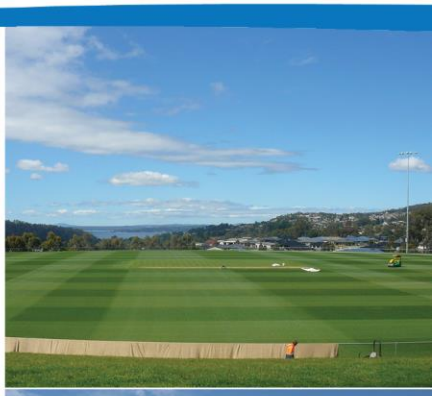
# LONG TERM ASSET MANAGEMENT PLAN

## SUMMARY

**Updated May 2016**



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# 1. Executive Summary

## 1.1. Introduction

In 2008 Council developed and adopted its Strategic Plan which set out Council's vision, values and future directions. Council's vision is for:

> *"Kingborough in 2020 will be a thriving, vibrant, and connected community; healthy by nature and naturally beautiful"*

To assist Council in achieving this vision, a number of outcomes and strategies were developed. The following outcome links Infrastructure and Asset Management Plans to Council's vision and future directions:

> *Outcome 1.6: Forward planning and leadership*
> *Develop a long term asset management plan which is underpinned by a financial management strategy for the delivery of services by Council.*

In addition to this, Council is required by legislation to develop a Strategic Plan which describes Council's role in supporting its vision and sets out the key targets and principles that drive the operation of Council. The Infrastructure and Asset Management Plan sits within this framework and documents in broad terms the principles and directions for the management and maintenance of Council's asset base.

An Asset Management Policy is the overarching document that defines the roles and responsibilities in respect to the management of Council's assets and provides the link between this document and Council's Strategic and Operational Plans.

## 1.2. Overview

Kingborough Council owns and is responsible for the management, operation and maintenance of a diverse asset portfolio that provides services to the community. Individual Asset Management Plans (IAMP's) have been developed to ensure that Council continues to provide effective and comprehensive management of its infrastructure asset portfolios. IAMP's have been completed for the following asset portfolios:

- Roads and footpaths – *Section 2*
- Stormwater – *Section 3*
- Buildings – *Section 4*
- Bridges and jetties– *Section 5*
- Parks and Reserves – *Section 6*

These plans outline Council's desire to operate and maintain its asset portfolio to achieve the following objectives:

- ensure the asset base contributes to the strategic objectives by providing the required levels of service.
- ensure infrastructure is maintained at a safe and functional standard as set out in the IAMP's.
- ensure the inspection and maintenance plans for all Council assets are sufficient to meet the legislative and operational requirements in order to deliver the required levels of service to the community.

This summary document brings together the key aspects of the IAMP's into a single, user-friendly format.

## 1.3. Asset Base

The investment in Council's portfolio of infrastructure assets has occurred over a number of decades. Ongoing investment has created an asset base which has a current written down value of $471M. The split between asset classes as at 31 January 2015 is illustrated below.

| Portfolio | Replacement Value ($'M) Million) | Accumulated Depreciation ($'M) | Written Down Value ($'M) |
|---|---|---|---|
| Roads and Footpaths | 396 | (152) | 247 |
| Stormwater | 77 | (21) | 56 |
| Bridges | 24 | (10) | 14 |
| Buildings | 57 | (11) | 46 |
| Land | 43 | 0 | 43 |
| Land under roads | 51 | 0 | 51 |
| Plant and equipment | 9 | (5) | 4 |
| Other | 9 | (3) | 6 |
| **Total** | **663** | **(192)** | **471** |

## 1.4. Asset Condition

Infrastructure assets owned by Kingborough Council are generally in reasonable condition. While the age and condition of individual assets within each class varies, consistent asset renewal and maintenance investment over a long period of time has ensured that the asset base overall is in good condition and is considered appropriate for the current level of service which they are expected to provide.

The table below provides a summary of the asset condition across infrastructure classes in the form of percentages of remaining life. This format provides an easy comparison across asset classes.

Ongoing condition audits and assessments provide up to date information on the asset base which enable the remaining life to be updated regularly.

| Portfolio | Remaining Life |
|---|---|
| Roads and Footpaths | 67% |
| Stormwater | 72% |
| Bridges | 67% |
| Buildings | 77% |
| Other | 67% |
| **Total** | 67% |

As part of the condition rating process, assets can be categorised based on a simple numerical rating system. Asset condition is measured using a 1 to 5 rating system as described below:

| Condition Index | Community Rating Scale | Condition Description |
|---|---|---|
| **1** | New/Excellent | New asset or providing a very high level of service. |
| **2** | Good | Good condition with no indicators of any future obsolescence and providing a good level of service |
| **3** | Fair | Aged and in fair condition providing an adequate level of service. No signs of immediate or short term obsolescence. |
| **4** | Poor | Will need to renew, upgrade or dispose in near future. Is reflected via inclusion in the 5 year Capital Works Plan. |
| **5** | Very Poor | Below an acceptable level of service. Requires renewal/upgrade immediately within the following year or so. |

Since 2003 Council has invested significantly in asset management systems, independent auditing and asset data capture to build a clear picture of Council's asset stock and condition. Council is also a member of the National Asset Management Strategy (NAMS) asset management program which was developed to facilitate high level asset management skills and documentation in Local Government.

Council also has independent audits undertaken on various asset types that provide an external reference and risk management component to Council's asset management activities.

Examples of the data captured to date include:

- Field asset attribute data
- Maintenance and capital activity actions
- Condition monitoring information
- Vested assets from development

Examples of independent audits include:

- ARRB for road surface condition information
- GR Webb Consulting for pavement strength testing
- AUSSPAN for bridge condition inspections
- State Grants Commission

Council appreciates that the estimation of the useful life of infrastructure assets is a matter of judgement based on the experience of Council, comparison with industry best practice and latest research for validation. Council will continue to endeavour to build a long term history of the condition of its assets over time and use this data when estimating useful lives.

The development and implementation of a Pavement Management System to further develop the current performance and predicted performance of the local road network is an example of Council's program of continuous improvement to its asset data and resulting capital and operational planning.

## 1.5. Financial Projections

Financial projections for maintenance and capital renewal costs have been completed for all infrastructure classes. Maintenance cost estimates assume the asset is maintained to provide its current engineering levels of service over the expected life of the asset, while renewal costs estimate the expected capital expenditure required to replace the asset at the end of its useful life.

The average projected capital renewal expenditure for infrastructure over the next 10 years is approximately $5M (unadjusted for inflation).

Projected total annual maintenance expenditure over the next 10 years is approximately $4.3 million.

The financial projections and requirements identified within this plan feed into Council's Long Term Financial Plan and are budgeted appropriately as part of Council's Annual Plan and Budget Process.

## 1.6. Future Demand

Council's fundamental role is to provide services to the community and is a critical contributor to ensuring connected and well serviced communities.

There are many factors that affect future demand for assets including population change, changes in demographics, seasonal factors, vehicle ownership, consumer preferences and expectations, economic, agricultural practices, climate change, environmental awareness, etc.

Issues such as changing demands for particular services, changing mixes in the balance between public and private service provisions and changing community expectations of service levels, all affect the need for assets.

The effects of climate change and potential sea level rise, are already being considered in Council's infrastructure planning, particularly with coastal assets. Kingborough has a number of low lying coastal settlements which, given the 100 year sea level rise projections, will be severely affected by coastal erosion, shoreline recession, increased water tables and inundation.

These impacts may result in loss of property which has social impacts, but also Council's infrastructure in these zones will require replacement or relocation which will have a significant impact on financial sustainability.

These impacts on Council's infrastructure services will be specifically considered as part of the Annual Plan and budget process.

## 1.7. Levels of Service

Each asset class discussed in this LTAMP have community and technical levels of service which govern the management practices, expenditure, maintenance and operations associated with them. These levels of service are not discussed in this over-arching summary but are part of the individual Roads, Bridges, Stormwater, Buildings and Parks and Reserves asset management plans.

## 1.8. Conclusion

Infrastructure and Asset Management Plans are a first step towards an integrated management program for Kingborough Council's assets and will be updated annually as part of the Annual Plan and Budget process.

The actions resulting from the Infrastructure and Asset Management Plans include continuous improvement of asset management practices, provision of financial forecasts for inclusion in the Long Term Financial Plan, budget allocations and ongoing improvements of the plans to ensure accurate reflection of the asset portfolios and contemporary asset management practices.

