lennox Head)	Picnic Table # 2 (SLSC)	Item	1	\$831	32020

Asset Group	Site	Description	UOM	Quantity	Replacement Value	AM #
Furniture	Lake Ainsworth Public Reserve (Lennox Head)	Picnic Table # 3 (SLSC)	Item	1	\$831	160401
Furniture	Lennox Park (Lennox Head)	Bench Seat # 1 (opposite Mackney Lane)	Item	1	\$509	33080
Furniture	Lennox Park (Lennox Head)	Bench Seat # 2 (opposite Mackney Lane)	Item	1	\$509	33081
Furniture	Lennox Park (Lennox Head)	Bench Seat # 3 (opposite Mackney Lane)	Item	1	\$509	33082
Furniture	Lennox Park (Lennox Head)	Bollards (7 Mile Beach) (opposite Mackney Lane)	m	656	\$32,389	151489
Furniture	Lighthouse Lookout Reserve (Ballina East)	Bench Seat # 1	Item	1	\$527	160392
Furniture	Lighthouse Lookout Reserve (Ballina East)	Bench Seat # 2	Item	1	\$527	160393
Furniture	Lighthouse Lookout Reserve (Ballina East)	Bench Seat # 3	Item	1	\$527	160394
Furniture	Lighthouse Lookout Reserve (Ballina East)	Bench Seat # 4	Item	1	\$527	160395
Furniture	Lighthouse Lookout Reserve (Ballina East)	Bench Seat # 5	Item	1	\$527	160396
Furniture	Lighthouse Lookout Reserve (Ballina East)	Bench Seat # 6	Item	1	\$527	160397
Furniture	Lighthouse Lookout Reserve (Ballina East)	Bench Seat # 7	Item	1	\$527	160398
Furniture	Lighthouse Lookout Reserve (Ballina East)	Bench Seat # 8	Item	1	\$527	160399
Furniture	Lighthouse Lookout Reserve (Ballina East)	Picnic Table # 1	Item	1	\$831	160391
Furniture	Lions Park (Lennox Head)	Picnic Table	Item	1	\$1,253	33971
Furniture	Lions Park (Lennox Head)	Timber Railing -(track 30-21) -LHS	m	21	\$4,723	33974
Furniture	Lions Park (Lennox Head)	Timber Railing -(track 30-21) -RHS	m	21	\$4,723	33975
Furniture	Lions Park (Lennox Head)	Timber Railing -(track 30-22A - Boat Ramp) -LHS	m	56	\$12,595	33976
Furniture	Lions Park (Lennox Head)	Timber Railing -(track 30-22A - Boat Ramp) -RHS	m	48	\$10,795	33977
Furniture	Lions Park (Lennox Head)	Timber Railing - (track 30-22B) -LHS	m	23	\$5,173	33978
Furniture	Lions Park (Lennox Head)	Timber Railing - (track 30-22B) -RHS	m	22	\$4,948	33979
Furniture	Lions Park (Lennox Head)	Timber Railing -(track 30-23) -LHS	m	23	\$5,173	33980
Furniture	Lions Park (Lennox Head)	Timber Railing -(track 30-23) -RHS	m	23	\$5,173	33981
Furniture	Lions Park (Lennox Head)	Timber Railing -south end of Carpark (along existing cycleway)	m	62	\$13,944	33987
Furniture	Lions Park (Lennox Head)	Timber Railing -(along existing Road 30:047) -off Rutherford St -LHS	m	105	\$23,615	33986
Furniture	Lions Park (Lennox Head)	Timber Railing -(along existing Road 30:047) -off Rutherford St -RHS	m	90	\$20,242	33985
Furniture	Pat Morton Lookout (Lennox Head)	Bench Seat # 1	Item	1	\$527	160403
Furniture	Pat Morton Lookout (Lennox Head)	Bench Seat # 2	Item	1	\$527	160404
Furniture	Pat Morton Lookout (Lennox Head)	Bench Seat # 3	Item	1	\$527	160405
Furniture	Pat Morton Lookout (Lennox Head)	Bench Seat # 4	Item	1	\$527	160406
Furniture	Ross Park (Lennox Head)	Bench Seat # 1	Item	1	\$527	34244
Furniture	Ross Park (Lennox Head)	Bench Seat # 2	Item	1	\$527	34245
Furniture	Ross Park (Lennox Head)	Bench Seat # 3	Item	1	\$527	34246
Furniture	Ross Park (Lennox Head)	Bench Seat # 4	Item	1	\$527	34247

Asset Group	Site	Description	UOM	Quantity	Replacement Value	AM #
Furniture	Ross Park (Lennox Head)	Bench Seat # 5	Item	1	\$527	34248
Furniture	Ross Park (Lennox Head)	Bin # 1	Item	1	\$439	34249
Furniture	Ross Park (Lennox Head)	Bin # 2	Item	1	\$439	34250
Furniture	Ross Park (Lennox Head)	Boundary Fence @ eastern end	m	50	\$11,245	34254
Furniture	Ross Park (Lennox Head)	Carpark Fence @ western end	m	45	\$10,121	34253
Furniture	Ross Park (Lennox Head)	Picnic Table # 01 (under shelter)	Item	1	\$703	34238
Furniture	Ross Park (Lennox Head)	Picnic Table # 02 (under shelter)	Item	1	\$703	34239
Furniture	Ross Park (Lennox Head)	Picnic Table # 03 (under shelter)	Item	1	\$703	34240
Furniture	Ross Park (Lennox Head)	Picnic Table # 04	Item	1	\$703	34241
Furniture	Ross Park (Lennox Head)	Picnic Table # 05	Item	1	\$703	34242
Furniture	Ross Park (Lennox Head)	Picnic Table # 06	Item	1	\$703	34243
Furniture	Seven Mile Beach Foreshore (Lennox Head)	Bench Seat: Lennox Point (Lennox Head)	Item	1	\$527	160411
Furniture	Seven Mile Beach Foreshore (Lennox Head)	Surfers Shack: Lennox Point (Lennox Head)	sq.m	5.2	\$5,200	160415
Furniture	SLSC Clubhouse -old (Ballina East)	Bench Seat	Item	1	\$415	33300
Furniture	SLSC Clubhouse -old (Ballina East)	Picnic Table # 01	Item	1	\$831	33298
Furniture	SLSC Clubhouse -old (Ballina East)	Picnic Table # 02	Item	1	\$831	33299
Furniture: sub-total					\$195,018	
Water Infrastructure	Shelley Beach	Beach Shower Platform + Railing: Old SLSC Clubhouse	Item	1	\$1,246	33303
Water Infrastructure	Shelley Beach	Beach Shower: Old SLSC Clubhouse	Item	1	\$2,150	33301
Water Infrastructure	Shelley Beach	Drinking Bubbler -refill station @ Carpark	Item	1	\$3,052	158321
Water Infrastructure	Seven Mile Beach	Beach Shower: Lions Park	Item	1	\$2,150	33972
Water Infrastructure	Seven Mile Beach	Drinking Bubbler: Ross Park	Item	1	\$3,955	34251
Water Infrastructure	Lighthouse Beach	Beach Shower: New SLSC Clubhouse	Item	1	\$2,704	
Water Infrastructure	Boulder Beach	Beach Shower:	Item	1	\$2,150	
Water Infrastructure	Lennox Point	Beach Shower: Lennox Point	Item	1	\$2,150	160410
Water Infrastructure: sub-total					\$19,557	
TOTAL: FORESHORE					\$1,066,000	

BSC Foreshore Assets Replacement Cost



Lennox Head Boat Ramp



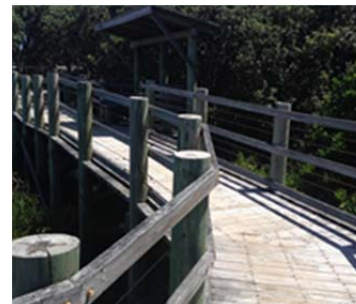
Lennox Point Beach Shower



Flat Rock Viewing Platform # 1



Angels Beach Viewing Platform # 4



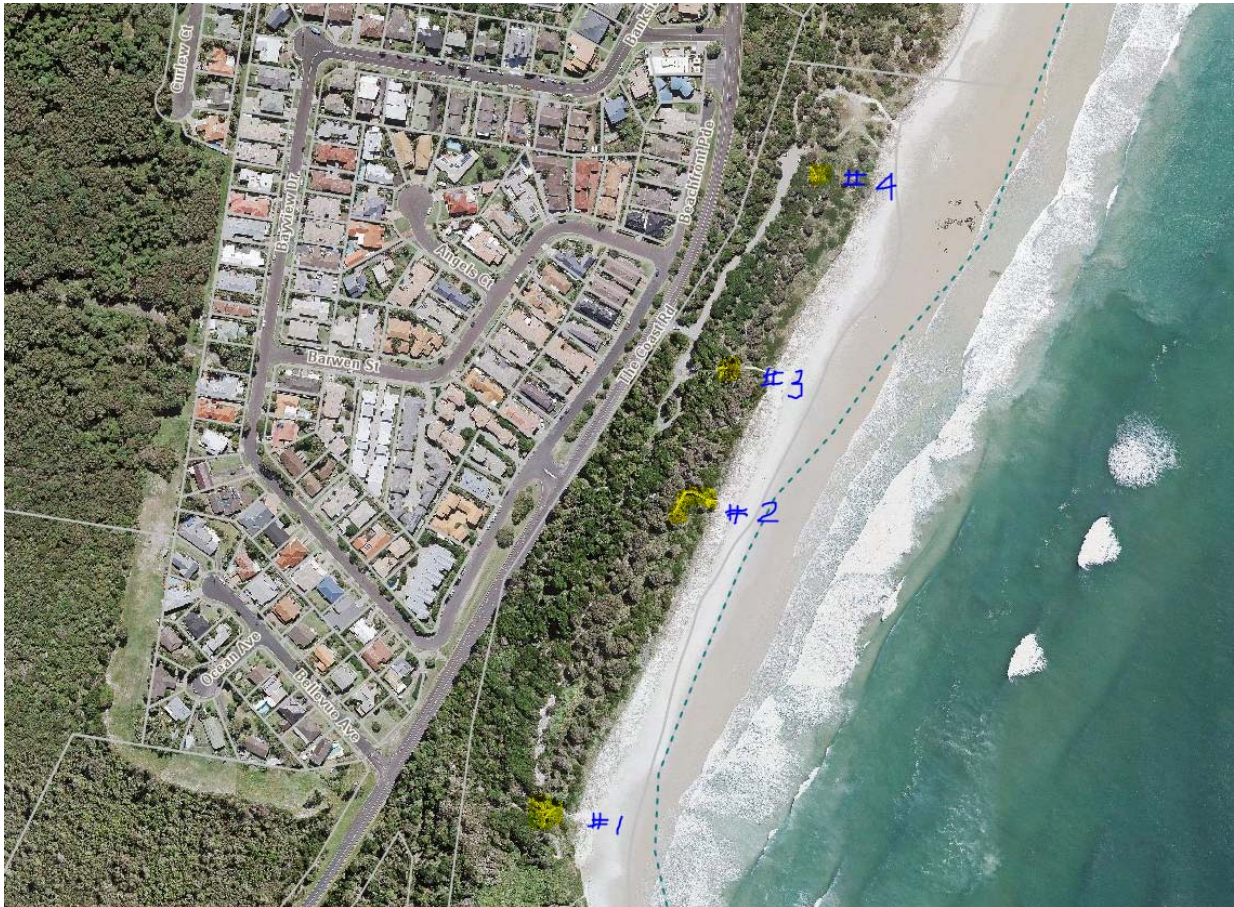
Angels Beach Raised Walkway # 2



Angels Beach Viewing Platform # 3

Viewing Platform Locations

Angels Beach Foreshore -overview (Ballina East) :AM 31212, 31214 & 31321, 31217 & 31259 and 31220



Angels Beach Platform # 1 (AM 31212)



Angels Beach Platform # 2 (AM 31321 & 31214)



Angels Beach Platform # 3 (AM 31217 & 31259)



Angels Beach Platform # 4 (AM 31220) –reconstructed in 2017 as part of coastal recreational path



Flat Rock Foreshore -overview (Skennars Head) :AM 31254 and 31255



Flat Rock Platform # 1 (AM 31254)



Flat Rock Platform # 2 (AM 31255)



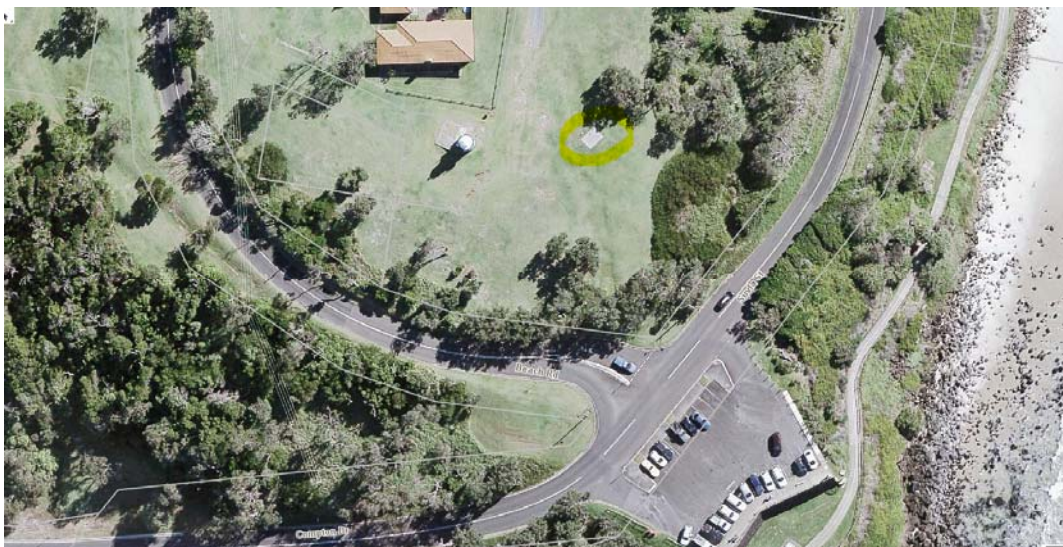
Norman Sharpe Lookout (AM 31299)



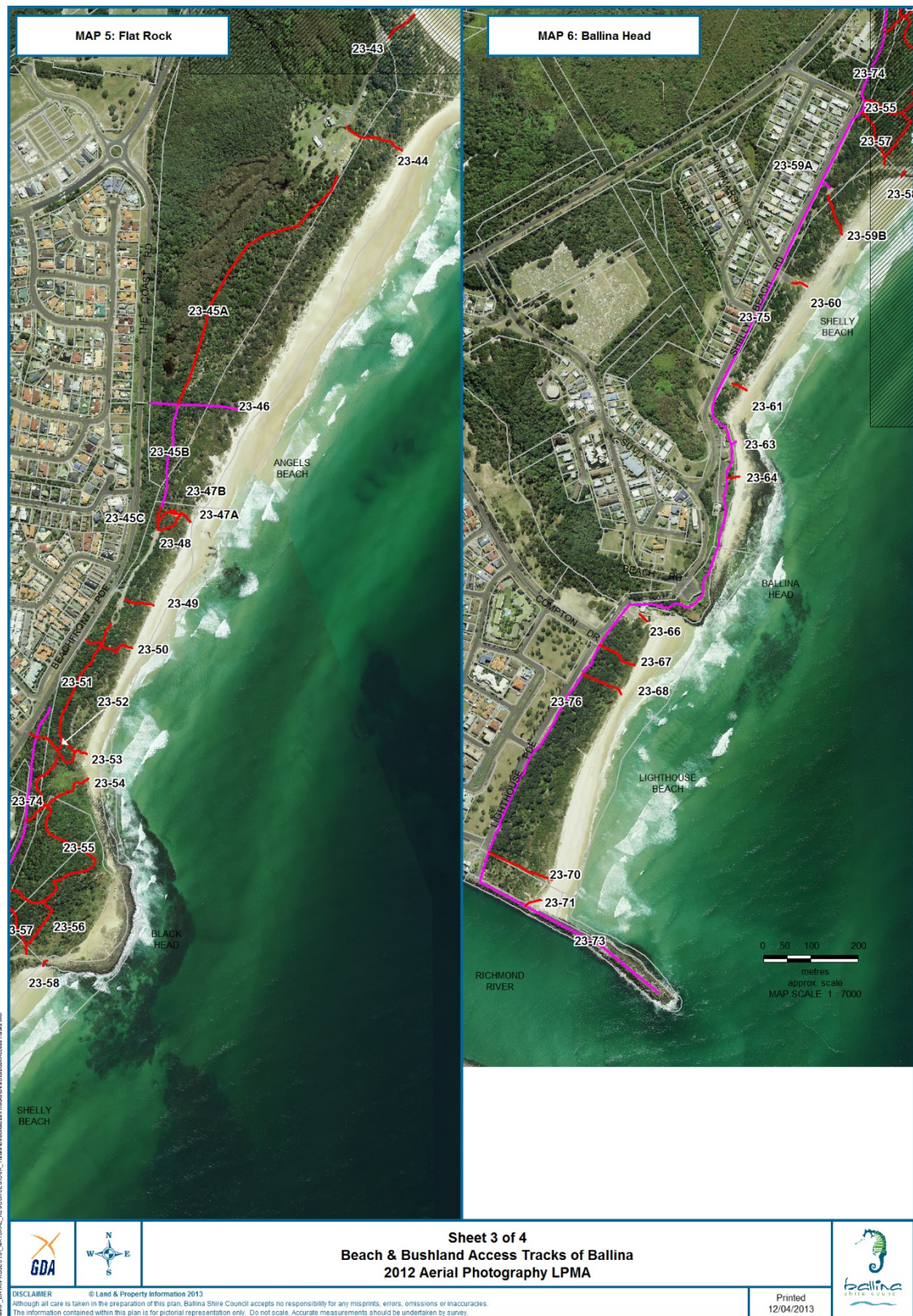
Walkway: Lennox Point (AM 160413)

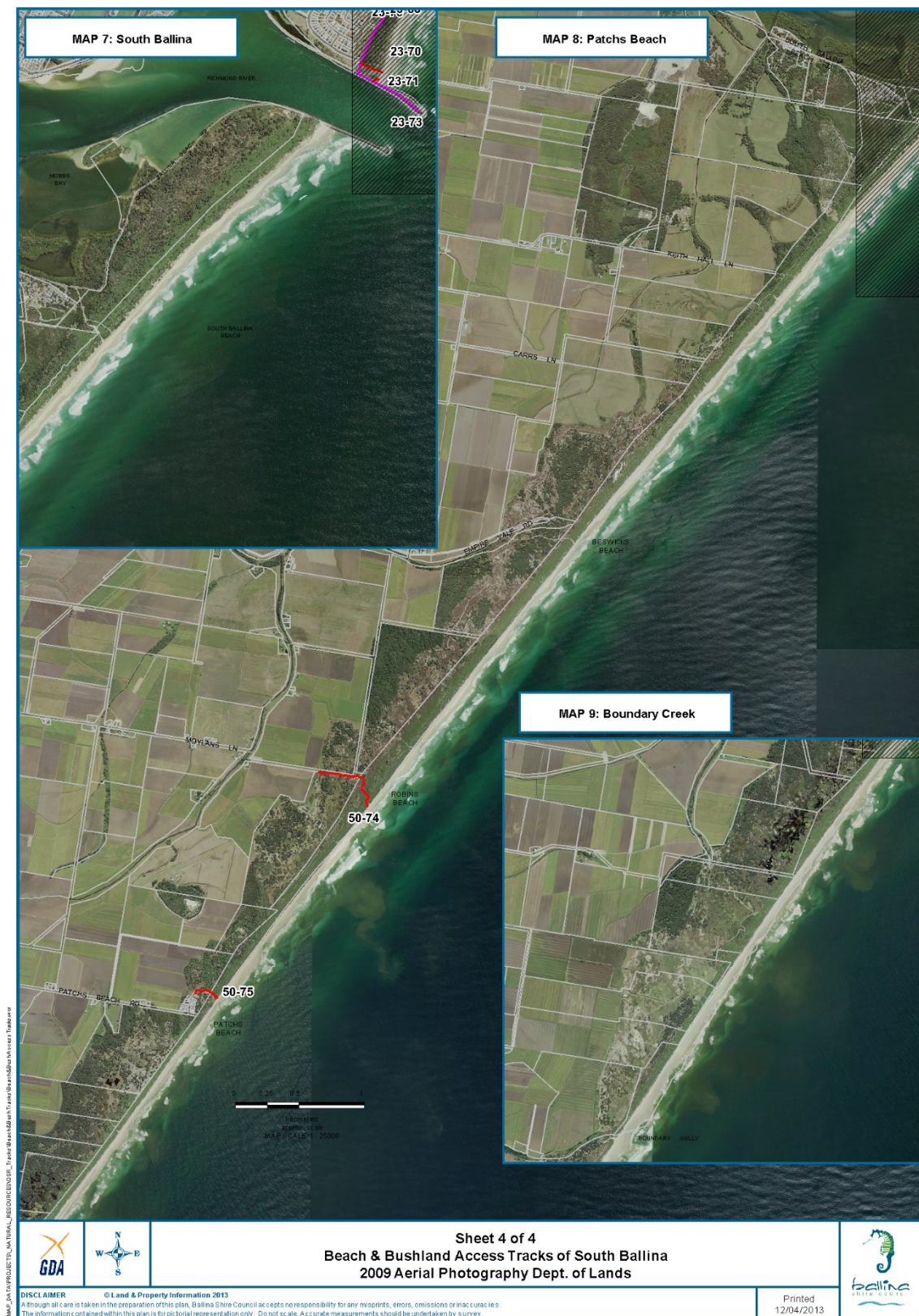


Lighthouse Lookout Reserve -platform (AM 31260)







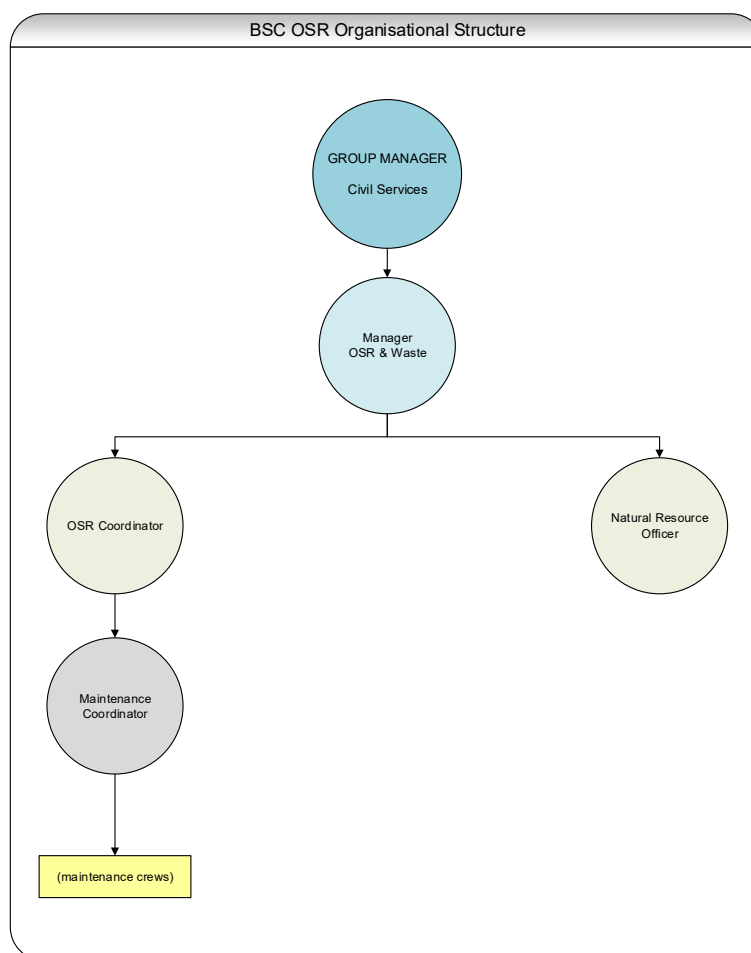


Key stakeholders in the preparation and implementation of this asset management plan are: Shown in Table 2.1.1.

