ITEM 9.2.3
APPENDIX A

SHIRE OF YORK

ROADS AND BRIDGES

Asset Management Plan

Version 2.0

March 2014

Institute of Public Works Engineering Australia
AM4SRRC

Document Control	Asset Management for Small, Rural or Remote Communities

YORK ROADS AND BRIDGES ASSET MANAGEMENT PLAN

Rev No	Date	Revision Details	Author	Reviewer	Approver
1.0	29/8/2012	First Draft of Roads & Bridges AMP	DL		
2.0	19/03/2014	Remodel and update of AMP	DL	DL	

Asset Management for Small, Rural or Remote Communities Practice Note

The Institute of Public Works Engineering Australia.

www.ipwea.org.au/AM4SRRC

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1. EXECUTIVE SUMMARY

Context

York is the oldest inland town in Western Australia, being situated approximately 97kms east of Perth by road in the Avon Valley, and covering 2,010km². Nestled on the banks of the Avon River, the town has maintained a vibrant spirit among its many Victorian and Federation buildings. York is renowned for its preservation of heritage buildings and sites, providing charm and character to the town. An abundance of local activities and facilities make it an attractive destination.

York offers a scenic, rural lifestyle, and a family orientated community. It is close enough to Perth for easy access, and only 45 minutes to Midland.

The objective of this Roads and Bridges Asset Management Plan is to outline all the tasks and resources required to manage and maintain Council's roads and bridges portfolio to an agreed standard. This Asset Management Plan provides a detailed overview of the ongoing management of the Roads and Bridges assets.

This plan acts as a tool to support the ability of Council to deliver well targeted, responsive and value for money maintenance and operational services for customers and the community as a whole.

The Transport Service

The Transport network comprises:

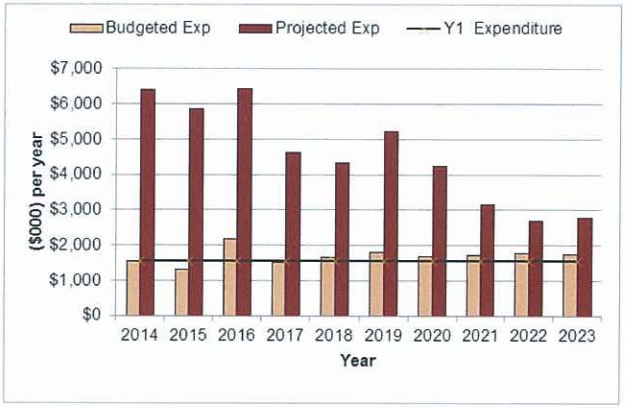
- Urban Roads consisting of-
  - Sealed roads – 38.25kms
  - Paved roads - 1.55kms
  - Formed roads - 0.87kms
  - Unformed roads - 0.35kms
- Rural Roads consisting of-
  - Sealed roads – 253.50kms
  - Paved roads – 239.49kms
  - Formed roads – 228.73kms
  - Unformed roads - 6.95kms
- Kerbing 70.25kms
- Bridges Not available

These infrastructure assets have a replacement value of $73,752,358.

What does it Cost?

The projected cost to provide the services covered by this Asset Management Plan includes operations, maintenance, renewal and upgrade of existing assets over the 10 year planning period is $45,726,000 or $4,573,000 per year.

Council's estimated available funding for this period is $16,883,000 or $1,688,000 per year. This is a funding shortfall of $2,884,000 per year, which is 37% of the cost to provide the service. Projected and budgeted expenditure are shown in the graph below.



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

What we will do

Council plans to provide Transport services for the following:

- Operation, maintenance, renewal and upgrade of Roads and Bridges assets to meet service levels set by council in annual budgets.
- Major renewals to Greenhills Road, Avon Terrace, Kauring Town streets, York town streets, Ashworth Road, Greenhills South Road, Spencers Brook Road, Qualen West Road, Doodenanning Road, Mannavale Road, Marwick Road, Top Beverley Road, Talbot West Road and Joaquina Street.
- Asset upgrades to Talbot West Road, Mokine Road, Greenhills South Road, Talbot Road, Top Beverley Road, Quellington Road, York-Tammin Road, Spencers Brook Road, Qualen West Road, Ashworth Road, Avon Terrace, Mannavale Road, Wambyn Road, Tenth Road, Leeming Road, Eleventh Road, Mansfield Street, Hardey Road, Cut Hill Road, Ovens Road, and Quellington Road bridge.

What we cannot do

The Asset Management Plan modelling has identified the following projected renewal works, which have not been funded in the Long Term Financial Plan over the next 10 years:

1. $16.7million of reseal works;
2. $1.6million of gravel sheeting works;
3. $600,000 of asphalt overlay works;
4. $2.1million in reconstruction works;
5. $5.6milliion in rehabilitation works.

Managing the Risks

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

- Poor condition of asset causes vehicle damage;
- Poor condition of asset causes injury;
- Flooding causing damage to asset;
- Damage to asset caused by natural disaster.
- Downgrading of services due to lack of funding.
- Lack of inspection and maintenance systems.

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

- Establish routine inspection regimes;
- Evaluate appropriate designs for flood prone areas;
- Monitor weather forecasting and general preparedness.
- Establishing criteria to determine renewal and new/upgrade priorities; and
- Ensure appropriate resources are allocated to maintain systems.

The Next Steps

The actions resulting from this asset management plan are:

- Assess first years costs against actual.
- Prepare ranking system for renewals.
- Review maintenance practices and align with service level requirements.
- Review latest road building technologies and practices and train staff in contemporary techniques.
- Ongoing rolling program of data collection.
- Community consultation on service level provision.

Questions you may have

What is this plan about?

This asset management plan covers the infrastructure assets that serve the Shire of York Community's Roads and Bridges needs. These assets include sealed roads, unsealed roads and bridges throughout the Council area that enable people to have access to a safe and suitable road transport network.

What is an Asset Management Plan?

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

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

Why is there a funding shortfall?

Most of the Council's roads and bridges network was constructed from government grants often provided and accepted without consideration of ongoing operations, maintenance and replacement needs.

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

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

What options do we have?

Resolving the funding shortfall involves several steps:

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

What happens if we don't manage the shortfall?

It is likely that council will have to reduce service levels in some areas, unless new sources of revenue are found. For Roads and Bridges, the service level reduction may include reverting a sealed road back to gravel, or reducing the number of times a road is graded per year.

What can we do?

Council can develop options and priorities for future Transport services with costs of providing the services, consult with the community to plan future services to match the community services needs with ability to pay for services and maximise benefit to the community for costs to the community.

2. INTRODUCTION

2.1 Background

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

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

- Plan for the Future
- Forward Capital Works Plan
- Five Year Financial Plan
- Annual Budget
- Risk Management Policy
- Department of Local Government Asset Management Framework and Guidelines

The infrastructure assets shown in Council's asset register and covered by this asset management plan are shown in Table 2.1.