# 2. Road and Footpath Network

## 2.1. Asset Information

Kingborough's roads and footpath network comprises road pavements, wearing surface (seal), footpaths, kerb and channel and other minor infrastructure such as pedestrian refuges and islands.

Council provides a road network in partnership with the Department of State Growth (DSG) to ensure that Kingborough has an extensive transport network and is accessible, safe and efficient for motorists, cyclists and pedestrians. The network includes the Bruny Island Ferry service which links the mainland to the Council and State owned road network on the island.

The maintenance and renewal of State owned roads is defined under the *Roads and Jetties Act 1935*, which notes that Council is responsible for the maintenance and replacement of all infrastructure that falls outside 3.7m from the road centreline and includes kerb and gutter, footpaths and shoulder works.

Kingborough Council also manages a major network of paths and cycleways which provide pedestrian and cyclist linkages and trafficable roadside interfaces. Associated with this network are kerb and channel, traffic islands and median assets which provide delineation, pedestrian refuge and landscaping to the road and footpath network.

Kingborough has a mix of sealed and unsealed roads with most major settlements having a completely sealed road system. The unsealed road network is predominantly in the rural areas and extends to the municipal boundaries. The most predominant sealed surface type is Spray Seal which is 80% of the total sealed road network.

The assets covered by this asset management plan are shown below.

| **Road Type** | **Road Length (km)** |
|---|---|
| Spray Seal | 177 |
| Asphalt | 96 |
| Unsealed | 265 |
| **Total** | **538** |
| **Footpath Type** | **Footpath Length (km)** |
| Concrete | 162 |
| Asphalt | 32 |
| Others | 17 |
| **Total** | **211** |

A brief description of each class of asset is presented below.

| | |
|---|---|
| **Sealed Roads** | Urban and rural roads with a bitumen surface typically spray seal (two coat seal) or asphalt. |
| **Unsealed Roads** | Mostly rural roads formed and surfaced with imported granular material. |
| **Footpaths and Shared Paths** | Paths to cater for pedestrian and cycle movements within road reserves, constructed with a mix of concrete, hot mix and gravel surfaces. |
| **Kerb and Channel** | Typically constructed of concrete on the edge of sealed roads to formalise the traffic corridor and convey surface stormwater to the underground pipe drainage network. |

The value of assets as at 31 January 2015 under the Roads and Footpaths category is:

| Asset Type | Replacement Value ($'M) | Accumulated Depreciation ($'M) | Written Down Value ($'M) |
|---|---|---|---|
| Sealed roads | 253 | (107) | 147 |
| Unsealed roads | 144 | (45) | 99 |
| **TOTAL** | **397** | **(152)** | **246** |

## 2.2. Condition Summary

A review of the actual lives being achieved, industry research and the likely renewal actions that would be undertaken on the individual components, revealed that it is commonly accepted that each component of a road has a varied useful life as follows:

- Seal: 15 years
- Base: 60 years
- Sub-base: 120 years
- Formation (Sub-grade)/Greenfield costs: Infinite

This position is supported by Austroads guide AP-144-00 Valuation of Road Infrastructure Assets in Australia and New Zealand notes “Road assets, especially pavements, can be restored to as-new or near-new condition (or service potential) through physical treatments such as rehabilitation.” This statement is particularly important when comparing the current valuation model (and resulting useful lives) and the proposed methodology.

An example would be that in general terms, re-sheeting of gravel roads on a cyclic 3 year program and re-sealing of rural sealed roads approximately every 15 years is considered to be road maintenance expenses necessary to ensure the roads achieve their estimated useful life.

The actual maintenance renewal intervals for the gravel road network are subject to a number of influencing factors such as the traffic volume and type, environmental conditions and required levels of service. The intervals are adjusted according to these factors and are accounted for in renewal planning.

The remaining life of the sealed road and footpath assets is based on the age of the asset linked to projected deterioration models sourced from asset material and condition information obtained from rolling condition audits. These audits provide an update to the expected life of the asset which is then used to amend estimated replacement/renewal requirements.

The average remaining life of Council's road assets are:

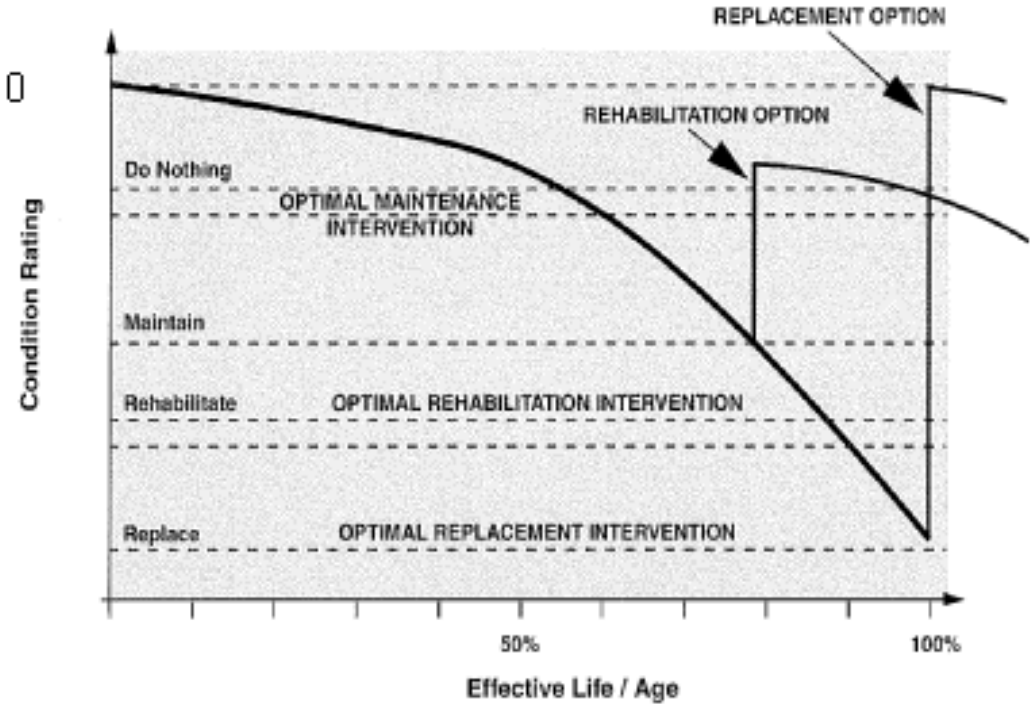
| Asset Type | Remaining Life | Condition Summary (Average) |
|---|---|---|
| Sealed roads | 65% | 2.6 |
| Unsealed roads | 71% | 1.1 |
| **Total** | **67%** | **2.1** |

## 2.3. Renewal Summary

A model for the lifecycle of sealed road pavements is presented below and highlights the maintenance and renewal stages of a road pavement life.

In the "Do Nothing" phase, the asset deteriorates slowly and maintenance is generally not required. In the "Maintain" phase, activities will need to be performed to minimise continued deterioration. In the "Rehabilitate" or "Renewal" phase, activities are undertaken that restore the asset to a condition close to that of the original.