Table 2.1.1: Key Stakeholders in the AM Plan

Key Stakeholder	Role in Asset Management Plan
Councillors	- Represent needs of community - Allocate resources to meet Council's objectives in providing services while managing risks, - Ensure Council is financial sustainable.
General Manager	Overall responsibility for delivering Council operations
Rate Payers	Will ultimately pay for any works undertaken
Recreation Users	Beneficiaries of Councils Local & Regional Parks & Reserves
Pedestrians	Beneficiaries of Councils Local & Regional footpath & shared path networks

Council's structure for service delivery from infrastructure assets is detailed below,



2.2 Goals and Objectives of Asset Management

Council exists to provide services to its community. Some of these services are provided by infrastructure assets. We have acquired infrastructure assets by 'purchase', by contract, construction by our staff and by donation of assets constructed by developers and others to meet increased levels of service.

Our goal in managing infrastructure assets is to meet the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers. The key elements of infrastructure asset management are:

- Providing a defined level of service and monitoring performance,
- Managing the impact of growth through demand management and infrastructure investment,
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service,
- Identifying, assessing and appropriately controlling risks, and
- Having a long-term financial plan which identifies required, affordable expenditure and how it will be financed.²

2.3 Plan Framework

Key elements of the plan are

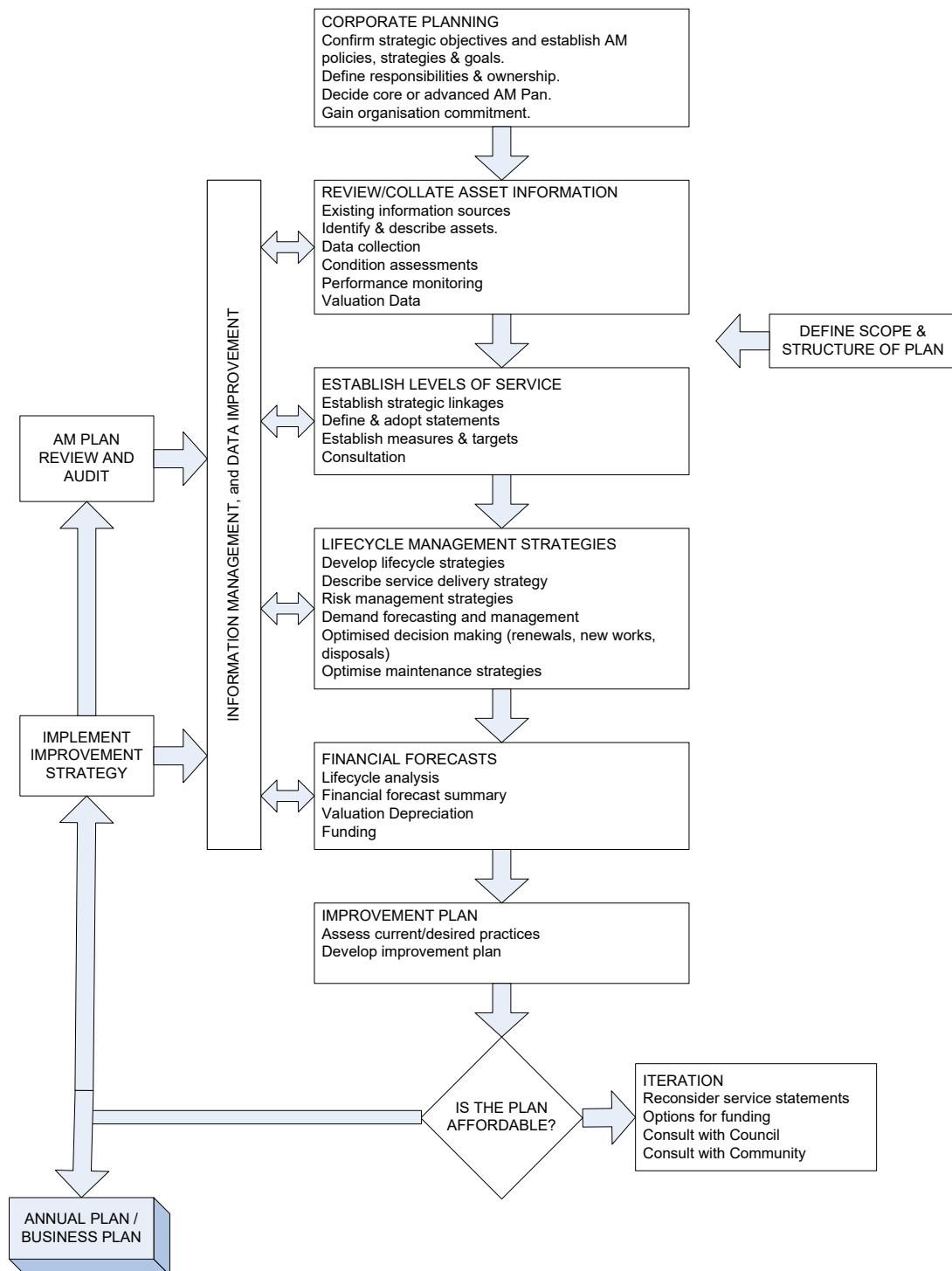
- Levels of service – specifies the services and levels of service to be provided by Council,
- Future demand – how this will impact on future service delivery and how this is to be met,
- Life cycle management – how Council will manage its existing and future assets to provide defined levels of service,
- Financial summary – what funds are required to provide the defined services,
- Asset management practices,
- Monitoring – how the plan will be monitored to ensure it is meeting Council's objectives,
- Asset management improvement plan.

A road map for preparing an asset management plan is shown below.

² Based on IPWEA, 2011, IIMM, Sec 1.2 p 1|7.

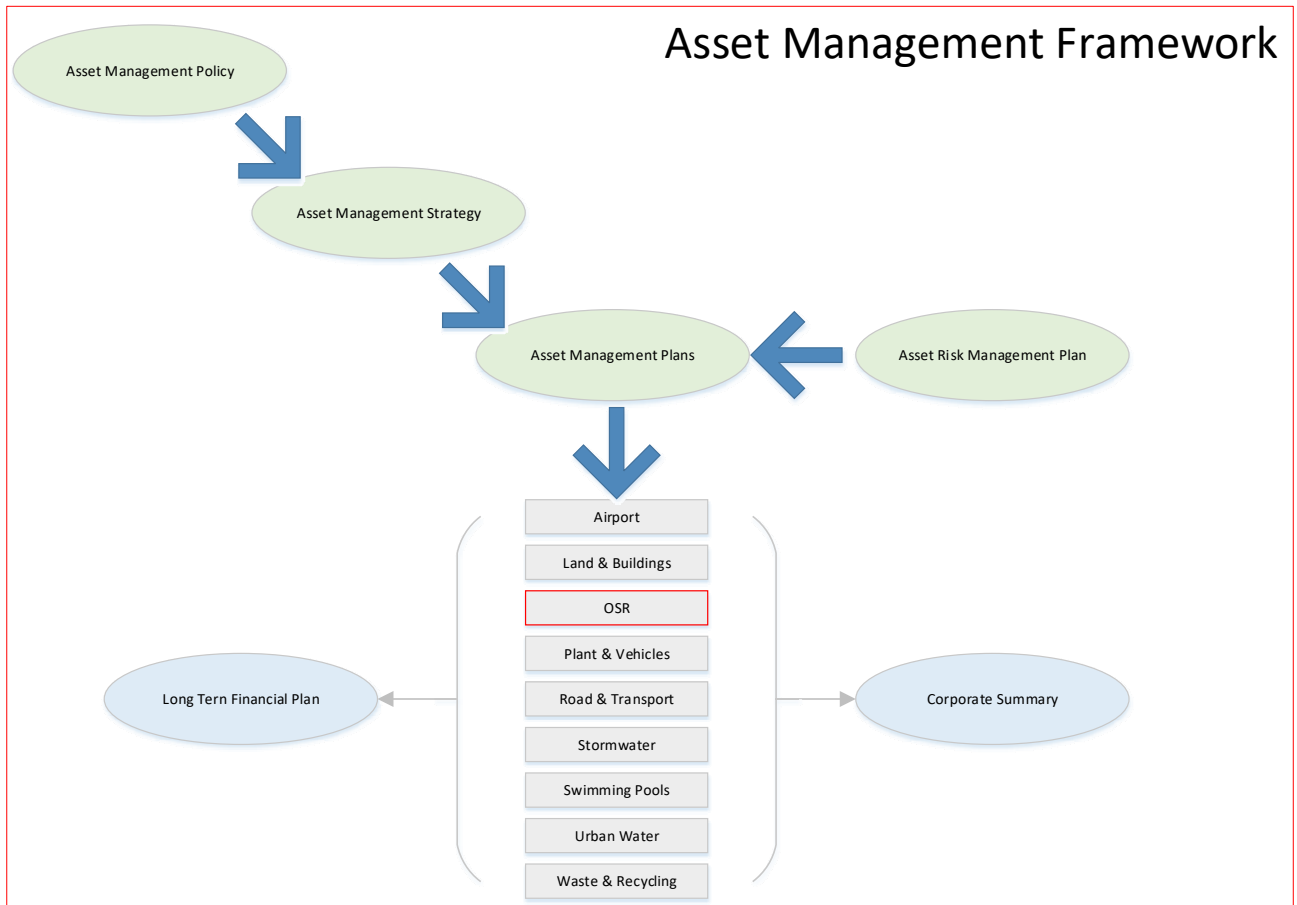
Road Map for preparing an Asset Management Plan

Source: IPWEA, 2006, IIMM, Fig 1.5.1, p 1.11.



This document exists as part of Council's asset management framework as defined below in figure 2.3.1

Figure 2.3.1: BSC Asset Management Framework



2.4 Core and Advanced Asset Management

This asset management plan is prepared as a 'core' asset management plan over a 20 year planning period in accordance with the International Infrastructure Management Manual³. It is prepared to meet minimum legislative and organisational requirements for sustainable service delivery and long term financial planning and reporting. Core asset management is a 'top down' approach where analysis is applied at the 'system' or 'network' level.

Future revisions of this asset management plan will move towards 'advanced' asset management using a 'bottom up' approach for gathering asset information for individual assets to support the optimisation of activities and programs to meet agreed service levels in a financially sustainable manner.

2.5 Community Consultation

This 'core' asset management plan is prepared to facilitate community consultation initially through feedback on public display of draft asset management plans prior to adoption by Council. Future revisions of the asset management plan will incorporate community consultation on service levels and costs of providing the service. This will assist Council and the community in matching the level of service needed by the community, service risks and consequences with the community's ability and willingness to pay for the service.

3. LEVELS OF SERVICE

3.1 Customer Research and Expectations

3.1.1 Micromex Community Priorities & Satisfaction Survey

Ballina Shire Council sought to examine community attitudes and perceptions towards current and future services and facilities provided by Council. Key objectives of the research included:

- To assess and establish the community's priorities and satisfaction in relation to Council activities, services and facilities
- To identify the community's overall level of satisfaction with Council's performance

To facilitate this, Micromex Research was contracted to develop a survey template that enabled Council to effectively analyse attitudes and trends within the community.

Micromex Research, together with Ballina Shire Council, developed the questionnaire. The survey was conducted during the period 26 September – 8 October 2014 from 4:30pm to 8:30pm, Monday to Friday and from 10am to 4pm Saturday.

The survey area covered the Ballina Shire Council Government Area and the sample consisted of a total of 500 residents. The selection of respondents was by means of a computer based random selection process using the electronic White Pages. A sample size of 500 residents provides a maximum sampling error of plus or minus 4.4% at 95% confidence.

The sample was weighted by age to reflect the 2011 ABS census data. Similar Micromex surveys were conducted in 2008 and 2012.

The data within this report was analysed using Q Professional. To identify the statistically significant differences between the groups of means, 'One-Way Anova tests' and 'Independent Samples T-tests' were used. 'Z Tests' were also used to determine statistically significant differences between column percentages.

³ IPWEA, 2011, IIMM.

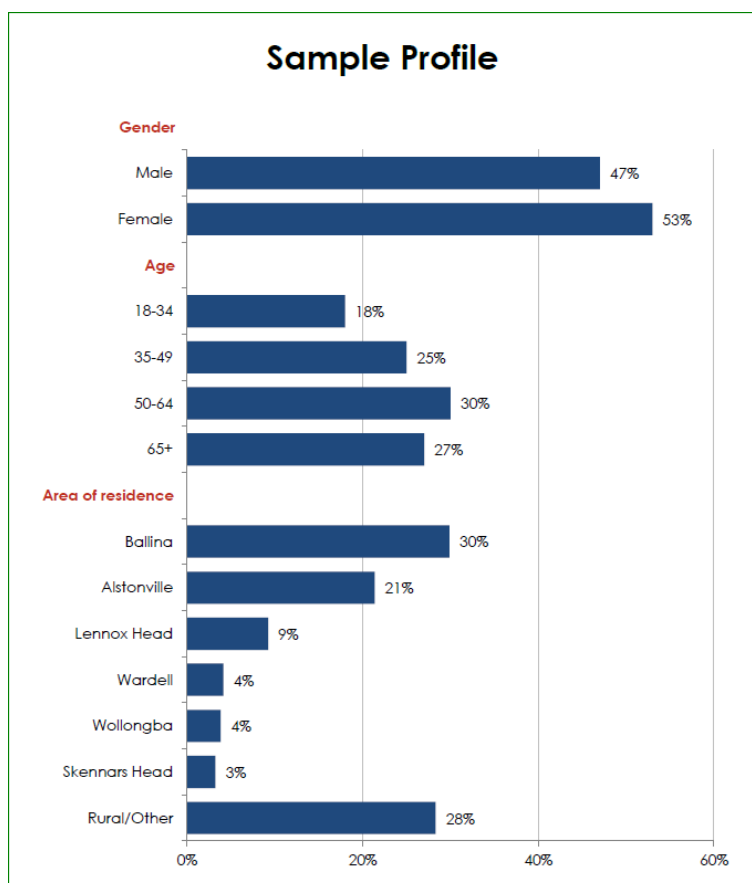
The rating questions utilised a unipolar Scale of 1 to 5, where 1 was the lowest importance or satisfaction and 5 the highest importance or satisfaction, was used in all rating questions. This scale allowed for a mid range position for those who had a divided or neutral opinion.

The 'mean' Rating scale is defined as:

- 0.00 – 1.99 'Very low' level of importance/satisfaction
- 2.00 – 2.49 'Low' level of importance/satisfaction
- 2.50 – 2.99 'Moderately low' level of importance/satisfaction
- 3.00 – 3.59 'Moderate' level of importance/satisfaction
- 3.60 – 3.89 'Moderately high' level of importance/satisfaction
- 3.90 – 4.19 'High' level of importance/satisfaction
- 4.20 – 4.49 'Very high' level of importance/satisfaction
- 4.50 – 5.00 'Extremely high' level of importance/satisfaction

Note: Only respondents who rated services/facilities a 4 or 5 in importance were asked to rate their satisfaction with that service/facility. All percentages are calculated to the nearest whole number and therefore the total may not exactly equal 100%.

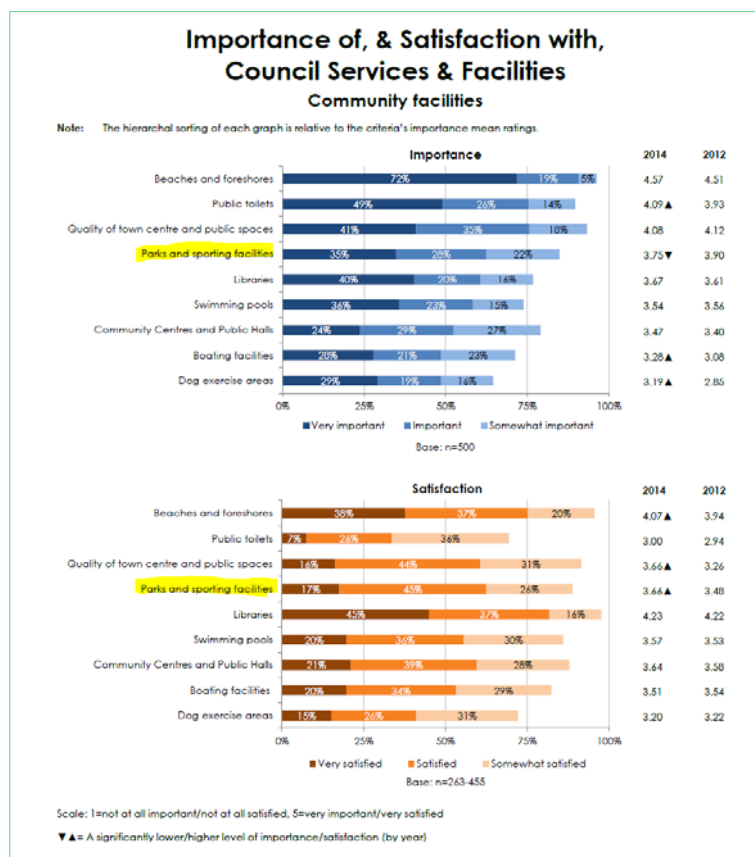
The sample size of 500 consisted of the following demographics.



Findings relating to Airport Infrastructure

OSR Infrastructure

The mean importance rating for the OSR infrastructure was 3.75 and mean satisfaction rating was 3.66, giving a performance gap of +0.09.



The performance gaps for Councils Parks & Sporting infrastructure have reduced since 2012 by 0.33. The tables below show the breakup of importance and satisfaction by locality and by age & gender.

OSR 2014 Community Survey			
Sub-group	Importance	Satisfaction	Performance Gap
Alstonville	3.98	3.86	+0.12
Ballina	3.84	3.50	+0.34
Lennox Head	3.70	3.47	+0.23
Skennars Head	3.76	3.81	-0.05
Wardell	3.52	3.62	-0.10
Wollongbar	3.91	3.73	+0.18
Rural / Other	3.52	3.70	-0.18
18-34	3.78	4.06	-0.28
35-49	4.05	3.28	+0.77
50-64	3.74	3.59	+0.15
65+	3.47	3.88	-0.41
Male	3.65	3.60	+0.05
Female	3.84	3.70	+0.14
Overall	3.75	3.66	+0.09 (+0.42 -2012)

Council uses this information in developing its Strategic Plan and in allocation of resources in the budget.

3.2 Strategic and Corporate Goals

This asset management plan is prepared under the direction of Council's vision and values.

Our Vision

Serving the community of today while preparing for the challenges of tomorrow

Our Values

Our values describe the behaviour we expect from all people within Council.



Council will exercise its duty of care to ensure public safety is accordance with the infrastructure risk management plan prepared in conjunction with this AM Plan. Management of infrastructure risks is covered in Section 5.2

3.3 Legislative Requirements

Council has to meet many legislative requirements including Australian and State legislation and State regulations. These include:

Table 3.3: Legislative Requirements

Legislation	Requirement
Local Government Act	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery.
Coastal Management Specification Manual 2005	Guide for the construction of coastal management infrastructure such as viewing platforms, boardwalks, steps, access points, seating, signage & shelters
Park Facilities Manual 2007	Provision of a coordinated set of management objectives & operational procedures & systems.
AS 2156.1-2001 –Walking Tracks	Defines track & signage classification, placement + design
Coastal Dune Management	Establishes dune & coastal zone processes, planning, community consultation, protection, access, weeds & revegetation

Council will exercise its duty of care to ensure public safety in accordance with the infrastructure risk management plan linked to this AM Plan. Management of risks is discussed in Section 5.2.

3.4 Community Levels of Service

Service levels are defined service levels in two terms, customer levels of service and technical levels of service.

Community Levels of Service measure how the community receives the service and whether Council is providing community value.

Community levels of service measures used in the asset management plan are:

Quality	How good is the service?
Function	Does it meet users' needs?
Capacity/Utilisation	Is the service over or under used?

Council's current and expected community service levels are detailed in Tables 3.4 and 3.5. Table 3.4 shows the agreed expected community levels of service based on resource levels in the current long-term financial plan and community consultation/engagement.

Table 3.4: Community Level of Service

Service Attribute	Service Objective	Performance Measure Process	Current Performance	Expected position in 10 years based on current LTFP
COMMUNITY OUTCOMES				
Provision of adequate safe, reliable & enjoyable foreshore area for residents and visitors of Ballina Shire				
COMMUNITY LEVELS OF SERVICE: Open Spaces & Reserves				
Quality	OSR assets comply with regulations & guidelines as described in section 3.3	Random internal audits for compliance New Works audited for compliance, prior to construction.	100% conformance 100 % conformance	100% conformance 100% conformance Organisational Measure Confidence Level: HIGH
Function	Provision of a reliable & accessible foreshore structures	Number of Customer Complaints	< 20 per year	< 10 per year Organisational Measure Confidence Level: MEDIUM
Function	Provision of a safe foreshore environment	Number of Accidents reported -First Aid -Hospitalisation -Fatality	< 20 per year < 2 per year 0 per year	< 20 per year < 2 per year 0 per year Organisational Measure Confidence Level: HIGH
Function	Satisfaction OSR equipment	Number of cleanliness Complaints Number of defect Complaints	< 10 per year < 5 per year	< 5 per year < 2 per year Organisational Measure Confidence Level: MEDIUM
Capacity/ Utilisation	Availability of use of the foreshore during peak times	Number of complaints due to congestion	< 5 per year	< 5 per year Organisational Measure Confidence Level: HIGH
Capacity/ Utilisation	Availability of service / Notifications of planned service interruptions	Number of days' notice	1 day	1 day Organisational Measure Confidence Level: HIGH

3.5 Technical Levels of Service

Technical Levels of Service - Supporting the community service levels are operational or technical measures of performance. These technical measures relate to the allocation of resources to service activities that Council undertakes to best achieve the desired community outcomes and demonstrate effective organisational performance.

Technical service measures are linked to annual budgets covering:

- Operations – the regular activities to provide services such as opening hours, cleansing, mowing grass, energy, inspections, etc.
- Maintenance – the activities necessary to retain an asset as near as practicable to an appropriate service condition (eg road patching, unsealed road grading, building and structure repairs),
- Renewal – the activities that return the service capability of an asset up to that which it had originally (eg frequency and cost of road resurfacing and pavement reconstruction, pipeline replacement and building component replacement),
- Upgrade – the activities to provide a higher level of service (eg widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (eg a new library).

Service and asset managers plan, implement and control technical service levels to influence the customer service levels.⁴

Table 3.5 shows the technical level of service expected to be provided under this AM Plan. The agreed sustainable position in the table documents the position agreed by Council following community consultation and trade-off of service levels performance, costs and risk within resources available in the long-term financial plan.

⁴ IPWEA, 2011, IIMM, p 2.22

Table 3.5: Technical Levels of Service

Service Attribute	Service Objective	Activity Measure Process	Current Performance *		Desired for Optimum Lifecycle Cost **		Agreed Sustainable Position ***
TECHNICAL LEVELS OF SERVICE: Foreshore Infrastructure							
Operations	Provision of safe, clean & tidy beach & foreshore	Beach operations programmes performed by council staff	Beaches & foreshore operational works	weekly	Beaches & foreshore operational works	weekly	
	Provision of safe & pleasant OSR environment	Vegetation management operations programmes performed by council staff	<u>Vegetation Management Works</u> –Weed control –Coastal reserves –Bushland reserves	Weekly	<u>Vegetation Management Works</u> –Weed control –Coastal reserves –Bushland reserves	Weekly	
		Cleaning of picnic areas	<u>Furniture</u> –Picnic tables –Seats –Bins (emptying)	4 monthly 4 monthly weekly	<u>Furniture</u> –Picnic tables –Seats –Bins (emptying)	4 monthly 4 monthly weekly	
	Asset Inspection Programs to record existing condition for the preparation of maintenance schedules and defects register	Inspection Type & Frequency	<u>Furniture:</u> (1 to 5 condition rating) –Fences & gates –Signage –bins, seats & picnic tables <u>Structures:</u> (1 to 5 condition rating) –Viewing Platforms –Raised walkways –Boat Ramps <u>Water Assets:</u> (1 to 5 condition rating) –Beach Showers –Drinking Water Bubblers	annual annual 5 years annual annual annual 3 years 3 years	<u>Furniture: (1 to 5 condition rating)</u> –Fences & gates –Signage –bins, seats & picnic tables <u>Structures: (1 to 5 condition rating)</u> –Viewing Platforms –Raised walkways –Boat Ramps <u>Water Assets: (1 to 5 condition rating)</u> –Beach Showers –Drinking Water Bubblers	annual annual 5 years annual annual annual 3 years 3 years	
		Operations Budget =	\$60,000 pa (approx.)		\$85,000 pa (approx.)		\$85,000 pa (approx.)
Maintenance	Provision of functional OSR infrastructure	general maintenance & minor repairs	<u>Pavement</u> –Grading of Tracks & Trails <u>Structures</u> –Viewing Platforms <u>Water Assets</u> –Beach Showers –Drinking Water Bubblers	4 monthly As required As required As required	<u>Pavement</u> – Grading of Tracks & Trails <u>Structures</u> –Viewing Platforms) <u>Water Assets</u> –Beach Showers –Drinking Water Bubblers	4 monthly As required As required As required	
		Maintenance Budget =	\$25,000 pa (approx.)		\$35,000 pa (approx.)		\$35,000 pa (approx.)
Renewal	To achieve the revised level of service as dictated by the community and	–track gravel overlay –Viewing Platforms –Boat Ramp –Furniture	Replacement = 2 years + condition 5 Replacement = 40 to 50 years + condition 5 Replacement = 80 years + condition 5 Replacement = 20 years + condition 5		Replacement = 2 years + condition 5 Replacement = 40 to 50 years + condition 5 Replacement = 80 years + condition 5 Replacement = 20 years + condition 5		

Service Attribute	Service Objective	Activity Measure Process	Current Performance *	Desired for Optimum Lifecycle Cost **	Agreed Sustainable Position ***
TECHNICAL LEVELS OF SERVICE: Foreshore Infrastructure					
	available budgets	–Water Assets	Replacement = 20 years + condition 5	Replacement = 20 years + condition 5	
		Renewal Budget =	varies pa	varies pa	varies pa
Upgrade/New	To achieve the revised level of service as dictated by the community and available budgets		Sharpe's Beach Master Plan S1 = \$900,000 (over 4 years) Sharpe's Beach Master Plan S2 = \$0 Sharpe's Beach Master Plan S3 = \$375,000 (over 4 years)	Sharpe's Beach Master Plan S1 = \$900,000 (over 4 years) Sharpe's Beach Master Plan S2 = \$0 Sharpe's Beach Master Plan S3 = \$375,000 (over 4 years)	
		Capital New Budget =	varies pa	varies pa	varies pa

Note: * Current activities and costs (currently funded).