Table 2.1: Assets covered by this Plan

Asset Category	Dimension		Replacement Value	Written Down Value
Roads – Urban (Built-Up)	Sealed:	38.25kms	$4,688,139	$3,981,391
	Paved:	1.55kms	$80,764	$69,805
	Formed:	0.87kms	$31,053	$31,053
	Unformed:	0.35kms	$0	$0
Roads - Rural	Sealed:	253.50kms	$35,028,405	$31,810,275
	Paved:	239.49kms	$22,734,320	$20,077,721
	Formed:	228.73kms	$10,627,677	$10,627,677
	Unformed:	6.95kms	$0	$0
Sub-Total Roads		**769.69kms**	**$73,190,358**	**$66,388,942**
Kerbing	Concrete:	70.25kms	$562,000	$353,020
Bridges		Not Available	Not Available	Not Available
TOTAL			**$73,752,358**	**$66,950,942**

Note: The figures in the above table are the full cost of the asset (formation plus pavement plus seal, where applicable) and do not represent the individual components of each asset. Formation cost equates to $53,751,088.

Key stakeholders in the preparation and implementation of this Transport Asset Management Plan can be divided into internal and external stakeholders.

Internal stakeholders include:

The Shire of York Council	Custodian of the assets, community representation and administration
Chief Executive	Council representation and administration, Identification and definition of level of service requirements
Operations Team	Design parameters, standards, operation and administration

External stakeholders include:

Shire of York Community	Asset users, service level expectations
Visitors to the Shire of York	Asset users
Local Government Insurance Services	Minimisation of risk

Fire and Emergency Services Authority Road Rescue and Emergency Services

2.2 Goals and Objectives of Asset Management

The Council exists to provide services to its community. Some of these services are provided by infrastructure assets. Council has acquired infrastructure assets by contract, construction by council staff and by donation of assets constructed by developers and others to meet increased levels of service.

Council's goal in managing infrastructure assets is to meet the required level of service in the most cost effective manner for present and future consumers. The key elements of infrastructure asset management are:

- Taking a life cycle approach,
- Developing cost-effective management strategies for the long term,
- Providing a defined level of service and monitoring performance,
- Understanding and meeting the demands of growth through demand management and infrastructure investment,
- Managing risks associated with asset failures,
- Sustainable use of physical resources,
- Continuous improvement in asset management practices.[1]

The goal of this asset management plan is to:

- Document the services/service levels to be provided and the costs of providing the service,
- Communicate the consequences for service levels and risk, where desired funding is not available, and
- Provide information to assist decision makers in trading off service levels, costs and risks to provide services in a financially sustainable manner.

This asset management plan is prepared under the direction of Council's vision, mission, goals and objectives.

Council's vision is "The Rural Gateway. A place:

- ***To visit, work, rest and play;***
- ***Of vibrancy and energy, but one of tranquillity and safety;***
- ***Of growth, where local businesses find opportunities and thrive;***
- ***Of history and cultural interests, where past history is valued, building a sense of permanency and pride; and***
- ***Of Community, where lifestyle choices are important and where community matters.***

Council's mission is:

"To manager growth, economically and socially, in supporting a progressive vibrant community"

Relevant goals and objectives and how these are addressed in this asset management plan are shown in Table 2.2.

Table 2.2: Organisation Goals and how these are addressed in this Plan

Goal	Objective	How Goal and Objectives are addressed in AMP
Improved quality of our assets.	▪ Upgrade and maintain our Infrastructure.	▪ Develop and implement Asset Management Plans. ▪ Provide and maintain safe, efficient transport, including roads, footpaths and cycleways. ▪ Provide and maintain facilities for youth and aged services.

[1] IPWEA, 2006, *IIMM* Sec 1.1.3, p 1.3.

2.3 Plan Framework

Key elements of the plan are

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

2.4 Core and Advanced Asset Management

This asset management plan is prepared as a first cut 'core' asset management plan in accordance with the International Infrastructure Management Manual[2] and the Asset Management Framework and Guidelines[3]. It is prepared to meet minimum legislative and organisational requirements for sustainable service delivery and long term financial planning and reporting. Core asset management is a 'top down' approach where analysis is applied at the 'system' or 'network' level.

2.5 Community Consultation

The Asset Management Framework and Guidelines require local governments to consult with the community on their service requirements, expectations and satisfaction levels as part of the community's ongoing engagement in relation to asset management.

The local government is required to report annually on its asset management; with the community providing feedback on the local government's asset management performance.

This 'core' asset management plan is prepared to facilitate community consultation initially through feedback on public display of draft asset management plans prior to adoption by Council. Future revisions of the asset management plan will incorporate community consultation on existing and future service needs, service levels and costs of providing the service.

This will assist Council and the community in matching the level of service needed by the community, service risks and consequences with the community's ability to pay for the service.

[2] IPWEA, 2006.
[3] Department of Local Government (WA), 2011.

3. LEVELS OF SERVICE

3.1 Customer Research and Expectations

Council has not carried out any research on customer expectations. This will be investigated for future updates of the asset management plan.

3.2 Legislative Requirements

Council has to meet many legislative requirements including Australian and State legislation and State regulations. Relevant legislation is shown in Table 3.2.

Table 3.2: Legislative Requirements

Legislation	Requirement
Aboriginal Heritage Act 1972	Preservation of the community places and objects used by traditional owners.
Aboriginal Heritage Regulations 1974	Preservation of the community places and objects used by traditional owners.
Disability Services Act 1993	An Act for the establishment of the Disability Services Commission and the Ministerial Advisory Council on Disability, for the progress of principles applicable to people with disabilities, for the funding and provision of services to such people that meet certain objectives, for the resolution of complaints by such people and for related purposes.
Disability Services Regulations 2004	Current amendments to Disability Services Act (1993)
Environmental Protection Act 1986 and associated regulations	To provide for an Environmental Protection Authority, for the prevention, control and abatement of environmental pollution, conservation, preservation, protection, enhancement and management of the environment.
Environmental Protection and Biodiversity Act 1999 (Cwth)	To provide for the prevention, control and abatement of environmental pollution, conservation, preservation, protection, enhancement and management of the environment.
Land Administration Act 1997	To make provision for the management and reservation of Crown Land.
Local Government Act 1995	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery.
Local Government (Financial Assistance) Act 1995	Sets out the allocation of how financial assistance for local government by means of grants will be provided to the States, Capital Territory and the Northern Territory.
Local Government (Miscellaneous Provisions) Act 1960	To provide for the good rule, government, convenience, comfort and safety of persons in local government districts.
Main Roads Act 1930	To provide for the construction, maintenance and supervision of highways, main and secondary roads, and other roads, the control of access to roads and for other relative purposes.
Native Title Act 1999	Sets out the requirement for the protection and recognition of native title, which local governments must take into consideration where there is the involvement of Crown Land that is subject to a native title claim.
Occupational Health and Safety Act 1984 and associated regulations	Administered in part by local governments to promote and improve standards for occupational health, safety and welfare and to coordinate administration of the laws relating to occupational safety and health for incidental and other purposes.
Planning and Development Act 2005	To provide a system for land use planning and development in the State of WA.

Legislation	Requirement
Road Traffic Act 1974	To provide for the regulation of road traffic
Roads to Recovery Act 2000	Sets out the provisions on how the Australian Government will provide funding to supplement expenditure on roads, including to local governments.

3.3 Current Levels of Service

Council has defined service levels in two terms.

Community Levels of Service relate to the service outcomes that the community wants in terms of safety, quality, quantity, reliability, responsiveness, cost effectiveness and legislative compliance.

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

Quality	How good is the service?
Function	Does it meet users' needs?
Safety	Is the service safe?

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

Technical service measures are linked to annual budgets covering:

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

Council's current service levels are detailed in the Tables below.

