

Kingston District Council

Infrastructure & Asset Management Plan

2019-2029



KINGSTON DISTRICT COUNCIL



Gateway to the South East Coast

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Introduction

The current asset stock of the Kingston District Council, consists of some 2372 individual assets including Transport Assets (roads, footpaths, kerb, car parks and bridges), Building Assets, Sewer Assets (reticulation and treatment), Marine Assets (structures & facilities), Open Space Assets (structures furniture & facilities) Plant and equipment and Land.

In total this asset portfolio has a replacement value of \$102.45 million and a "Fair Value" (depreciated replacement value) of \$85.4 Million.

The effective and efficient management of the portfolio will ensure the services provided by the assets to council and the community are delivered at an appropriate level and at a cost the community can afford.

Goals & Objectives

The primary objective of this Plan is to ensure that the current assets owned and operated by the Kingston District Council are managed in terms of ongoing maintenance and renewal activity and expenditure such that all desired levels of service are met now and into the future.

Achieving this objective will require the meeting of a number of goals in line with Council's Vision including:

- The effective management of Council's assets in line with corporate policies, strategies and objectives, statutory and legislative requirements and regulations;
- Ensuring that assets are safe, appropriately accessible, well maintained and meet customers' needs in a manner that is sustainable;
- Recognising appropriate levels and sources of capital investment required to meet Council's asset renewal and replacement needs;
- Maximising the service potential of current assets by ensuring they are used and maintained appropriately;
- Achieving better value for money through evaluation processes that take into account lifecycle costing;
- Minimising Council's exposure to risk as a result of asset failures.

Assetic System

All of council's asset data is held in the Assetic system, which is cloud based. The Assetic system generates financial, renewal and maintenance requirements based on asset value, condition and useful life.

Marine Structures										
Renewal	\$105,880	\$105,880	\$105,880	\$105,880	\$105,880	\$105,880	\$105,880	\$105,880	\$105,880	\$105,880
Maintenance	\$425,000	\$425,000	\$425,000	\$425,000	\$425,000	\$301,000	\$301,000	\$301,000	\$301,000	\$301,000
Plant & Equipment										
Renewal	\$420,000	\$360,000	\$315,000	\$545,000	\$520,000	\$255,000	\$250,000	\$585,000	\$135,000	\$180,000
Non specific										
Discretionary Works	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Project CapEx	\$865,270	\$734,730		\$2,600,000						
Sale of replaced assets	(\$140,000)	(\$140,000)	(\$105,000)	(\$140,000)	(\$225,000)	(\$105,000)	(\$140,000)	(\$140,000)	(\$105,000)	(\$140,000)
Capital Expenditure (NET)	\$1,455,880	\$1,455,880	\$1,435,880	\$1,634,880	\$1,524,880	\$1,379,880	\$1,339,880	\$1,674,880	\$1,259,880	\$1,269,880
Maintenance	\$1,159,912	\$1,159,912	\$1,159,912	\$1,159,912	\$1,159,912	\$1,035,912	\$1,035,912	\$1,035,912	\$1,035,912	\$1,035,912

Asset Management Plan Structure

The Asset Management Plan is structured to support the Asset Management Planning timeline shown in the table below.

	Year 1	Year 2	Year 3	Year 4
Asset Management Plan	Review & Update for new council	Review	Review	Review
Cap EX Project plan (Rolling 5 year)	Review & Update	Roll to year 2	Roll to year 3	Roll to year 4
LTFP	Review & Update	Review & Update	Review & Update	Review & Update
10 Year Plan	Review & Update All	Review & Update All	Review & Update All	Review & Update All
	Reforecast Transport	Reforecast Civil Infrastructure & Fleet	Reforecast Buildings & Other Structures	Reforecast Stormwater & Sewer
Revaluation	Transport Assets	Civil Infrastructure Fleet	Buildings & Other Structures & Land	Sewer & Stormwater
Condition Assessment	Civil Infrastructure	Buildings	Sewer & Stormwater	Sealed Roads
	Unsealed Roads depths 25%	Unsealed Roads depths 25%	Unsealed Roads depths 25%	Unsealed Roads depths 25%

The Plan comprises 6 sections each relating to a specific grouping or class of assets according to function and / or type. Each section includes:

- Details of what asset stock Council currently owns and operates, the current state of that stock, and how much it costs to own, operate, and maintain them.
- An overview of the levels of service provided by these assets.
- A summary of the expenditure required and planned for over the next 10 years to ensure assets continue to provide the appropriate level of service.
- An improvement Plan that outlines what actions will be taken to improve the content &/or outcomes of the plan.