** Desired activities and costs to sustain current service levels and achieve minimum life cycle costs (not currently funded).

*** Activities and costs communicated and agreed with the community as being sustainable (funded position following trade-offs, managing risks and delivering agreed service levels).

4. FUTURE DEMAND

4.1 Demand Drivers

The primary drivers affecting demand expected population growth in the region for both residents and tourist numbers. Secondary drivers include changes in demographics, land zoning, seasonal factors, local promotional activities, consumer preferences and expectations, technological changes, economic factors and agricultural practices.

4.2 Demand Forecast

The present position and projections for demand drivers that may impact future service delivery and utilisation of assets were identified and are documented in Table 4.3.

4.2.1 Current attractions at Councils Foreshore areas

Each locality within the foreshore area has its own specific list of attractions that draw visitors. These attractions are expected to continue into the future

Lennox Headland

- Whale Watching
- Coastal Viewing & Walking
- Toilet Facilities

Seven Mile Beach

- Surfing
- Surf Life Saving
- Life Guards
- Recreational 4WD
- Horse Riding
- Kite Surfing
- Boat Access
- Lake Ainsworth Connectivity
- Toilet & Shower facilities

Lennox Point

- Surfing
- Coastal Viewing & Walking
- Shower Facilities

Boulder Beach

- Surfing
- Coastal Viewing & Walking

Boulder Beach Headland

- Surfing
- Whale Watching
- Coastal Viewing & Walking
- Weddings
- Shower facilities

Skennars Headland

- Whale Watching
- Coastal Viewing & Walking

Sharpe's Beach

- Coastal Viewing & Walking
- Lifeguards
- Car Parking Facilities

Flat Rock

- Surfing
- Bird Watching
- Whale Watching
- Coastal Viewing & Walking
- Car Parking Facilities
- Toilet & shower facilities

Angels Beach

- Surfing
- Bird Watching
- Whale Watching
- Coastal Viewing & Walking
- Shower facilities

Black Head

- Surfing
- Whale watching
- Coastal Viewing & Walking

Shelly Beach

- Surfing
- Surf Life Saving
- Life Guards
- Coastal Viewing & Walking
- Toilet & Shower Facilities

Lighthouse Beach

- Surfing
- Surf Life Saving
- Life Guards
- Toilet & Shower Facilities

North Wall

- Whale watching
- Coastal Viewing & Walking

South Ballina Beach

- Surfing

Beswick's Beach

- Surfing

Robins Beach

- Surfing

Patches Beach

- Surfing

4.2.2 Beach Visitations (on patrolled beaches)

Lifeguards are required to capture aggregate beach attendance figures between the flags, over the course of the day in the daily logs. Below is a summary of the beach visitations to the beaches during lifeguard patrols for 2015/16. Numbers for non-patrolled beaches are not recorded.

Beach	Suburb	Beach Length -m	Days Patrolled	Total Attendance	average daily attendance
Lennox Head	Lennox Head	8,460	153	128,406	840
Boulder Beach	Skennars Head	505	-	-	(150)
Sharpe's Beach	Skennars Head	1,310	70	26,196	374
Angels Beach	Ballina East	1,820	-	-	(150)
Shelly Beach	Ballina East	995	70	29,456	421
Lighthouse Beach	Ballina East	690	41	12,316	302
South Ballina Beach	Ballina South	2,600	-	-	(50)
Beswick's Beach	Empire Vale	2,400	-	-	(50)
Robins Beach	Empire Vale	4,730	-	-	(50)
Patches Beach	Patches Beach	8,870	-	-	(50)

Table 4.2.2.1: average daily Beach Visitations

It is expected that non-patrolled beaches would receive significantly less average daily patronage, and additional beach goers would

4.2.3 Sharpe's Beach Master Plan (concept 2012)

The Sharpe's Beach Master Plan concept was developed by 'King & Campbell' and describes the proposed upgrade of the Sharpe's Beach Foreshore. The full cost of the proposal is in the order of \$900,000.

Table 4.3.2 & Table 4.3.3 summarises the scenario 2 and scenario 3 option of the Sharpe's Beach Master Plan. Figure 4.3.1 shows the 2012 concept for the proposed works.

Until the capital works required for this proposed project are confirmed and funding sources identified, the default position of this asset management plan is that the Sharpe's Beach upgrade project will not be commissioned. It is presented for information purposes only. If in the future, the project is confirmed and funding allocated, then this asset management plan will be updated.

4.3 Demand Impact on Assets

The impact of demand drivers that may affect future service delivery and utilisation of assets are shown in Table 4.3.1

Table 4.3.1: Demand Drivers, Projections and Impact on Services

Demand drivers	Present position	Projection	Impact on services
Population Growth	41,947 (approx.)	Uniform 1% increase per year to 2035 shire wide with several known local growth areas	Minor annual increase in foreshore patronage from local population
Demographics (aging population)	Currently higher than state average % of residents aged 65+	Expected to continue	Impacts on beach use patterns & public transport use and demand
Expectations from Residents / Tourists		Possible future capital growth projects include an ocean pool	Provision of a new foreshore attraction and negative impact on the long term works budget
The presence of large predator sharks adjacent to the foreshore areas	Trials underway of shark nets at lighthouse beach	This is a divisive issue that will require further input from Council, the community & state authorities	To be revealed
Unit Costs	Current unit rates	Possibility of sudden increase in Foreshore construction + O&M costs	Impacts on long term works program with given budget constraints. Not being able to complete works program

Project	Suburb	Proposed Works -by Type	Proposed Works	Full Cost	Grants..?	BSC Contribution	Year
0-A	Skennars Head	Detailed Survey & Design	Detailed Survey & Design	\$10,000	\$0	\$10,000	2017/2018
1-A	Skennars Head	Preparation & Underground Services	Dune Restoration	\$100,000	\$0	\$100,000	2019/2020
1-B	Skennars Head	Preparation & Underground Services	Dune Restoration Fencing (300 m)	\$45,000	\$0	\$45,000	2019/2020
1-C	Skennars Head	Preparation & Underground Services	Drainage (4m wide infiltration Swale in carpark)	\$30,000	\$0	\$30,000	2019/2020
1-D	Skennars Head	Preparation & Underground Services	Drainage (rock drainage Swale) -3 sites	\$20,000	\$0	\$20,000	2019/2020
1-E	Skennars Head	Preparation & Underground Services	Drainage (infiltration basin)	\$20,000	\$0	\$20,000	2019/2020
1-F	Skennars Head	Preparation & Underground Services	Drainage (reticulation 60m + 2 SWP)	\$20,500	\$0	\$20,500	2019/2020
2-A	Skennars Head	Carpark & Beach Access	Formalised Carpark (pavement: 3,850 sq.m - 78 spaces)	\$327,250	\$0	\$327,250	2020/2021
2-B	Skennars Head	Carpark & Beach Access	Formalised Carpark (bollard & wheel stops)	\$10,000	\$0	\$10,000	2020/2021
2-C	Skennars Head	Carpark & Beach Access	Formalised Carpark (traffic islands: 30 sq.m)	\$7,500	\$0	\$7,500	2020/2021
2-D	Skennars Head	Carpark & Beach Access	Formalised Carpark (gate to control access -overflow)	\$5,000	\$0	\$5,000	2020/2021
2-E	Skennars Head	Carpark & Beach Access	Formalised Carpark (gravel reinforced grass # 1 -500 sq.m)	\$12,500	\$0	\$12,500	2020/2021
2-F	Skennars Head	Carpark & Beach Access	Formalised Carpark (gravel reinforced grass # 2 -965 sq.m)	\$24,125	\$0	\$24,125	2020/2021
2-G	Skennars Head	Carpark & Beach Access	FWD Beach Access Track (160 sq.m)	\$64,000	\$0	\$64,000	2020/2021
2-H	Skennars Head	Carpark & Beach Access	Pedestrian Beach Access Track # 1 (20 sq.m)	\$30,000	\$0	\$30,000	2020/2021
2-I	Skennars Head	Carpark & Beach Access	Pedestrian Beach Access Track # 2 (30 sq.m)	\$12,000	\$0	\$12,000	2020/2021
3-A	Skennars Head	Built Structures	Surf Life Saving Observation Tower (12 sq.m)	\$42,000	\$42,000	\$0	2021/2022
3-B	Skennars Head	Built Structures	Unisex Toilet (9 sq.m)	\$31,500	\$0	\$31,500	2021/2022
3-C	Skennars Head	Built Structures	Surf Life Saving Equipment Storage Room (9 sq.m)	\$18,000	\$18,000	\$0	2021/2022
3-D	Skennars Head	Built Structures	Beach Shower	\$5,000	\$5,000	\$0	2021/2022
3-E	Skennars Head	Built Structures	timber Viewing Deck & Beach Access Walkway (25 sq.m)	\$25,000	\$0	\$25,000	2021/2022
4-A	Skennars Head	Site Embellishments & landscaping	Picnic Facilities (site # 1)	\$4,000	\$0	\$4,000	2022/2023
4-B	Skennars Head	Site Embellishments & landscaping	Picnic Facilities (site # 2)	\$4,000	\$0	\$4,000	2022/2023
4-C	Skennars Head	Site Embellishments & landscaping	Picnic Facilities (site # 3)	\$4,000	\$0	\$4,000	2022/2023
4-D	Skennars Head	Site Embellishments & landscaping	tree planting & site landscaping	\$30,000	\$0	\$30,000	2022/2023
				\$901,375	\$65,000	\$836,375	

Table 4.3.2: (aspirational –for information only) Sharpe’s Beach Master Plan (full installation of 2012 concept) Capital Works (Scenario 2 option)

Project	Suburb	Proposed Works -by Type	Proposed Works	Full Cost	Grants..?	BSC Contribution	Year
0-A	Skennars Head	Detailed Survey & Design	Detailed Survey & Design	\$10,000	\$0	\$10,000	2017/2018
1-A	Skennars Head	Preparation & Underground Services	Dune Restoration	\$100,000	\$0	\$100,000	2019/2020
1-B	Skennars Head	Preparation & Underground Services	Dune Restoration Fencing (300 m)	\$45,000	\$0	\$45,000	2019/2020
2-G	Skennars Head	Carpark & Beach Access	FWD Beach Access Track (160 sq.m)	\$64,000	\$0	\$64,000	2020/2021
2-H	Skennars Head	Carpark & Beach Access	Pedestrian Beach Access Track # 1 (20 sq.m)	\$30,000	\$0	\$30,000	2020/2021
2-I	Skennars Head	Carpark & Beach Access	Pedestrian Beach Access Track # 2 (30 sq.m)	\$12,000	\$0	\$12,000	2020/2021
3-A	Skennars Head	Built Structures	Surf Life Saving Observation Tower (12 sq.m)	\$42,000	\$42,000	\$0	2021/2022
3-D	Skennars Head	Built Structures	Beach Shower	\$5,000	\$5,000	\$0	2021/2022
3-E	Skennars Head	Built Structures	timber Viewing Deck & Beach Access Walkway (25 sq.m)	\$25,000	\$0	\$25,000	2021/2022
4-A	Skennars Head	Site Embellishments & landscaping	Picnic Facilities (site # 1)	\$4,000	\$0	\$4,000	2022/2023
4-B	Skennars Head	Site Embellishments & landscaping	Picnic Facilities (site # 2)	\$4,000	\$0	\$4,000	2022/2023
4-C	Skennars Head	Site Embellishments & landscaping	Picnic Facilities (site # 3)	\$4,000	\$0	\$4,000	2022/2023
4-D	Skennars Head	Site Embellishments & landscaping	tree planting & site landscaping	\$30,000	\$0	\$30,000	2022/2023
				\$375,000	\$47,000	\$328,000	

Table 4.3.3: (aspirational –for information only) Sharpe’s Beach Master Plan (partial installation of 2012 concept) Capital Works (Scenario 3 option)

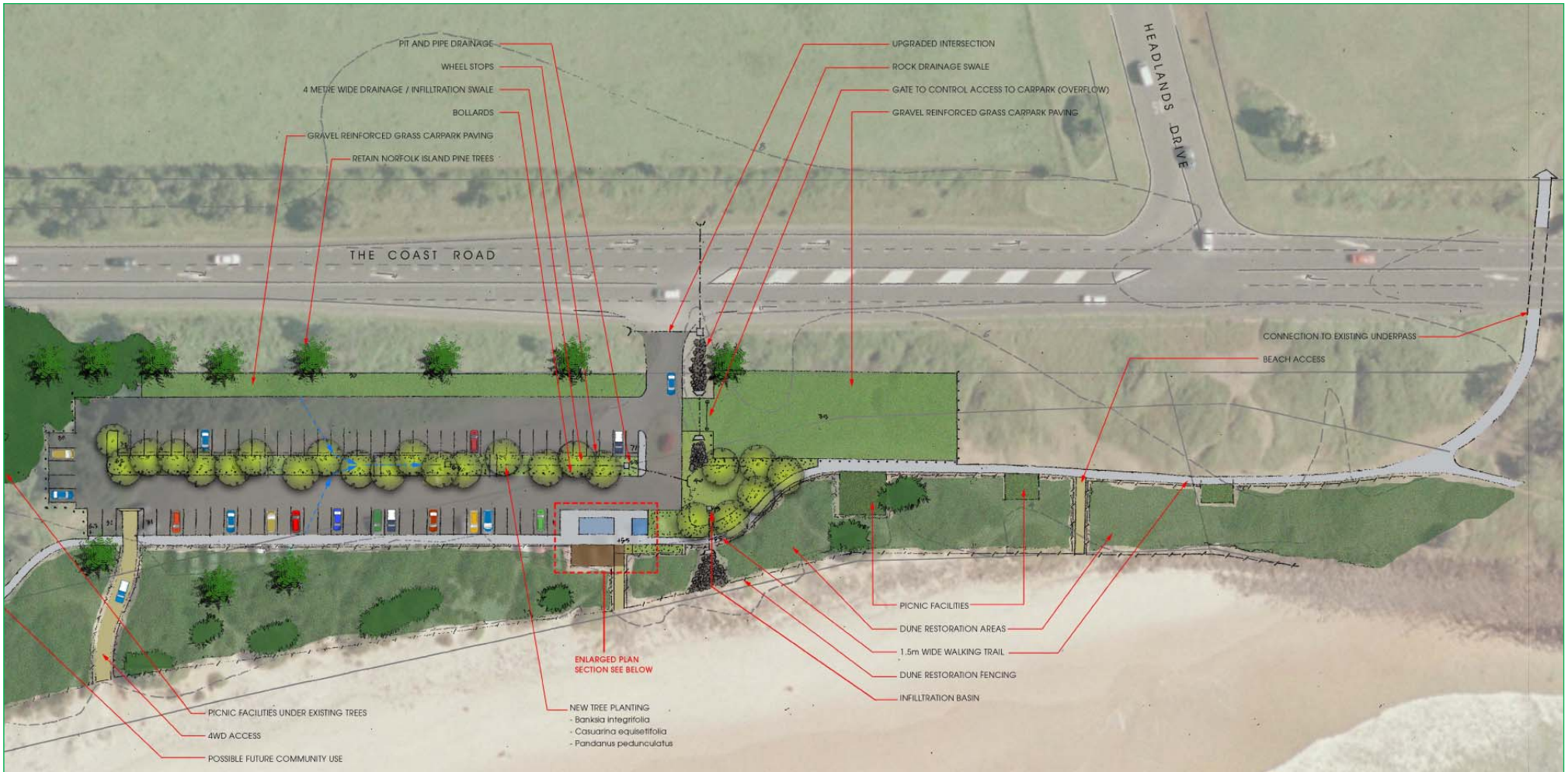


Figure 4.3.1: Sharpe's Beach Master Plan (concept 2012)

4.4 Demand Management Plan

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices include non-asset solutions, insuring against risks and managing failures.

Non-asset solutions focus on providing the required service without the need for Council to own the assets and management actions including reducing demand for the service, reducing the level of service (allowing some assets to deteriorate beyond current service levels) or educating customers to accept appropriate asset failures⁵. Examples of non-asset solutions include providing services from existing infrastructure such as aquatic centres and libraries that may be in another community area or public toilets provided in commercial premises.

Opportunities identified to date for demand management are shown in Table 4.4. Further opportunities will be developed in future revisions of this asset management plan.

Table 4.4: Demand Management Plan Summary

Demand Driver	Impact on Services	Demand Management Plan
Expectations from Residents / Tourists	Provision of a new foreshore attraction and negative impact on the long term works budget	Council to be kept updated on any proposed new projects cost / benefit which includes lifetime costs.
The presence of large predator sharks	To be revealed	Trials & testing to continue
Unit Costs	Impacts on long term works program with given budget constraints. Not being able to complete works program	Continue quarterly budget review processes

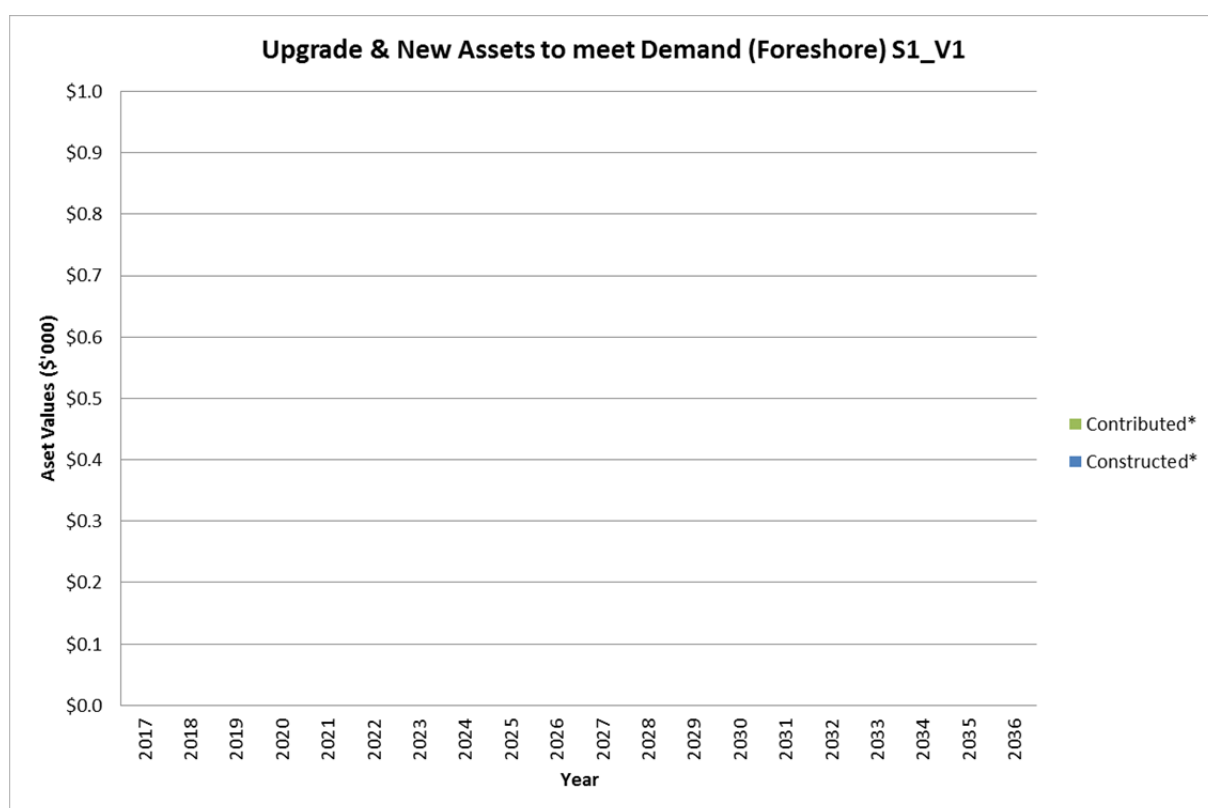
⁵ IPWEA, 2011, IIMM, Table 3.4.1, p 3|58.

4.5 Asset Programs to meet Demand

The new assets required to meet growth will be acquired free of cost from land developments and constructed / acquired by Council. New assets constructed/acquired by Council are discussed in Section 5.5. The cumulative value of new contributed and constructed asset values are summarised in Figure 1.

Acquiring these new assets will commit Council to fund ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs in Section 5.

Figure 1: Upgrade and New Assets to meet Demand (No Sharpe's Beach Master Plan)



5. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how Council plans to manage and operate the assets at the agreed levels of service (defined in Section 3) while optimising life cycle costs.

5.1 Background Data

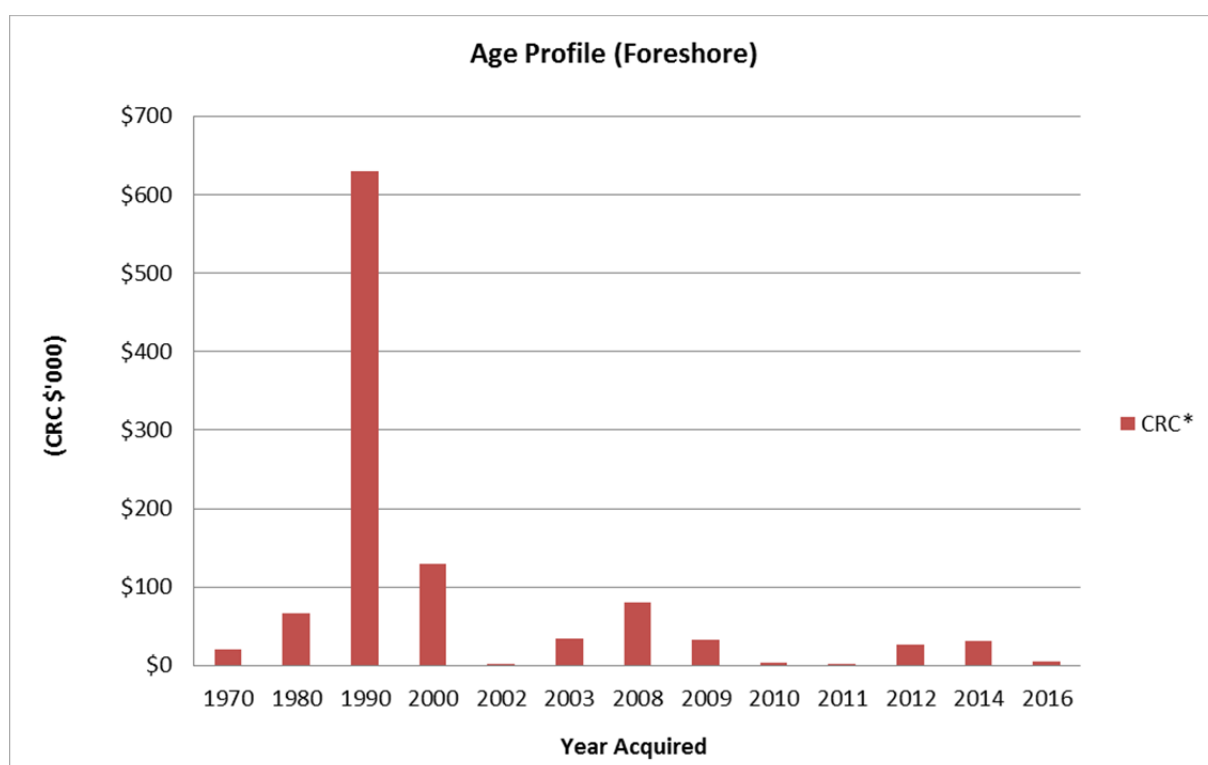
5.1.1 Physical parameters

The assets covered by this asset management plan are shown in Table 2.1. The assets defined within this Asset Management Plan span the coastal foreshore and consist of

- Viewing Platforms & beach access structures
- beach & bush tracks
- furniture
- beach showers + drinking water bubblers
- ocean going boat ramps

The age profile of the assets include in this AM Plan is shown in Figure 2.