Table 3.3A: Current Service Levels – Sealed Roads

Key Performance Measure	Level of Service Objective	Performance Measure Process	Desired Level of Service	Current Level of Service (2012)
COMMUNITY LEVELS OF SERVICE				
Quality	Provide a smooth ride	Customer service requests	To be determined	Not currently measured.
Function	Ensure that the road meets the user requirements for travel time and availability	Customer service requests	To be determined	Not currently measured.
Safety	Provide safe suitable roads, free from hazards	▪ Customer reported accidents. ▪ Customer requests for curve realignments and safety signage.	To be determined	Not currently measured.
TECHNICAL LEVELS OF SERVICE				
Operations	Urban sealed roads are clean	Street sweeping frequency	3 times per annum	Not currently measured.
Maintenance	Transport network is suitable for purpose.	▪ Average maintenance cost per km of road. ▪ Pothole patching frequency	▪ Less than 10% variation between actual and 4 Year average maintenance cost. ▪ Potholes do not exceed 150mm in diameter	Not currently measured.
		▪ Cost effectiveness	▪ $3,000/km	Not currently measured
		▪ Budget	▪ $151,2507	▪ $122,600
Renewal	Ensure roads are replaced/renewed so that roads continue to be fit for purpose	▪ No of renewals identified in Renewal Plan (reseals) completed per year. ▪ Useful life of Infrastructure Assets	▪ 70% of renewals identified in first generation Renewal Plan completed per annum. ▪ Sealed surfaces 20 years.	▪ Not currently measured. ▪ Sealed surfaces 30-35 years.
		▪ Condition of seals	▪ Less than 5% of roads with sections that have a condition rating of 4 or 5.	6.7% of Roads with sections that have a condition rating of 4 or 5.
Upgrade/New	Ensure roads are upgraded to meet current standards and modern needs	No of upgrades identified in Upgrade Plan completed per annum.	80% of upgrades identified in first generation Upgrade Plan completed per annum.	Not currently measured.

Table 3.3B: Current Service Levels – Unsealed Roads

Key Performance Measure	Level of Service Objective	Performance Measure Process	Desired Level of Service	Current Level of Service
COMMUNITY LEVELS OF SERVICE				
Quality	▪ Provide a smooth ride. ▪ Road does not have excessive loose material or dust.	Customer service requests	To be determined	Not currently measured.
Function	Ensure that the road meets the user requirements for travel time and availability	▪ Customer service requests relating to travel time & availability	To be determined	Not currently measured.
Safety	Provide safe suitable roads, free from hazards	▪ Customer reported accidents. ▪ Customer requests for curve realignments and safety signage.	▪ To be determined	Not currently measured.
TECHNICAL LEVELS OF SERVICE				
Operations				
Maintenance	▪ Maintain transport network in an efficient and cost effective manner. ▪ Conduct routine maintenance grading as per service level standards	▪ Average maintenance cost per km of road. ▪ No of times each road is graded, according to Hierarchy.	▪ Less than 10% variation between actual and 4 Year average maintenance cost. ▪ Grading – o Regional – 4/yr o Local – 2/yr o Bus routes – 2/yr o Access roads – 1/yr	Not currently measured.
		▪ Budget	▪ $604,990	$490,400
Renewal	▪ Ensure roads are replaced/renewed so that road continues to be fit for purpose	▪ No of renewals identified in Renewal Plan (resheets) completed per year.	▪ 70% of renewals identified in first generation Renewal Plan completed per annum.	Not currently measured.
		▪ Condition of paved and formed roads, including unsealed shape.	▪ Less than 5% of roads with sections that have a condition rating of 4 or 5.	86% of Paved/Formed Roads with sections that have a condition rating of 4 or 5.
Upgrade/New	▪ Ensure roads are upgraded to meet current standards and modern needs	▪ No of upgrades identified in Upgrade Plan completed per annum.	▪ 80% of upgrades identified in first generation Upgrade Plan completed per annum.	Not currently measured.

Table 3.3C: Current Service Levels – Bridges

Key Performance Measure	Level of Service Objective	Performance Measure Process	Desired Level of Service	Current Level of Service
COMMUNITY LEVELS OF SERVICE				
Quality	▪ Ensure bridges provide a smooth ride.	▪ Customer service requests	▪ To be determined	Not currently measured.
Function	▪ Ensure bridges meet road users' needs in relation to accessibility, weight requirements and availability	▪ Customer service requests relating to availability.	▪ To be determined.	Not currently measured.
Safety	▪ Provide safe suitable bridges for vehicular traffic	▪ Customer reported accidents.	▪ To be determined.	Not currently measured.
TECHNICAL LEVELS OF SERVICE				
Operations				
Maintenance	▪ Ensure bridges are maintained in working condition.	▪ Inspections conducted per annum. ▪ No of defects outstanding. ▪ Average maintenance cost per annum	▪ One inspection conducted per annum. ▪ Less than 3 defect items per inspection. ▪ Less than 10% variation between actual and 4 Year average maintenance cost.	Not currently measured.
		▪ Budget	▪ $119,600	$97,000
Renewal	Ensure bridges are replaced/renewed so that they continue to be fit for purpose	No of renewals identified in Renewal Plan (overlays) completed per year.	▪ 70% of renewals identified in first generation Renewal Plan completed per annum.	Not currently measured.
Upgrade/New	Ensure bridges are upgraded/constructed to meet current standards and modern needs	No of bridge upgrades identified in Upgrade/New Plan completed per annum.	▪ 80% of upgrades identified in first generation Upgrade Plan completed per annum.	Not currently measured.

3.4 Desired Levels of Service

At present, indications of desired levels of service are obtained from various sources including residents' feedback to Councillors and staff, service requests and correspondence. Council has yet to quantify desired levels of service. This will be done in future revisions of this asset management plan.

4. FUTURE DEMAND

4.1 Demand Forecast

Factors affecting demand include population change, changes in demographics, seasonal factors, vehicle ownership, consumer preferences and expectations, economic factors, agricultural practices, environmental awareness, etc.

Demand factor trends and impacts on service delivery are summarised in Table 4.1.

Table 4.1: Demand Factors, Projections and Impact on Services

Demand factor	Present position	Projection	Impact on services
Population	▪ The population as at 30 June 2011 was 3,396[4].	▪ 5,400 by 2026[5] (Band C), equates to 59% increase.	▪ No change in demand on community and facilities.
Demographics	▪ 2011 Census over 65 made up 19.3% of population.	▪ Projected to increase to 21% over 65 by 2026.	▪ Require smoother roads to facilitate access for the elderly.
Climate change		▪ Flooding and storm frequency increasing.	▪ Emergency Services ▪ Infrastructure damage creating higher frequency of loss of service. ▪ More requirement for Water Sensitive Urban Design principles to be incorporated into rural roads, resulting in higher design costs. ▪ Fuel costs increasing.
Agricultural Practices	▪ Standard sized farm holdings.	▪ Aggregation of farms into larger holdings. ▪ Greater use of larger farm equipment and mobility between land holdings.	▪ Higher standard roads for larger, heavier transport vehicles.
Material sources	▪ Gravel pavement used for roads	▪ Gravel supplies becoming scarce in the local area.	▪ Greater lead transport costs for importing gravel construction materials.

4.2 Changes in Technology

Technology changes are forecast to affect the delivery of services covered by this plan in the following areas.