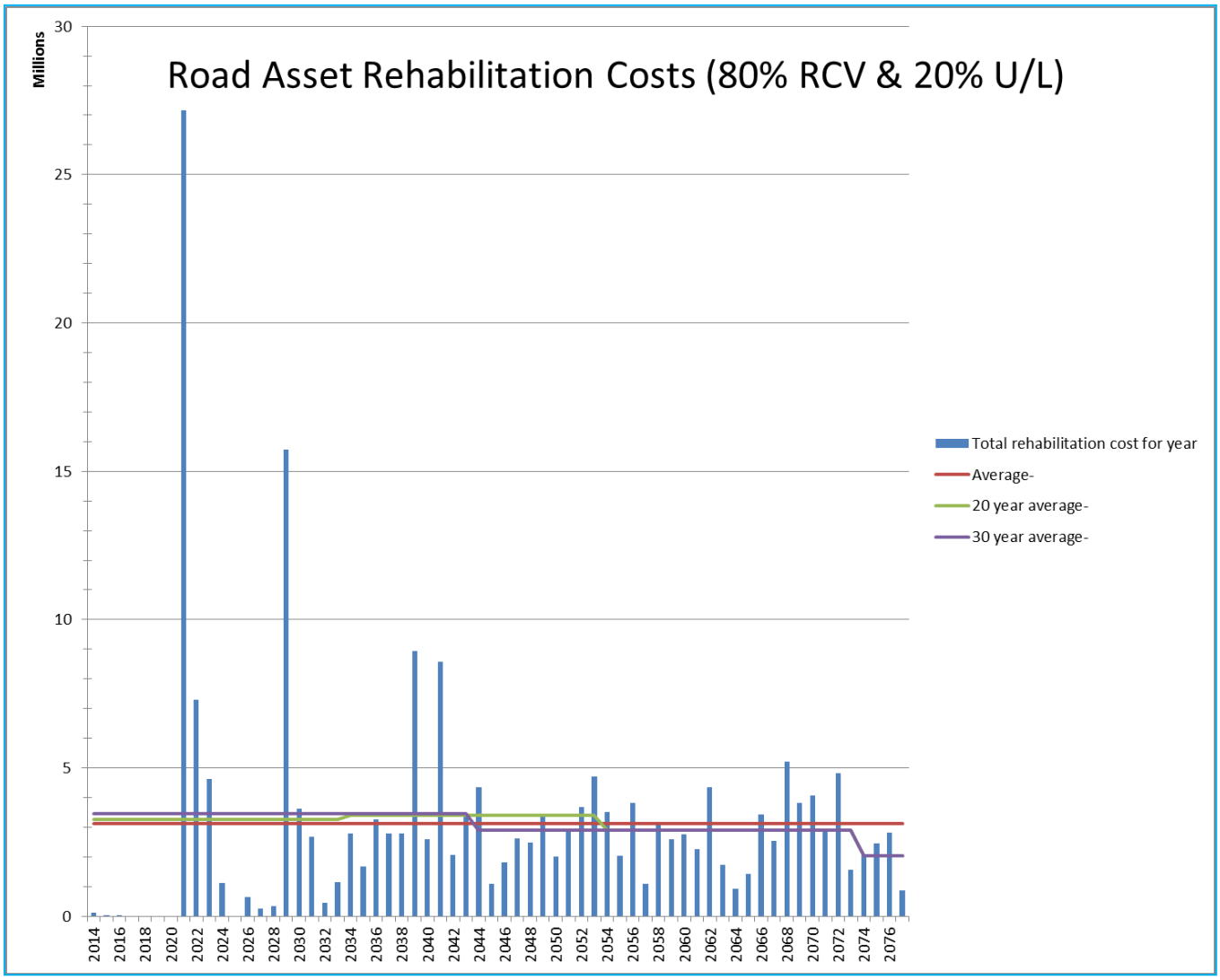
The importance of the time for intervention for renewal is paramount. If renewal activities are not undertaken in a timely manner, the condition of the asset may deteriorate rapidly to failure, and the cost of reconstruction, may be many times that of renewal/remedial activities.



The asset renewal profile for roads assets has been developed by modelling asset remaining life based on asset expected life, known installation dates and all available condition information.

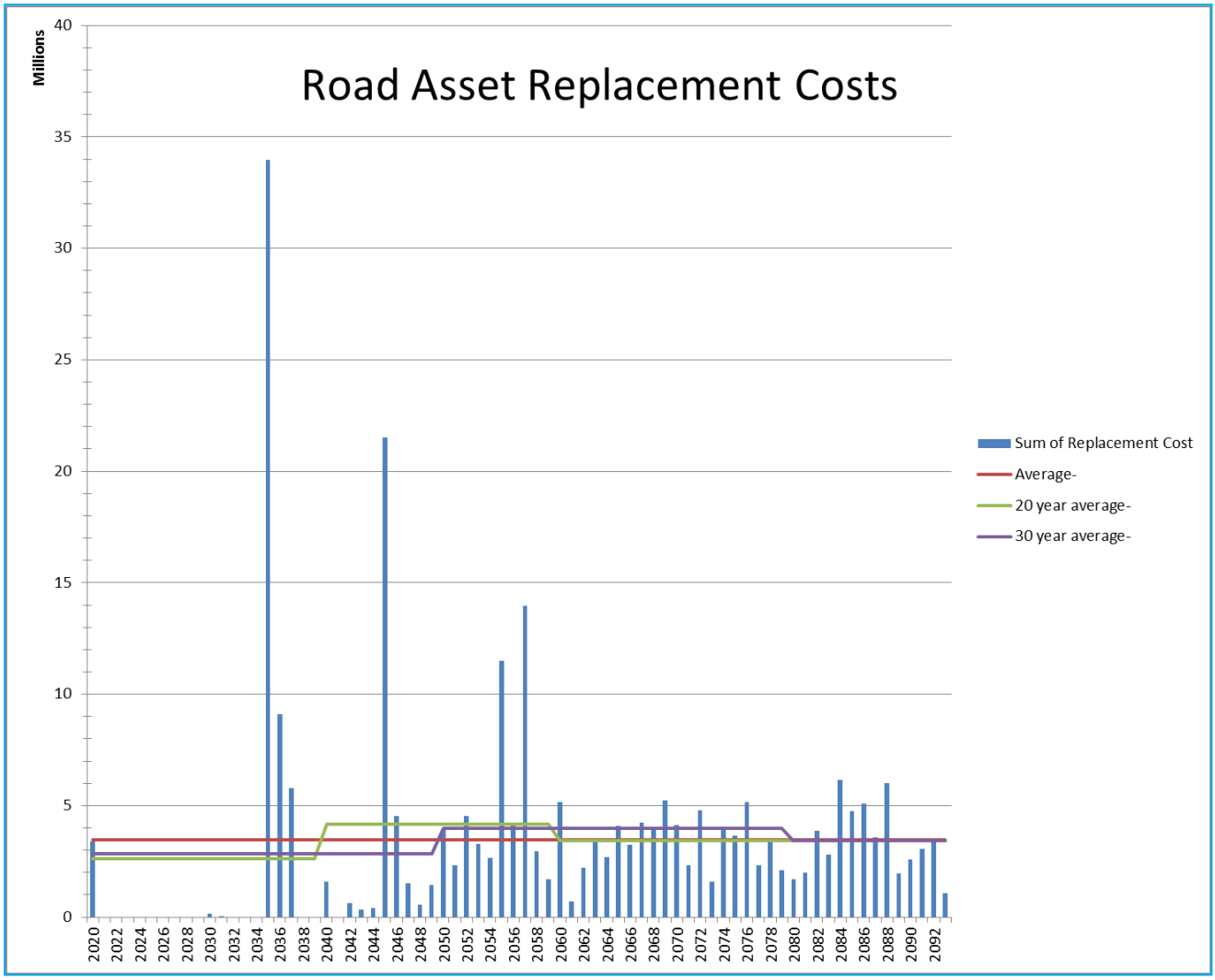
The projected renewal expenditure for road and footpaths under the ***REHABILITATION OPTION*** is illustrated below. Assumptions include rehabilitation at 20% remaining useful life and at 80% of total replacement value.

Council believe the rehabilitation option is the most appropriate strategy to follow to manage the roads network. Intervention prior to the end of the roads useful life is likely to provide a higher standard of service to the community and potential cost savings.




Under the 'rehabilitation' option (above) the rehabilitation costs for road assets averages $3.263M per year over a 20 year horizon. This is also consistent with the 30 year horizon and overall average under this methodology as the graph illustrates.

Under the 'replacement' option replacement costs for existing road assets averages $3.468M per year over 90 years when considering the overall renewal profile over one cycle of their useful lives (refer graph on following page).




The replacement scenario reflects a slightly later expiry date and a higher replacement cost. Also, the overall average spend is higher when compared to the rehabilitation scenario.

The development of a 10 year Capital Works Program is a delivery priority to provide Council with the ability to manage long term financial commitments and also to cater and adequately manage large future infrastructure renewal investments.

As part of the asset management development process, Council must undertake a full condition rating process for the road and footpath network. Only then can valid assessments and comparisons be made to prioritise capital works and manage risks associated with defects. In the meantime, the data used to build the charts in this AM Plan is based on assumed lifecycles of assets rather than their condition.

Council currently has a 5 year capital works program which reflects priority capital spend within a 5 year timeframe.