Figure 2: Asset Age Profile



5.1.2 Asset capacity and performance

Council's services are generally provided to meet design standards where these are available.

Locations where deficiencies in service performance are known are detailed in Table 5.1.2.

Table 5.1.2: Known Service Performance Deficiencies

Location	Service Deficiency
Angels Beach Viewing Platform # 4 (AM 7327)	Poor Condition

The above service deficiencies were identified from asset inspections

5.1.3 Asset condition

Condition data is to be collected from inspections on a visual 1 to 5 basis where 1= as new and 5 = immediate replacement required.

Pavement (unsealed tracks & trails)

Desktop survey using age profiles. Condition of unsealed pavements changes to rapidly to be an effective modelling tool.

Data sets Collected:

- none

Frequency:

- Annual

Methodology:

- Step 1: determine theoretical % of life remaining of pavement segment using,

$$\% \text{ life remaining} = \left[\frac{\text{design life} - \min(\text{design life}, \text{age})}{\text{design life}} \right] \times 100$$

if age > design life, then re - assess design lives

- Step 2: convert values to 1 to 5 score (using BSC Classification Matrix)

→ remaining life	65 -100 %	theoretical condition 1
→ remaining life	35 – 65 %	theoretical condition 2
→ remaining life	10 – 35 %	theoretical condition 3
→ remaining life	5 – 10 %	theoretical condition 4
→ remaining life	0 – 5 %	theoretical condition 5

Furniture

1 to 5 condition assessments of seats, picnic tables, bins, signage and fences, gates + bollards performed as part of the defect inspection programs

Data sets Collected:

- 1 to 5 Condition rating of ancillary assets by BSC staff.

Frequency:

- Condition (5 yearly), Defects (12 monthly)

Methodology:

- Generally, the criteria with the worst score shall define the overall condition, but the use of the definitions will require some degree of subjective assessment.

Criteria	Condition 1	Condition 2	Condition 3	Condition 4	Condition 5
Seats / benches / tables	Excellent Condition	Sound condition, minor defects + do not affect function	Moderate deterioration present, maintenance repair	Isolated structural deterioration	Widespread structural failure imminent
Rubbish bins					
Signage					
Fences / gates					
% defect effected	0 to 1 %	1 to 10 %	10 to 30 %	30 to 50 %	> 50 %
% useful life remaining	80 to 100 %	50 to 80 %	20 to 50 %	5 to 20 %	0 to 5 %
Overall Condition	Very Good –as new	Good	Fair	Poor	Very Poor -replace
Risk of Failure	Very Low risk	Low risk	Median risk	High risk	Very high risk

Table 5.1.3.01 (furniture)

Timber Viewing Platforms & Raised Walkways

1 to 5 condition assessments performed as part of the defect inspection programs

Data sets Collected:

- 1 to 5 Condition rating of ancillary assets by BSC staff.

Frequency:

- Condition (5 yearly), Defects (12 monthly)

Methodology:

- Generally, the criteria with the worst score shall define the overall condition, but the use of the definitions will require some degree of subjective assessment.

Criteria	Condition 1	Condition 2	Condition 3	Condition 4	Condition 5
Platforms & raised Walkway	Sound structure constructed to current standards. No defects	Not constructed to current standards. Minor wear, tear & deterioration. No significant impact on function, strength or appearance	Functionally sound but appearance affected by minor defects. (vandalism, fine cracking) Beginning to affect the function.	Still functioning but with significant defects, (cracking, spalling, corrosion) Causes marked deterioration in strength & function	Item has failed or is about to fail, resulting unacceptable deterioration in stability, operation, safety & appearance
% defect effected	0 to 1 %	1 to 10 %	10 to 30 %	30 to 50 %	> 50 %
% useful life remaining	80 to 100 %	50 to 80 %	20 to 50 %	5 to 20 %	0 to 5 %
Overall Condition	Very Good –as new	Good	Fair	Poor	Very Poor -replace
Risk of Failure	Very Low risk	Low risk	Median risk	High risk	Very high risk

Table 5.1.3.02 (viewing platforms)

Water Infrastructure

1 to 5 condition assessments of beach showers & drinking bubblers performed as part of the defect inspection programs

Data sets Collected:

- 1 to 5 Condition rating of marine assets by BSC staff.

Frequency:

- Condition (5 yearly) Defects (12 monthly)

Methodology:

- Generally the criteria with the worst score shall define the overall condition, but the use of the definitions will require some degree of subjective assessment.

Criteria	Condition 1	Condition 2	Condition 3	Condition 4	Condition 5
Beach Shower Drinking Water Bubbler	Sound & designed & installed to current standards. No work required	Not constructed to current standards. Minor wear, tear & deterioration, (staining of metal surfaces, infrequent control failures) No significant impact on function, strength or appearance	Functionally sound but affected by minor defects. (minor corrosion of metal surfaces, regular minor control failures) Beginning to affect the appearance & function.	Still functioning but with significant defects, (major corrosion of metal surfaces, major control failures) Causes marked deterioration in strength & function Water flow effected	item has failed or is about to fail, resulting unacceptable deterioration in appearance, strength or function. Water flow reduced to unacceptable rate
% defect effected	0 to 1 %	1 to 10 %	10 to 30 %	30 to 50 %	> 50 %
% useful life remaining	80 to 100 %	50 to 80 %	20 to 50 %	5 to 20 %	0 to 5 %
Overall Condition	Very Good –as new	Good	Fair	Poor	Very Poor -replace
Risk of Failure	Very Low risk	Low risk	Median risk	High risk	Very high risk

Table 5.1.3.03 (water infrastructure)

Boat Ramps

1 to 5 condition assessments of boat ramps, wharves, jetties and pontoons performed as part of the defect inspection programs

Data sets Collected:

- 1 to 5 Condition rating of marine assets by BSC staff.

Frequency:

- Boat Ramps: Condition (5 yearly) Defects (12 monthly)
- Wharves, Jetties & Pontoons: Condition (5 yearly) Defects (12 monthly)

Methodology:

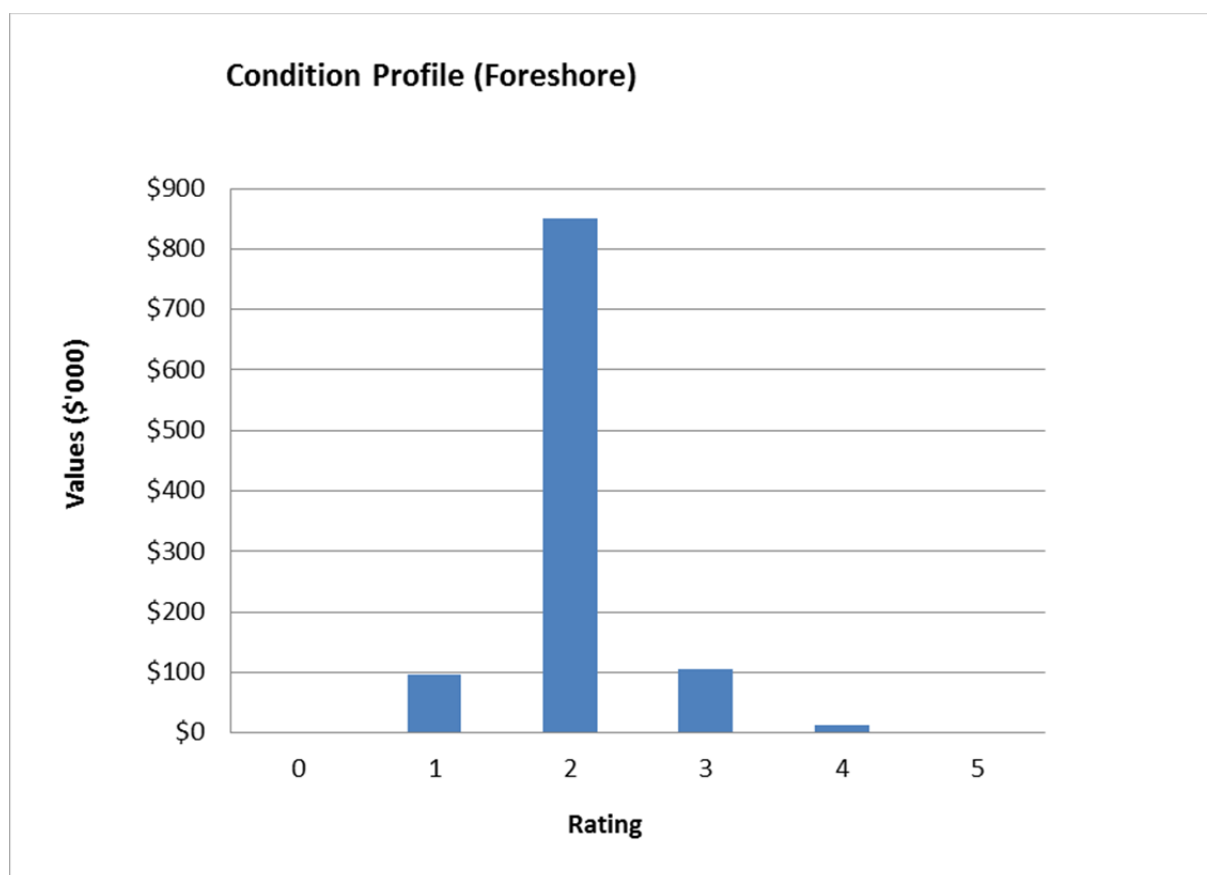
- Marine asset assessment criteria. Generally the criteria with the worst score shall define the overall condition, but the use of the definitions will require some degree of subjective assessment.

Criteria	Condition 1	Condition 2	Condition 3	Condition 4	Condition 5
Cracking	None or very fine	Some fine cracks	Number of cracked sections	Significant severely cracked sections	Extreme levels of cracked sections
Slipperiness	Slip free	Slightly slippery surfaces	Slippery surfaces	Very slippery surfaces	Extreme slipperiness
Evenness -within sections	Even Surface	Slightly uneven surface	Moderately uneven surface	Very uneven	Extremely uneven surface
Gaps -between sections	< 10 mm between sections	No-uniform gaps < 10 mm	No-uniform gaps 10 to 20 mm	No-uniform gaps 20 to 30 mm	Non-uniform gaps > 30 mm
Displacement -between sections	< 5 mm	5 to 10 mm	10 to 20 mm	20 to 30 mm	> 30 mm
% defect effected	0 to 1 %	1 to 10 %	10 to 30 %	30 to 50 %	> 50 %
% useful life remaining	80 to 100 %	50 to 80 %	20 to 50 %	5 to 20 %	0 to 5 %
Overall Condition	Very Good –as new	Good	Fair	Poor	Very Poor -replace
Risk of Failure	Very Low risk	Low risk	Median risk	High risk	Very high risk

Table 5.1.3.04 (boat ramps)

The condition profile of our assets is shown in Figure 3.

Fig 3: Asset Condition Profile



Condition is measured using a 1 – 5 grading system⁶ as detailed in Table 5.1.3.

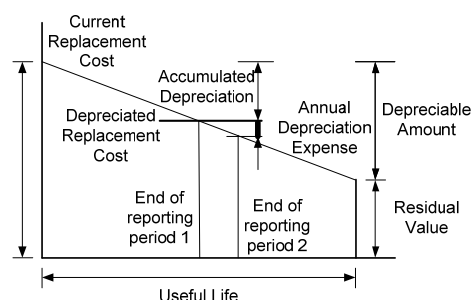
Table 5.1.3: Simple Condition Grading Model

Condition Grading	Description of Condition
1	Very Good: only planned maintenance required
2	Good: minor maintenance required plus planned maintenance
3	Fair: significant maintenance required
4	Poor: significant renewal/rehabilitation required
5	Very Poor: physically unsound and/or beyond rehabilitation

5.1.4 Asset valuations

The value of assets recorded in the asset register as at December 2016 covered by this asset management plan is shown below. Assets are valued at fair value.

Current Replacement Cost	\$1,066,000
Depreciable Amount	\$1,066,000
Depreciated Replacement Cost ⁷	\$619,000
Annual Depreciation Expense	\$23,000



Useful lives were reviewed in 2014. The primary methodology behind this review was to maintain existing levels of service while *generally* keeping with the confines of Councils long term financial plan. The adopted useful lives have been compared against Councils previous figures as well as published figures from the Institute of Public Works Engineers Australia (IPWEA) and the Local Government Association (LGA)

Various ratios of asset consumption and expenditure have been prepared to help guide and gauge asset management performance and trends over time.

Rate of Annual Asset Consumption (Depreciation/Depreciable Amount)	2.2%
Rate of Annual Asset Renewal (Capital Renewal Expenditure / Depreciable amount)	0%

In 2017 Council plans to renew assets at 0% of the rate they are being consumed and will be increasing its asset stock by 0% in the year.

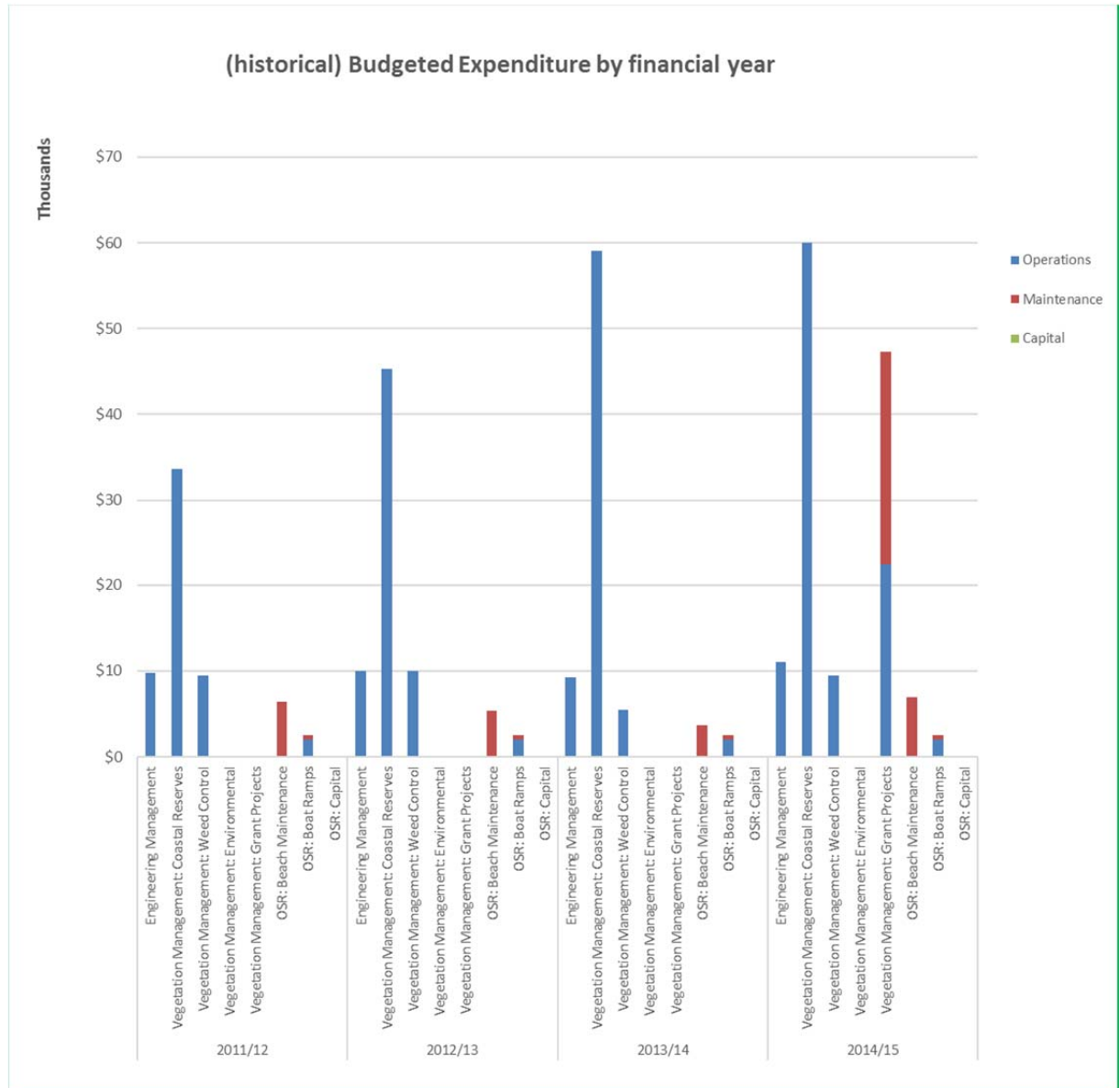
⁶ IPWEA, 2011, IIMM, Sec 2.5.4, p 2 | 79.

⁷ Also reported as Written Down Current Replacement Cost (WDCRC).

5.1.5 Historical Data

Figure 5.15.1 below summarises the previous 4 years of budgeted operations, maintenance & capital expenditure over a number of Foreshore related sub-groups.

Figure 5.15.1: Historical OSR costings by sub-group & type



5.2 Infrastructure Risk Management Plan

An assessment of risks⁸ associated with service delivery from infrastructure assets has identified critical risks that will result in loss or reduction in service from infrastructure assets or a 'financial shock' to Council. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

Critical risks, being those assessed as 'Very High' - requiring immediate corrective action and 'High' – requiring prioritised corrective action identified in the Infrastructure Risk Management Plan, together with the estimated residual risk after the selected treatment plan is operational are summarised in Table 5.2. These risks are reported to management and Council.

Table 5.2: Critical Risks and Treatment Plans

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs (\$'000)
N / A	N / A	N / A	N / A	N / A	N / A

Note * The residual risk is the risk remaining after the selected risk treatment plan is operational

5.3 Routine Operations and Maintenance Plan

Operations include regular activities to provide services such as public health, safety and amenity, eg cleansing, street sweeping, grass mowing and street lighting.

Routine maintenance is the regular on-going work that is necessary to keep assets operating, including instances where portions of the asset fail and need immediate repair to make the asset operational again.

5.3.1 Operations and Maintenance Plan

Operations activities affect service levels including quality and function through street sweeping and grass mowing frequency, intensity and spacing of street lights and cleaning frequency and opening hours of building and other facilities.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating, eg road patching but excluding rehabilitation or renewal. Maintenance may be classified into reactive, planned and specific maintenance work activities.

Reactive maintenance is unplanned repair work carried out in response to service requests and management/supervisory directions.

Planned maintenance is repair work that is identified and managed through a maintenance management system (MMS). MMS activities include inspection, assessing the condition against failure/breakdown experience, prioritising, scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.

Specific maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, replacing air conditioning units, etc. This work falls below the capital/maintenance threshold but may require a specific budget allocation.

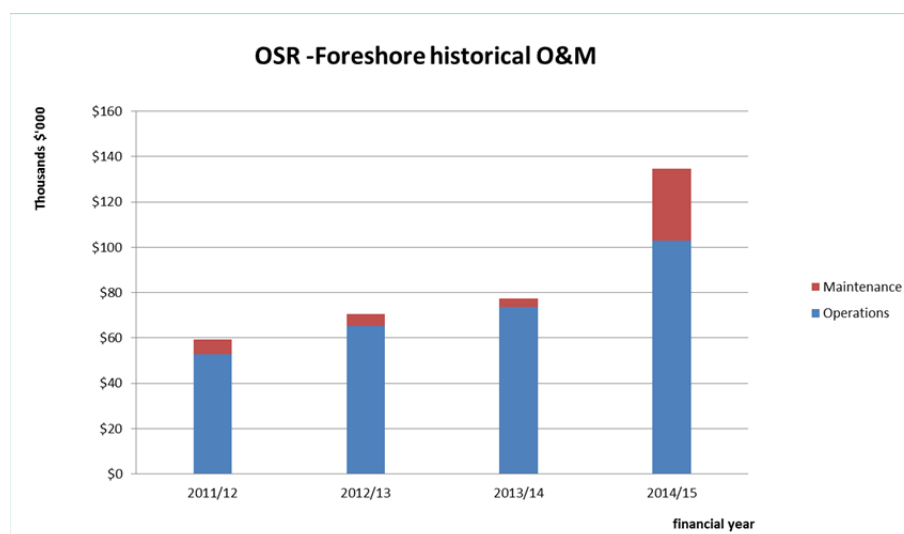
Actual past maintenance expenditure is shown in Table 5.3.1.

⁸ BSC Infrastructure Risk Management Plan 2016

Table 5.3.1.1: Operations & Maintenance Expenditure Trends

Year	Group	Task	Measured Against	Unit of Measure	Planned		Unplanned		TOTAL
					Expenditure	\$ / UOM	Expenditure	\$ / UOM	Expenditure
2011/12	Operations	Management	N / A	item	\$9,791	\$9,791	-	-	\$9,791
		OSR: Boat Ramps	N / A	item	\$2,000	\$2,000	-	-	\$2,000
		Vegetation Management: Coastal Reserves	N / A	item	\$33,600	\$33,600	-	-	\$33,600
		Vegetation Management: Weed Control	N / A	item	\$9,500	\$9,500	-	-	\$9,500
		Vegetation Management: Grant Based Projects	N / A	item	-	-	-	-	-
	Maintenance	OSR: Beach Maintenance	N / A	item	\$5,800	\$6,444	\$644	\$6,444	\$6,444
		OSR: Boat Ramps	N / A	item	\$500	\$500	-	-	\$500
		Vegetation Management: Grant Based Projects	N / A	item	-	-	-	-	-
2012/13	Operations	Management	N / A	item	\$10,012	\$10,012	-	-	\$10,012
		OSR: Boat Ramps	N / A	item	\$2,000	\$2,000	-	-	\$2,000
		Vegetation Management: Coastal Reserves	N / A	item	\$45,300	\$45,300	-	-	\$45,300
		Vegetation Management: Weed Control	N / A	item	\$10,000	\$10,000	-	-	\$10,000
		Vegetation Management: Grant Based Projects	N / A	item	-	-	-	-	-
	Maintenance	OSR: Beach Maintenance	N / A	item	\$4,800	\$5,333	\$533	\$5,333	\$5,333
		OSR: Boat Ramps	N / A	item	\$500	\$500	-	-	\$500
		Vegetation Management: Grant Based Projects	N / A	item	-	-	-	-	-
2013/14	Operations	Management	N / A	item	\$9,224	\$9,224	-	-	\$9,224
		OSR: Boat Ramps	N / A	item	\$2,000	\$2,000	-	-	\$2,000
		Vegetation Management: Coastal Reserves	N / A	item	\$59,100	\$59,100	-	-	\$59,100
		Vegetation Management: Weed Control	N / A	item	\$5,500	\$5,500	-	-	\$5,500
		Vegetation Management: Grant Based Projects	N / A	item	-	-	-	-	-
	Maintenance	OSR: Beach Maintenance	N / A	item	\$3,300	\$3,667	\$367	\$3,667	\$3,667
		OSR: Boat Ramps	N / A	item	\$500	\$500	-	-	\$500
		Vegetation Management: Grant Based Projects	N / A	item	-	-	-	-	-
2014/15	Operations	Management	N / A	item	\$11,049	\$11,049	-	-	\$11,049
		OSR: Boat Ramps	N / A	item	\$2,000	\$2,000	-	-	\$2,000
		Vegetation Management: Coastal Reserves	N / A	item	\$60,000	\$60,000	-	-	\$60,000
		Vegetation Management: Weed Control	N / A	item	\$9,500	\$9,500	-	-	\$9,500
		Vegetation Management: Grant Based Projects	N / A	item	\$22,400	\$22,400	-	-	\$22,400
	Maintenance	OSR: Beach Maintenance	N / A	item	\$6,200	\$6,889	\$689	\$6,889	\$6,889
		OSR: Boat Ramps	N / A	item	\$500	\$500	-	-	\$500
		Vegetation Management: Grant Based Projects	N / A	item	\$22,400	\$24,889	\$2,489	\$24,889	\$24,889

Figure 5.3.1.1 – historical O&M costs



Planned maintenance work is currently 25% of total maintenance expenditure.

