

Shire of Boddington

## Kerb and Channel Asset Management Plan

Revision 0.1

## Document Control

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## Executive Summary

The Shire of Boddington provides and maintains all stormwater drainage infrastructure within the Shire. As custodian of the local road network the Shire is responsible for a number of functions. The ownership functions include providing and maintaining the integrity of pavements, wearing courses and kerbing.

Kerbing is the concrete structure that generally runs down both sides of the road. The repair of existing or construction of new kerb in town sites assists with the efficient movement of storm-water, protection of residences from flooding and protection of the road pavement from water infiltration. In addition to this, damaged sections have the potential to pose a significant hazard to pedestrians and cause damage to vehicles.

This document is the Shire's Asset Management Plan (AMP) for its' Kerb and Channel assets in the Shire of Boddington. It outlines the activities that will be carried out over the next ten years to provide and maintain the portfolio. It also details the service levels (standard) the Shire will provide and the resources required to deliver them.

While the document is comprehensive, it is also evolving with the Shire's practice maturity. As such there are a number of actions that have been identified that will improve the AMP's accuracy over time. All readers of this AMP must understand its limitations and applied assumptions before acting on any information contained within it.

Overall, the Shire's Kerb and Channel assets have significant value estimated at \$1.5 million. Evidence suggests that the general condition of the assets are in good overall condition but with some obvious deterioration evident, serviceability would be impaired very slightly. This position is supported with assets at the Kerb and channel portfolio asset consumption ratio of 63% (target band is 50-75%).

Looking forward, a number of key improvement actions have been identified that would enable the Shire to better manage its drainage asset portfolio. These have been listed within the Improvement Plan for future implementation.

## Background and Objectives

### Purpose of this Asset Management Plan

This document is an Asset Management Plan (AMP) for the Shire's Kerb and Channel assets. The AMP documents shows how the Shire plans to manage these assets, to deliver services of a specified quality (service levels) and what the associated long term costs are.

### Focus of this Asset Management Plan

The AMP focuses on the following asset type portfolio.

Asset Class	Number of Assets	Current Replacement Cost
Kerb and Channel	122	\$ 1,552,124

Table 1: Assets covered by AMP

### Corporate Document Relationships

This AMP integrates with the other following Shire documents:

- = Strategic Community Plan
- = Corporate Business Plan
- = Long Term Financial Plan
- = Annual Budget.

### Time Period of the AMP and Next Review Date

The AMP covers a 10 year period and will be next reviewed by 1 July 2019.

# Service Levels

## Introduction

The level of service is the defined service quality for a particular activity or service area against which performance can be measured. Understanding the level of service required of an asset is vital for its lifecycle management, as this largely determines an asset's development, operation, maintenance replacement and disposal. Defining the levels of service that will be provided by the asset portfolio is a key process in the development of Asset Management Plans.

The levels of service support Council's strategic goals and are based on customer expectation and statutory requirements. Service levels usually relate to quality, quantity, reliability, responsiveness, environmental acceptability and cost. An important objective of this Plan is to match the level of service provided by Council's bridge infrastructure assets with the expectations of the community given financial, technical and legislative constraints.

Service levels are divided into two terms:

- Community based; and
- Technical based

Community based levels of service relate to the function of the service provided and how the community/customer receives the service in terms of requirements, expectations and satisfaction input as part of the local government's ongoing community engagement activities.

Technical based levels of service relate to the technical measures and outputs the customer receives in terms of quality, quantity, maintainability reliability and performance, responsiveness, capacity, environmental impacts and affordability.

## Service Level Performance

Table 2 details the service level performance that the Shire provides.

Key Performance Indicator KPI	Performance	Tactic
Safety	Unknown	Monitoring performance
Accessibility	Unknown	Monitoring performance
Function	Unknown	Monitoring performance
Responsiveness	Unknown	Monitoring performance
Condition	Unknown	Monitoring performance
Cost/Affordability	Unknown	Monitoring performance

Table 2: Service Level Performance

The Shire of Boddington in 2017 carried out a 'Community Perception Survey' in the process of reviewing its Community Strategic Plan. Levels of satisfaction for overall subjects were obtained. However the survey was not sufficiently detailed to clearly articulate what its *current* levels of service are for Kerb and Channel assets. New levels of service has been considered in an asset management context. These will need to be refined in further versions of this Plan.

## Stakeholder Key Service Attributes

The Shire has considered on behalf of each key stakeholder what they value and expect from 'Kerb and Channel' assets. These needs and wants were captured and have been presented in the table below.

Stakeholder	Expectations
Councillors	Meeting community needs, sound management and allocation of resources, good governance
Employees / Contractors	Safe working environment
Community residents and businesses	Value for money, equitable and responsible service, well maintained assets
Facility Users	Well maintained assets specific to users' needs
Insurers	Appropriate risk management policies and practices, safe working environments, well maintained assets
Tourists	Well maintained assets, accessible services, safe facilities

Table 3: Service Levels

The perception of what the customer wants will be investigated for future updates of the asset management plan.