Table 4.2: Changes in Technology and Forecast effect on Service Delivery

Technology Change	Effect on Service Delivery
Larger Heavy Vehicles	Wider roads with sealed shoulders
Pavement Recycling Methods	Less reliance on virgin material – resulting in less haulage of material and disposal. Potential for greater efficiencies and lower road rehabilitation and renewal costs.

[4] Source: ABS 2011 Census.

[5] Source: "WA Tomorrow Report", 2012 - WA Planning Commission

Technology Change	Effect on Service Delivery
Pavement preservation techniques	Longer lasting gravel paved roads due to use of stabilisation additives.

The Shire of Quairading will monitor and investigate advances in technology, and introduce them as appropriate.

4.3 Demand Management Plan

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management.

Opportunities identified to date for demand management are shown in Table 4.3. Further opportunities will be developed in future revisions of this asset management plan.

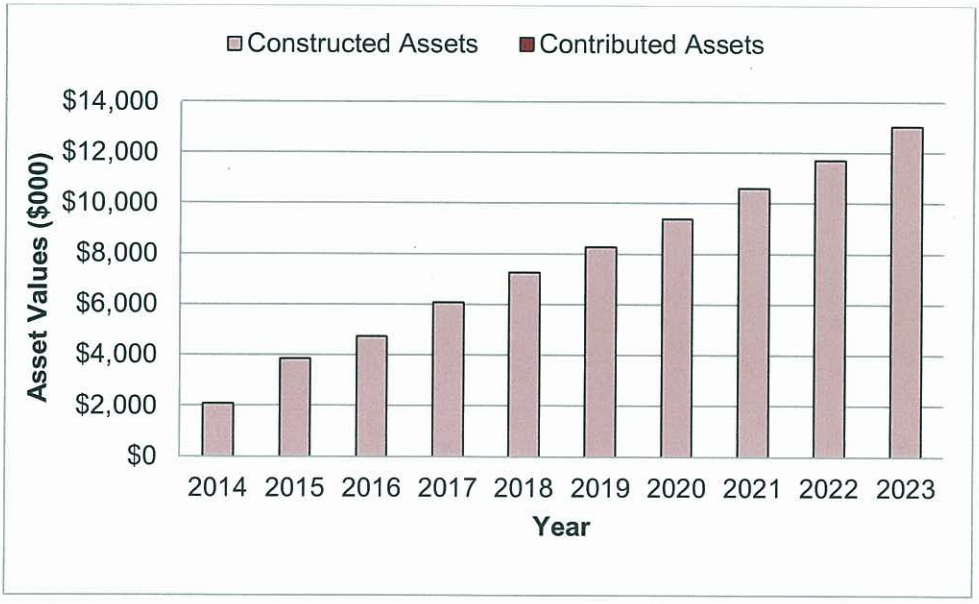
Table 4.3: Demand Management Plan Summary

Service Activity	Demand Management Plan
Regional Distributors	Upgrade and renewal of regional roads that will be impacted by increased heavy traffic volumes from increased agricultural activity and transporting product to port.
Local Distributors	Upgrade and renewal of local roads that experience increased heavy traffic volumes from increase agricultural activity, timber harvesting life cycle (once every 7-10 years).
Local Distributors	Renewal and maintenance priority to school bus routes.

4.4 New Assets

The new assets will be acquired free of cost from land developments and constructed/acquired by Council. The new contributed (from developers) and constructed (by Council) asset values are summarised in Figure 1.

Figure 1: New Assets



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

5. LIFECYCLE MANAGEMENT PLAN

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

5.1 Background Data

5.1.1 Physical parameters

The assets covered by this asset management plan are shown in Table 2.1.

Asset category	Length (kms)	Dimension (M^2)
Built Up Roads – Sealed	38.25	290,829 M^2
Built-Up Roads – Paved	1.55	6,660 M^2
Built-Up Roads – Formed	0.87	4,690 M^2
Built-Up Roads – Unformed	0.35	0 M^2
Rural Roads – Sealed	253.50	1,479,941 M^2
Rural Roads – Paved	239.49	1,414,848 M^2
Rural Roads - Formed	228.73	1,190,708 M^2
Rural Roads - Unformed	6.95	0 M^2
Sub-Total	**769.69**	**4,387,676 M^2**
Kerbing	70.25	70,250 LM
Bridges	N/A	Not Available

The age profile of the assets include in this Asset Management Plan is shown in Figures 2A, 2B and 2C.