Maintenance expenditure levels are considered to be adequate to meet projected service levels, which may be less than or equal to current service levels. Where maintenance expenditure levels are such that will result in a lesser level of service, the service consequences and service risks have been identified and service consequences highlighted in this AM Plan and service risks considered in the Infrastructure Risk Management Plan.

Assessment and prioritisation of reactive maintenance is undertaken by Council staff using experience and judgement.

5.3.2 Operations and Maintenance Strategies

Council will operate and maintain assets to provide the defined level of service to approved budgets in the most cost-efficient manner. The operation and maintenance activities include:

- Scheduling operations activities to deliver the defined level of service in the most efficient manner,
- Undertaking maintenance activities through a planned maintenance system to reduce maintenance costs and improve maintenance outcomes. Undertake cost-benefit analysis to determine the most cost-effective split between planned and unplanned maintenance activities (50 – 70% planned desirable as measured by cost),
- Maintain a current infrastructure risk register for assets and present service risks associated with providing services from infrastructure assets and reporting Very High and High risks and residual risks after treatment to management and Council,
- Review current and required skills base and implement workforce training and development to meet required operations and maintenance needs,
- Review asset utilisation to identify underutilised assets and appropriate remedies, and over utilised assets and customer demand management options,
- Maintain a current hierarchy of critical assets and required operations and maintenance activities,
- Develop and regularly review appropriate emergency response capability,
- Review management of operations and maintenance activities to ensure Council is obtaining best value for resources used.

5.3.3 Operations, Maintenance & Capital Costs Projection

Group	Task	Frequency	UOM	Quantity	Unit Cost	Cost (p.a.)
Operations	Management	Annual	item	1	\$5,000	\$5,000
Operations	Litter Removal	Weekly	item	1	\$5,000	\$5,000
Operations	Cleaning timber structures	6 months	each	15	\$150	\$4,500
Operations	Cleaning Picnic Areas	6 months	each	46	\$75	\$6,900
Operations	Cleaning Boat Ramps	6 months	each	3	\$450	\$2,700
Operations	Vegetation Management (coastal reserves)	Annual	item	1	\$40,000	\$40,000
Operations	Vegetation Management (weed control)	Annual	item	1	\$9,500	\$9,500
Operations	Vegetation Management (grant based projects)	Annual	item	1	\$10,000	\$10,000
Operations	Inspections (view platforms)	Annual	each	15	\$38	\$563
Operations	Inspections (water assets)	Annual	each	8	\$38	\$300
Operations	Inspections (boar ramps)	Annual	each	3	\$38	\$113
Operations	Inspections (furniture)	5 years	each	46	\$38	\$345
						\$85,000
Maintenance	General Repairs (timber structures)	Annual	each	15	\$250	\$3,750
Maintenance	General Repairs (water assets)	Annual	each	8	\$250	\$2,000
Maintenance	Grade unsealed trails	4 months	km	11.64	\$83 per km	\$2,916
Maintenance	Beach Maintenance	Annual	item	1	\$6,889	\$6,889
Maintenance	Vegetation Management (grant based projects)	Annual	item	1	\$20,000	\$20,000
						\$36,000
Capital -renewal	Overlay unsealed trails	3 years	km	11.64	\$12,500 per km	\$48,600
Capital -renewal	Renewal Program (appendix B)	(varies)	item	1	(varies)	\$7,650
Capital -upgrade	SBMP (scenario 3)	over 4 years	item	1	\$375,000	\$93,750
						\$150,000

Table 5.3.2.1: Operations & Maintenance Costing Models

Year	Group	Task	Measured Against	Unit of Measure	Planned		Unplanned		TOTAL	Future Growth Model (excluding CPI)
					Expenditure	\$ / UOM	Expenditure	\$ / UOM	Expenditure	
2014/15	Operations	Management	N / A	item	\$11,049	\$11,049	-	-	\$11,049	Static
		OSR: Boat Ramps	N / A	item	\$2,000	\$2,000	-	-	\$2,000	Linear with additions / item
		Vegetation Management: Coastal Reserves	N / A	item	\$60,000	\$60,000	-	-	\$60,000	Static
		Vegetation Management: Weed Control	N / A	item	\$9,500	\$9,500	-	-	\$9,500	Static
		Vegetation Management: Grant Based Projects	N / A	item	\$22,400	\$22,400	-	-	\$22,400	Linear with additions / item
	Maintenance	OSR: Beach Maintenance	N / A	item	\$6,200	\$6,889	\$689	\$6,889	\$6,889	Static
		OSR: Boat Ramps	N / A	item	\$500	\$500	-	-	\$500	Linear with additions / item
		Vegetation Management: Grant Based Projects	N / A	item	\$22,400	\$24,889	\$2,489	\$24,889	\$24,889	Linear with additions / item

Table 5.3.2.2: Asset Service Hierarchy

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7
Open Spaces & Reserves Assets Class	Open Spaces & Reserves Sub Category	Site Facility Name	Site Related Components	Site Fences Header	Site Fence Item	-
					Site Gate Item	-
					Site Bollards Item	-
				Site Paths Header	Site Path Item	-
					Site Path Structure Item	-
				Site Signs Header	Site Signs Item	-
				Site Security & Lighting Header	Site Lighting Item	-
					Site Security System Item	-
				Site Open Space Header	Open Space Area Item	-
				Site Sculptures & Monuments Header	Site Sculpture & Monument Item	-
				Site Furniture Header	Site Seat Item	-
					Site BBQ Item	-
					Site Litter Bin Item	-
					Site Table Item	-
					Site Water Item	-
					Site Water Item	-
				Site Internal Road Name	Road Wearing Course Header	Road Wearing Course Section Item
					Road Pavement Header	Road Pavement Item
					Road Formation Header	Road Formation Item
					Road Kerb & Gutter Header	Road K&G Item
				Site Shade Structure Header	Site Shade Structure Item	-

This can be seen graphically in section 7.1.6

Asset hierarchy

An asset hierarchy provides a framework for structuring data in an information system to assist in collection of data, reporting information and making decisions. The hierarchy includes the asset class and component used for asset planning and financial reporting and service level hierarchy used for service planning and delivery.

Council's service hierarchy is shown in Table 5.3.2.2

Critical Assets

Critical assets are those assets which have a high consequence of failure but not necessarily a high likelihood of failure. By identifying critical assets and critical failure modes, Council can target and refine investigative activities, maintenance plans and capital expenditure plans at the appropriate time.

Operations and maintenance activities may be targeted to mitigate critical assets failure and maintain service levels. These activities may include increased inspection frequency, higher maintenance intervention levels, etc. No assets in this plan meet the criteria for criticality as defined in the Infrastructure Risk Management Plan 2016.

Table 5.3.2.1: Critical Assets and Service Level Objectives

Critical Assets	Critical Failure Mode	O&M Service Activities
N / A	N / A	N / A

Standards and specifications

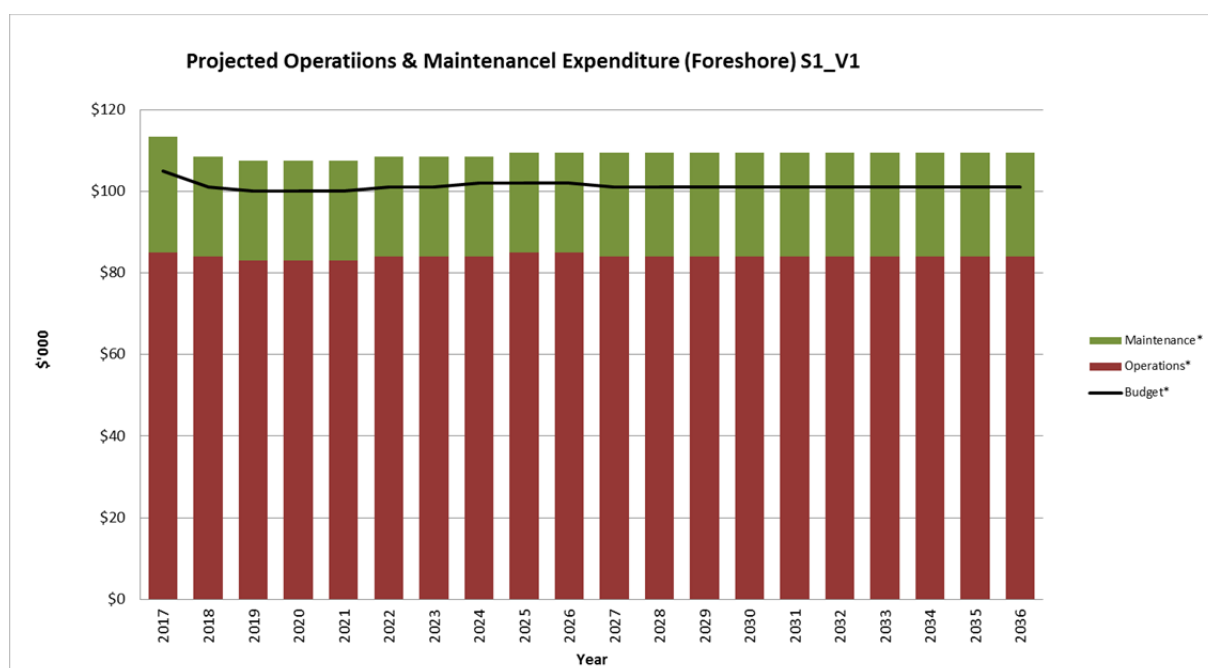
Maintenance work is carried out in accordance with the following Standards and Specifications.

- Northern Rivers Design Guide
- Coastal Management Specification Manual 2005
- Park Facilities Manual 2007
- AS 2156.1-2001 –Walking Tracks
- Coastal Dune Management

5.3.3 Summary of future operations and maintenance expenditures

Future operations and maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Figure 4. Note that all costs are shown in current 2016 dollar values (ie real values).

Figure 4: Projected Operations and Maintenance Expenditure (No Sharpe's Beach Master Plan)



Deferred maintenance, ie works that are identified for maintenance and unable to be funded are to be included in the risk assessment and analysis in the infrastructure risk management plan.

Maintenance is funded from the operating budget where available. This is further discussed in Section 6.2.

5.4 Renewal/Replacement Plan

Renewal and replacement expenditure is major work which does not increase the asset's design capacity but restores, rehabilitates, replaces or renews an existing asset to its original or lesser required service potential. Work over and above restoring an asset to original service potential is upgrade/expansion or new works expenditure.

5.4.1 Renewal plan

Assets requiring renewal/replacement are identified from one of three methods provided in the 'Expenditure Template'.

- Method 1 uses Asset Register data to project the renewal costs using acquisition year and useful life to determine the renewal year, or
- Method 2 uses capital renewal expenditure projections from external condition modelling systems (such as Pavement Management Systems), or
- Method 3 uses a combination of average *network renewals* plus *defect repairs* in the *Renewal Plan* and *Defect Repair Plan* worksheets on the 'Expenditure template'.

Method 1 was used for this asset management plan.

The useful lives of assets used to develop projected asset renewal expenditures are shown in Table 5.4.1. Asset useful lives were last reviewed on December 2016.⁹

Table 5.4.1: Useful Lives of Assets

Asset Group	Asset Category	Asset (Sub) Category	Useful life –years
Foreshore (OSR)	Built Structures	Timber Viewing Platform	40-50
		Timber Walkway	40-50
		Boat Ramp	80
	Furniture	Picnic Table	25-30
		Bench Seat	25-30
		Bin	20
		Fence / Bollard	20
		Beach Shower	20
	Water Infrastructure	Drinking Bubbler	20
	Civil Infrastructure	Pavement -Tracks & Trails	100

5.4.2 Renewal and Replacement Strategies

Council will plan capital renewal and replacement projects to meet level of service objectives and minimise infrastructure service risks by:

- Planning and scheduling renewal projects to deliver the defined level of service in the most efficient manner,
- Undertaking project scoping for all capital renewal and replacement projects to identify:
 - o the service delivery 'deficiency', present risk and optimum time for renewal/replacement,
 - o the project objectives to rectify the deficiency,
 - o the range of options, estimated capital and life cycle costs for each options that could address the service deficiency,
 - o and evaluate the options against evaluation criteria adopted by Council, and
 - o select the best option to be included in capital renewal programs,
- Using 'low cost' renewal methods (cost of renewal is less than replacement) wherever possible,
- Maintain a current infrastructure risk register for assets and service risks associated with providing services from infrastructure assets and reporting Very High and High risks and residual risks after treatment to management and Council,
- Review current and required skills base and implement workforce training and development to meet required construction and renewal needs,
- Maintain a current hierarchy of critical assets and capital renewal treatments and timings required ,
- Review management of capital renewal and replacement activities to ensure Council is obtaining best value for resources used.

Renewal ranking criteria

Asset renewal and replacement is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (eg replacing a bridge that has a 5 t load limit), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (eg roughness of a road).¹⁰

⁹ IPWEA Practice Note 10.2

It is possible to get some indication of capital renewal and replacement priorities by identifying assets or asset groups that:

- Have a high consequence of failure,
- Have a high utilisation and subsequent impact on users would be greatest,
- The total value represents the greatest net value to Council,
- Have the highest average age relative to their expected lives,
- Are identified in the AM Plan as key cost factors,
- Have high operational or maintenance costs, and
- Where replacement with modern equivalent assets would yield material savings.¹¹

The ranking criteria used to determine priority of identified renewal and replacement proposals is detailed in Table 5.4.2.

Table 5.4.2: Renewal and Replacement Priority Ranking Criteria

Criteria	Weighting
Condition	50%
Criticality Score	30%
% of Design Life consumed	20%
Total	100%

Renewal and replacement standards

Renewal work is carried out in accordance with the following Standards and Specifications.

- Northern Rivers Design Guide
- Coastal Management Specification Manual 2005
- Park Facilities Manual 2007

5.4.3 Summary of future renewal and replacement expenditure

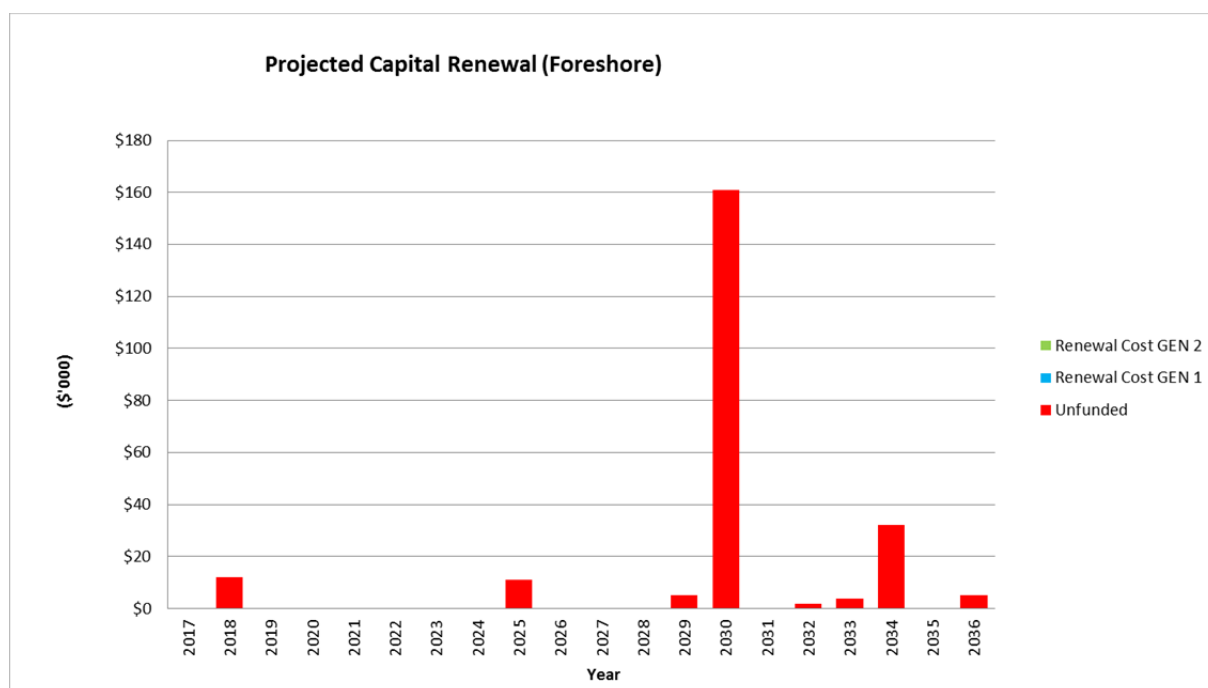
Projected future renewal and replacement expenditures are forecast to increase over time as the asset stock increases from growth. The expenditure is summarised in Fig 5. Note that all amounts are shown in real values.

The projected capital renewal and replacement program is shown in Appendix B.

¹⁰ IPWEA, 2011, IIMM, Sec 3.4.4, p 3|60.

¹¹ Based on IPWEA, 2011, IIMM, Sec 3.4.5, p 3|66.

Figure 5: Projected Capital Renewal and Replacement Expenditure (existing assets)



Deferred renewal and replacement, ie those assets identified for renewal and/or replacement and not scheduled in capital works programs are to be included in the risk analysis process in the risk management plan.

Renewals and replacement expenditure in Council's capital works program will be accommodated in the long term financial plan. This is further discussed in Section 6.2.

5.5 Creation/Acquisition/Upgrade Plan

New works are those works that create a new asset that did not previously exist, or works which upgrade or improve an existing asset beyond its existing capacity. They may result from growth, social or environmental needs. Assets may also be acquired at no cost to Council from land development. These assets from growth are considered in Section 4.4.

5.5.1 Selection criteria

New assets and upgrade/expansion of existing assets are identified from various sources such as councillor or community requests, proposals identified by strategic plans or partnerships with other organisations. Candidate proposals are inspected to verify need and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed below.

Table 5.5.1: New Assets Priority Ranking Criteria

Criteria	Weighting
Criticality Score	50%
Strategic justification	50%
Total	100%

5.5.2 Capital Investment Strategies

Council will plan capital upgrade and new projects to meet level of service objectives by:

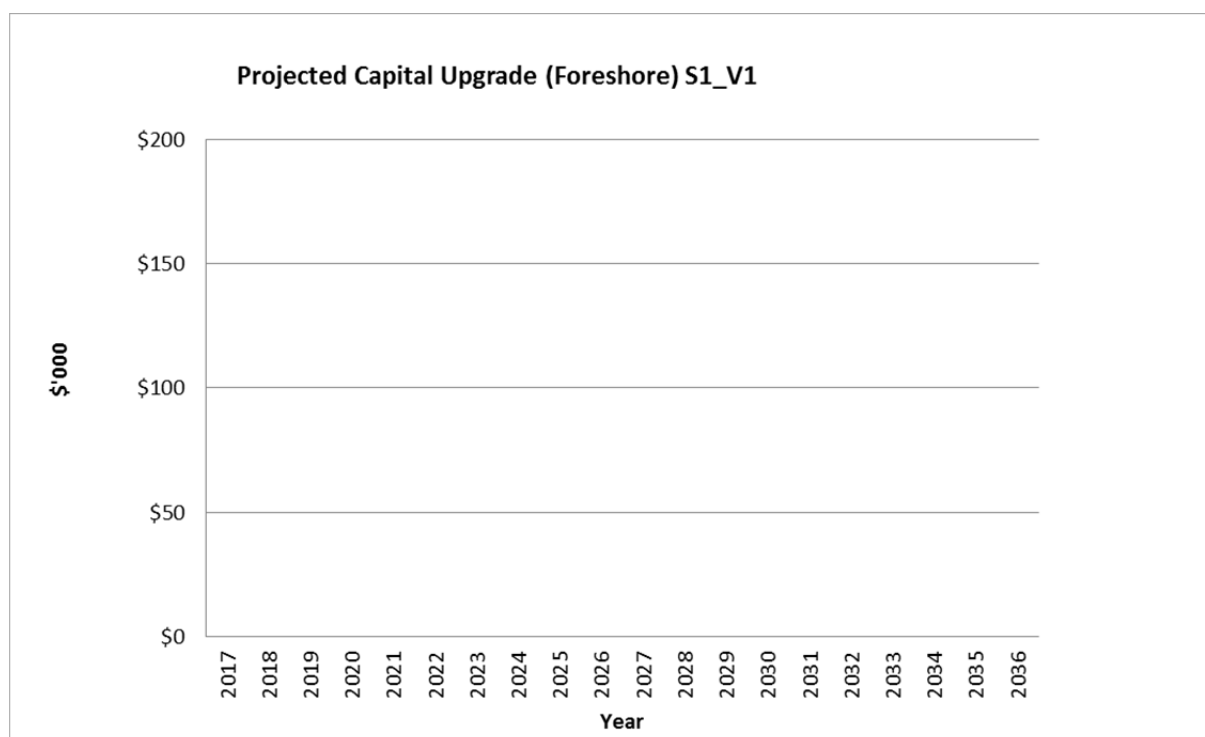
- Planning and scheduling capital upgrade and new projects to deliver the defined level of service in the most efficient manner,
- Undertake project scoping for all capital upgrade/new projects to identify:
 - o the service delivery 'deficiency', present risk and required timeline for delivery of the upgrade/new asset,
 - o the project objectives to rectify the deficiency including value management for major projects,
 - o the range of options, estimated capital and life cycle costs for each options that could address the service deficiency,
 - o management of risks associated with alternative options,
 - o and evaluate the options against evaluation criteria adopted by Council, and
 - o select the best option to be included in capital upgrade/new programs,
- Review current and required skills base and implement training and development to meet required construction and project management needs,
- Review management of capital project management activities to ensure Council is obtaining best value for resources used.

Standards and specifications for new assets and for upgrade/expansion of existing assets are the same as those for renewal shown in Section 5.4.2.

5.5.3 Summary of future upgrade/new assets expenditure

Projected upgrade/new asset expenditures are summarised in Fig 6. The projected upgrade/new capital works program is shown in Appendix C. All amounts are shown in real values.

Figure 6: Projected Capital Upgrade/New Asset Expenditure (No Sharpe's Beach Master Plan)



Expenditure on new assets and services in Council's capital works program will be accommodated in the long term financial plan. This is further discussed in Section 6.2.

5.6 Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.6, together with estimated annual savings from not having to fund operations and maintenance of the assets. These assets will be further reinvestigated to determine the required levels of service and see what options are available for alternate service delivery, if any. Any revenue gained from asset disposals is accommodated in Council's long term financial plan.

Where cash-flow projections from asset disposals are not available, these will be developed in future revisions of this asset management plan.

Table 5.6: Assets Identified for Disposal

Asset	Reason for Disposal	Timing	Disposal Expenditure	Operations & Maintenance Annual Savings
N / A	N / A	N / A	N / A	N / A

5.7 Service Consequences and Risks

Council has prioritised decisions made in adopting this AM Plan to obtain the optimum benefits from its available resources. Decisions were made based on the development of 3 scenarios of AM Plans.

Scenario 1 - What we would like to do based on asset register data

Scenario 2 – What we should do with existing budgets and identifying level of service and risk consequences (ie what are the operations and maintenance and capital projects we are unable to do, what is the service and risk consequences associated with this position). This may require several versions of the AM Plan.

Scenario 3 – What we can do and be financially sustainable with AM Plans matching long-term financial plans.

The development of scenario 1 and scenario 2 AM Plans provides the tools for discussion with Council and community on trade-offs between what we would like to do (scenario 1) and what we should be doing with existing budgets (scenario 2) by balancing changes in services and service levels with affordability and acceptance of the service and risk consequences of the trade-off position (scenario 3).