## Service Level Targets and Performance

By considering the potential service attributes from the Strategic Community Plan and stakeholder key service attributes, a total of eight KPI's have been selected. The following table outlines the KPIs that can be used to monitor performance delivery.

Key Performance Indicator	Level of Service	Performance Measure	Target Performance	Current Performance
Safety	Provide a working kerb and Channel network, free from hazards.	Number of hazards identified and remedied within performance guidelines. Insurance claim history. User feedback.	Appropriate action on all hazards according to risk management plan.	Quantity measured through action requests.
Accessibility	Kerb line is made accessible to all. (Pram ramps etc.)	Feedback from community. Number of complaints received regarding lack of accessibility	In accordance with current Disability Access and Inclusion Plan.	Not measured.
Function	Kerb meets drainage requirements for road users	Kerb and Channel type is appropriate for location	Minimal Customer Service Requests reflects good performance	Not measured.
Responsiveness	Responses are prompt, clear and work appropriately prioritised (Inspect, make-safe or repair)	% of requested responded to within defined response times	90% compliance with targets based on risk assessment.	Not measured
Condition	All Kerb assets will meet condition standards	Ongoing condition assessments.	70% of Kerb assets assessed as good condition or better.	Not measured.
Cost/Affordability	Provide repairs or new/upgrade work in a cost effective manner.	Develop and regularly review future renewal and new/upgrade programs achieved on time, on budget and to appropriate standards.	All services and goods are delivered by internal or external resources that provide best value for money service.	Not measured.

**Table 4: Service Level Targets and Performance**



## Demand

This section summarises likely factors that may affect the demand for assets based services over the life of the AMP. Full details of past and future demand factors are recorded in the General Guidance Notes.

### Historic Demand

A range of historical sources of service demand change have been considered. Their overall effect has been summarised as follows in Table 5.

Driver Type	Effect	Demand Change
Population	Shire population up by 441 people (+31%) from 1,401 (2001) to 1,844 (2016).	Possible <b>Increase</b> in demand.
Demographic	Population increase in all demographic age bands (2001 – 2016) except 30-39. Median age has increased from 35 to 39 years (2001 – 2016).	<b>No change</b>
Recreation Participation	Participation rates continue to fall slightly year on year across the general population. Walking remains the most popular activity for recreation, followed by fitness/gym, jogging & running, swimming/diving and cycling/BMXing.	Possible <b>Increase</b> in demand.
Tourism	Tourist numbers in the 'golden outback' region grew from 1.5m (2012) to 2.1m (2017). This growth may have increased demand on the road network.	Possible <b>Increase</b> in demand.
Climate	Annual rainfall has fallen from approximately 730mm to 580mm per annum (1916 to 2017). Annual monthly mean maximum temperatures up from 29.2°C to 31.8°C (1935 to 2017). Address risks from climate changes a result.	Possible <b>Increase</b> in demand.

Table 5: Historic Demand Drivers

### Future Demand

Consideration was given to six possible future demand drivers (political, economic, social, technological, legal and environmental) that may influence demand on the provision of drainage based services at the Shire of Boddington.

Driver Type	Service Demand Change
Political	Negligible
Economic	<b>Increase</b> from higher energy costs, and potential catastrophic funding constraints if a local mine closes.
Social	Negligible
Technological	Opportunity to <b>decrease</b> maintenance costs through implementation of emerging technologies.
Legal	<b>Increase</b> in compliance obligations.
Environmental	<b>Increase</b> in costs due to climate change and implementation of appropriate asset management strategies.

Table 6: Future Demand Drivers

## Demand Management

A review of past and future demand factors shows that council does not anticipate demand change has occurred, and will also likely occur into the future. Looking forward, the following initiatives/improvements are proposed to meet demand changes.

- = Improving asset knowledge so that the data accurately records the asset inventory
- = Monitor how assets are performing and when assets are not able to provide the required service levels.
- = Improving our efficiency in operating, maintaining, replacing existing and constructing new assets to optimise life cycle costs.

## Risk Management

A risk analysis of the current asset management deficiencies identified by the AMP has been undertaken. Table 7 outlines the top identified risks.

Ref.	Risk	Level of Risk	Further Action
1	The Shire has no 'live' AMP for Kerb and Channel assets.	Moderate	Develop AMP
2	A planned maintenance schedule does not exist.	Moderate	Implement the Synergy Soft AM module.
4	Shire has no long-term capital works programme.	High	Develop a 10 year works programme.
7	Shire has no monitored AMP service levels.	Low	Monitor the service levels recorded within this AMP.

Table 7: Major Asset Management Risks

## Lifecycle Management Plan

The lifecycle management plan details how the Shire intends to manage and operate its' Kerb and Channel asset portfolio at the agreed service levels.