Sections

1. Transport
 - Roads & Carparks
 - Footpaths
 - Kerbs
 - Bridges
2. Civil Infrastructure
 - Marine Assets.
 - Breakwaters & seawalls
 - Marina Walls & Paths
 - Boat ramps and facilities
3. Buildings & other structures

- All buildings including sheds, public toilets etc.
- Other Structures
 - Open Space Structures – shelters etc.
 - Open Space Furniture including sport & play equipment
 - Other structures (lighting & aviation)
- 4. Sewer
 - Reticulation (mains & inspection points)
 - Pump stations
 - Treatment Plant
- 5. Stormwater Drainage
 - Pipes & Culverts
 - Sumps Pits and Other structures
- 6. Plant and Equipment
 - Light Vehicles,
 - Heavy Plant & Equipment

1 TRANSPORT ASSETS

The transport asset class comprises asset categories of roads, kerbs, footpaths, bridges and carparks. Roads are further split into sealed and unsealed and classified as urban or rural.

Footpaths, Kerbs & stormwater are generally associated with the urban roads.

Road	Measure	Units	Replacement Cost
Sealed	130.9	Km	\$21,515,921
Unsealed	566	Km	\$19,855,539
Total	696.9	Km	\$41,371,460
Footpaths	24836	m	\$2,483,765
Kerb	29803	m	\$1,367,760
Carparks	8395	m ²	\$223,810
Bridges **	4	No	\$376,005
Grand Total			\$45,822,800

** Bridges are maintained under the Buildings & Other structures Plan.

10 Year Transport Plan

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Sealed Roads										
Renewal	\$210,000	\$210,000	\$210,000	\$210,000	\$210,000	\$210,000	\$210,000	\$210,000	\$210,000	\$210,000
Maintenance	\$117,400	\$117,400	\$117,400	\$117,400	\$117,400	\$117,400	\$117,400	\$117,400	\$117,400	\$117,400
New /Upgrade										
Unsealed Roads										
Renewal	\$650,000	\$650,000	\$650,000	\$650,000	\$650,000	\$650,000	\$650,000	\$650,000	\$650,000	\$650,000
Maintenance	\$393,032	\$393,032	\$393,032	\$393,032	\$393,032	\$393,032	\$393,032	\$393,032	\$393,032	\$393,032
Upgrade			\$500,000				\$500,000			
New /Upgrade										
Footpaths & Kerb										
Renewal	\$106,000	\$106,000	\$106,000	\$106,000	\$106,000	\$106,000	\$106,000	\$106,000	\$106,000	\$106,000
Footpath Maintenance	\$18,500	\$18,500	\$18,500	\$18,500	\$18,500	\$18,500	\$18,500	\$18,500	\$18,500	\$18,500
Kerb Maintenance	\$11,500	\$11,500	\$11,500	\$11,500	\$11,500	\$11,500	\$11,500	\$11,500	\$11,500	\$11,500
New /Upgrade										

Treatments applicable to roads are

- Renewal. Reseals and associated preparation, rehabilitations unsealed resheeting
- Maintenance Seal patching, grading, ripping & reshaping, sign & delineation maintenance
- Upgrade Unsealed road sealing, includes \$250,000 external funding for years 3 & 7.

Long Term Planning:

- Sealed Roads Based on Predictor model using 2016 Data. Current Model indicates surplus in year 3 & 5 but this needs to be confirmed with updated condition data
- Unsealed Roads Based on Predictor model using 2016 condition data & gravel depths. Current Model indicates surplus in most years further gravel depth measurement required to confirm outputs.
- Footpath Based on Predictor model using 2016 data, a simple footpath & kerb condition survey should be undertaken to update outputs
- Kerb Based on Predictor model but will normally occur in conjunction with Sealed Road projects

2 CIVIL INFRASTRUCTURE

Marine Structures	Number	Unit	Replacement Cost
Marina Walls	34	Each	\$12,341,199
Marina Wall Pathways	26	Each	\$2,548,658
Boat Ramps & Associated Assets	2	Each	\$982,759
Breakwaters	4	Each	\$1,913,694
Sea Wall	1	Each	\$1,200,000
Grand Total			\$18,986,310

Civil Infrastructure	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Marine Structures										
Renewal	\$105,880	\$105,880	\$105,880	\$105,880	\$105,880	\$105,880	\$105,880	\$105,880	\$105,880	\$105,880
Maintenance	\$425,000	\$425,000	\$425,000	\$425,000	\$425,000	\$301,000	\$301,000	\$301,000	\$301,000	\$301,000
New /Upgrade										

Renewals allow \$50,000 for repairs to Cape Jaffa breakwaters, \$50,000 for repairs to Kingston Breakwaters and \$5880 for replacement of components associated with boat ramps at Cape Jaffa & Maria Creek

3 BUILDINGS & OTHER STRUCTURES.

Building	Number	Unit	Replacement Cost
All Buildings	56	No	\$13,823,367
Other Structures	Number)	Unit	Replacement Cost
Open space Furniture	93	No	\$359,009
Open Space Structures	14	No	\$1,745,693
Lighting	38	No	\$497,584
Total		No	\$2,602,286.00

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Buildings										
Renewal	\$50,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Maintenance	\$10,480	\$10,480	\$10,480	\$10,480	\$10,480	\$10,480	\$10,480	\$10,480	\$10,480	\$10,480
New /Upgrade										
Other Structures										
Renewal	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Maintenance										
New /Upgrade										

Building renewal based on Predictor models using 2016 condition data, maintenance updated to include cleaning & other costs.