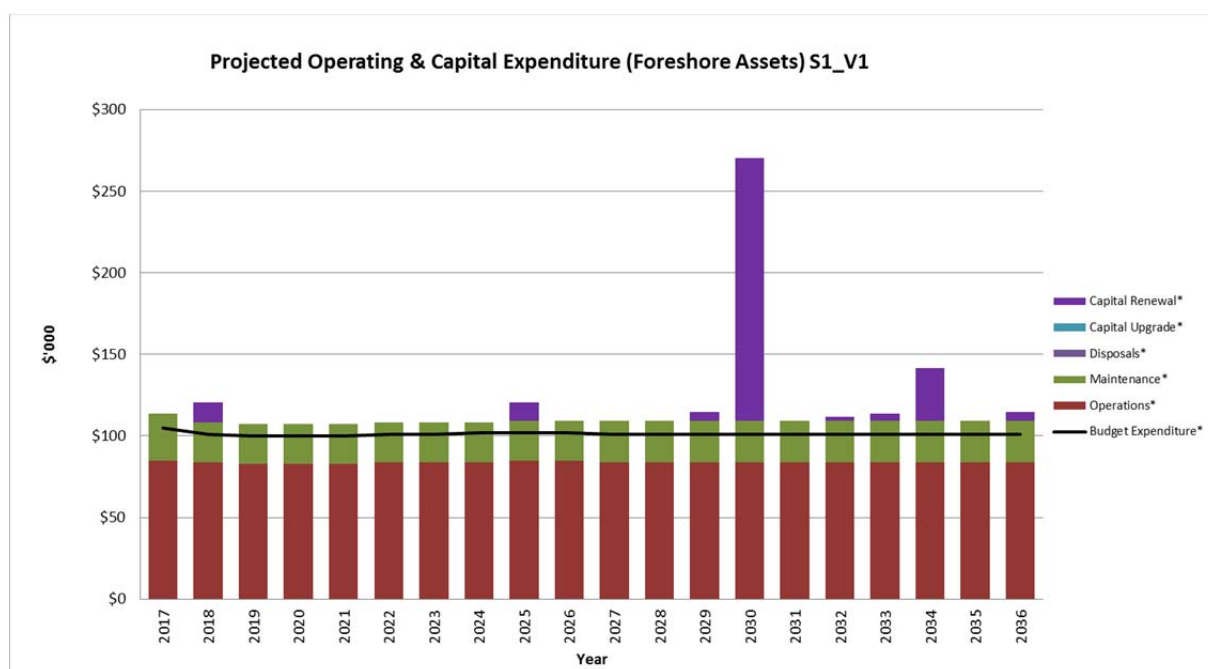
6. FINANCIAL SUMMARY

This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available

6.1 Financial Statements and Projections

The financial projections are shown in Fig 7 for projected operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets). Note that all costs are shown in real values.

Figure 7: Projected Operating and Capital Expenditure (No Sharpe's Beach Master Plan)



6.1.1 Sustainability of service delivery

There are four key indicators for service delivery sustainability that have been considered in the analysis of the services provided by this asset category, these being the asset renewal funding ratio, long term life cycle costs/expenditures and medium term projected/budgeted expenditures over 5 and 10 years of the planning period.

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio¹² 0%

The Asset Renewal Funding Ratio is the most important indicator and reveals that over the next 10 years, Council is forecasting that it will have 0% of the funds required for the optimal renewal and replacement of its assets.

¹² AIFMG, 2012, Version 1.3, Financial Sustainability Indicator 4, Sec 2.6, p 2.16

Long term - Life Cycle Cost

- Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the longest asset life. Life cycle costs include operations and maintenance expenditure and asset consumption (depreciation expense).
- The expected 10 year life cycle expenditure is \$132k per year (10-year average operations, maintenance and depreciation expense).
- The 10 year life cycle budget is \$101k (10-year average budgeted operations, maintenance and capital renewal expenditure). This value will heavily depend on the timing of asset renewals.
- The difference between the average 10 year lifecycle budget and the average 10 year lifecycle expenditure gives an indication to the sustainability. The life cycle gap for services covered by this asset management plan is -\$31k per year
- Life cycle expenditure is 77% of life cycle costs giving a life cycle sustainability index of 0.77
- The life cycle costs and life cycle expenditure comparison highlights any difference between present outlays and the *average* cost of providing the service over the long term. If the life cycle expenditure is less than that life cycle budget, it is most likely that outlays will need to be increased or cuts in services made in the future.

Medium term – 10 year financial planning period

- This asset management plan identifies the projected operations, maintenance and capital renewal expenditures required to provide an agreed level of service to the community over a 10-year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.
- These projected expenditures may be compared to budgeted expenditures in the 10-year period to identify any funding shortfall. In a core asset management plan, a gap is generally due to increasing asset renewals for ageing assets.
- 10-year average operations, maintenance and capital renewal expenditure required over the first 10-year planning period is \$111k per year.
- 10 year average operations, maintenance and capital renewal budget is \$101k per year
- This gives a 10-year funding deficit of -\$10k per year and a 10-year sustainability indicator of 91%.

Medium Term – 5 year financial planning period

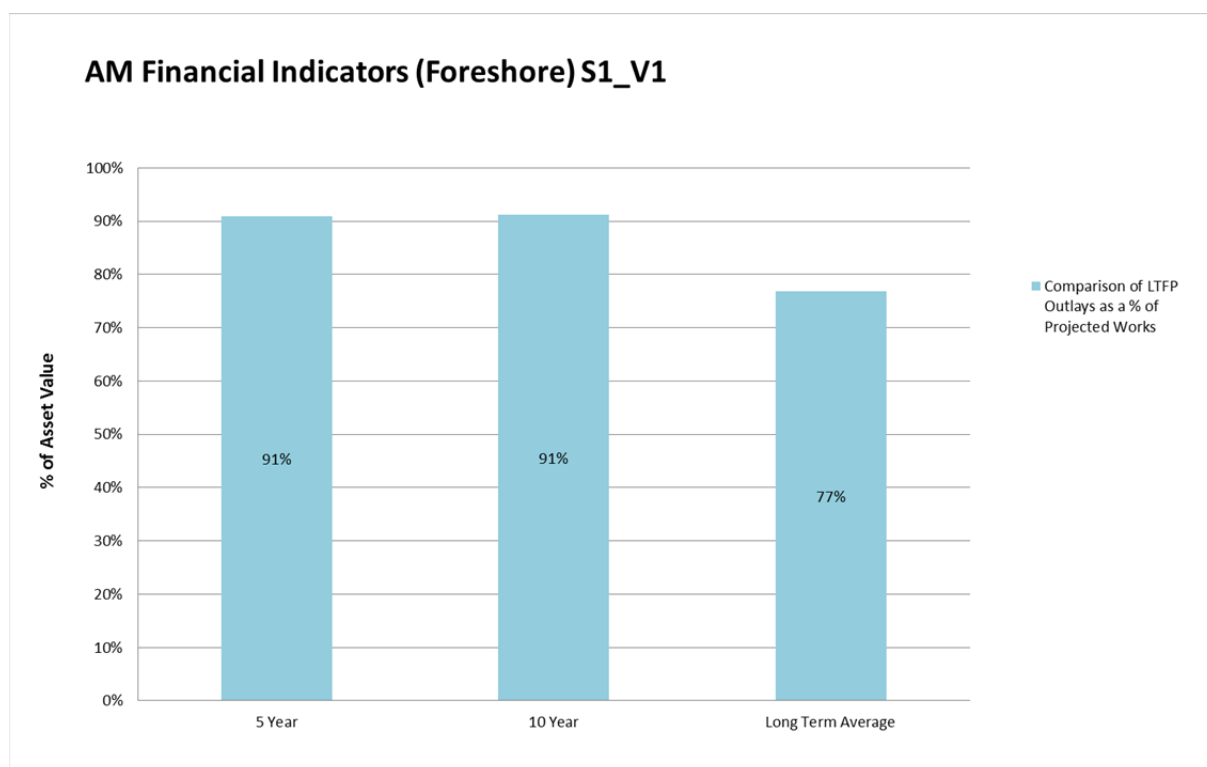
- 5-year average operations, maintenance and capital renewal expenditure required over the first 5 years of the planning period is \$111k per year.
- 5-year average operations, maintenance and capital renewal budget is \$101k per year
- This gives a 5-year funding deficit of -\$10k.per year and a 5-year sustainability indicator of 91%

Table 6.1.1 & Figure 7A summarises these indicators over the 10 year planning period and for the long term life cycle.

Table 6.1.1: Sustainability Indicators (no Sharpe's Beach Masterplan)

Strategy S1_V1	
Asset Renewal Funding Ratio	
Asset Renewal Funding Ratio	0%
Long Term - Life Cycle Costs	
Life Cycle Cost [average 10 years projected O, M expenditure and depreciation.]	\$132
Life Cycle Exp [average 10 years LTFP budget O, M & capital renewal expenditure]	\$101
Life Cycle Gap [life cycle expenditure – life cycle cost (-ve = gap)]	-\$31
Life Cycle Indicator [life cycle expenditure / life cycle cost]	77%
Medium Term - 10 year financial planning period	
10 yr Ops, Maint & Renewal Projected Expenditure	\$111
10 yr Ops, Maint & Renewal LTFP Budget Exp	\$101
10 year financing shortfall [10 yr proj exp - LTFP Budget exp]	-\$10
10 year financing indicator [LTFP Budget exp / 10 yr proj exp]	91%
Medium Term – 5 year financial planning period	
5 yr Ops, Maint & Renewal Projected Expenditure	\$111
5 yr Ops, Maint & Renewal LTFP Budget Exp	\$101
5 year financing shortfall [5 yr proj exp - LTFP Budget exp]	-\$10
5 year financing indicator [LTFP Budget exp / 5 yr proj exp]	91%

Figure 7A: Asset Management Financial Indicators (No Sharpe's Beach Master Plan)



Providing services from infrastructure in a sustainable manner requires the matching and managing of service levels, risks, projected expenditures and financing to achieve a financial indicator of approximately 1.0 for the first years of the asset management plan and ideally over the 10-year life of the Long Term Financial Plan.

Figure 8 shows the projected asset renewal and replacement expenditure over the 20 years of the AM Plan. The projected asset renewal and replacement expenditure is compared to renewal and replacement expenditure in the capital works program, which is accommodated in the long term financial plan

Figure 8: Projected and LTFP Budgeted Renewal Expenditure (No Sharpe's Beach Master Plan)

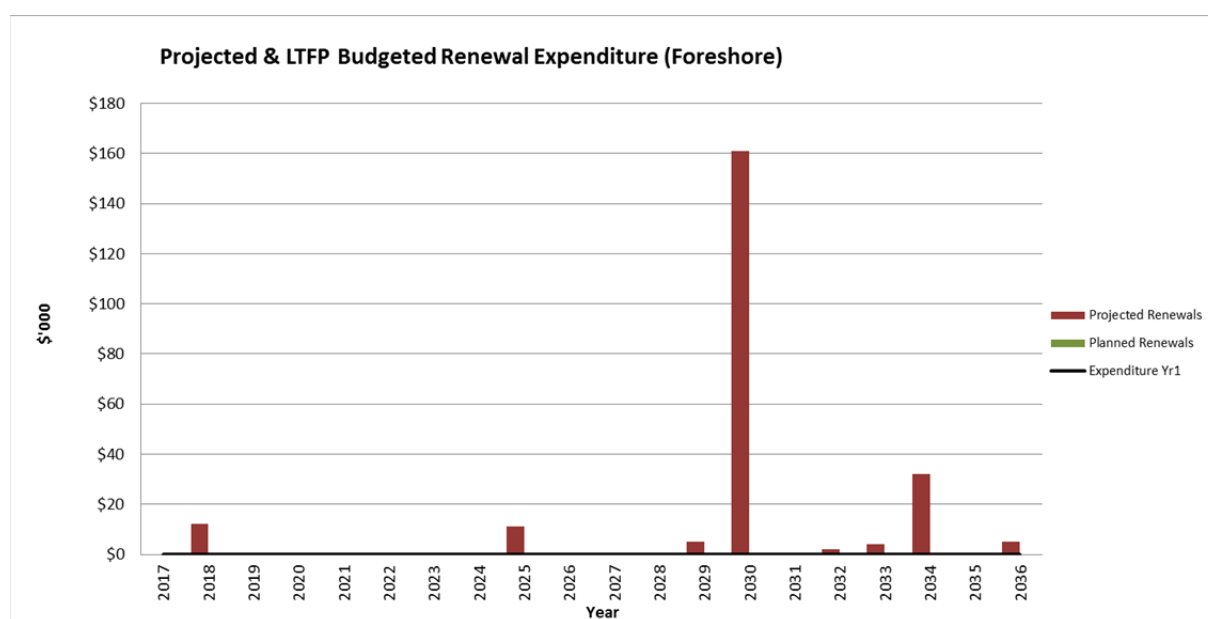


Table 6.1.4 shows the shortfall between projected renewal and replacement expenditures and expenditure accommodated in long term financial plan. Budget expenditures accommodated in the long term financial plan or extrapolated from current budgets are shown in Appendix D.

Table 6.1.4: Projected and LTFP Budgeted Renewals and Financing Shortfall

Year	Projected Renewals (\$'000)	LTFP Renewal Budget (\$'000)	Renewal Financing Shortfall (\$'000) (-ve Gap, +ve Surplus)	Cumulative Shortfall (\$'000) (-ve Gap, +ve Surplus)
2016	\$0	\$0	\$0	\$0
2017	\$12	\$0	-\$12	-\$12
2018	\$0	\$0	\$0	-\$12
2019	\$0	\$0	\$0	-\$12
2020	\$0	\$0	\$0	-\$12
2021	\$0	\$0	\$0	-\$12
2022	\$0	\$0	\$0	-\$12
2023	\$0	\$0	\$0	-\$12
2024	\$11	\$0	-\$11	-\$23
2025	\$0	\$0	\$0	-\$23

Year	Projected Renewals (\$000)	LTFP Renewal Budget (\$000)	Renewal Financing Shortfall (\$000) (-ve Gap, +ve Surplus)	Cumulative Shortfall (\$000) (-ve Gap, +ve Surplus)
2026	\$0	\$0	\$0	-\$23
2027	\$0	\$0	\$0	-\$23
2028	\$5	\$0	-\$5	-\$28
2029	\$161	\$0	-\$161	-\$189
2030	\$0	\$0	\$0	-\$189
2031	\$2	\$0	-\$2	-\$191
2032	\$4	\$0	-\$4	-\$195
2033	\$32	\$0	-\$32	-\$227
2034	\$0	\$0	\$0	-\$227
2035	\$5	\$0	-\$5	-\$232

Note: A negative shortfall indicates a financing gap, a positive shortfall indicates a surplus for that year.

Providing services in a sustainable manner will require matching of projected asset renewal and replacement expenditure to meet agreed service levels with **the corresponding** capital works program accommodated in the long term financial plan.

A gap between **projected asset renewal/replacement expenditure and amounts accommodated in the LTFP** indicates that **further work is required on reviewing service levels in the AM Plan (including possibly revising the LTFP)** before finalising the asset management plan to manage required service levels and funding **to eliminate any funding gap**.

We will manage the 'gap' by developing this asset management plan to provide guidance on future service levels and resources required to provide these services, and review future services, service levels and costs with the community.

6.1.2 Projected expenditures for long term financial plan

Table 6.1.5 shows the projected expenditures for the 10 year long term financial plan.

Expenditure projections are in 2016 real values.

Table 6.1.6: Projected Expenditures for Long Term Financial Plan (\$000) S2_V1

Year	Operations (\$000)	Maintenance (\$000)	Projected Capital Renewal (\$000)	Capital Upgrade/ New (\$000)	Disposals (\$000)
2017	\$85	\$29	\$0	\$0	\$0
2018	\$84	\$25	\$12	\$0	\$0
2019	\$83	\$25	\$0	\$0	\$0
2020	\$83	\$25	\$0	\$0	\$0
2021	\$83	\$25	\$0	\$0	\$0
2022	\$84	\$25	\$0	\$0	\$0
2023	\$84	\$25	\$0	\$0	\$0
2024	\$84	\$25	\$0	\$0	\$0
2025	\$85	\$25	\$11	\$0	\$0

Year	Operations (\$000)	Maintenance (\$000)	Projected Capital Renewal (\$000)	Capital Upgrade/ New (\$000)	Disposals (\$000)
2026	\$85	\$25	\$0	\$0	\$0

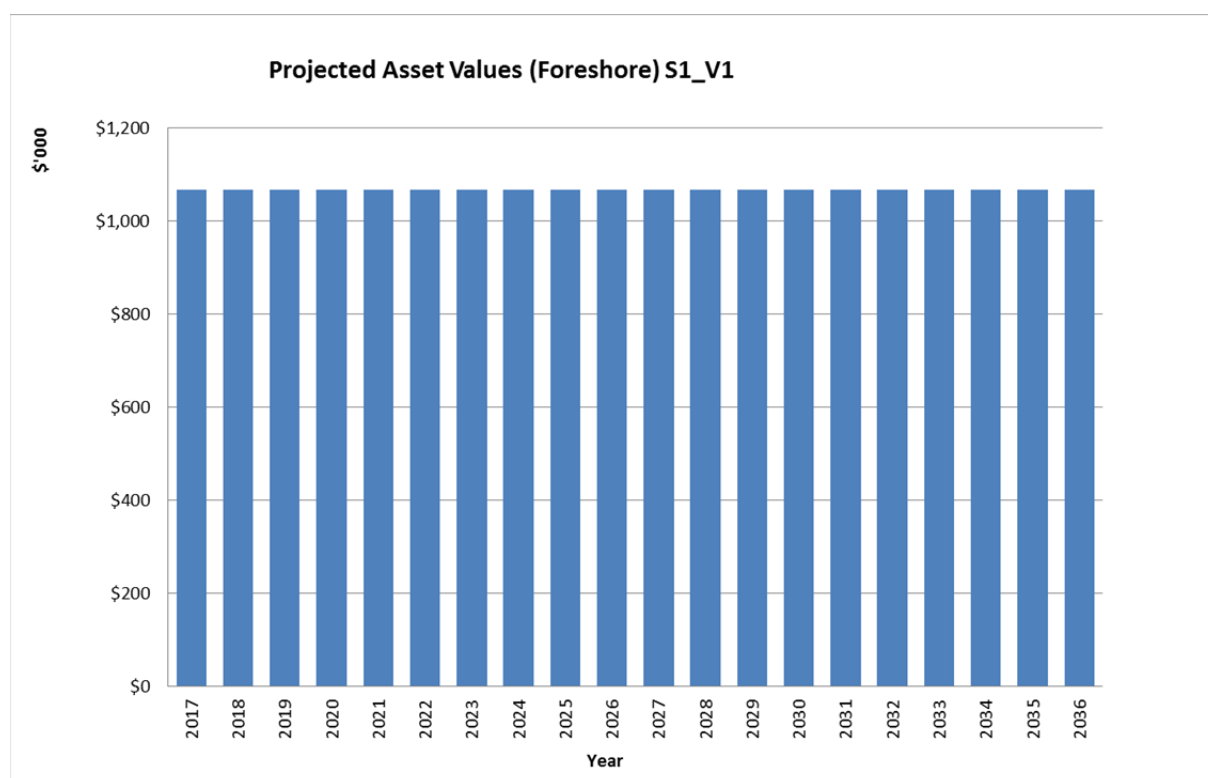
6.2 Funding Strategy

After reviewing service levels, as appropriate to ensure ongoing financial sustainability projected expenditures identified in Section 6.1.2 will be accommodated in the Council's 10 year long term financial plan.

6.3 Valuation Forecasts

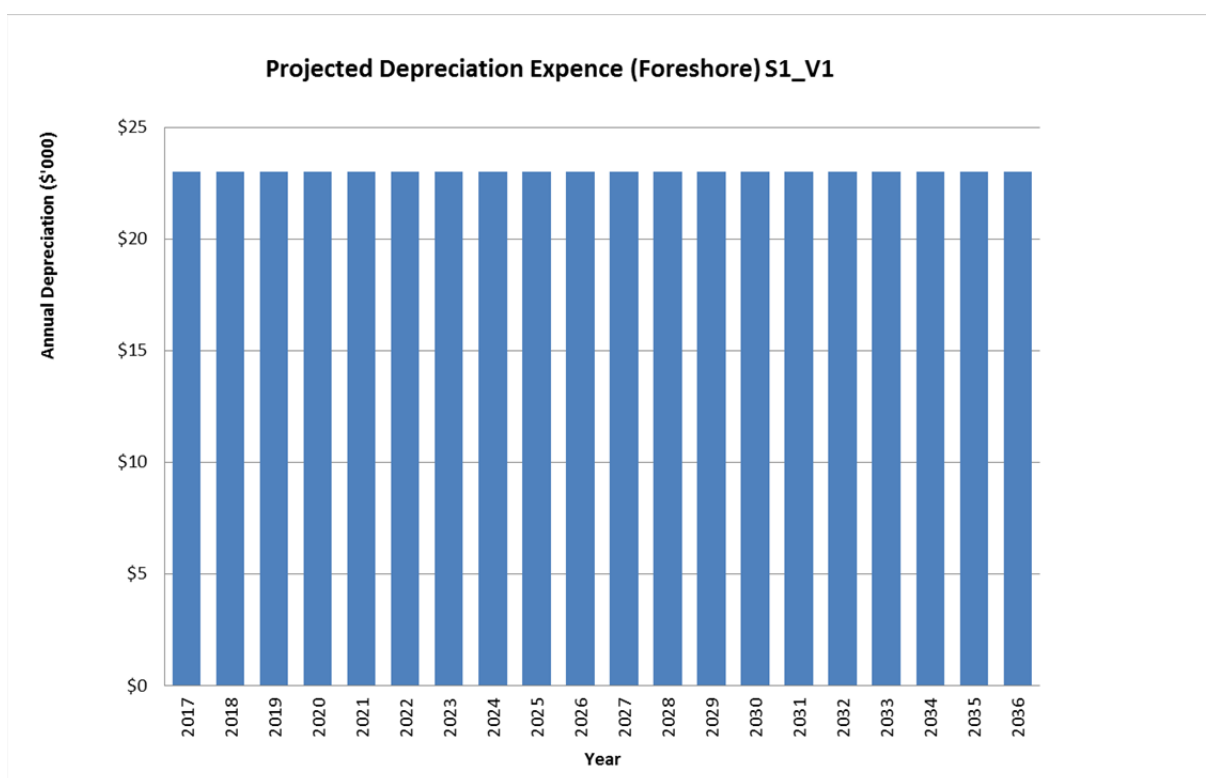
Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. Figure 9 shows the projected replacement cost asset values over the planning period in real values.

Figure 9: Projected Asset Values (No Sharpe's Beach Master Plan)



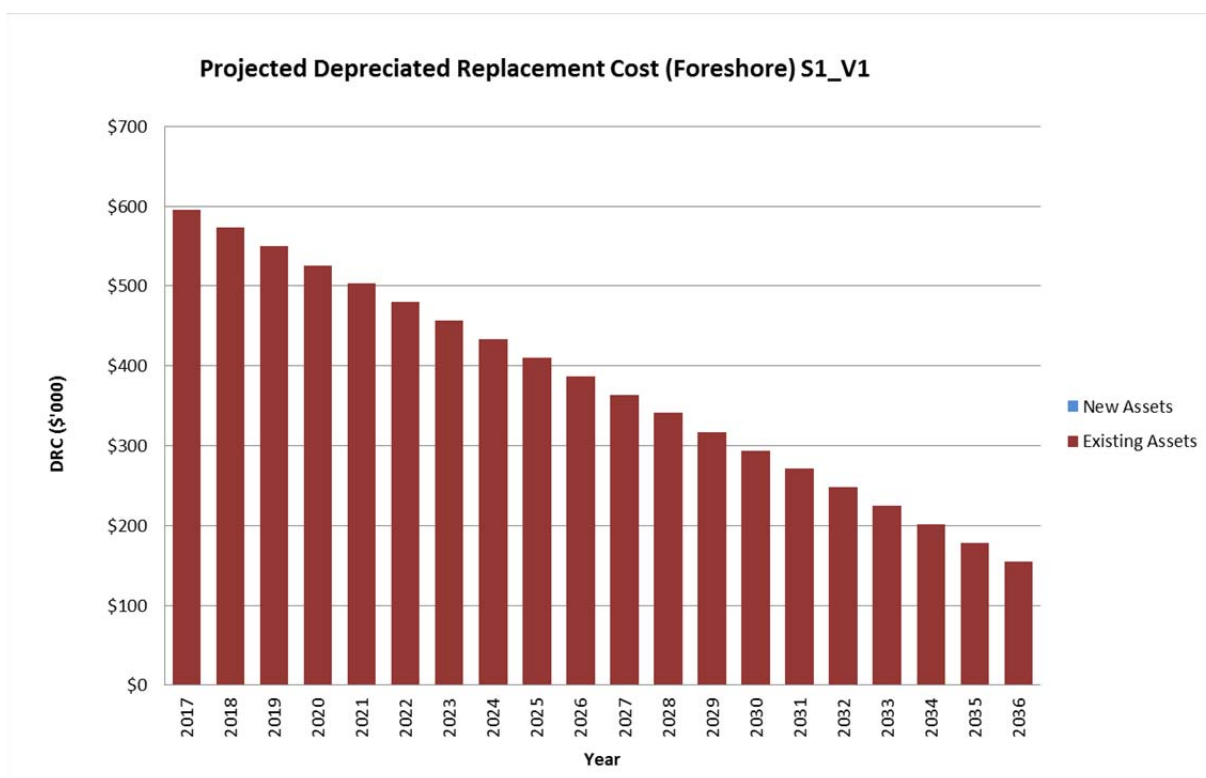
Depreciation expense values are forecast in line with asset values as shown in Figure 10.