### Kerb and Channel Assets Physical Parameters

Asset ID	Asset Description	Length (m)	Current Replacement Cost \$	Fair Value \$	Annual Depreciation \$
RKCKX001030	Adam Street	1,335	82,200	53,430	1,566
RKCKX001077	Assay Terrace	1,119	68,900	44,785	1,312
RKCKX001051	Banksia Crescent	954	58,720	38,169	1,118
RKCKX001999	Bannister Road	2,746	169,310	110,052	3,226
RKCKX001033	Batt Way	87	5,320	3,459	102
RKCKX001054	Blue Gum Way	365	22,500	14,625	429
RKCKX001063	Club Drive	995	61,280	39,832	1,169
RKCKX001037	Bosse Link	156	9,580	6,227	182
RKCKX001081	Colin Street	36	2,220	1,443	42
RKCKX001001	Crossman Road	288	17,700	11,505	337
RKCKX001038	Eucalypt Street	508	31,300	20,345	596
RKCKX001015	Farmers Avenue	651	40,100	26,065	764
RKCKX001025	Forrest Street	754	46,410	30,167	884
RKCKX001052	Firns Court	166	10,220	6,643	194
RKCKX001026	George Street	515	31,720	20,619	606
RKCKX001117	Grassdale View	587	36,100	23,465	688
RKCKX001057	Greenstone Way	981	60,400	39,260	1,150
RKCKX001040	Hakea Road	426	26,300	17,095	501
RKCKX001027	Hill Street	871	53,620	34,854	1,022
RKCKX001024	Hotham Avenue	2,469	152,200	95,746	2,936

Asset ID	Asset Description	Length (m)	Current Replacement Cost \$	Fair Value \$	Annual Depreciation \$
RKCKX001066	Illyarrie Crescent	1,354	83,400	54,210	1589
RKCKX001053	Jarrah Terrace	330	20,330	13,215	387
RKCKX001029	Johnstone Street	1,035	63,700	28,226	1350
RKCKX001032	King Street	289	17,830	11,590	340
RKCKX001076	Mahogany Crescent	249	15,310	9,952	292
RKCKX001048	Nichols Place	294	18,080	11,752	345
RKCKX001045	Pecan Place	222	13,670	8,886	260
RKCKX001028	Pollard Road	1635	100,728	49,359	2084
RKCKX001050	Prussian Way	512	31,500	20,475	601
RKCKX001049	Pyke Gardens	232	14,310	9,302	272
RKCKX001059	Sandalwood Place	587	36,200	23,530	690
RKCKX001062	Sheoak Court	205	12,620	8,203	241
RKCKX001069	Shepherds Turn	347	21,320	13,858	406
RKCKX001111	Roberts Road	369	22,700	14,755	432
RKCKX001065	Wattle Link	111	6,860	4,460	130
RKCKX001039	Wuraming Avenue	654	40,266	26,174	768
RKCKX002039	Caravan Park	766	47,200	30,680	899
		25.2 KM	\$ 1,552,124	\$ 976,413	\$ 29,910

Table 8: Kerb and Channel Assets Physical Parameters

## Kerb and Channel Assets' Condition

As at 30 June 2018, the Shire holds condition ratings for all the Kerb and Channel assets derived from the last asset valuation. While the condition ratings provide some indication as to where renewal works may be required, the ratings are not sufficiently robust to produce a long term works programme. An improvement action to implement a programme of inspections across the portfolio has been listed.

The following section outlines the Shire's Kerb and Channel assets as of 30 June 2018.

Asset ID	Asset Description	Length (m)	Width	Current Replacement Cost \$	Fair Value \$	Annual Depreciation \$	Remaining Useful Life (Years)	Condition 0-10
RKCKX001030	Adam Street	405.3	1	25,000	16,250	476	26	4.0
RKCKX001030	Adam Street	367.4	1	22,600	14,690	431	26	4.0
RKCKX001030	Adam Street	562.4	1	34,600	22,490	659	26	4.0
RKCKX001077	Assay Terrace	545.4	1	33,600	21,840	640	26	4.0
RKCKX001077	Assay Terrace	573.3	1	35,300	22,945	672	26	4.0
RKCKX001051	Banksia Crescent	341	1	21,000	13,650	400	26	4.0
RKCKX001051	Banksia Crescent	107.7	1	6,630	4,310	126	26	4.0
RKCKX001051	Banksia Crescent	419.1	1	25,800	16,770	491	26	4.0
RKCKX001051	Banksia Crescent	85.8	1	5,290	3,439	101	26	4.0
RKCKX001999	Bannister Road	172	1	10,600	6,890	202	26	4.0
RKCKX001999	Bannister Road	212.2	1	13,100	8,515	250	26	4.0
RKCKX001999	Bannister Road	52.2	1	3,220	2,093	61	26	4.0
RKCKX001999	Bannister Road	302	1	18,600	12,090	354	26	4.0
RKCKX001999	Bannister Road	192.7	1	11,900	7,735	227	26	4.0
RKCKX001999	Bannister Road	177.3	1	10,900	7,085	208	26	4.0
RKCKX001999	Bannister Road	194.6	1	12,000	7,800	229	26	4.0
RKCKX001999	Bannister Road	186.5	1	11,500	7,475	219	26	4.0
RKCKX001999	Bannister Road	190.8	1	11,800	7,670	225	26	4.0
RKCKX001999	Bannister Road	207.8	1	12,800	8,320	244	26	4.0
RKCKX001999	Bannister Road	387.7	1	23,900	15,535	455	26	4.0
RKCKX001999	Bannister Road	269.4	1	16,600	10,790	316	26	4.0