The peaks in the above graphs are indicative of assets with an assumed construction date. For example, after the 1967 bush fires, many records were lost. As a result some assets were assigned an assumed construction date. Council is undergoing a continuous process of data review to more accurately define the construction dates of these assets which is refined by field condition assessment and modelling to

determine remaining life.

The table below splits out by location the rehabilitation costs for roads as captured within the above graph. The below analysis is a guide only as to the likely expiry of roads by locality and will be further refined with additional condition assessment data.

| LOCALITY | 2014 to 2023 Amount | 2024 to 2033 Amount |
|---|---|---|
| MARGATE | 4,943,467 | 891,336 |
| ADVENTURE BAY | 4,617,124 | - |
| TINDERBOX | 3,303,802 | - |
| SANDFLY | 2,642,796 | - |
| WOODBRIDGE | 2,447,103 | - |
| LESLIE VALE | 2,333,607 | 590,057 |
| BLACKMANS BAY | 2,238,443 | 3,029,914 |
| LONGLEY | 2,104,853 | - |
| KETTERING | 2,062,411 | - |
| NEIKA | 1,846,399 | - |
| KAOOTA | 1,783,967 | - |
| KINGSTON | 1,171,715 | 2,589,140 |
| DENNES POINT | 1,053,022 | - |
| HOWDEN | 1,015,473 | 653,936 |
| CONINGHAM | 971,346 | - |
| LUNAWANNA | 937,670 | - |
| LOWER LONGLEY | 723,221 | - |
| LOWER SNUG | 720,970 | - |
| SNUG | 668,879 | 2,659,738 |
| MIDDLETON | 642,182 | - |
| OYSTER COVE | 546,305 | 157,759 |
| BARNES BAY | 396,618 | - |
| TAROONA | 47,097 | 10,374,012 |
| KINGSTON BEACH | | 3,231,476 |
| BONNET HILL | | 1,179,191 |
| BARRETTA | | 467,627 |
| ELECTRONA | | 155,062 |
| HUNTINGFIELD | | 69,568 |
| | **39,218,470** | **26,048,818** |

The above table illustrates that rural towns comprise the top 6 highest areas requiring rehabilitation works for roads over the next 10 years.

## 2.4. Maintenance Summary

Maintenance refers to works undertaken to address minor defects such as pothole patching, edge-break patching, minor kerb repair works or footpath grinding. These treatment works are undertaken to keep Council's Road assets in a safe and operational condition, but not necessarily to improve the overall condition of these assets.

Typical defects used to determine intervention levels include:

- **Cracking:** Crocodile and linear related to pavement and surface fatigue.
- **Pavement defects:** related to pavement deformities in localised areas such as shape loss and sub grade movements, local rutting, shoving and deformities.
- **Ravelling:** related to asphalt age/fretting and fatigue.
- **Local Surface defects:** Related to minor surface deformities and groups of potholes, delaminating.
- **Stripping**: Loss of stone from spray seal surface.
- **Flushing:** Excess bitumen pumping on surface of spray seals.
- **Kerb and gutter:** alignment, distortion, cracking, shape loss, structural failures, roll backs and channel deficiencies.
- **Footpath:** cracking, stepping, distortion and tree root defects.

Maintenance includes reactive, planned and cyclic maintenance work activities. Reactive maintenance work is typically 35% of total maintenance expenditure. Planned maintenance work is typically 30% of total maintenance expenditure. Cyclic maintenance work is typically 35% of total maintenance expenditure.

If road assets are left to deteriorate (i.e. sufficient capital expenditure is not allocated), then the amount of distresses being fixed under routine maintenance will increase and hence the routine maintenance expenditure required will also increase. Equally, if the condition of these assets improves then the routine maintenance expenditure required will decrease.

The level of maintenance expenditure for road assets is estimated below.

| *Roads and Footpath Maintenance* | *Amount* |
|---|---|
| 1.40.200.0000 Agricultural Drains | 21,816 |
| 1.40.201.0000 Asphalt Corrections | 139,797 |
| 1.40.204.0000 Bus Stop & Shelter Maintenance | 996 |
| 1.40.205.0000 Crack Sealing | 11,400 |
| 1.40.206.0000 Crossover Repairs | 28,800 |
| 1.40.208.0000 Culvert Cleaning | 49,139 |
| 1.40.210.0000 Culvert Replacement | 45,160 |
| 1.40.214.0000 Drainage - Easements | 13,280 |
| 1.40.216.0000 Footpath Inspection | 18,744 |
| 1.40.218.0000 Footpath Repair | 249,496 |
| 1.40.220.0000 Grading | 237,396 |
| 1.40.221.0000 Gravel Shoulders | 91,296 |
| 1.40.222.0000 Guide Posts | 19,613 |
| 1.40.224.0000 Handrails & Guardrails | 15,408 |
| 1.40.226.0000 Inspection & Site Checks | 79,296 |
| 1.40.228.0000 Kerb & Gutter Maintenance | 73,079 |
| 1.40.234.0000 Major Pavement Repairs - Sealed | 417,300 |
| 1.40.235.0000 Major Pavement Repairs - Unsealed | 47,436 |
| 1.40.244.0000 Potholing | 179,592 |
| 1.40.250.0000 Reseal | 358,600 |
| 1.40.252.0000 Resheeting | 500,999 |
| 1.40.254.0000 Retaining Walls | 8,292 |
| 1.40.264.0000 Table Drains | 318,480 |
| 1.40.268.0000 Turning Bays | 25,686 |
| 1.40.700.0000 Minor Infrastructure Upgrade | 39,950 |
| **Total** | **2,991,051** |

## 2.5. Road and footpath Summary

Kingborough Council has an integrated network of roads and footpath infrastructure which provide the pedestrian, cyclist and vehicle network requirements for the municipal area. Council's fundamental role is to provide services to the community and its road assets are a critical contributor to ensuring connected and well serviced communities. Overall the network is in good condition and the asset class is providing an adequate level of service for the community.

In 2035 there is a spike of renewals totalling $34M. To accommodate this, Council will need to bring forward some of these renewals in the 20 years prior. Ideally, a consistent annual expenditure of between $3.0 and $3.5M per year is required. A maintenance expenditure of approximately $3.0M annually is also necessary to maintain the current service level of roads and footpaths within Kingborough.

# 3. Stormwater

## 3.1. Asset Information

The stormwater network is designed to capture and convey stormwater flows, provide runoff management and flood mitigation responsibilities for the municipal area. The network is made up of road reserves, underground stormwater pipes, open channels, creeks, waterway detention basins and gross pollutant traps which capture, treat and convey stormwater.

The system of pits, underground pipes, open channels and minor creeks are classified as the minor system and convey stormwater runoff from minor storm events (rainstorm events that occur on average once every 10 or 20 years). This system is augmented by the major system of major creeks, waterways and rivers are used to convey major storm events that produce flows that are in excess of the capabilities of the minor system.

During these high flow events road reserves and park land areas will provide overland flow paths and be inundated with stormwater for short periods of time in order to reduce the risk to adjacent properties from flooding.

Approximately 66% of the replacement value of Council's storm water infrastructure has been constructed with reinforced concrete. The remaining 33% has been constructed with uPVC or high density polyethylene (HDPE).

The stormwater infrastructure covered by this asset management plan is shown below.

| Asset Type | Length or Quantity |
|---|---|
| Box Culverts | 1.26 km |
| Grated Trench | 222 m |
| Pipes | 243.76 km |
| Subsoil Drains | 10.46 km |
| Open Drains | 14.75 km |
| Grated Pits | 2,429 Units |
| Side Entry Pits | 1,074 Units |
| Headwalls (Inlet/Outlet) | 778 Units |
| Gross Pollutant Traps (GPT's) | 8 Units |
| Detention Basins | 2 Basins |

The value of assets as at 31 January 2015 covered by this asset management plan is summarised below.

| Asset Type | Replacement Value ($'M) | Accumulated Depreciation ($'M) | Written Down Value ($'M) |
|---|---|---|---|
| Box Culverts | 2.1 | (0.6) | 1.5 |
| Grated Trench | 0.1 | (0.0) | 0.1 |
| Piped Reticulation | 73.6 | (20.6) | 53.4 |
| Subsoil Drains | 0.4 | (0.0) | 0.1 |
| Open Drains | 0.5 | (0.1) | 0.4 |
| **TOTAL** | **76.7** | **(21.3)** | **55.5** |

## 3.2. Condition Summary

The remaining life of stormwater drainage assets is based on their age and condition deterioration since installation. The average remaining life of stormwater assets is 74% of expected life which indicates that the network is relatively young and in good condition.