Figure 2A: Sealed Roads Asset Age Profile

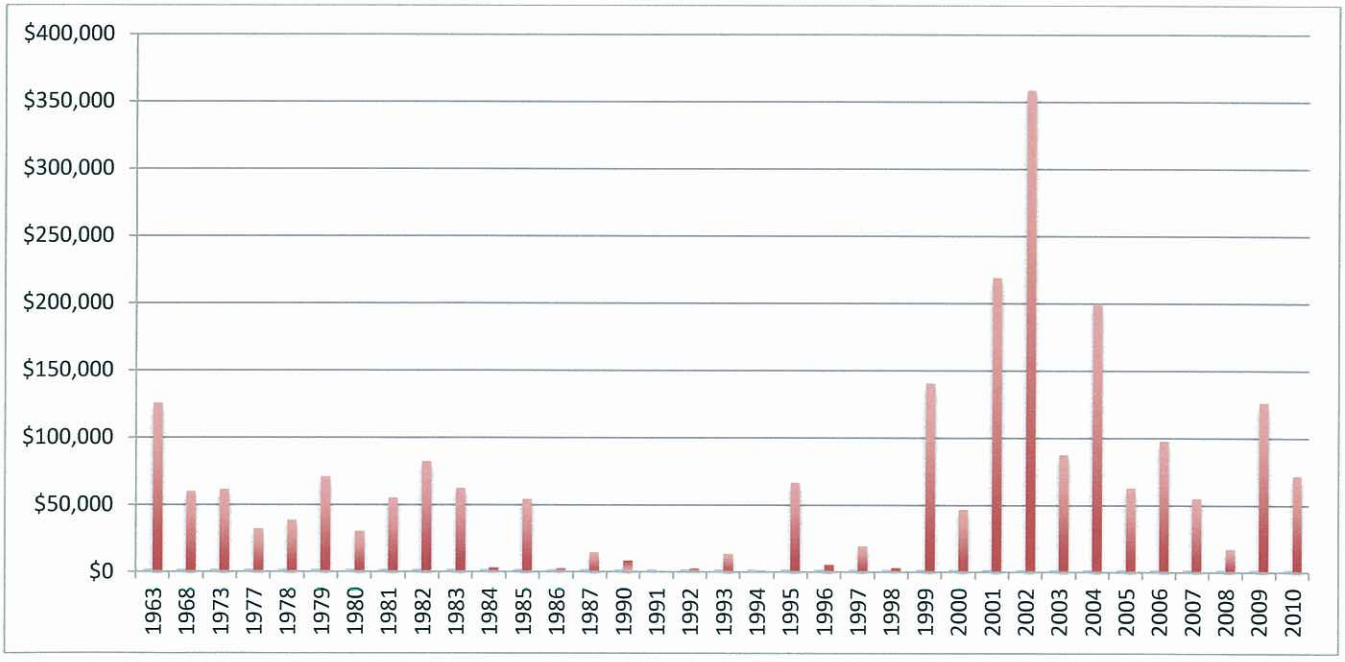
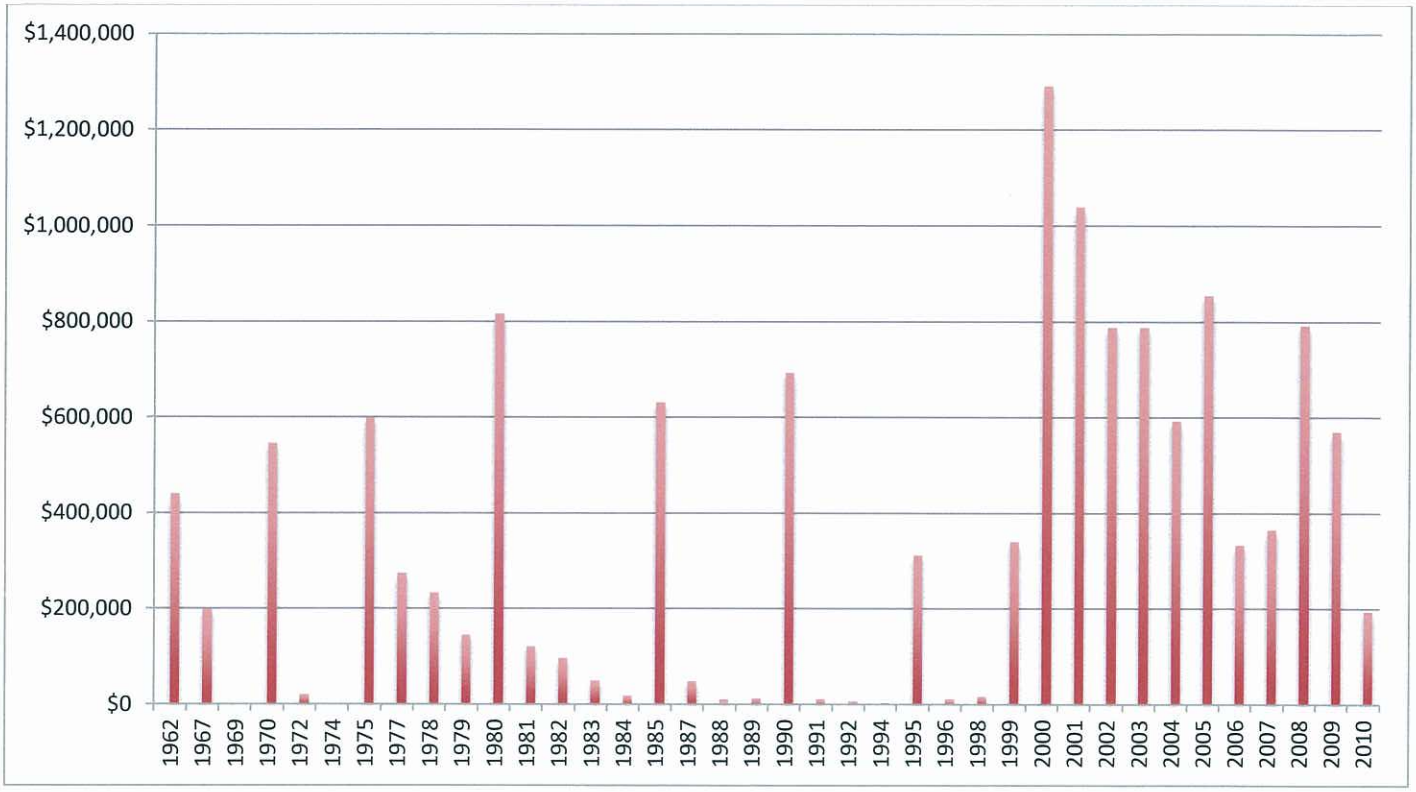


Figure 2B: Paved Roads Asset Age Profile



5.1.2 Asset capacity and performance

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

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

Table 5.1.2: Known Service Performance Deficiencies

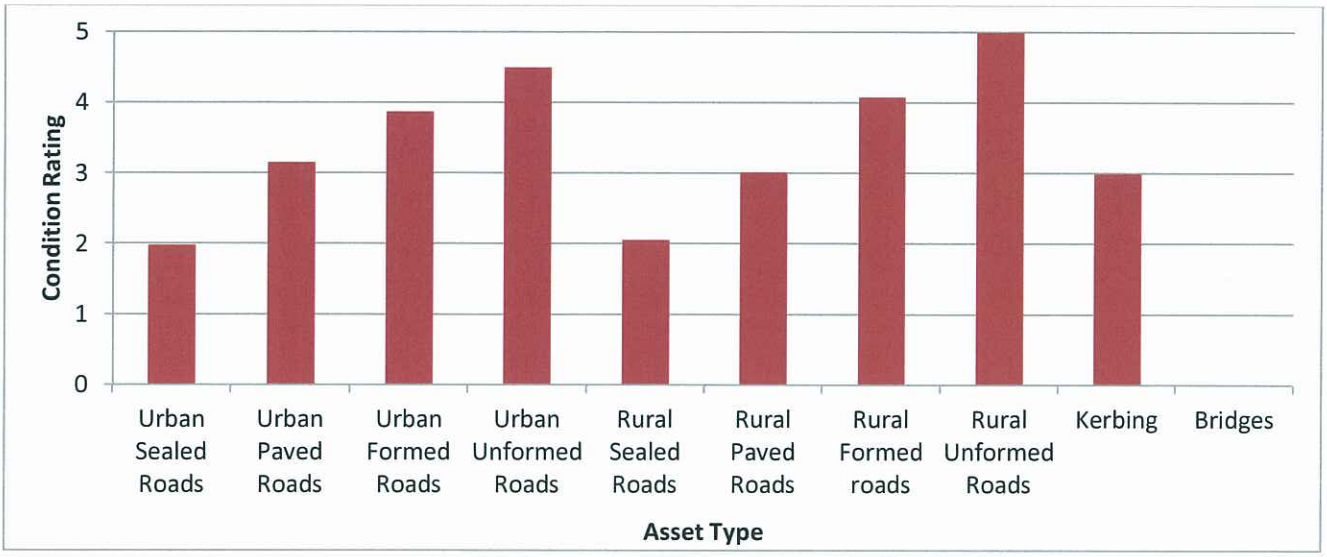
Location	Start SLK	End SLK	Condition Rating	Service Deficiency

There are currently no known service deficiencies.

5.1.3 Asset condition

The condition profile of assets included within this AM Plan is shown in Figure 3.

Figure 3: Asset Group Average Condition Profile



Condition is measured using a 1 – 5 rating system[6] as detailed in Table 5.1.3.

Table 5.1.3: IIMM Description of Condition

Condition Rating	Description
1	Good condition: Only planned maintenance required.
2	Fair-Plus condition: Minor defects only, minor maintenance required plus planned maintenance (5%).
3	Fair condition: Significant maintenance required to return to acceptable level of service (10-20%).
4	Fair-Minus condition: Significant renewal/upgrade required (20-50%).
5	Poor condition: Asset unserviceable, over 50% of asset requires replacement.

5.1.4 Asset valuations

The value of assets recorded in the asset register as at 2013 covered by this asset management plan is shown below. Assets were last revalued at June 2011.

Current Replacement Cost	$73,752,358
Depreciable Amount	$13,199,901
Depreciated Replacement Cost	$66,950,942
Annual Depreciation Expense	$795,000

Council's sustainability reporting reports the rate of annual asset consumption and compares this to asset renewal and asset upgrade and expansion.