Asset ID	Asset Description	Length (m)	Width	Current Replacement Cost \$	Fair Value \$	Annual Depreciation \$	Remaining Useful Life (Years)	Condition
RKCKX001999	Bannister Road Car Park	125	1	7,700	5,005	147	26	4.0
RKCKX001999	Information Bay/RV Parking	28.9	1	1,780	1,157	34	26	4.0
RKCKX001999	Information Bay/RV Parking	47.2	1	2,910	1,892	55	26	4.0
RKCKX001033	Batt Way	39.8	1	2,450	1,593	47	26	4.0
RKCKX001033	Batt Way	46.7	1	2,870	1,866	55	26	4.0
RKCKX001054	Blue Gum Way	195.5	1	12,000	7,800	229	26	4.0
RKCKX001054	Blue Gum Way	169.7	1	10,500	6,825	200	26	4.0
RKCKX001063	Club Drive	31.1	1	1,920	1,248	37	26	4.0
RKCKX001063	Club Drive	30.6	1	1,880	1,222	36	26	4.0
RKCKX001063	Boddington Community Club front Car Park	144.8	1	8,920	5,798	170	26	4.0
RKCKX001063	Boddington Community Club front Car Park	78.8	1	4,860	3,159	93	26	4.0
RKCKX001063	Boddington Community Club rear Car Park	280.4	1	17,300	11,245	330	26	4.0
RKCKX001063	Rec Centre Car Park	429.2	1	26,400	17,160	503	26	4.0
RKCKX001037	Bosse Link	77.9	1	4,800	3,120	91	26	4.0
RKCKX001037	Bosse Link	77.6	1	4,780	3,107	91	26	4.0
RKCKX001081	Colin Street	18.2	1	1,120	728	21	26	4.0
RKCKX001081	Colin Street	17.9	1	1,100	715	21	26	4.0
RKCKX001001	Crossman Road	288	1	17,700	11,505	337	26	4.0
RKCKX001038	Eucalypt Street	254.4	1	15,700	10,205	299	26	4.0



Asset ID	Asset Description	Length (m)	Width	Current Replacement Cost \$	Fair Value \$	Annual Depreciation \$	Remaining Useful Life (Years)	Condition
RKCKX001015	Farmers Avenue	373.3	1	23,000	14,950	438	26	4.0
RKCKX001015	Farmers Avenue	277.5	1	17,100	11,115	326	26	4.0
RKCKX001025	Forrest Street	105.9	1	6,520	4,238	124	26	4.0
RKCKX001025	Forrest Street	244.0	1	15,000	9,750	286	26	4.0
RKCKX001025	Forrest Street	103.1	1	6,350	4,128	121	26	4.0
RKCKX001025	Forrest Street	242.1	1	14,900	9,685	284	26	4.0
RKCKX001025	Forrest Street Car Park	59.2	1	3,640	2,366	69	26	4.0
RKCKX001052	Firns Court	82.1	1	5,060	3,289	96	26	4.0
RKCKX001052	Firns Court	83.7	1	5,160	3,354	98	26	4.0
RKCKX001026	George Street	131.6	1	8,110	5,272	155	26	4.0
RKCKX001026	George Street	128.2	1	7,900	5,135	151	26	4.0
RKCKX001117	Grassdale View	276.3	1	17,000	11,050	324	26	4.0
RKCKX001117	Grassdale View	310.3	1	19,100	12,415	364	26	4.0
RKCKX001057	Greenstone Way	525.8	1	32,400	21,060	617	26	4.0
RKCKX001057	Greenstone Way	454.9	1	28,000	18,200	533	26	4.0
RKCKX001040	Hakea Road	216.9	1	13,400	8,710	255	26	4.0
RKCKX001040	Hakea Road	209.4	1	12,900	8,385	246	26	4.0
RKCKX001027	Hill Street	120	1	7,390	4,804	141	26	4.0
RKCKX001027	Hill Street	302.5	1	18,600	12,090	354	26	4.0
RKCKX001027	Hill Street	329	1	20,300	13,195	387	26	4.0
RKCKX001027	Hill Street	119	1	7,330	4,765	140	26	4.0