The average remaining life of stormwater is shown below.

| Asset Type | Remaining Life | Condition Summary |
|---|---|---|
| Box Culverts | 75% | 3 |
| Grated Trench | 83% | 2 |
| Piped Reticulation | 71% | 2 |
| Subsoil Drains | 94% | 2 |
| Open Drains | 81% | 2 |
| **Average** | **81%** | **2** |

## 3.3. Renewal Summary

The asset renewal profile for stormwater assets has been developed by modelling the expected asset remaining life based on the known age of the pipe and projected condition. The projected renewal expenditure for drainage assets over the next 100 years is shown in the following graphs.

Over the 100 year lifecycle, renewal costs for stormwater drainage assets are on average $0.766M per year. Renewal expenditure over the next 10-30 years is lower ($47K) than the lifecycle average as the network is relatively young, in good condition and as such does not require significant immediate attention.

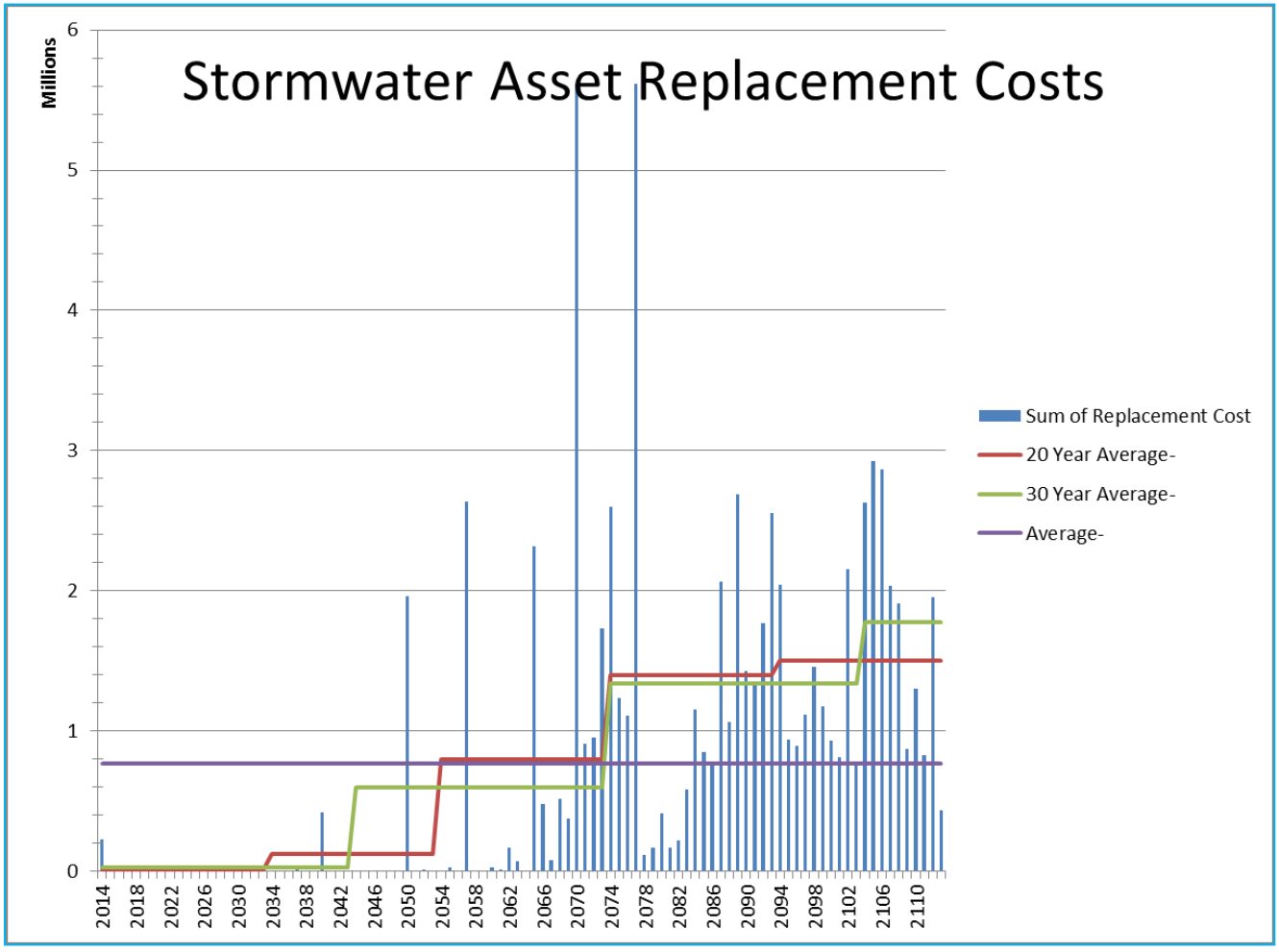
As part of Council works planning and programming, there is often an opportunity to bring forward stormwater renewal works which coincide with street resurfacing renewal requirements to reduce cost liability for stormwater renewal.

Whilst there is an extensive existing reticulated stormwater network, only a minimal increase in the stormwater asset base (and hence renewal expenditure requirements) is anticipated in the longer term as a result of development.

Whilst there is little projected growth, the impacts on existing reticulated infrastructure from development undertaken to date is considered to be high. With the rapid infill development of area like Taroona and Blackmans Bay, there are now capacity limitations in much of the network.

Council is embarking on a project to hydraulically model the entire reticulated stormwater network to identify upgrade and renewal projects to address some of these limitations. This will result in the upgrade

of certain assets to provide increased levels of flooding protection.



## 3.4. Maintenance Summary

Proactive maintenance programs are required to prevent blockages in pipes and inlets leading to surcharge or flooding, collapse of pipes and/or trenches and minimise contaminated outflows.

The level of annual maintenance expenditure is represented below.

| ***Stormwater Maintenance*** | ***Amount*** |
|---|---|
| 1.41.280.0000 Inspection & Site Checks | 53,400 |
| 1.41.282.0000 Manhole Construction | 21,720 |
| 1.41.288.0000 Repairs of Pits | 32,892 |
| 1.41.290.0000 Repairs of Pipes | 30,000 |
| 1.41.700.0000 Minor Infrastructure Upgrade | 24,000 |
| 1.41.284.0000 Pit Cleaning | 64,992 |
| 1.41.286.0000 Pipe Cleaning | 72,600 |
| 1.41.296.0000 Pipeline Camera Inspections | 24,996 |
| 1.41.294.0000 Cleaning Gross Pollutant Traps | 20,844 |
| **Total** | **345,444** |

## 3.5. Stormwater Drainage Summary

Kingborough Council has a fully developed stormwater network which provides stormwater management and flood mitigation control for the municipality. Over the next 10 years there is minimal requirement for asset renewal and the timing of non critical renewal requirements can be linked to associated road and footpath renewal projects to minimise disruptions and inconvenience to the public.

There are likely to be a considerable number of capacity driven renewal or upgrade projects, however the magnitude of the impact will not be available until computer modelling has been undertaken. The annual renewal/replacement allocation should therefore be considered with this in mind.

Overall the projections for the next 10 years for Asset Renewal should be consistent with the 90 year renewal requirement average being $0.765M.

# 4. Buildings

## 4.1. Asset Information

Kingborough Council owns a diverse property and building portfolio which comprises of operational facilities and community facilities.