[6] IIMM 2006, Appendix B, p B:1-3 ('cyclic' modified to 'planned', 'average' changed to 'fair'')

Asset Consumption Ratio 26.0%
(Depreciated replacement cost/Current replacement cost of assets)

Asset Sustainability Ratio 72.0%
(Capital renewal exp/Depreciation expense

Asset Renewal Funding Ratio 23.3%
(NPV of planned capital renewal exp/NPV of Projected capital renewal exp)

Asset Consumption 6.0%
(Depreciation/Depreciable Amount)

Asset renewal 4.3%
(Capital renewal exp/Depreciable amount)

Annual Upgrade/New 15.8%
(Capital upgrade exp/Depreciable amount)

Annual Upgrade/New 15.8%
(including contributed assets)

Council is currently renewing assets at 71.8% of the rate they are being consumed and increasing its asset stock by 15.8% each year.

To provide services in a financially sustainable manner, Council will need to ensure that it is renewing assets at the rate they are being consumed over the medium-long term and funding the life cycle costs for all new assets and services in its long term financial plan.

5.1.5 Asset hierarchy

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

Council's Road Asset hierarchy, based on the Main Roads WA Road Hierarchy for WA, is shown is Table 5.1.5.

Table 5.1.5: Road Asset Hierarchy

Asset Category	Service Hierarchy	Function	Service Level Objective
Rural Roads	Primary Distributor (PD)	Predominant purpose is the movement of inter-regional and/or cross town/city traffic (freeways, highways and main roads) Primary Distributors have a high degree of connectivity, connecting other Primary and Distributor roads.	Nil – These designated roads are the responsibility of Main Roads Western Australia.
	Regional Distributor Road (RD)	Predominant purpose is the linking of significant destinations and designed for efficient movement of people and goods between and within regions. Regional distributors have a high degree of connectivity, connecting to primary and other distributor roads.	2 lanes constructed to a pavement width of 10m, with a bitumen seal width of 7m and a left and right shoulder width of 1.5m. Design characteristics support an Average Annual Daily Traffic volume greater than 100 vehicles per day (vpd). Heavy vehicles permitted on road. Intersection treatments are controlled with measures such as signs and line marking. Road marked with centrelines, speed signs and guide signs.
	Local Distributor Road (LD)	Predominant purpose is the movement of traffic within local areas and connecting to high order Distributor Roads. Local Distributors have a medium degree of connectivity, connecting to Distributors and Access Roads.	Road constructed to a pavement width of 8m, and a left and right shoulder width of 1.0m. Design characteristics support an Average Annual Daily Traffic volume of up to 100 vpd. Heavy vehicle's permitted, but only to service properties and subject to designated as a permitted heavy vehicle route. Intersection treatments are controlled with minor local area traffic management such as signing. Road marked with speed and guide signs only.
	Paved Access Road (PA)	Predominant purpose is provision of vehicle access to abutting properties. Paved Access Roads have a low degree of connectivity, provided mainly for property access.	Road constructed to a pavement width of 7m, with a left and right shoulder width of 1.0m. Design characteristics support a maximum Average Annual Daily Traffic volume of up to 75 vpd. Heavy vehicles only permitted access to service local properties if road is designated as a permitted heavy vehicle route. Intersection treatments are self controlling. Road marked with guide signs only.
	Formed Access Road (FA)	Predominant purpose is provision of vehicle access to abutting properties. Paved Access Roads have a low degree of connectivity, provided mainly for property access.	Road formed to a width of 6m, with a left and right shoulder width of 1.0m. Design characteristics support a maximum Average Annual Daily Traffic volume of up to 50 vpd. Heavy vehicles only permitted access to service local properties if road is designated as a permitted heavy vehicle route. Intersection treatments are self controlling. Road marked with guide signs only.

Asset Category	Service Hierarchy	Function	Service Level Objective
Urban Roads	Primary Distributor (PD)	Predominant purpose is the movement of inter-regional and/or cross town/city traffic (freeways, highways and main roads) Primary Distributors have a high degree of connectivity, connecting other Primary and Distributor roads.	Nil – These designated roads are the responsibility of Main Roads Western Australia.
	District Distributor Road A (DA)	Predominant purpose is the high capacity movement of traffic between industrial, commercial and residential areas. District Distributor A roads have a high degree of connectivity, connecting to Primary and/or other Distributor Roads.	2 to 4 lane road constructed and sealed. Design characteristics support an Average Annual Daily Traffic volume greater than 8,000 vehicles per day (vpd). Heavy vehicles permitted on road. Intersection treatments are controlled with appropriate measures such as traffic signals. Pedestrian access controlled with positive measures (pedestrian signals) for safety. Road marked with centrelines, speed signs and guide signs. Speed 60-80km/hr.
	District Distributor Road B (DB)	Predominant purpose is the reduced capacity but high movement of traffic between industrial, commercial and residential areas. District Distributor B roads have a high degree of connectivity, connecting to Primary and/or other Distributor Roads.	2 lane road constructed and sealed. Design characteristics support an Average Annual Daily Traffic volume greater than 6,000 vehicles per day (vpd). Heavy vehicles permitted on road. Intersection treatments are controlled with appropriate Local Area Traffic Management. Pedestrian access controlled with appropriate measures (medians, island refuges) for safety. Road marked with centrelines, speed signs and guide signs. Speed 60-70km/hr.
	Local Distributor Road (LD)	Predominant purpose is the movement of traffic within local areas and connecting to high order Distributor Roads. Local Distributors have a medium degree of connectivity, connecting to Distributors and Access Roads.	Road constructed to a pavement width of 8m. Design characteristics support an Average Annual Daily Traffic volume of up to 6,000 vpd. Heavy vehicle's permitted, but only to service properties and subject to designated as a permitted heavy vehicle route. Intersection treatments are controlled with minor local area traffic management such as signing. Road marked with speed and guide signs only. Speed 50-60 km/hr.
	Paved Access Road (PA)	Predominant purpose is provision of vehicle access to abutting properties. Paved Access Roads have a low degree of connectivity, provided mainly for property access.	Road constructed to a width of 8m. Design characteristics support a maximum Average Annual Daily Traffic volume of up to 3,000 vpd. Heavy vehicles only permitted access to service local properties if road is designated as a permitted heavy vehicle route. Intersection treatments are self controlling. Speed 50-60 km/hr.

5.2 Risk Management Plan

An assessment of risks[7] associated with service delivery from infrastructure assets has identified critical risks that will result in loss or reduction in service from infrastructure assets or a 'financial shock' to the organisation. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

Critical risks, being those assessed as 'Very High' - requiring immediate corrective action and 'High' – requiring prioritised corrective action identified in the Infrastructure Risk Management Plan are summarised in Table 5.2.