Asset ID	Asset Description	Length (m)	Width	Current Replacement Cost \$	Fair Value \$	Annual Depreciation \$	Remaining Useful Life (Years)	Condition
RKCKX001024	Hotham Avenue	243.4	1	15,000	9,750	286	26	4.0
RKCKX001024	Hotham Avenue	353	1	21,700	11,544	440	19	5.0
RKCKX001024	Hotham Avenue	174.7	1	10,800	8,651	190	38	3.0
RKCKX001024	Hotham Avenue	350	1	21,600	11,491	438	19	5.0
RKCKX001024	Hotham Avenue	256	1	15,800	8,406	320	19	5.0
RKCKX001024	Hotham Avenue	238.9	1	14,700	9,555	280	26	4.0
RKCKX001024	Hotham Avenue	170.1	1	10,500	8,411	185	38	3.0
RKCKX001024	Hotham Avenue	168.4	1	10,400	8,330	183	38	3.0
RKCKX001024	Hotham Avenue	166.0	1	10,200	8,170	179	38	3.0
RKCKX001024	Hotham Avenue	348.5	1	21,500	11,438	435	19	5.0
RKCKX001066	Illyarrie Crescent	684.6	1	42,200	27,430	804	26	4.0
RKCKX001066	Illyarrie Crescent	669.4	1	41,200	26,780	785	26	4.0
RKCKX001053	Jarraah Terrace	157.9	1	9,730	6,325	185	26	4.0
RKCKX001053	Jarraah Terrace	171.7	1	10,600	6,890	202	26	4.0
RKCKX001029	Johnstone Street	360.9	1	22,200	8,880	480	12	6.0
RKCKX001029	Johnstone Street	166.8	1	10,300	5,480	209	19	5.0
RKCKX001029	Johnstone Street	336.6	1	20,700	8,280	448	12	6.0
RKCKX001029	Johnstone Street	170.7	1	10,500	5,586	213	19	5.0
RKCKX001032	King Street	148.7	1	9,160	5,954	175	26	4.0
RKCKX001032	King Street	140.7	1	8,670	5,636	165	26	4.0
RKCKX001076	Mahogany Crescent	120.7	1	7,440	4,836	142	26	4.0

Asset ID	Asset Description	Length (m)	Width	Current Replacement Cost \$	Fair Value \$	Annual Depreciation \$	Remaining Useful Life (Years)	Condition
RKCKX001076	Mahogany Crescent	127.8	1	7,870	5,116	150	26	4.0
RKCKX001048	Nichols Place	137.7	1	8,480	5,512	162	26	4.0
RKCKX001048	Nichols Place	155.9	1	9,600	6,240	183	26	4.0
RKCKX001045	Pecan Place	108.2	1	6,670	4,336	127	26	4.0
RKCKX001045	Pecan Place	113.6	1	7,000	4,550	133	26	4.0
RKCKX001028	Pollard Road	126.8	1	7,810	4,155	158	19	5.0
RKCKX001028	Pollard Road	123.7	1	7,620	4,953	145	26	4.0
RKCKX001028	Pollard Road	305.9	1	18,800	10,002	381	19	5.0
RKCKX001028	Pollard Road	257.6	1	15,900	6,360	344	12	6.0
RKCKX001028	Pollard Road	12.8	1	788	512	15	26	4.0
RKCKX001028	Pollard Road	584.3	1	36,000	14,400	778	12	6.0
RKCKX001028	Boddington Swimming Pool Car Park	51.7	1	3,180	2,067	61	26	4.0
RKCKX001028	Boddington Swimming Pool Car Park	40.0	1	2,470	1,606	47	26	4.0
RKCKX001028	ELC Car Park	132.5	1	8,160	5,304	155	26	4.0
RKCKX001050	Prussian Way	265.2	1	16,300	10,595	311	26	4.0
RKCKX001050	Prussian Way	246.8	1	15,200	9,880	290	26	4.0
RKCKX001049	Pyke Gardens	123	1	7,580	4,927	144	26	4.0
RKCKX001049	Pyke Gardens	109.2	1	6,730	4,375	128	26	4.0
RKCKX001059	Sandalwood Place	323	1	19,900	12,935	379	26	4.0