Buildings with a replacement value greater than $500,000 are detailed below and represent greater than 75% of the total buildings replacement value.

| Asset Type | Asset Description | Total Replacement Value | Remaining Life (Years) |
|---|---|---|---|
| Sports Facility | Main Stadium | 7,847,500 | 67 |
| Civic Centre | Civic Centre | 5,597,280 | 87 |
| Sports Facility | Twin Ovals Complex | 4,637,524 | 96 |
| Clubrooms | Twin Ovals Sports Pavilion | 3,189,205 | 98 |
| Sports Facility | KSC Stadium Netball Courts | 2,355,868 | 97 |
| Sports Facility | Kingborough Gymnastics Centre | 2,167,932 | 96 |
| Sports Facility | Indoor Cricket Stadium | 1,738,800 | 67 |
| Miscellaneous Structures | Waste Transfer Station - BC & S | 1,678,295 | 57 |
| Miscellaneous Structures | Barretta Compactor | 1,589,452 | 22 |
| Community Hall | Senior Citizens Club | 1,159,240 | 67 |
| Community Hall | Alonnah Hall | 950,725 | 77 |
| Sports Facility | Table Tennis Centre | 912,990 | 67 |
| Community Hall | Kettering Hall | 883,070 | 67 |
| Administration / Service Centre | Family Day Care Centre | 795,150 | 67 |
| Community Hall | Kingston Beach Hall | 773,200 | 57 |
| Clubrooms | Lightwood Park Club House | 675,500 | 67 |
| Miscellaneous Structures | Barretta Saw Tooth | 667,536 | 97 |
| Community Hall | Taroona Hall | 594,150 | 67 |
| Community Hall | Woodbridge Hall | 586,190 | 57 |
| Community Hall | Margate Hall | 583,125 | 57 |
| Clubrooms | Alzheimers Centre | 575,400 | 72 |
| Amenities | Snug Oval Change Rooms | 569,930 | 67 |
| Administration / Service Centre | Depot Offices and Ameneities | 545,421 | 67 |
| Community Hall | Blackmans Bay Hall | 542,190 | 77 |
| Clubrooms | Kingston Beach Football & Cricket Club | 540,000 | 67 |
| Clubrooms | Fusion Clubrooms | 536,300 | 67 |
| Clubrooms | Sherburd Oval Cricket club | 507,640 | 57 |
| Community Hall | Dennes Point Hall Upgrade | 506,635 | 96 |

## 4.2. Condition Summary

Council undertakes regular condition inspections on all Council buildings on a three month interval. The inspections focus on most aspects of the structure including legislative compliance (fire systems, emergency lighting etc), building structure and fabric, electrical services, hydraulic services vertical transport (lifts) and building amenity (fit outs, carpets, fittings etc).

Council buildings are constructed with long lived materials, including concrete, brick and/or steel with independent lives in the order of 100 years or greater.

Maintenance programs have and will continue to ensure maximum useful lives are achieved. It is Council's view effective maintenance programs provide the most economic benefit and financial sustainability in light of high replacement values. Council is proactively looking to improve these processes to ensure the maximum useful life of assets.

## 4.3. Renewal Summary

An analysis of the remaining useful lives of Council buildings highlighted that over the next 10-25 years the complete renewal and replacement of buildings will be minimal. However it is expected that building maintenance costs will increase over time.

## 4.4. Maintenance Strategy

Proactive maintenance programs are required to prevent unnecessary deterioration of buildings. Current annual building maintenance estimates are detailed below.

| ***Building Maintenance*** | ***Amount*** |
|---|---|
| 1.56.164.6170 Building Maintenance | 50,247 |
| 1.56.164.6182 Cleaning | 14,500 |
| 1.56.164.6274 Light & Power | 80,700 |
| 1.56.480.0000 Hall Scheduled Maintenance | 79,600 |
| 1.56.482.0000 Hall Unscheduled Maintenance | 60,000 |
| 1.56.483.0000 Hall Cleaning | 10,800 |
| 1.56.484.0000 Hall Toilet Cleaning | 16,200 |
| 1.56.485.0000 Hall Toilet Repairs | 12,696 |
| 1.56.486.0000 Hall Upgrading | 15,000 |
| 1.56.488.0000 General Building Maintenance | 109,080 |
| 1.56.490.0000 98 Beach Road – FDC | 3,804 |
| **Total** | **452,627** |

## 4.5. Buildings Summary

Kingborough Council has a diverse portfolio of building assets which provide accommodation to its staff and provide facilities throughout the municipal area. The recently constructed buildings are in fair to good condition and there is currently no backlog of deferred renewal works.

Pre-war assets that were vested to Council are a priority for renewal and will require the majority of building capital outlay and maintenance allocations to ensure serviceability. This will be prioritised and staged through Council's capital works planning process.

Renewal expenditure is minimal over the next 10-20 years given the relatively young age of the majority of buildings, particularly those of high value.

Projected annual maintenance costs for the next ten years will commence at approximately $0.383M and is expected to increase annually between 5%-10%.

# 5. Bridges & Jetties

## 5.1. Asset Information

Bridges constructed with concrete and steel account for over 96% of Council's replacement value of bridges. The remaining 4% are timber bridges, and Council's asset replacement program for bridges has identified that the remaining timber bridges will be replaced within the next 5 years.

Within Kingborough there are 17 boat ramps with an average replacement value of approximately $84K. There are also 9 jetties and excluding the Alonnah Pontoon ($3.606M) the average replacement value is approximately $112K.

| Asset Type | Replacement Value ($'M) | Accumulated Depreciation ($'M) | Written Down Value ($'M) |
|---|---|---|---|
| Boat Ramp | 1.4 | (0.4) | 1.0 |
| Jetty | 0.9 | (0.2) | 0.7 |
| Box Culvert | 6.0 | (2.2) | 3.7 |
| Multi Plate Arch | 0.3 | (0.1) | 0.2 |
| Concrete Bridges | 8.6 | (2.4) | 6.1 |
| Pipe Culvert | 2.7 | (1.0) | 1.7 |
| Pontoon | 3.6 | (3.6) | 0.0 |
| Timber Bridge concrete abutments | 0.4 | (0.2) | 0.2 |
| Timber Bridge timber abutments | 0.4 | (0.3) | 0.2 |
| **Grand Total** | **24.3** | **(10.4)** | **13.8** |

## 5.2. Condition summary

Based on the construction type, environmental conditions, traffic volumes and loadings present in Kingborough, independent structural auditing by AUSSPAN and industry standard research (refer Austroads AP-R235 *Remaining Life of Road Infrastructure Assets: An overview*) it is reasonable to assume a bridge constructed with concrete and steel has an estimated useful life of 100 years. Again Council's maintenance program for bridges has and will continue to ensure useful lives are maximised and bridges are able to carry legal loadings within safety parameters.

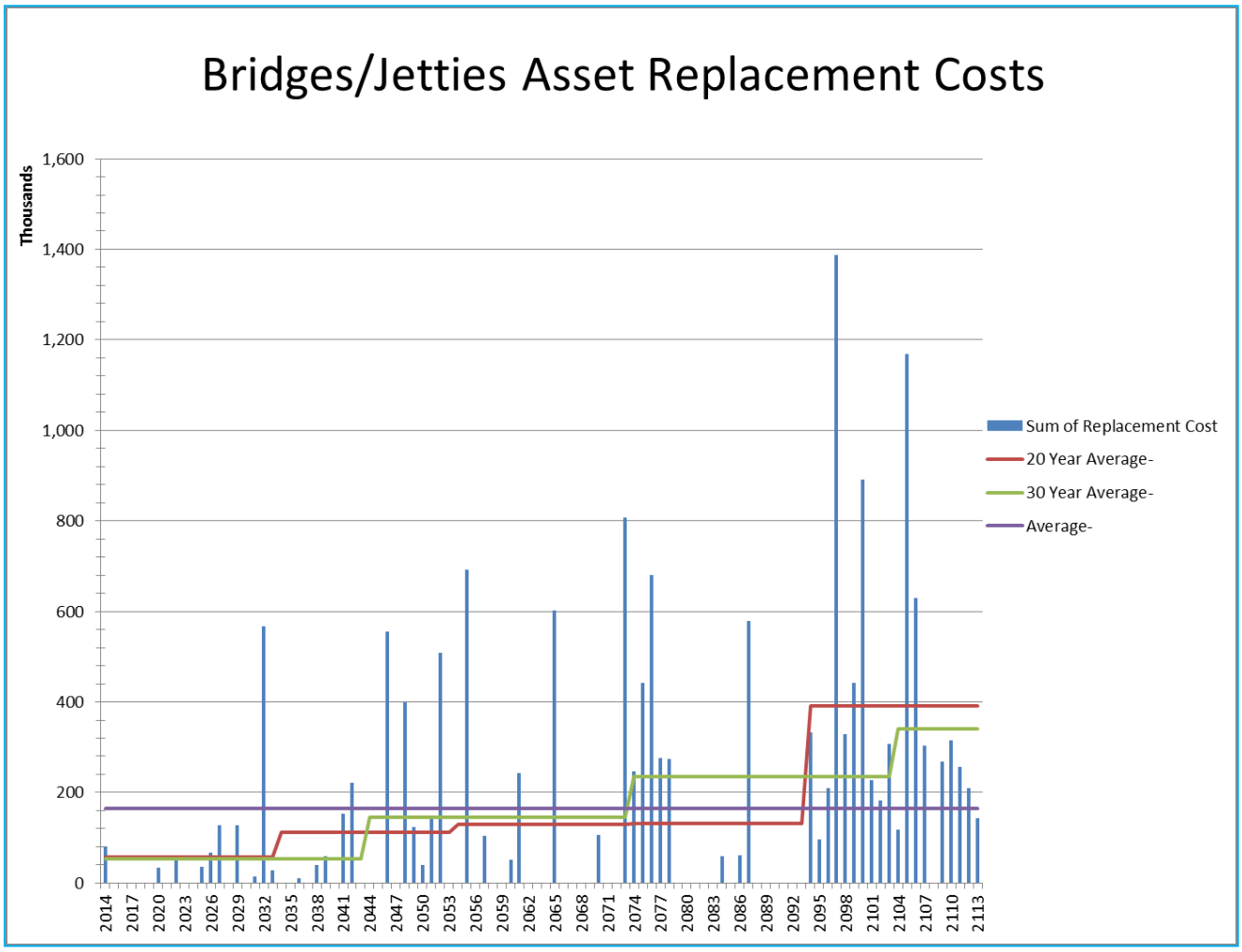
Boat ramps have a useful life of 100 years and jetties 50 years. Excluding the Alonnah Pontoon which is fully written down the average remaining useful life for jetties is 78%.