Table 5.2: Critical Risks and Treatment Plans

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Associated Costs
Road and/or Bridge	Poor condition of road and/or bridge causes damage to vehicle.	M	Establish routine inspection regime and customer request management system for capturing and analysis of reported problems and incidents.	TBC
Road and/or Bridge	Poor condition of asset causes injury	H	Establish routine inspection regime and customer request management system for capturing and analysis of reported problems and incidents.	TBC
Road	Poor road surface causing dust/noise complaints	M	Establish routine inspection regime and customer request management system for capturing and analysis of reported problems and incidents.	TBC
Road	Damage/injury caused by utility provider assets or work	M-H	Formalise process for recording defects and develop standard process for notification to utility provider.	TBC
Road	Loose material on surface, loose material on shoulders causing damage or injury	H	▪ Monitor sediment deposits from rainfall events. ▪ Monitor degradation of gravel road surface during summer periods.	TBC
Road and/or Bridge	Flooding causing damage to road and/or bridge	H	Evaluate appropriate designs for flood prone areas.	TBC
Road and/or Bridge	Damage caused by natural disaster	M	Monitor weather forecasting and general preparedness	TBC
Road	Road pavement irregularities causing complaints	M	Formalise level of service standards in consultation with community.	TBC

[7] Shire of Quairading Infrastructure Risk Management Plan

5.3 Routine Maintenance Plan

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

5.3.1 Maintenance plan

Maintenance includes reactive, planned and specific maintenance work activities. Reactive maintenance is unplanned repair work carried out in response to service requests and management/supervisory directions.

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

Specific maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including culverts and pipes, etc. This work may generally falls below the capital/maintenance threshold but may require a specific budget allocation.

Actual past maintenance expenditure is shown in Table 5.3.1.

Table 5.3.1: Maintenance Expenditure Trends

Year	Maintenance Expenditure
2010/2011	$666,500
2011/2012	$710,000
2012/2013	$748,000

Current maintenance expenditure levels are based on historical data to meet the basic level of service, and are considered to be inadequate to meet required service levels. Future revision of this asset management plan will include linking required maintenance expenditures with required service levels.

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

5.3.2 Standards and specifications

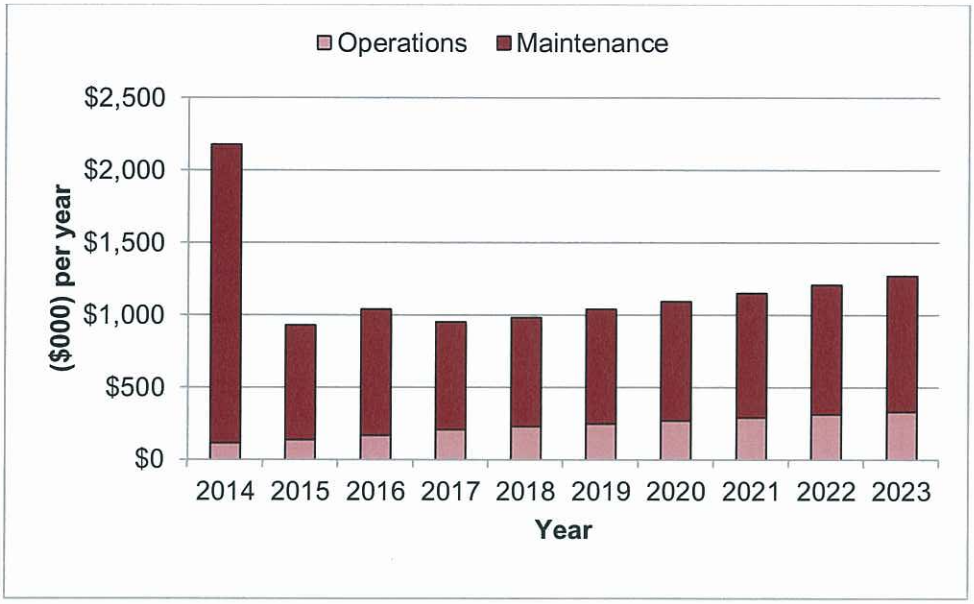
Maintenance work is carried out in accordance with the following Standards and Specifications.

- Internal practices
- Accepted Industry Standards
- IPWEA standards.

5.3.3 Summary of future operations and maintenance expenditures

Future operations and maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Figure 4. Note that all costs are shown in 2014 dollar values.

Figure 4: Projected Operations and Maintenance Expenditure



Deferred maintenance, i.e. works that are identified for maintenance and unable to be funded are to be included in the risk assessment process in the infrastructure risk management plan. Maintenance is funded from the operating budget and grants where available. This is further discussed in Section 6.2.

5.4 Renewal/Replacement Plan

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

5.4.1 Renewal plan

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

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

Method 2 was used for this asset management plan. The ranking criteria used to determine priority of identified renewal proposals is detailed in Table 5.4.1.

Table 5.4.1: Renewal Priority Ranking Criteria

Criteria	Weighting
Regional Distributor Roads (Rural)	No current weighting or ranking
Rural School Bus Routes	No current weighting or ranking
Local Distributor Roads (Rural)	No current weighting or ranking
Local Distributor Roads (Urban)	No current weighting or ranking
Access Roads (Rural)	No current weighting or ranking
Access Roads (Urban)	No current weighting or ranking
Total	**%**

Renewal will be undertaken using 'low-cost' renewal methods where practical. The aim of 'low-cost' renewals is to restore the service potential or future economic benefits of the asset by renewing the assets at a cost less than replacement cost.

Examples of low cost renewal include will be included in future updates of this Plan.

5.4.2 Renewal standards

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

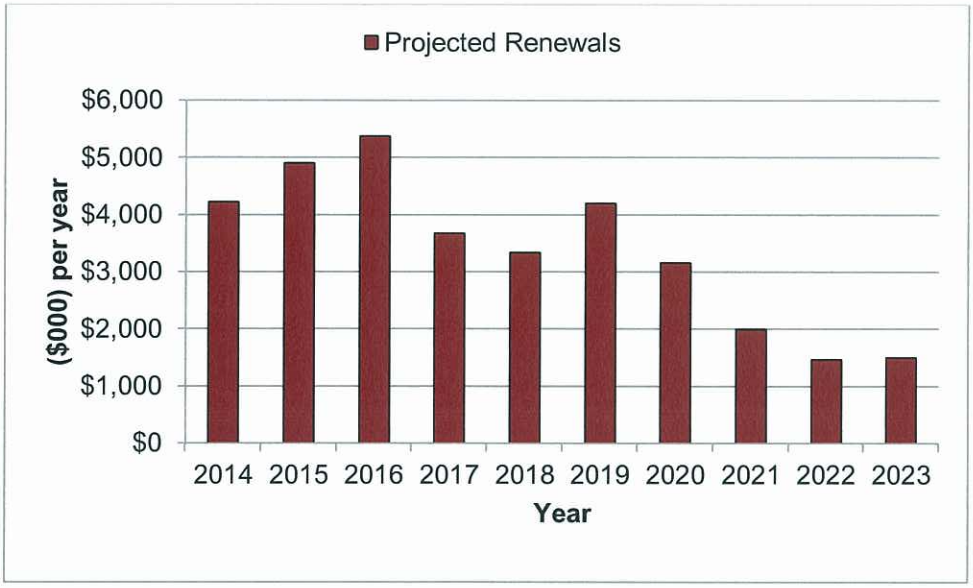
- Sealed Local Roads Manual, ARRB July 2005
- Unsealed Roads Manual, ARRB April 2009
- Occupational Health and Safety Standards
- Australian Asphalt Pavement Association Standards
- Acceptable Industry Standards

5.4.3 Summary of projected renewal expenditure

Projected future renewal expenditures are forecast to increase over time as the asset stock ages. The costs are summarised in Figure 5. Note that all costs are shown in 2014 dollar values.

The projected capital renewal program is shown in Appendix B.

Figure 5: Projected Capital Renewal Expenditure



Deferred renewal, i.e. those assets identified for renewal and not scheduled for renewal in capital works programs are to be included in the risk assessment process in the risk management plan.