Asset ID	Asset Description	Length (m)	Width	Current Replacement Cost \$	Fair Value \$	Annual Depreciation \$	Remaining Useful Life (Years)	Condition
RKCKX001059	Sandalwood Place	264	1	16,300	10,595	311	26	4.0
RKCKX001062	Sheoak Court	100.4	1	6,180	4,017	118	26	4.0
RKCKX001062	Sheoak Court	104.6	1	6,440	4,186	123	26	4.0
RKCKX001069	Shepherds Turn	255.2	1	15,700	10,205	299	26	4.0
RKCKX001069	Shepherds Turn	91.3	1	5,620	3,653	107	26	4.0
RKCKX001111	Roberts Road	186.6	1	11,500	7,475	219	26	4.0
RKCKX001111	Roberts Road	181.9	1	11,200	7,280	213	26	4.0
RKCKX001065	Wattle Link	55.7	1	3,430	2,230	65	26	4.0
RKCKX001065	Wattle Link	55.7	1	3,430	2,230	65	26	4.0
RKCKX001039	Wuraming Avenue	145.5	1	8,960	5,824	171	26	4.0
RKCKX001039	Wuraming Avenue	10	1	616	400	12	26	4.0
RKCKX001039	Wuraming Avenue	116.4	1	7,170	4,661	137	26	4.0
RKCKX001039	Wuraming Avenue	134.6	1	8,290	5,389	158	26	4.0
RKCKX001039	Wuraming Avenue	118.5	1	7,300	4,745	139	26	4.0
RKCKX001039	Wuraming Ave Car Park	36	1	2,220	1,443	42	26	4.0
RKCKX001039	CRC Car Park	48.8	1	3,000	1,950	57	26	4.0
RKCKX001039	CRC Car Park	44.0	1	2,710	1,762	52	26	4.0
RKCKX002039	Caravan Park	765.7	1	47,200	30,680	899	26	4.0
				\$ 1,552,124	\$ 976,402	\$ 29,901	Average 4.0	

Table 9: Kerb and Channel Assets Condition

## Data Confidence and Reliability

Table 11 details the reliability and confidence levels of the current asset data the Shire holds. It is the Shire's intention to progress towards a position whereby data confidence levels for all areas are classified as either a 1 or 2.

Confidence Grade	Description	Accuracy
1 – Excellent	Accurate	100%
2 – Good	Minor inaccuracies	± 5%
3 – Average	50% estimated	± 20%
4 – Poor	Significant data estimated	± 30%
5 – Very Poor	All data estimated	± 40%

Table 10: Data Confidence Measures

Asset Type	Inventory	Condition	Valuation
Kerb and Channel assets	1	4	2

Table 11: Kerb and Channel Assets Data Confidence Levels

# Lifecycle Management Strategies

## Maintenance Strategy

Currently the Shire of Boddington has no formal maintenance strategy in place for Councils Kerb and Channel assets. The majority of current maintenance practices are reactive. Ultimately, a high percentage of reactive maintenance works will lead to asset deterioration that will cost the organisation more to rectify in the long term. The development of maintenance strategies have been identified as a priority to reduce risk and reactive maintenance. The maintenance strategy will:

- describe the systems and procedures to be used to plan and manage maintenance work
- specify the types of maintenance to be carried out
- establish the order of priority for maintenance activities
- describes inspection regimes and responsibilities

Looking forward, the Shire wishes to improve this practice by increasing the level of planned maintenance activity and linking schedules to annual budgets. The development of a formal Kerb and Channel maintenance programme has been listed as an improvement action.

## Operation Strategy

Operational activities keep the asset utilised but have no effect on condition whilst maintenance activities relate to the repair of faults and attention to an assets structure to ensure ongoing serviceability and to prevent premature deterioration or failure.

Operational activities keep the asset utilised but have no effect on condition.

Typical operational activities include:

- Weed Spraying
- Inspections

## Maintenance Activities

Maintenance includes both reactive and proactive activities that preserve or restore the condition of a structure or its components. Adequate maintenance is necessary for the proper drainage of the roads. The lack of maintenance is one of the most common causes of failure of assets.

Maintenance activities are those routine works which keep assets operating to the required service levels. They fall into two broad categories:

- 1. Planned Maintenance (proactive): inspection and maintenance works planned to prevent asset failure.
- 2. Unplanned Maintenance (reactive): Reactive action to correct asset malfunctions and failures on an as required basis (i.e. emergency repairs).

## **Kerb and Channel AMP**

This document that sets out the Shire's long term management tactics for Kerb and Channel assets.

## **Service Level Agreements**

The Shire generally has little by way of formal Service Level Agreements with community groups and residents. The development of a template agreement has been listed as an improvement action.

## **Renewal Strategy**

All Kerb and Channel assets are periodically inspected to determine their condition, on a 0 (new/excellent) to 10 (very poor/failed) scale. Condition results will be used to predict assets' potential year of renewal.

Staff then reinspect these assets to determine the timing, scope and budget of any future renewal project.

Projects are then listed on a long term works programme and reported within this AMP, any work on renewing assets would be regarded as Capital expenditure.

The renewal strategy in this plan is predominately providing for asset renewal once the asset condition is 6 or greater, as is demonstrated in the condition table. There are assets that are currently a 6 or higher and will need to be actioned on.