| Asset Type | Remaining Life | Condition Summary (Average) |
|---|---|---|
| Boat Ramp | 72% | 2 |
| Jetty | 78% | 2 |
| Box Culvert | 62% | 2 |
| Multi Plate Arch | 68% | 3 |
| Concrete Bridges | 78% | 2 |
| Pipe Culvert | 59% | 2 |
| Pontoon | 24% | 4 |
| Timber Bridge concrete abutments | 53% | 2 |
| Timber Bridge timber abutments | 65% | 2 |
| **Total** | **62%** | **2** |

## 5.3. Renewal Summary

The asset renewal profile bridges and jetties have been developed by modelling the expected asset remaining life based on the known age of the asset and projected condition.

Renewal expenditure over the next 10-30 years is lower than the lifecycle average as the assets are relatively young, in good condition and as such does not require significant immediate attention.



## 5.4. Maintenance Strategy

Current annual bridge and Jetty maintenance estimates are detailed below.

| *Bridges Maintenance* | *Amount* |
|---|---|
| 1.42.202.0000 Boat Ramps | 5,700 |
| 1.42.300.0000 Bridge Deck Repairs | 1,092 |
| 1.42.302.0000 Bridge Handrail Repairs | 3,996 |
| 1.42.304.0000 Bridge Abutment Maintenance | 7,200 |
| 1.42.306.0000 Bridge General Maintenance | 69,396 |
| 1.42.308.0000 Bridge Sub-Structure Maintenance | 3,144 |
| 1.42.310.0000 Bridge Inspections | 46,000 |
| 1.42.312.0000 Jetty Maintenance | 10,800 |
| **Total** | **147,328** |

## 5.5. Bridge Summary

Council bridges are in good to excellent condition. The four big ticket items on the horizon are the Alonnah Pontoon rehabilitation ($500K), the Browns River footbridge rehabilitation ($400K), the Snug Beach footbridge rehabilitation ($150K) and Barnes Bay jetty rehabilitation ($210K).

Renewal expenditure is minimal over the next 10-20 years given that the majority of timber bridges have recently been replaced with concrete structures.

Projected average annual maintenance cost for the next ten years is $106K annually.

# 6. Parks and Reserves

## 6.1. Asset Information

Kingborough has a large suite of Parks and Reserves assets which includes all street and park furniture assets, recreational elements (playgrounds, BBQ's etc) and other urban furniture items. These assets contribute to the amenity and user friendly aspect of the municipal area.

Council undertakes a range of internal and external inspection programs to monitor condition and comply with the relevant Australian Standards for equipment safety.

Examples of this include monthly monitoring of soft fall and equipment condition, quarterly compliance auditing and annual external engineering certification of all playground equipment.

The Parks and Reserves asset base has a current replacement value in excess of $2M. The split of assets and their replacement values are shown below.

| Asset Type | Replacement Value ($'000) | Accumulated Depreciation ($'000) | Written Down Value ($'000) |
|---|---|---|---|
| BBQ | 132 | (108) | 38 |
| Feeding Platform | 23 | (12) | 11 |
| Play Equipment | 621 | (318) | 309 |
| Shelter | 287 | (165) | 116 |
| Complex | 1,858 | (497) | 1,338 |
| **Grand Total** | **2,921** | **(1100)** | **1,812** |

## 6.2. Condition Summary

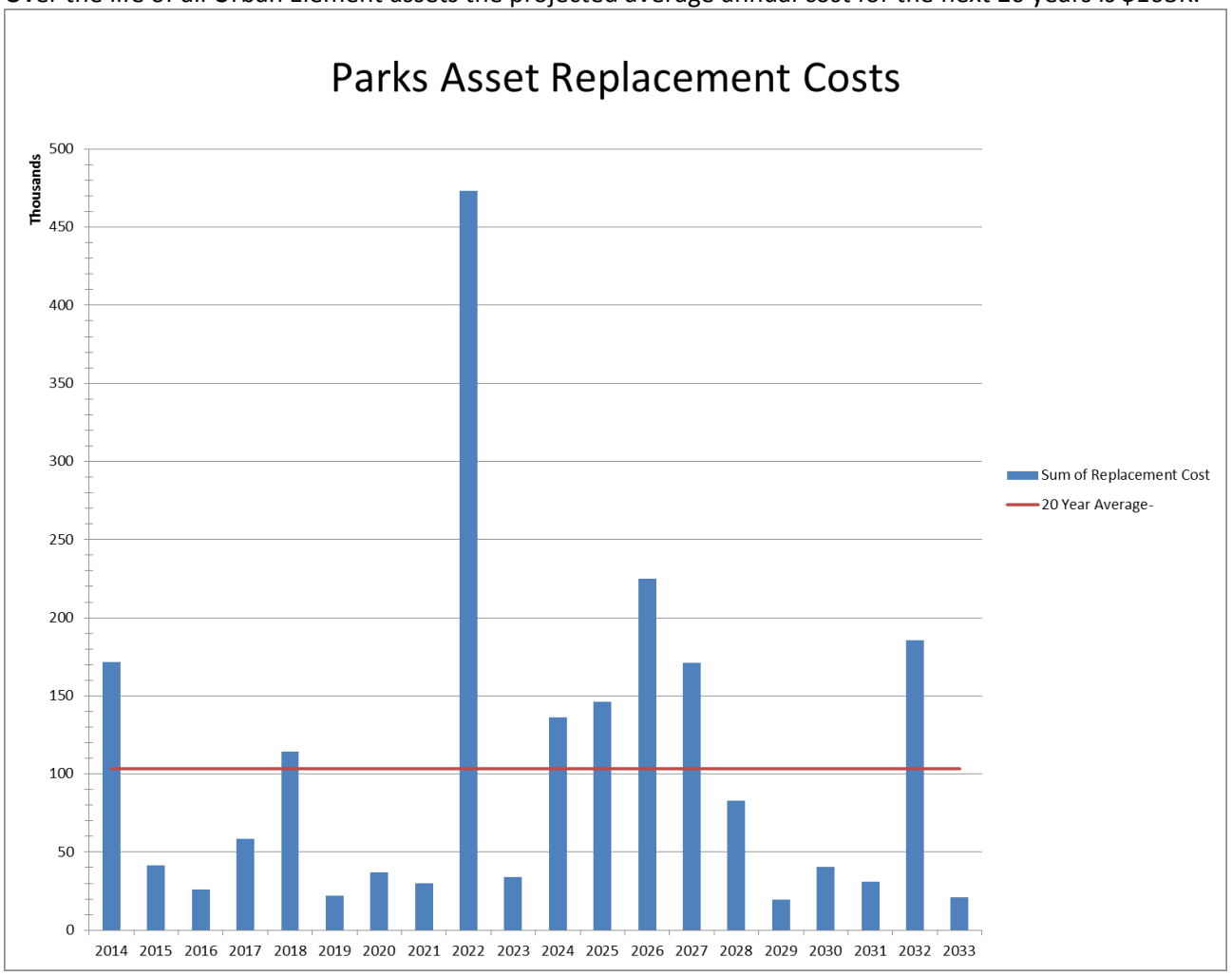
Remaining life of depreciated urban element assets (BBQ's, Playgrounds) are based on age (installation date) and condition audits. The average remaining life of depreciated urban element assets is 42%.

| Asset Type | Remaining Life | Condition Summary (Average) |
|---|---|---|
| BBQ | 20% | 4 |
| Feeding Platform | 45% | 3 |
| Play Equipment | 39% | 3 |
| Shelter | 41% | 3 |
| Other | 73% | 2 |
| **Grand Total** | 42% | 3 |

## 6.3. Renewal Summary

The asset renewal profile has been developed by modelling asset remaining lives based on asset expected life, known installation dates and available condition information. The chart below shows replacements over a 20 year period as most assets in this class have relatively short lives.