Figure 10: Projected Depreciation Expense (No Sharpe's Beach Master Plan)



The depreciated replacement cost will vary over the forecast period depending on the rates of addition of new assets, disposal of old assets and consumption and renewal of existing assets. Forecast of the assets' depreciated replacement cost is shown in Figure 11.

Figure 11: Projected Depreciated Replacement Cost (No Sharpe's Beach Master Plan)



6.4 Key Assumptions made in Financial Forecasts

This section details the key assumptions made in presenting the information contained in this asset management plan and in preparing forecasts of required operating and capital expenditure and asset values, depreciation expense and carrying amount estimates. It is presented to enable readers to gain an understanding of the levels of confidence in the data behind the financial forecasts.

Key assumptions made in this asset management plan and risks that these may change are shown in Table 6.4.

Table 6.4: Key Assumptions made in AM Plan and Risks of Change

Key Assumptions	Risks of Change to Assumptions
Operational & maintenance expenditure is based on historical expenditure and assumes there will no significant change in this level of service	Low
The operational & maintenance costs associated with new assets created over the 20-year term of this document has been based on existing O&M expenditure per unit asset of existing	Low
That there will be no major technological change that creates dramatic changes the road & transport industry in terms of unit cost and treatment process.	Low
All works are undertaken to relevant manuals & Northern Rivers design guidelines	Medium to High
The useful lives & unit costs remain valid over the 5 year period to the next revaluation (with annual CPI)	Medium

6.5 Forecast Reliability and Confidence

The expenditure and valuations projections in this AM Plan are based on best available data. Currency and accuracy of data is critical to effective asset and financial management. Data confidence is classified on a 5 level scale¹³ in accordance with Table 6.5.

Table 6.5: Data Confidence Grading System

Confidence Grade	Description
A Highly reliable	Data based on sound records, procedures, investigations and analysis, documented properly and recognised as the best method of assessment. Dataset is complete and estimated to be accurate $\pm 2\%$
B Reliable	Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example some of the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation. Dataset is complete and estimated to be accurate $\pm 10\%$
C Uncertain	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated $\pm 25\%$
D Very Uncertain	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. Dataset may not be fully complete and most data is estimated or extrapolated. Accuracy $\pm 40\%$
E Unknown	None or very little data held.

The estimated confidence level for and reliability of data used in this AM Plan is shown in Table 6.5.1.

¹³ IPWEA, 2011, IIMM, Table 2.4.6, p 2|59.

Table 6.5.1: Data Confidence Assessment for Data used in AM Plan

Data	Confidence Assessment	Comment
Demand drivers	C Uncertain	Growth rates vary from year to year
Growth projections	B Reliable	Based on population models developed by Strategic Services
Operations expenditures	B Reliable	Based on current expenditure
Maintenance expenditures	C Uncertain	Based on current expenditure, models to be refined
Projected Renewal expense.		
- Asset values	B Reliable	
- Asset residual values	A Highly reliable	There are no residual values
- Asset useful lives	B Reliable	
- Condition modelling	C Uncertain	Will be refined as more data is collected
- Network renewals	B Reliable	Models refined as more project data is collated
- Defect repairs	B Reliable	Defects identified & programmed in Reflect database
Upgrade/New expenditures	C Uncertain	
Disposal expenditures	E Unknown	Disposals are very rare

Over all data sources the data confidence is assessed as Medium confidence level for data used in the preparation of this AM Plan.

7. PLAN IMPROVEMENT AND MONITORING

7.1 Status of Asset Management Practices

7.1.1 Accounting and financial systems

The accounting & financial system used by Ballina Council is Authority v6.9. The financial applications are designed to interact seamlessly with the broader Authority Enterprise Application Suite that incorporates Asset & Infrastructure Management, Customer Request Management, integration with TRIM (electronic documents & records management system), Land Information, Human Resources, Payroll, and Executive Management software applications.

The Authority application is designed specifically for Local Government and the inherent single database design eliminates duplication of data throughout the enterprise application.

- General Ledger
- Accounts Payable
- Purchasing and online requisitioning
- Payroll
- Plant & Fleet Management

7.1.2 Accountabilities for accounting & financial systems

Module	Task	Officer
Budget	Draft	Finance Manager + Line Managers
	Review	Finance Manager + Line Managers
	Finalise	Finance Manager + Line Managers
	Approval + adopt	Council
General Ledger	Establish	Finance Manager
	Finalise	Finance Manager
End of Quarter Process	Capitalise	Accountant + Asset Engineer
	Depreciation	Accountant + Asset Engineer
	Review control accounts	Accountant
End of Year Process	Indexation	Accountant + Asset Engineer
	Roll Over	Accountant + Asset Engineer
	Revaluations	Accountant + Asset Engineer

7.1.3 Accounting standards and regulations

- AAS27 - Australian Accounting Standard
- AASB101 - Presentation of Financial Statements
- AASB116 - Property Plant & Equipment
- AASB13 - Fair Value Measurement

7.1.4 Capital/maintenance threshold

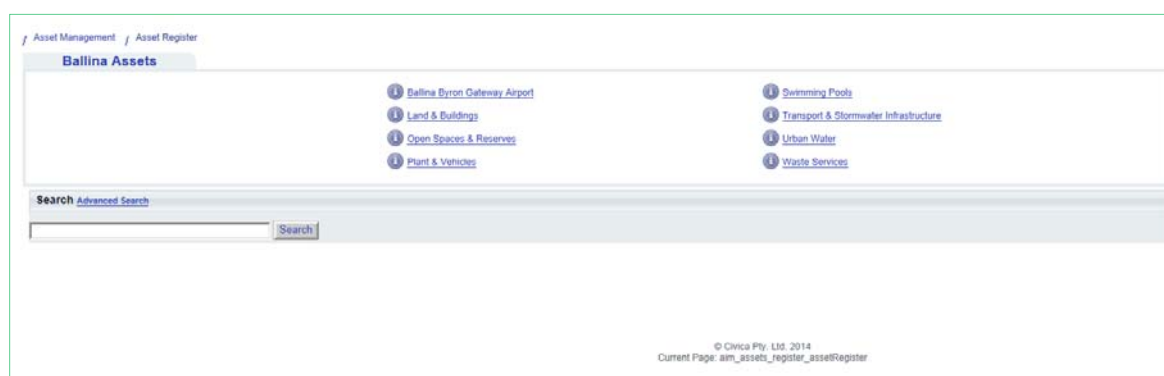
The Capital / maintenance threshold for plant & equipment assets is \$5,000 and for \$10,000 for built structures, water and stormwater reticulation assets.

7.1.5 Asset Management System

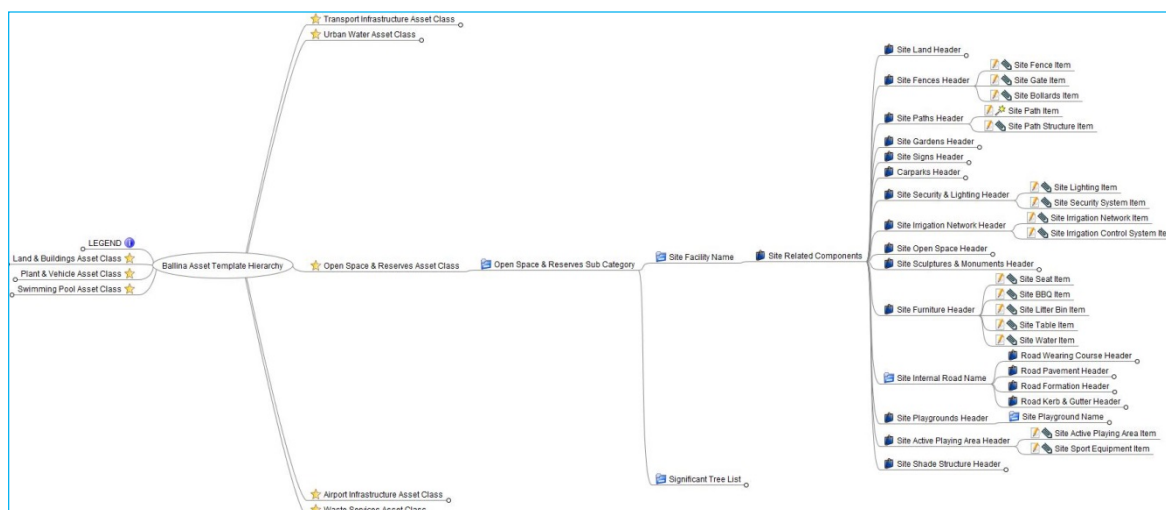
Ballina Council has adopted the Authority Asset Management (AM) System. It allows real time integration to Authority Financials, Customer Request Management, TRIM & GIS.

7.1.6 Asset Registers

The asset register exists within Authority and is accessible by all staff with at a minimum of an 'enquiry' user role assigned to their Authority account. There are currently 8 asset main groups, which includes 'Transport & Storm water infrastructure', and data is organized in a user friendly 'parent, child, sibling' format. Users may drill down through the levels by clicking on the blue hyperlink text or click on the ⓘ icon to view attribute information.

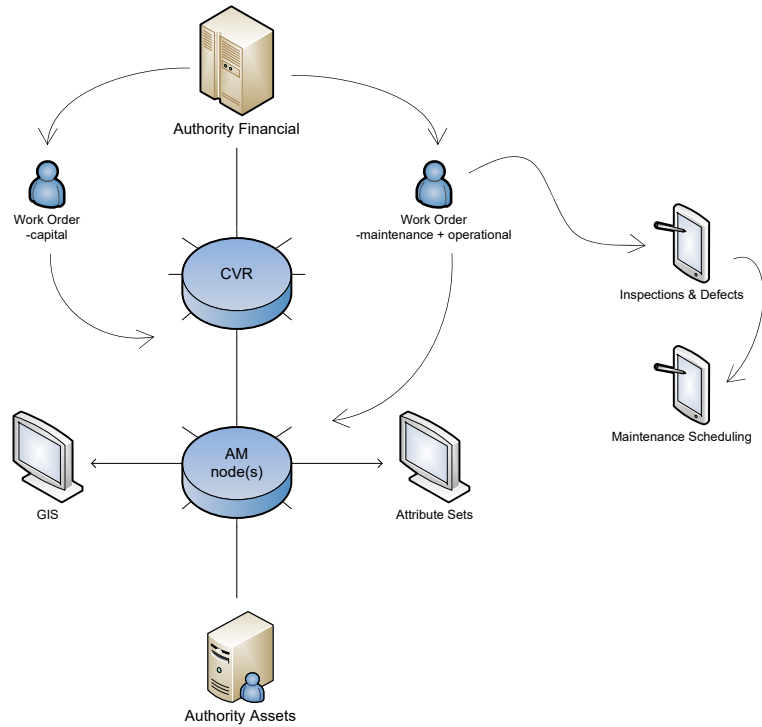


The OSR asset hierarchy is summarised below.



7.1.7 Linkage from Asset Management to Financial System

The Asset Management and the Financial System are linked through the CVR (capital value record)



i.as020 - Asset Depreciation / Valuation - Ballina Shire Council - 13724 - 6.9

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1 of 2

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Asset Details

Asset Number 71431

Kerb & Gutter (41:054:010) iL

Valuation Code Accounting Valuation - General Fund

Asset Year 2015

Commission Date 30/06/2014

Aquisition Date 30/06/2014

Function 14 TRANSPORT & COMMUNICATION

Activity 141 Urban Roads: Local

Sub Activity

Type 40 Infrastructure

Sub Type 1 403 Kerb & Gutter

Sub Type 2

Sub Type 3

Valuation Basis

Valuer Name No

Valuation Frequency 0

Value at ☒ Cost ☐ Valuation

Depreciation Details

Depreciation Method Straight Line

Useful Life 70.00

Residual Life 69.00

Depreciation Rate 1.4286

Depreciation Yly Chg 144.00

Depreciation Period Monthly

Residual Value 0.00

	Value	Quantity
At Cost	10080.00	
Original Purchase	10080.00	112.00
Begin Yr Writ. Down	10080.00	112.00
Current Writ. Down	10080.00	112.00

	Date	LTD Value	Qty	YTD Value	Qty
Depreciation		0.00		0.00	
Revaluation		0.00		0.00	
Revaluation Depreciation W/B				0.00	
Last Addition		10080.00	112.00	0.00	0.00
Sales		0.00	0.00	0.00	0.00
Sales Depreciation W/B				0.00	
Disposals		0.00	0.00	0.00	0.00
Profit/Loss		0.00		0.00	
Impairments		0.00	0.00	0.00	0.00

Created 2014-08-14 08:52:34 Modified 2014-10-16 16:43:39 Operator 229737 Linda Coulter

CVR: 1

The CVR contains financial information for a single asset (cloned CVR) or for a group of similar assets (linked CVR). This information includes

- CVR id number
- Funding source (General, Water or Sewer)
- Commission date
- Depreciation method
- Useful Life (years)
- Residual life (years)
- Depreciation rate (%)
- Residual Value
- Replacement cost
- Written down value
- Revaluation information
- Function / Activity / Sub-activity / Type / Sub-type allocations & related control accounts.

The historical information is retained each year when the end of financial year rollover is performed for all assets. This historical data can be displayed within the CVR record. Historical CVR information is locked from any form of updating. Each CVR id number is unique and is never reused, even after asset disposal.

The key to the linkages between Authority Assets & Authority Finance, GIS & the Plant System is the development of linkage rules assigned to the Asset Templates. These rules define where an asset fits within the asset hierarchy, which CVR clone template it should copy along with itself to create a new Asset-CVR pair and which attribute information sets are made available to the new asset.

7.1.8 Accountabilities for Asset Management System and Data Maintenance

Module	Task	Officer
Asset hierarchy	Add / refine rules	Asset Engineer
Asset Creation	Define + load	Asset Engineer
Attribute Sets	Definition	Asset Engineer + advice from relevant line manager
	Setup + loading	Asset Engineer
	Updating	Section asset officer -noting guidelines set by Asset Engineer
Document & Files	Linking from TRIM	Section asset officer -noting guidelines set by Asset Engineer
Work Orders	Task definition	Asset Engineer + advice from Finance Manager
	Setup	Asset Engineer
	Open	Asset Engineer + Finance Officer
	Close	Asset Engineer + Finance Officer
	Capitalise	Asset Engineer + Accountant
Data review / refine	Useful Life	Asset Engineer –audited
	Unit Rates	Asset Engineer –audited
	Treatment Costs	Asset Engineer –audited

7.2 Improvement Plan

The asset management improvement plan generated from this asset management plan is shown in Table 7.2.

Table 7.2: Improvement Plan

Task No	Task	Responsibility	Resources Required	Timeline
1	Collection of attribute information as per attribute sets	Assets	5 days	June 2017
2	Links to GIS	Assets + GIS	10 days	March 2018
3	Development of Maintenance & Operational Work Orders	Assets	10 days	June 2018
4	Development of Maintenance Scheduling	Assets	10 days	June 2018
5	Development of Inspect & Defect Programming	Assets	20 days	June 2018
6				
7				
8				
9				
10				

7.3 Monitoring and Review Procedures

This asset management plan will be reviewed during annual budget planning processes and amended to recognise any material changes in service levels and/or resources available to provide those services as a result of budget decisions.

The AM Plan will be updated annually to ensure it represents the current service level, asset values, projected operations, maintenance, capital renewal and replacement, capital upgrade/new and asset disposal expenditures and projected expenditure values incorporated into Councils long term financial plan.

The AM Plan has a life of 4 years and is due for complete revision and updating on December 2020.

7.4 Performance Measures

The effectiveness of the asset management plan can be measured in the following ways:

- The degree to which the required projected expenditures identified in this asset management plan are incorporated into Council's long term financial plan,
- The degree to which 1-5 year detailed works programs, budgets, business plans and organisational structures take into account the 'global' works program trends provided by the asset management plan,
- The degree to which the existing and projected service levels and service consequences (what we cannot do), risks and residual risks are incorporated into the Council's Strategic Plan and associated plans,
- **The Asset Renewal Funding Ratio achieving the target of 1.0.**

8. REFERENCES

Ballina Council, Community Strategic Plan 2013-2023

Ballina Council, Resourcing Strategy

Ballina Council, Delivery Program & Operational Plan 2014/15 – 2017/18

Ballina Council, Long Term Financial Plan 2014/15 – 2023/24

IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/namsplus.

IPWEA, 2009, 'Australian Infrastructure Financial Management Guidelines', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/AIFMG.

IPWEA, 2011, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM

9. APPENDICES

Appendix A	Maintenance Response Levels of Service
Appendix B	Projected 10 year Capital Renewal and Replacement Works Program
Appendix C	Projected 10 year Capital Upgrade/New Works Program
Appendix D	LTFP Budgeted Expenditures Accommodated in AM Plan
Appendix E	Abbreviations
Appendix F	Glossary

Appendix A Projected 20 year Capital Renewal and Replacement Works Program

Ballina SC - Report 6 - Appendix B 10 year Renewal & Replacement Program (Foreshore Assets)								
Asset ID	Sub Category	Asset Name	From	To	Remaining Life (Years)	Planned Renewal Year	Renewal Cost (\$)	Useful Life (Years)
31220	LAND, BUILDINGS & STRUCTURES: STRUCTURES -OSR	Viewing Platform: Angels Beach Foreshore # 4 -Structure	Angels Beach Foreshore (Ballina East)	Viewing Platform 04	1	2018	\$12,000	40
Subtotal							\$12,000	
31302	LAND, BUILDINGS & STRUCTURES: STRUCTURES -OSR	Norman Sharpe Rotary Lookout: Railing	Richmond Park (Ballina East)	Norman Sharpe Rotary Lookout	8	2025	\$4,128	25
33971	Parks -(with playgrounds)	Picnic Table	OSR: Furniture	Lions Park (Lennox Head)	8	2025	\$1,253	25
33300	Reserves	Bench Seat	OSR: Furniture	SLSC Clubhouse -old (Ballina East)	8	2025	\$415	25
33298	Reserves	Picnic Table	OSR: Furniture	SLSC Clubhouse -old (Ballina East)	8	2025	\$831	25
33299	Reserves	Picnic Table	OSR: Furniture	SLSC Clubhouse -old (Ballina East)	8	2025	\$831	25
32015	Sporting Facilities	Bench Seat # 1 (opposite Foster St)	OSR: Furniture	Lake Ainsworth Public Reserve (Lennox Head)	8	2025	\$415	25
32016	Sporting Facilities	Bench Seat # 2 (north of Foster St)	OSR: Furniture	Lake Ainsworth Public Reserve (Lennox Head)	8	2025	\$415	25
32017	Sporting Facilities	Bench Seat # 3 (@ Ross St Carpark)	OSR: Furniture	Lake Ainsworth Public Reserve (Lennox Head)	8	2025	\$415	25
32018	Sporting Facilities	Bench Seat # 4 (@ Ross St Carpark)	OSR: Furniture	Lake Ainsworth Public Reserve (Lennox Head)	8	2025	\$415	25
32019	Sporting Facilities	Picnic Table # 1 (SLSC)	OSR: Furniture	Lake Ainsworth Public Reserve (Lennox Head)	8	2025	\$831	25
32020	Sporting Facilities	Picnic Table # 2 (SLSC)	OSR: Furniture	Lake Ainsworth Public Reserve (Lennox Head)	8	2025	\$831	25
Subtotal							\$10,780	
34251	OSR: Water Infrastructure	Drinking Bubbler: Ross Park (Lennox Head)	OSR: Water Infrastructure	Ross Park (Lennox Head)	12	2029	\$3,955	20
34249	Parks -(with playgrounds)	Bin # 1	OSR: Furniture	Ross Park (Lennox Head)	12	2029	\$439	20
34250	Parks -(with playgrounds)	Bin # 2	OSR: Furniture	Ross Park (Lennox Head)	12	2029	\$439	20
Subtotal							\$4,834	
31259	LAND, BUILDINGS & STRUCTURES: STRUCTURES -OSR	Viewing Platform: Angels Beach Foreshore # 3 -Walkway	Angels Beach Foreshore (Ballina East)	Viewing Platform 03	13	2030	\$42,000	40
33303	OSR: Water Infrastructure	Beach Shower Railing: Old SLSC Clubhouse (Ballina East)	OSR: Water Infrastructure	SLSC Clubhouse -old (Ballina East)	13	2030	\$1,246	30
33972	OSR: Water Infrastructure	Beach Shower: Lions Park (Lennox Head)	OSR: Water Infrastructure	Lions Park (Lennox Head)	13	2030	\$2,500	30
33301	OSR: Water Infrastructure	Beach Shower: Old SLSC Clubhouse (Ballina East)	OSR: Water Infrastructure	SLSC Clubhouse -old (Ballina East)	13	2030	\$4,154	30
33974	Parks -(with playgrounds)	Timber Railing -Beach Access 1 -LHS	OSR: fences & gates	Lions Park (Lennox Head)	13	2030	\$4,723	30
33975	Parks -(with playgrounds)	Timber Railing -Beach Access 1 -RHS	OSR: fences & gates	Lions Park (Lennox Head)	13	2030	\$4,723	30
33976	Parks -(with playgrounds)	Timber Railing -Beach Access 2 -LHS	OSR: fences & gates	Lions Park (Lennox Head)	13	2030	\$12,595	30
33977	Parks -(with playgrounds)	Timber Railing -Beach Access 2 -RHS	OSR: fences & gates	Lions Park (Lennox Head)	13	2030	\$10,795	30
33978	Parks -(with playgrounds)	Timber Railing -Beach Access 3 -LHS	OSR: fences & gates	Lions Park (Lennox Head)	13	2030	\$5,173	30
33979	Parks -(with playgrounds)	Timber Railing -Beach Access 3 -RHS	OSR: fences & gates	Lions Park (Lennox Head)	13	2030	\$4,948	30
33980	Parks -(with playgrounds)	Timber Railing -Beach Access 4 -LHS	OSR: fences & gates	Lions Park (Lennox Head)	13	2030	\$5,173	30
33981	Parks -(with playgrounds)	Timber Railing -Beach Access 4 -RHS	OSR: fences & gates	Lions Park (Lennox Head)	13	2030	\$5,173	30
33987	Parks -(with playgrounds)	Timber Railing -south end of Carpark	OSR: fences & gates	Lions Park (Lennox Head)	13	2030	\$13,944	30
33986	Parks -(with playgrounds)	Timber Railing -SR 30.047 -LHS	OSR: fences & gates	Lions Park (Lennox Head)	13	2030	\$23,615	30
33985	Parks -(with playgrounds)	Timber Railing -SR 30.047 -RHS	OSR: fences & gates	Lions Park (Lennox Head)	13	2030	\$20,242	30
Subtotal							\$161,003	

Ballina SC - Report 6 - Appendix B 10 year Renewal & Replacement Program (Foreshore Assets)								
Asset ID	Sub Category	Asset Name	From	To	Remaining Life (Years)	Planned Renewal Year	Renewal Cost (\$)	Useful Life (Years)
160391	Reserves	Picnic Table # 1	OSR: Furniture	Lighthouse Lookout Reserve (Ballina East)	15	2032	\$831	30
160400	Sporting Facilities	Bench Seat # 5 (north of Ross St Carpark)	OSR: Furniture	Lake Ainsworth Public Reserve (Lennox Head)	15	2032	\$527	30
160401	Sporting Facilities	Picnic Table # 3 (SLSC)	OSR: Furniture	Lake Ainsworth Public Reserve (Lennox Head)	15	2032	\$831	30
Subtotal							\$2,189	
160393	Reserves	Bench Seat # 2	OSR: Furniture	Lighthouse Lookout Reserve (Ballina East)	16	2033	\$527	25
160394	Reserves	Bench Seat # 3	OSR: Furniture	Lighthouse Lookout Reserve (Ballina East)	16	2033	\$527	25
160395	Reserves	Bench Seat # 4	OSR: Furniture	Lighthouse Lookout Reserve (Ballina East)	16	2033	\$527	25
160396	Reserves	Bench Seat # 5	OSR: Furniture	Lighthouse Lookout Reserve (Ballina East)	16	2033	\$527	25
160397	Reserves	Bench Seat # 6	OSR: Furniture	Lighthouse Lookout Reserve (Ballina East)	16	2033	\$527	25
160398	Reserves	Bench Seat # 7	OSR: Furniture	Lighthouse Lookout Reserve (Ballina East)	16	2033	\$527	25
160399	Reserves	Bench Seat # 8	OSR: Furniture	Lighthouse Lookout Reserve (Ballina East)	16	2033	\$527	25
Subtotal							\$3,692	
151489	Reserves	Bollards (7 Mile Beach) (opposite Mackney Lane)	OSR: Furniture	Lennox Park (Lennox Head)	17	2034	\$32,389	20
Subtotal							\$32,389	
158321	OSR: Water Infrastructure	Drinking Bubbler -refill station: Shelly Beach Carpark	OSR: Water Infrastructure	Shelly Beach Carpark	19	2036	\$5,202	20
Subtotal							\$5,202	
Program Total							\$232,089	