## **Strategic Goals**

A sample of Kerb and Channel asset data collection and condition assessment process was conducted in 2018 randomly picked within the Shire's kerbing assets. From this a consultant provided condition information for all Kerb and Channel assets. It is recommended that Council budget for capital expenditure that focuses its spending on poor condition Kerb and Channel assets graded at level 6 or higher.

## Financial

Funds are managed within Asset Class. The current budget does not separate kerbing and channel from the footpath funds. This is in most part as a consequence that the Shire of Boddington has never had an effective Asset Management Plan in respect of the Kerb and Channel. These assets will require further inspection and a review will be required.

### Projected Expenditure Requirements

Expense Type	Year 1 2018/19	Year 2 2019/20	Year 3 2020/21	Year 4 2021/22	Year 5 2022/23
Operations					
Maintenance					
Renewal	\$ 14,295	\$ 20,109	\$ 12,965	\$ 13,575	\$ 14,122
Upgrade					
New					
Disposal					

Expense Type	Year 6 2023/24	Year 7 2024/25	Year 8 2025/26	Year 9 2026/27	Year 10 2027/28
Operations					
Maintenance					
Renewal	\$ 14,678	\$ 15,165	\$ 15,656	\$ 16,152	\$ 16,352
Upgrade					
New					
Disposal					

Table 12: Kerb and Channel Expenditure Requirements

Planned Renewal Expenditure over the next 10 years (Renewal/Upgrade) \$ 153,369



## Plan Improvement and Monitoring

This Section of the AMP outlines the degree to which it is an effective and integrated tool within the Shire. It also details the future tasks required to improve its accuracy and robustness.

### Performance Measures

The effectiveness of the AMP will be monitored by the performance of the three statutory ratios that the Shire reports on. The Shire's current performance is recorded in Table 17.

### Asset Consumption Ratio

The ratio is a measure of the condition of the Shire's physical assets, by comparing their condition based fair value (what they're currently worth) against their current replacement cost (what their replacement asset is currently worth as new). The ratio highlights the aged condition of the portfolio and has a target band of between 50%-75%. Non-depreciating assets should be excluded from the calculation.

Asset Consumption Ratio = 
$$\frac{\text{Depreciated Replacement Cost (Fair Value) of Depreciable Kerb and Channel Assets}}{\text{Current Replacement Cost of Depreciable Kerb and Channel Assets}}$$

This ratio seeks to highlight the aged condition of a local government's stock of physical assets. If a local government is responsibly maintaining and renewing / replacing its assets in accordance with a well prepared asset management plan, then the fact that its Asset Consumption Ratio may be relatively low and/or declining should not be cause for concern – providing it is operating sustainably.

Asset ID	Asset Description	Length (m)	Current Replacement Cost \$	Fair Value \$	Asset Consumption Ratio %
RKCKX001030	Adam Street	1,335	82,200	53,430	65
RKCKX001077	Assay Terrace	1,119	68,900	44,785	65
RKCKX001051	Banksia Crescent	954	58,720	38,169	65
RKCKX001999	Bannister Road	2,746	169,310	110,052	65
RKCKX001033	Batt Way	87	5,320	3,459	65
RKCKX001054	Blue Gum Way	365	22,500	14,625	65
RKCKX001063	Club Drive	995	61,280	39,832	65
RKCKX001037	Bosse Link	156	9,580	6,227	65
RKCKX001081	Colin Street	36	2,220	1,443	65
RKCKX001001	Crossman Road	288	17,700	11,505	65
RKCKX001038	Eucalypt Street	508	31,300	20,345	65
RKCKX001015	Farmers Avenue	651	40,100	26,065	65
RKCKX001025	Forrest Street	754	46,410	30,167	65
RKCKX001052	Firms Court	166	10,220	6,643	65
RKCKX001026	George Street	515	31,720	20,619	65
RKCKX001117	Grassdale View	587	36,100	23,465	65
RKCKX001057	Greenstone Way	981	60,400	39,260	65
RKCKX001040	Hakea Road	426	26,300	17,095	65
RKCKX001027	Hill Street	871	53,620	34,854	65
RKCKX001024	Hotham Avenue	2,469	152,200	95,746	63
RKCKX001066	Illyarrie Crescent	1,354	83,400	54,210	65
RKCKX001053	Jarraah Terrace	330	20,330	13,215	65
RKCKX001029	Johnstone Street	1,035	63,700	28,226	44