Over the life of all Urban Element assets the projected average annual cost for the next 20 years is $103K.



## 6.4. Maintenance Summary

For assets which are replaced on an ad hoc basis (seats, bins etc) an annual allocation determined from historical replacement rates has been applied to cover renewal costs.

Over the life of all urban element assets the projected average annual cost for the next ten years is $165K.

| ***Reserves*** | ***Amount*** |
|---|---|
| 1.58.500.0000 BBQ Maintenance | 14,600 |
| 1.58.530.0000 Playground Inspections | 11,900 |
| 1.58.532.0000 Playground Maintenance | 57,300 |
| 1.58.534.0000 Toilet Repairs | 36,100 |
| 1.58.700.0000 Minor Infrastructure Upgrade | 62,313 |
| **Total** | **182,213** |

## 6.5. Parks and Reserves Summary

Council has a significant number of Parks and Reserves Assets which improve the amenity and experience of users. The majority of these assets are replaced in an ad hoc manner as their condition warrants. It is anticipated that expenditure over the longer term for Parks and Reserves will increase as additional users demand improved public amenity and experience within the municipal area.

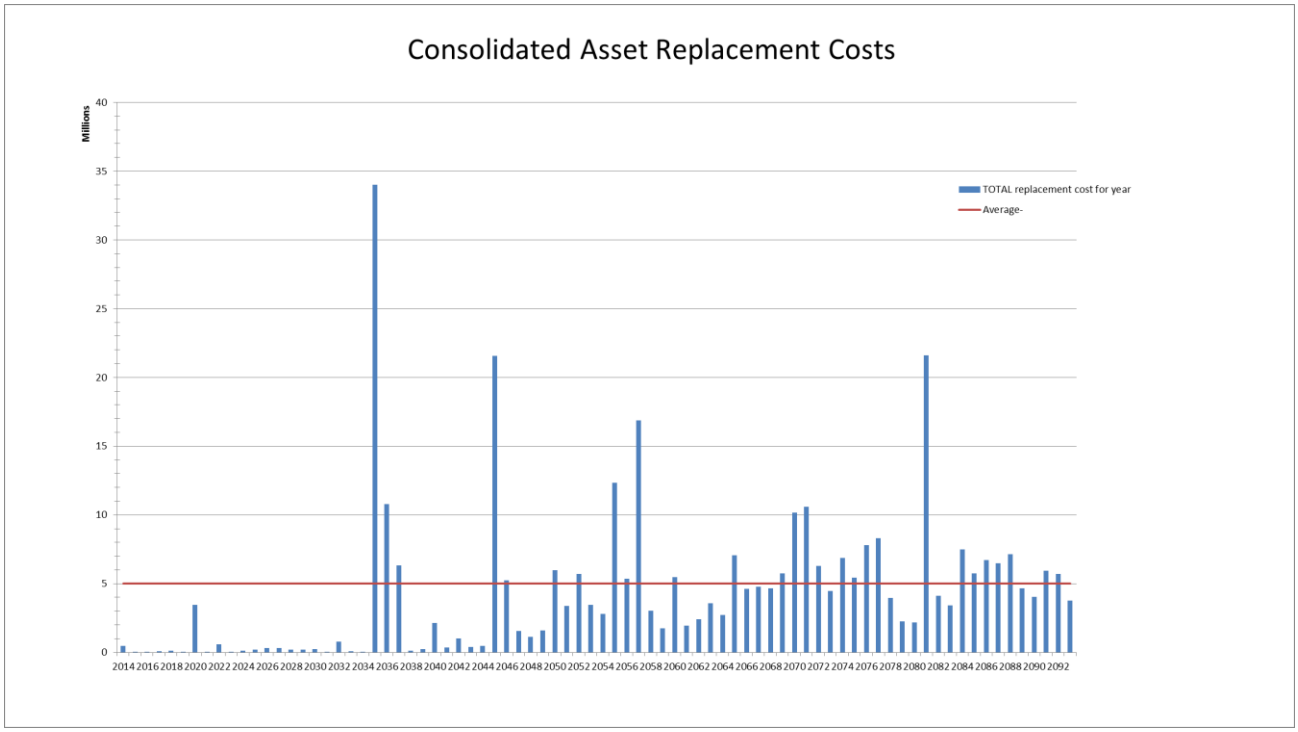
# 7. Overall Financial Summary

Infrastructure and Asset Management Plans have been developed to ensure that Council continues to provide effective and comprehensive management of its infrastructure asset portfolios. The Asset Management Plans are separate documents to the LTFP. However a high level summary has been provided as the funding for the capital works program is generated through an effective LTFP.

The asset renewal profile for infrastructure assets has been developed by modelling the expected asset remaining life based on the known age of the infrastructure and projected condition. The projected renewal capital expenditure for infrastructure assets over the next 80 years is shown below.

The combined financial projections for all asset classes covered in this plan are detailed within the following graph. Over the next 10 years, the projection sits at a relatively constant rate of $5.0M. This is provided for through Council's capital and operating projects program and its operational budget.

Currently Council has allocated sufficient budget within its Long Term Financial Plan to meet its Capital Asset Renewal Requirements.




The graph illustrates there are peaks and troughs over the 80 year period representing the fluctuations in the annual value of expired infrastructure assets in any one year. Council's Asset Management Plans dictate that consistent annual capital spend is the most effective approach in maintaining existing infrastructure. In 2035 the graph shows a peak of 34 million (mostly road asset renewals). In this case, Council should bring about the steady renewals of those assets in the preceding years where very little capital expenditure is indicated. By using this method, as the next generation of renewals come due, a levelling effect will appear in future modelling.

The asset management plans therefore indicate that over the next 10 years Council should be spending approximately $5.0M (unadjusted for inflation) per annum on capital renewal. An annual capital works program of $5.0M would maintain Council's current infrastructure to an acceptable standard. The projected level of capital expenditure of $5.0M for the renewal and rehabilitation of infrastructure assets is consistent with Council's five year capital works program.

Capital funding in excess of the $5.0M for capital renewal purposes could be available for new infrastructure projects. The Long Term Financial Plan estimates the potential capital spend on new assets over the next 10 years. The estimate is based on a number of key assumptions related to revenue and operating cost increases, and is significantly affected by the development of the former Kingston High School site.

Council should strive toward ensuring asset renewal and replacement expenditure is equal to depreciation for long term financial sustainability. However the above analysis highlights anything less than $5.0M in the short term is likely to result in existing infrastructure failing to provide the required level of services over the next 10 to 15 years.

## 7.1. Normalising Future Expenditure

The chart below has been normalised and better reflects the strategy of Council in bringing forward projects due in 2039 & 2041 respectively, and spreading them over the 2016 -2030 period. The **preceding** chart is based on the asset registers where some of the installation years have been assumed as records were lost in the 1967 bush fires. Additionally, not all assets deteriorate at the same rate with factors such as usage, quality of asset and environmental impacts causing variations in their deterioration curves. Also, with **asset componentisation** beginning to occur in 2015, various components of an asset will have different useful lives and do not necessarily all gets replaced at the same time. For example, wearing surfaces such as bridge decks and road surfaces have a shorter life than their sub-structures. A building's roof will typically have a shorter life than its foundation. Therefore, Council uses condition modelling to prioritise asset component renewal and rehabilitation based on available annual budgets, rather than the theoretical lifespan of whole assets.