Appendix B (aspirational) Upgrade/Expenditure/New 10 year Capital Works Program

Ballina Shire Council Projected Capital Upgrade/New Works Program - Foreshore Assets_S2_V1			
			(\$000)
Year	Item	Description	Estimate
2018	1	Sharpes Beach MASTERPLAN: Detailed Survey & Design	\$10
2018		Total	\$10
Year	Item	Description	Estimate
2020	1	Sharpes Beach MASTERPLAN: Dune Restoration	\$100
	2	Sharpes Beach MASTERPLAN: Dune Restoration Fencing (300 m)	\$45
	3	Sharpes Beach MASTERPLAN: Drainage (4m wide infiltration Swale in carpark)	\$30
	4	Sharpes Beach MASTERPLAN: Drainage (rock drainage Swale)	\$20
	5	Sharpes Beach MASTERPLAN: Drainage (infiltration basin)	\$20
	6	Sharpes Beach MASTERPLAN: Drainage (reticulation 60m + 2 SWP)	\$21
2020		Total	\$236
Year	Item	Description	Estimate
2021	1	Sharpes Beach MASTERPLAN: Formalised Carpark (pavement: 3,850 sq.m - 78 spaces)	\$327
	2	Sharpes Beach MASTERPLAN: Formalised Carpark (bollard & wheel stops)	\$10
	3	Sharpes Beach MASTERPLAN: Formalised Carpark (traffic islands: 30 sq.m)	\$8
	4	Sharpes Beach MASTERPLAN: Formalised Carpark (gate to control access -overflow)	\$5
	5	Sharpes Beach MASTERPLAN: Formalised Carpark (gravel reinforced grass # 1 -500 sq.m)	\$13
	6	Sharpes Beach MASTERPLAN: Formalised Carpark (gravel reinforced grass # 2 -965 sq.m)	\$24
	7	Sharpes Beach MASTERPLAN: FWD Beach Access Track (160 sq.m)	\$64
	8	Sharpes Beach MASTERPLAN: Pedestrian Beach Access Track # 1 (20 sq.m)	\$30
	9	Sharpes Beach MASTERPLAN: Pedestrian Beach Access Track # 2 (30 sq.m)	\$12
2021		Total	\$492
Year	Item	Description	Estimate
2022	1	Sharpes Beach MASTERPLAN: Surf Life Saving Observation Tower (12 sq.m)	\$42
	2	Sharpes Beach MASTERPLAN: Unisex Toilet (9 sq.m)	\$32
	3	Sharpes Beach MASTERPLAN: Surf Life Saving Equipment Storage Room (9 sq.m)	\$18
	4	Sharpes Beach MASTERPLAN: Beach Shower	\$5
	5	Sharpes Beach MASTERPLAN: timber Viewing Deck & Beach Access Walkway (25 sq.m)	\$25
2022		Total	\$122
Year	Item	Description	Estimate
2023	1	Sharpes Beach MASTERPLAN: Picnic Facilities (site # 1)	\$4
	2	Sharpes Beach MASTERPLAN: Picnic Facilities (site # 2)	\$4
	3	Sharpes Beach MASTERPLAN: Picnic Facilities (site # 3)	\$4
	4	Sharpes Beach MASTERPLAN: tree planting & site landscaping	\$30
2023		Total	\$42

Ballina Shire Council Projected Capital Upgrade/New Works Program - Foreshore Assets_S3_V1			
			(\$000)
Year	Item	Description	Estimate
2018	1	Sharpes Beach MASTERPLAN: Detailed Survey & Design	\$10
2018		Total	\$10
Year	Item	Description	Estimate
2020	1	Sharpes Beach MASTERPLAN: Dune Restoration	\$100
	2	Sharpes Beach MASTERPLAN: Dune Restoration Fencing (300 m)	\$45
2020		Total	\$145
Year	Item	Description	Estimate
2021	7	Sharpes Beach MASTERPLAN: FWD Beach Access Track (160 sq.m)	\$64
	8	Sharpes Beach MASTERPLAN: Pedestrian Beach Access Track # 1 (20 sq.m)	\$30
	9	Sharpes Beach MASTERPLAN: Pedestrian Beach Access Track # 2 (30 sq.m)	\$12
2021		Total	\$106
Year	Item	Description	Estimate
2022	1	Sharpes Beach MASTERPLAN: Surf Life Saving Observation Tower (12 sq.m)	\$42
	4	Sharpes Beach MASTERPLAN: Beach Shower	\$5
	5	Sharpes Beach MASTERPLAN: timber Viewing Deck & Beach Access Walkway (25 sq.m)	\$25
2022		Total	\$72
Year	Item	Description	Estimate
2023	1	Sharpes Beach MASTERPLAN: Picnic Facilities (site # 1)	\$4
	2	Sharpes Beach MASTERPLAN: Picnic Facilities (site # 2)	\$4
	3	Sharpes Beach MASTERPLAN: Picnic Facilities (site # 3)	\$4
	4	Sharpes Beach MASTERPLAN: tree planting & site landscaping	\$30
2023		Total	\$42

Appendix C Budgeted Expenditures Accommodated in LTFP

NAMS.PLUS3 Asset Management Ballina SC										
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Forshore Assets_S1_V1			Asset Management Plan							
First year of expenditure projections 2017 (financial yr ending)										
Forshore Assets										
Asset values at start of planning period										
Current replacement cost	\$1,066	(000)	Calc CRC from Asset Register							
Depreciable amount	\$1,066	(000)	\$1,066 (000)							
Depreciated replacement cost	\$619	(000)	This is a check for you.							
Annual depreciation expense	\$23	(000)								
Operations and Maintenance Costs for New Assets										
		% of asset value								
Additional operations costs		7.88%								
Additional maintenance		1.64%								
Additional depreciation		2.18%								
Planned renewal budget (information only)										
You may use these values calculated from your data or overwrite the links.										
Planned Expenditures from LTFP										
20 Year Expenditure Projections Note: Enter all values in current 2017 values										
Financial year ending	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
Expenditure Outlays included in Long Term Financial Plan (in current \$ values)										
Operations										
Operations budget	\$74	\$71	\$71	\$71	\$71	\$71	\$71	\$71	\$71	\$71
Management budget	\$11	\$14	\$12	\$12	\$13	\$13	\$13	\$14	\$14	\$15
AM systems budget	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total operations	\$85	\$84	\$83	\$83	\$83	\$84	\$84	\$84	\$85	\$85
Maintenance										
Reactive maintenance budget	\$18	\$15	\$15	\$15	\$15	\$15	\$15	\$15	\$15	\$15
Planned maintenance budget	\$3	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2
Specific maintenance items budget	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total maintenance	\$21	\$17	\$17	\$17	\$17	\$17	\$17	\$17	\$17	\$17
Capital										
Planned renewal budget	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Planned upgrade/new budget	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Non-growth contributed asset value	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Asset Disposals										
Est Cost to dispose of assets	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Carrying value (DRC) of disposed assets	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Additional Expenditure Outlays Requirements (e.g from Infrastructure Risk Management Plan)										
Additional Expenditure Outlays required and not included above	2017 \$000	2018 \$000	2019 \$000	2020 \$000	2021 \$000	2022 \$000	2023 \$000	2024 \$000	2025 \$000	2026 \$000
Operations	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Maintenance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Renewal	to be incorporated into Forms 2 & 2.1 (where Method 1 is used) OR Form 2B Defect Repairs (where Method 2 or 3 is used)									
Capital Upgrade	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
User Comments #2										
Forecasts for Capital Renewal using Methods 2 & 3 (Form 2A & 2B) & Capital Upgrade (Form 2C)										
Forecast Capital Renewal from Forms 2A & 2B	2017 \$000	2018 \$000	2019 \$000	2020 \$000	2021 \$000	2022 \$000	2023 \$000	2024 \$000	2025 \$000	2026 \$000
Forecast Capital Upgrade from Form 2C	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	\$0	\$10	\$0	\$236	\$492	\$158	\$42	\$0	\$0	\$0

Appendix D Abbreviations

AAAC	Average annual asset consumption
AM	Asset management
AM Plan	Asset management plan
ARI	Average recurrence interval
ASC	Annual service cost
BOD	Biochemical (biological) oxygen demand
CRC	Current replacement cost
CWMS	Community wastewater management systems
DA	Depreciable amount
DRC	Depreciated replacement cost
EF	Earthworks/formation
IRMP	Infrastructure risk management plan
LCC	Life Cycle cost
LCE	Life cycle expenditure
LTFP	Long term financial plan
MMS	Maintenance management system
PCI	Pavement condition index
RV	Residual value
SoA	State of the Assets
SS	Suspended solids
vph	Vehicles per hour
WDCRC	Written down current replacement cost

Appendix E Glossary

Annual service cost (ASC)

- 1) Reporting actual cost
The annual (accrual) cost of providing a service including operations, maintenance, depreciation, finance/opportunity and disposal costs less revenue.
- 2) For investment analysis and budgeting
An estimate of the cost that would be tendered, per annum, if tenders were called for the supply of a service to a performance specification for a fixed term. The Annual Service Cost includes operations, maintenance, depreciation, finance/opportunity and disposal costs, less revenue.

Asset

A resource controlled by an entity as a result of past events and from which future economic benefits are expected to flow to the entity. Infrastructure assets are a sub-class of property, plant and equipment which are non-current assets with a life greater than 12 months and enable services to be provided.

Asset category

Sub-group of assets within a class hierarchy for financial reporting and management purposes.

Asset class

A group of assets having a similar nature or function in the operations of an entity, and which, for purposes of disclosure, is shown as a single item without supplementary disclosure.

Asset condition assessment

The process of continuous or periodic inspection, assessment, measurement and interpretation of the resultant data to indicate the condition of a specific asset so as to determine the need for some preventative or remedial action.

Asset hierarchy

A framework for segmenting an asset base into appropriate classifications. The asset hierarchy can be based on asset function or asset type or a combination of the two.

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 renewal funding ratio

The ratio of the net present value of asset renewal funding accommodated over a 10 year period in a long term financial plan relative to the net present value of projected capital renewal expenditures identified in an asset management plan for the same period [AIFMG Financial Sustainability Indicator No 8].

Average annual asset consumption (AAAC)*

The amount of an organisation's asset base consumed during a reporting period (generally a year). This may be calculated by dividing the depreciable amount by the useful life (or total future economic benefits/service potential) and totalled for each and every asset OR by dividing the carrying amount (depreciated replacement cost) by the remaining useful life (or remaining future economic benefits/service potential) and totalled for each and every asset in an asset category or class.

Borrowings

A borrowing or loan is a contractual obligation of the borrowing entity to deliver cash or another financial asset to the lending entity over a specified period of time or at a specified point in time, to cover both the initial capital provided and the cost of the interest incurred for providing this capital. A borrowing or loan provides the means for the borrowing entity to finance outlays (typically physical assets) when it has insufficient funds of its own to do so, and for the lending entity to make a financial return, normally in the form of interest revenue, on the funding provided.

Capital expenditure

Relatively large (material) expenditure, which has benefits, expected to last for more than 12 months. Capital expenditure includes renewal, expansion and upgrade. Where capital projects involve a combination of renewal, expansion and/or upgrade expenditures, the total project cost needs to be allocated accordingly.

Capital expenditure - expansion

Expenditure that extends the capacity of an existing asset to provide benefits, at the same standard as is currently enjoyed by existing beneficiaries, to a new group of users. It is discretionary expenditure, which increases future operations and maintenance costs, because it increases Council's asset base, but may be associated with additional revenue from the new user group, eg. extending a drainage or road network, the provision of an oval or park in a new suburb for new residents.

Capital expenditure - new

Expenditure which creates a new asset providing a new service/output that did not exist beforehand. As it increases service potential it may impact revenue and will increase future operations and maintenance expenditure.

Capital expenditure - renewal

Expenditure on an existing asset or on replacing an existing asset, which returns the service capability of the asset up to that which it had originally. It is periodically required expenditure, relatively large (material) in value compared with the value of the components or sub-components of the asset being renewed. As it reinstates existing service potential, it generally has no impact on revenue, but may reduce future operations and maintenance expenditure if completed at the optimum time, eg. resurfacing or resheeting a material part of a road network, replacing a material section of a drainage network with pipes of the same capacity, resurfacing an oval.

Capital expenditure - upgrade

Expenditure, which enhances an existing asset to provide a higher level of service or expenditure that will increase the life of the asset beyond that which it had originally. Upgrade expenditure is discretionary and often does not result in additional revenue unless direct user charges apply. It will increase operations and maintenance expenditure in the future because of the increase in Council's asset base, eg. widening the sealed area of an existing road, replacing drainage pipes with pipes of a greater capacity, enlarging a grandstand at a sporting facility.

Capital funding

Funding to pay for capital expenditure.

Capital grants

Monies received generally tied to the specific projects for which they are granted, which are often upgrade and/or expansion or new investment proposals.

Capital investment expenditure

See capital expenditure definition

Capitalisation threshold

The value of expenditure on non-current assets above which the expenditure is recognised as capital expenditure and below which the expenditure is charged as an expense in the year of acquisition.

Carrying amount

The amount at which an asset is recognised after deducting any accumulated depreciation / amortisation and accumulated impairment losses thereon.

Class of assets

See asset class definition

Component

Specific parts of an asset having independent physical or functional identity and having specific attributes such as different life expectancy, maintenance regimes, risk or criticality.

Core asset management

Asset management which relies primarily on the use of an asset register, maintenance management systems, job resource management, inventory control, condition assessment, simple risk 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 detailed risk analysis and optimised decision-making).

Cost of an asset

The amount of cash or cash equivalents paid or the fair value of the consideration given to acquire an asset at the time of its acquisition or construction, including any costs necessary to place the asset into service. This includes one-off design and project management costs.

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 (CRC)

The cost the entity would incur to acquire the asset on the reporting date. The cost is measured by reference to the lowest cost at which the gross future economic benefits could be obtained in the normal course of business or the minimum it would cost, to replace the existing asset with a technologically modern equivalent new asset (not a second hand one) with the same economic benefits (gross service potential) allowing for any differences in the quantity and quality of output and in operating costs.

Deferred maintenance

The shortfall in rehabilitation work undertaken relative to that required to maintain the service potential of an asset.

Depreciable amount

The cost of an asset, or other amount substituted for its cost, less its residual value.

Depreciated replacement cost (DRC)

The current replacement cost (CRC) of an asset less, where applicable, accumulated depreciation calculated on the basis of such cost to reflect the already consumed or expired future economic benefits of the asset.

Depreciation / amortisation

The systematic allocation of the depreciable amount (service potential) of an asset over its useful life.

Economic life

See useful life definition.

Expenditure

The spending of money on goods and services. Expenditure includes recurrent and capital outlays.

Expenses

Decreases in economic benefits during the accounting period in the form of outflows or depletions of assets or increases in liabilities that result in decreases in equity, other than those relating to distributions to equity participants.

Fair value

The amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties, in an arms length transaction.

Financing gap

A financing gap exists whenever an entity has insufficient capacity to finance asset renewal and other expenditure necessary to be able to appropriately maintain the range and level of services its existing asset stock was originally designed and intended to deliver. The service capability of the existing asset stock should be determined assuming no additional operating revenue, productivity improvements, or net financial liabilities above levels currently planned or projected. A current financing gap means service levels have already or are currently falling. A projected financing gap if not addressed will result in a future diminution of existing service levels.

Heritage asset

An asset with historic, artistic, scientific, technological, geographical or environmental qualities that is held and maintained principally for its contribution to knowledge and culture and this purpose is central to the objectives of the entity holding it.

Impairment Loss

The amount by which the carrying amount of an asset exceeds its recoverable amount.

Infrastructure assets

Physical assets that contribute to meeting the needs of organisations or the need for access to major economic and social facilities and services, eg. roads, drainage, footpaths and cycleways. These are typically large, interconnected networks or portfolios of composite assets. The components of these assets may be separately maintained, renewed or replaced individually so that the required level and standard of service from the network of assets is continuously sustained. Generally the components and hence the assets have long lives. They are fixed in place and are often have no separate market value.

Investment property

Property held to earn rentals or for capital appreciation or both, rather than for:

- (a) use in the production or supply of goods or services or for administrative purposes; or
- (b) sale in the ordinary course of business.

Key performance indicator

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.

Level of service

The defined service quality for a particular service/activity against which service performance may be measured. Service levels usually relate to quality, quantity, reliability, responsiveness, environmental impact, acceptability and cost.

Life Cycle Cost *

1. **Total LCC** The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, rehabilitation and disposal costs.

2. **Average LCC** The life cycle cost (LCC) is average cost to provide the service over the longest asset life cycle. It comprises average operations, maintenance expenditure plus asset consumption expense, represented by depreciation expense projected over 10 years. The Life Cycle Cost does not indicate the funds required to provide the service in a particular year.

Life Cycle Expenditure

The Life Cycle Expenditure (LCE) is the average operations, maintenance and capital renewal expenditure accommodated in the long term financial plan over 10 years. Life Cycle Expenditure may be compared to average Life Cycle Cost to give an initial indicator of affordability of projected service levels when considered with asset age profiles.

Loans / borrowings

See borrowings.

Maintenance

All actions necessary for retaining an asset as near as practicable to an appropriate service condition, including regular ongoing day-to-day work necessary to keep assets operating, eg road patching but excluding rehabilitation or renewal. It is operating expenditure required to ensure that the asset reaches its expected useful life.

- **Planned maintenance**

Repair work that is identified and managed through a maintenance management system (MMS). MMS activities include inspection, assessing the condition against failure/breakdown criteria/experience, prioritising scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.

- **Reactive maintenance**

Unplanned repair work that is carried out in response to service requests and management/supervisory directions.

- **Specific maintenance**

Maintenance work to repair components or replace sub-components that needs to be identified as a specific maintenance item in the maintenance budget.

- **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.

Maintenance expenditure *

Recurrent expenditure, which is periodically or regularly required as part of the anticipated schedule of works required to ensure that the asset achieves its useful life and provides the required level of service. It is expenditure, which was anticipated in determining the asset's useful life.

Materiality

The notion of materiality guides the margin of error acceptable, the degree of precision required and the extent of the disclosure required when preparing general purpose financial reports. Information is material if its omission, misstatement or non-disclosure has the potential, individually or collectively, to influence the economic decisions of users taken on the basis of the financial report or affect the discharge of accountability by the management or governing body of the entity.

Modern equivalent asset

Assets that replicate what is in existence with the most cost-effective asset performing the same level of service. It is the most cost efficient, currently available asset which will provide the same stream of services as the existing asset is capable of producing. It allows for technology changes and, improvements and efficiencies in production and installation techniques

Net present value (NPV)

The value to Council of the cash flows associated with an asset, liability, activity or event calculated using a discount rate to reflect the time value of money. It is the net amount of discounted total cash inflows after deducting the value of the discounted total cash outflows arising from eg the continued use and subsequent disposal of the asset after deducting the value of the discounted total cash outflows.

Non-revenue generating investments

Investments for the provision of goods and services to sustain or improve services to the community that are not expected to generate any savings or revenue to Council, eg. parks and playgrounds, footpaths, roads and bridges, libraries, etc.

Operations

Regular activities to provide services such as public health, safety and amenity, eg street sweeping, grass mowing and street lighting.

Operating expenditure

Recurrent expenditure, which is continuously required to provide a service. In common use the term typically includes, eg power, fuel, staff, plant equipment, on-costs and overheads but excludes maintenance and depreciation. Maintenance and depreciation is on the other hand included in operating expenses.

Operating expense

The gross outflow of economic benefits, being cash and non cash items, during the period arising in the course of ordinary activities of an entity when those outflows result in decreases in equity, other than decreases relating to distributions to equity participants.

Operating expenses

Recurrent expenses continuously required to provide a service, including power, fuel, staff, plant equipment, maintenance, depreciation, on-costs and overheads.

Operations, maintenance and renewal financing ratio

Ratio of estimated budget to projected expenditure for operations, maintenance and renewal of assets over a defined time (eg 5, 10 and 15 years).

Operations, maintenance and renewal gap

Difference between budgeted expenditures in a long term financial plan (or estimated future budgets in absence of a long term financial plan) and projected expenditures for operations, maintenance and renewal of assets to achieve/maintain specified service levels, totalled over a defined time (e.g. 5, 10 and 15 years).

Pavement management system (PMS)

A systematic process for measuring and predicting the condition of road pavements and wearing surfaces over time and recommending corrective actions.

PMS Score

A measure of condition of a road segment determined from a Pavement Management System.

Rate of annual asset consumption *

The ratio of annual asset consumption relative to the depreciable amount of the assets. It measures the amount of the consumable parts of assets that are consumed in a period (depreciation) expressed as a percentage of the depreciable amount.

Rate of annual asset renewal *

The ratio of asset renewal and replacement expenditure relative to depreciable amount for a period. It measures whether assets are being replaced at the rate they are wearing out with capital renewal expenditure expressed as a percentage of depreciable amount (capital renewal expenditure/DA).

Rate of annual asset upgrade/new *

A measure of the rate at which assets are being upgraded and expanded per annum with capital upgrade/new expenditure expressed as a percentage of depreciable amount (capital upgrade/expansion expenditure/DA).

Recoverable amount

The higher of an asset's fair value, less costs to sell and its value in use.

Recurrent expenditure

Relatively small (immaterial) expenditure or that which has benefits expected to last less than 12 months. Recurrent expenditure includes operations and maintenance expenditure.

Recurrent funding

Funding to pay for recurrent expenditure.

Rehabilitation

See capital renewal expenditure definition above.

Remaining useful life

The time remaining until an asset ceases to provide the required service level or economic usefulness. Age plus remaining useful life is useful life.

Renewal

See capital renewal expenditure definition above.

Residual value

The estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life.

Revenue generating investments

Investments for the provision of goods and services to sustain or improve services to the community that are expected to generate some savings or revenue to offset operating costs, eg public halls and theatres, childcare centres, sporting and recreation facilities, tourist information centres, etc.

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.

Section or segment

A self-contained part or piece of an infrastructure asset.

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. A measure of service potential is used in the not-for-profit sector/public sector to value assets, particularly those not producing a cash flow.

Service potential remaining

A measure of the future economic benefits remaining in assets. It may be expressed in dollar values (Fair Value) or as a percentage of total anticipated future economic benefits. It is also a measure of the percentage of the asset's potential to provide services that is still available for use in providing services (Depreciated Replacement Cost/Depreciable Amount).

Specific Maintenance

Replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, replacement of air conditioning equipment, etc. This work generally falls below the capital/ maintenance threshold and needs to be identified in a specific maintenance budget allocation.

Strategic Longer-Term Plan

A plan covering the term of office of councillors (4 years minimum) reflecting the needs of the community for the foreseeable future. It brings together the detailed requirements in Council's longer-term plans such as the asset management plan and the long-term financial plan. The plan is prepared in consultation with the community and details where Council is at that point in time, where it wants to go, how it is going to get there, mechanisms for monitoring the achievement of the outcomes and how the plan will be resourced.

Sub-component

Smaller individual parts that make up a component part.

Useful life

Either:

- (a) the period over which an asset is expected to be available for use by an entity, or
- (b) the number of production or similar units expected to be obtained from the asset by the entity.

It is estimated or expected time between placing the asset into service and removing it from service, or the estimated period of time over which the future economic benefits embodied in a depreciable asset, are expected to be consumed by Council.

Value in Use

The present value of future cash flows expected to be derived from an asset or cash generating unit. It is deemed to be depreciated replacement cost (DRC) for those assets whose future economic benefits are not primarily dependent on the asset's ability to generate net cash inflows, where the entity would, if deprived of the asset, replace its remaining future economic benefits.

Source: IPWEA, 2009, Glossary

Additional and modified glossary items shown *