Asset ID	Asset Description	Length (m)	Current Replacement Cost \$	Fair Value \$	Asset Consumption Ratio %
RKCKX001032	King Street	289	17,830	11,590	65
RKCKX001076	Mahogany Crescent	249	15,310	9,952	65
RKCKX001048	Nichols Place	294	18,080	11,752	65
RKCKX001045	Pecan Place	222	13,670	8,886	65
RKCKX001028	Pollard Road	1635	100,728	49,359	49
RKCKX001050	Prussian Way	512	31,500	20,475	65
RKCKX001049	Pyke Gardens	232	14,310	9,302	65
RKCKX001059	Sandalwood Place	587	36,200	23,530	65
RKCKX001062	Sheoak Court	205	12,620	8,203	65
RKCKX001069	Shepherds Turn	347	21,320	13,858	65
RKCKX001111	Roberts Road	369	22,700	14,755	65
RKCKX001065	Wattle Link	111	6,860	4,460	65
RKCKX001039	Wuraming Avenue	654	40,266	26,174	65
RKCKX002039	Caravan Park	766	47,200	30,680	65
		<b>25.2 KM</b>	<b>\$ 1,552,124</b>	<b>\$ 976,413</b>	<b>Average 63%</b>

Table 13: Kerb and Channel Assets Consumption Ratios

The average Asset Consumption Ratio of the Kerb and Channel Assets does meet the target band of between 50%-75%. The average is 63% therefore within target.

### Asset Sustainability Ratio

The ratio is a measure of the extent to which assets managed by the Shire are being replaced as they reach the end of their useful lives. The ratio is essentially past looking, and is based upon dividing the average annual depreciation expense of the Kerb and Channel asset portfolio by the average annual renewal expenditure, for a number of past years (e.g. 3).

Asset	Renewal Expenditure			Average Renewal Expenditure
	2015/16	2016/17	2017/18	
Kerb and Channel	\$ -	\$ -	\$ -	\$ 0

Table 14: Kerb and Channel Assets Sustainability Ratios

$$\begin{aligned}
 \text{Asset Sustainability Ratio} &= \frac{\text{Kerb and Channel Asset Renewal Expenditure}}{\text{Kerb and Channel Asset Depreciation}} \\
 &= \frac{\$ 0}{\$ 29,901} \\
 &= 0\%
 \end{aligned}$$

### Asset Renewal Funding Ratio

The ratio is a measure as to whether the Shire has the financial capacity to fund asset renewal as and when it is required over the future 10 year period. The ratio is calculated by dividing the net present value of planned renewal expenditure over the next 10 years in the LTFP, by the net present value of planned renewal expenditure over the next 10 years in the AMP. The same net present value discount must be applied in both calculations.

Planned Renewal Expenditure				
2018/19	2019/20	2020/21	2021/22	2022/23
Year 1	Year 2	Year 3	Year 4	Year 5
\$ 14,295	\$ 20,109	\$ 12,965	\$ 13,575	\$ 14,122

Planned Renewal Expenditure					
2023/24	2024/25	2025/26	2026/27	2027/28	Total sum
Year 6	Year 7	Year 8	Year 9	Year 10	Year 1 - 10
\$ 14,678	\$ 15,165	\$ 16,152	\$ 16,652	\$ 16,652	\$ 153,369

Table 15: Kerb and Channel Assets Planned Renewal Expenditure at 2% per year

Required Renewal Expenditure				
2018/19	2019/20	2020/21	2021/22	2022/23
Year 1	Year 2	Year 3	Year 4	Year 5
\$ 29,901	\$ 30,499	\$ 31,109	\$ 31,731	\$ 32,366

Required Renewal Expenditure					
2023/24	2024/25	2025/26	2026/27	2027/28	Total sum
Year 6	Year 7	Year 8	Year 9	Year 10	Year 1 - 10
\$ 33,013	\$ 33,673	\$ 34,347	\$ 35,034	\$ 35,034	\$ 327,408

Table 16: Kerb and Channel Assets Required Renewal Expenditure at 2% per year

Asset Renewal Funding Ratio =  $\frac{\text{NPV of LTFP Planned Renewal Expenditure over the next 10 years}}{\text{NPV of AMP Required Renewal Expenditure over the next 10 years}}$

$$= \frac{\$ 153,367}{\$ 327,408}$$

$$= 47\%$$

Year	Asset Consumption Ratio	Asset Sustainability Ratio	Asset Renewal Funding Ratio
2018/19	63%	0%	47%

Table 17: AMP Performance Measures

## Improvement Plan

The asset management improvement plan generated from this AMP is shown in Table 17.

Task No.	Task	Responsibility	Timeline
1	Complete the implementation of the Synergy Soft AM module.		
2	Update new assets when handed over to the council		
3	Identify future technologies that can facilitate more effective and cost-efficient asset management practices.		
4	Provision of detailed work program for renewal		
5	Monitor the service levels recorded within this AMP.		
6	Implement an ongoing programme of Kerb and Channel condition asset inspections.		
7	Develop a Kerb and Channel maintenance schedule, with associated budgets.		
8	Develop an upgrade/new project evaluation and prioritisation framework.		

Table 18: AMP Improvement Plan

## Monitoring and Review Procedures

This AMP will be reviewed during annual budget preparation and amended to recognise any changes in service level and/or resources available to provide those services as a result of the budget decision process.