An audit of building assets to be completed in 2019/20

Other Structures renewal covers open space furniture & structures etc. of \$27,000K and airstrip facilities \$3,000 based on asset useful lives.

4 SEWER

Asset Type	Number	Unit	Replacement Cost
Mains & Inspection Points	18	No	\$5,708,177
Pump stations	15	No	\$679,040
Treatment Plant	1	No	\$1,430,527
Irrigation Systems	??	No	\$369,409
Total			\$8,187,153

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Renewal	\$24,000	\$24,000	\$24,000	\$24,000	\$24,000	\$24,000	\$24,000	\$24,000	\$24,000	\$24,000
Maintenance	\$152,000	\$152,000	\$152,000	\$152,000	\$152,000	\$152,000	\$152,000	\$152,000	\$152,000	\$152,000
New /Upgrade	\$0	\$0	\$0	\$0	\$0					

Renewal based on % of asset stock & useful lives and allows for items such as pumps & motors to be replaced with life remaining rather than running to failure.

Maintenance includes cyclical desludging of connected properties as well as day to day maintenance.

5 STORMWATER

Asset Type	Measure	Units	Replacement Cost
Pipes & Culverts	936	m	\$421,970.60
Sumps Pits and Other structures	66	no	\$596,785.3
Total			\$1,018,755.92

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Stormwater										
Renewal	\$0	\$0	\$0	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000
Maintenance	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
New /Upgrade										

Renewal is primarily to reline or renew sump bores, little other renewal is anticipated within the next 10 years.

Maintenance is primarily cleaning and replacement of damaged pit lids.

6 PLANT & EQUIPMENT

Plant & Equipment	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Light Vehicles	\$180,000	\$180,000	\$135,000	\$180,000	\$180,000	\$135,000	\$180,000	\$180,000	\$135,000	\$180,000
Heavy Plant	\$240,000	\$180,000	\$180,000	\$365,000	\$340,000	\$120,000	\$70,000	\$405,000		
Total	\$420,000	\$360,000	\$315,000	\$545,000	\$520,000	\$255,000	\$250,000	\$585,000	\$135,000	\$180,000

Renewal budget allocation is in line with council life cycle of plant and equipment.

Plant	Life Cycle
Grader	15 years
Truck	12 years
Loader	10 years
Ride on mower	10 years
Tractor	15 years
Roller	15 years
Light vehicles	3 years or 80,000 Km's

7 NON SPECIFIC CAPITAL

Non specific	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Discretionary New Works	\$144,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Project Works	\$865,270	\$734,730		\$2,600,000						

Discretionary Works currently unidentified works to create new, upgrade or renew existing assets at Council's discretion.

Project works planned works that will create new, upgrade or renew existing assets. Current projects are Main St upgrade and foreshore development

IMPROVEMENT PLAN

Overall:

1. Finalise & adopt asset management planning & revaluation cycle to align with 4 year council terms.
2. Investigate options for basic GIS capacity.

Transport

1. Undertake automated sealed road condition survey in 2019 (Approx cost \$15,000 – \$20,000). This will enable refinement of current models and provide base line for similar surveys at 4 yearly intervals.
2. Adopt 4 year cycle (25%/ year) for depth measurement of unsealed roads.
3. Implement process for regular road defect inspection using assetic mobility app & assessment module to:
 - a. Identify maintenance needs
 - b. Establish baseline “defect count” as a performance measure.

Buildings

1. Prepare for building and playground condition Audit for 2019 2020 year, (In house or contract options)
2. Trial / Implement simple defect inspections & recording using Assetic mobility app & assessment module.

Sewer

1. Evaluate benefits of mapping mains & inspection points to GIS & Assetic cloud. (options for utilising existing maps &/ or contract inspection & mapping capability)
2. Document cyclical maintenance process pump replacement schedule etc.

Stormwater

1. Evaluate benefits of mapping mains & inspection points to GIS & Assetic cloud. (options for utilising existing maps &/ or contract inspection & mapping capability)

Definitions

- **GIS:** A Geographic information system (GIS) is a system designed to capture, store, manipulate, analyse, manage and present spatial or geographic data. GIS applications are tools that allow users to create interactive queries, analyse spatial information, edit data in maps, and present the results visually.
- **Automated sealed road condition survey:** Automated surveys typically incorporate the use of specially fitted out vehicles for collecting pavement and roadway features through lasers, high speed cameras and computers.