Renewals are to be funded from capital works programs and grants where available. This is further discussed in Section 6.2.

5.5 Creation/Acquisition/Upgrade Plan

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

5.5.1 Selection criteria

New assets and upgrade/expansion of existing assets are identified from various sources such as councillor or community requests, proposals identified by strategic plans or partnerships with other organisations. Candidate proposals are inspected to verify need and to develop a preliminary estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed in Table 5.5.1.

Table 5.5.1: Upgrade/New Assets Priority Ranking Criteria

Criteria	Weighting
	No current weighting or ranking
	No current weighting or ranking
	No current weighting or ranking
	No current weighting or ranking
	No current weighting or ranking
	No current weighting or ranking
Total	**%**

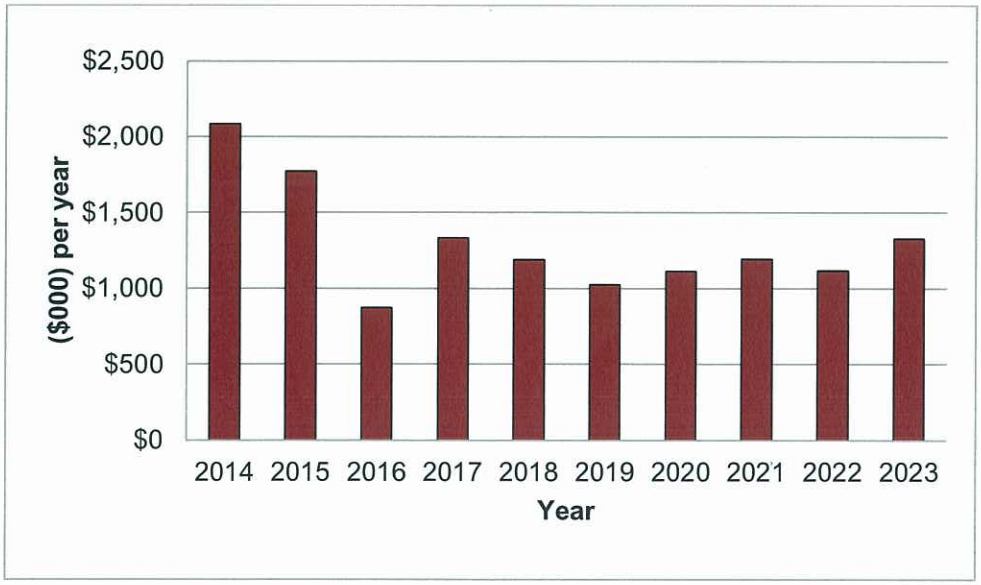
5.5.2 Standards and specifications

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

5.5.3 Summary of projected upgrade/new assets expenditure

Projected upgrade/new asset expenditures are summarised in Figure 6. The projected upgrade/new capital works program is shown in Appendix C. All costs are shown in current 2014 dollar values.

Figure 6: Projected Capital Upgrade/New Asset Expenditure



New assets and services are to be funded from capital works program and grants where available. This is further discussed in Section 6.2.

5.6 Disposal Plan

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

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

Table 5.6: Assets identified for Disposal

Asset	Reason for Disposal	Timing	Net Disposal Expenditure (Expend +ve, Revenue –ve)	Operations & Maintenance Annual Savings
Nil.	Nil.	Nil.	Nil.	Nil

6. FINANCIAL SUMMARY

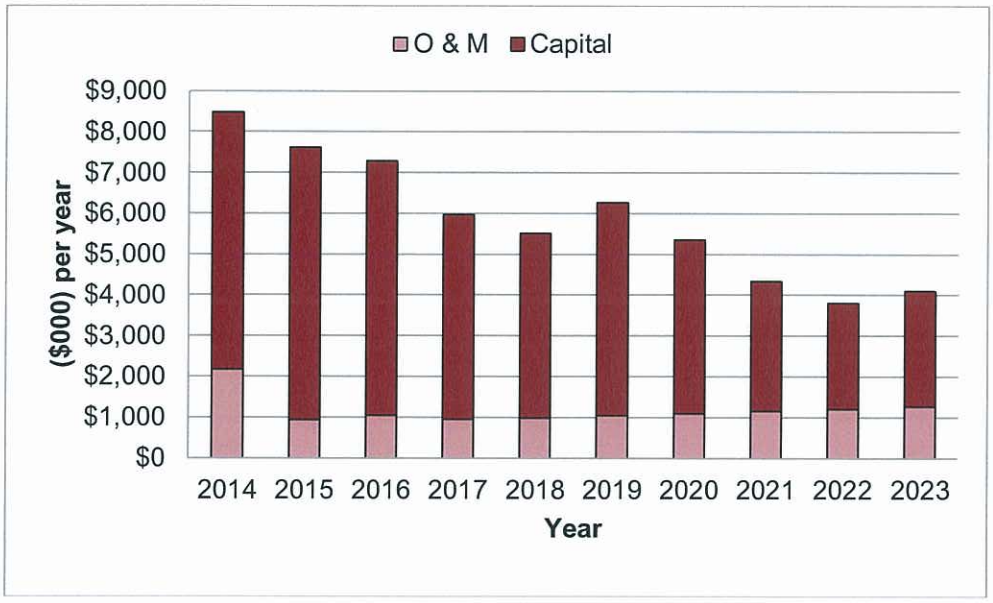
This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset performance.

6.1 Financial Statements and Projections

The financial projections are shown in Figure 7 for projected operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets), net disposal expenditure and estimated budget funding.

Note that all costs are shown in 2014 dollar values.

Figure 7: Projected Operating and Capital Expenditure and Budget



6.1.1 Financial sustainability in service delivery

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

Long term - Life Cycle Cost

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the longest asset life. Life cycle costs include operations and maintenance expenditure and asset consumption (depreciation expense). The life cycle cost for the services covered in this asset management plan is $2,975,000 per year (operations and maintenance expenditure plus depreciation expense in year 1).

Life cycle costs can be compared to life cycle expenditure to give an indicator of sustainability in service provision. Life cycle expenditure includes operations, maintenance and capital renewal expenditure in year 1. Life cycle expenditure will vary depending on the timing of asset renewals. The life cycle expenditure at the start of the plan is $2,751,000 (operations and maintenance expenditure plus budgeted capital renewal expenditure in year 1).

A shortfall between life cycle cost and life cycle expenditure is the life cycle gap.

The long term life cycle gap for services covered by this asset management plan is ($224,000) per year (-ve = gap, +ve = surplus).

Life cycle expenditure is 92% of life cycle costs giving a life cycle sustainability index of 0.92.

The life cycle costs and life cycle expenditure comparison highlights any difference between present outlays and the average cost of providing the service over the long term. If the life cycle expenditure is less than that life cycle cost, it is most likely that outlays will need to be increased or cuts in services made in the future.

Knowing the extent and timing of any required increase in outlays and the service consequences if funding is not available will assist organisations in providing services to their communities in a financially sustainable manner. This is the purpose of the asset management plans and long term financial plan.

Medium term – 10 year financial planning period

This asset management plan identifies the projected operations, maintenance and capital renewal expenditures required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

These projected expenditures may be compared to budgeted expenditures in the 10 year period to identify any funding shortfall. In a core asset management plan, a gap is generally due to increasing asset renewals for ageing assets.

The projected operations, maintenance and capital renewal expenditure required over the 10 year planning period is $4,573,000 per year.

Estimated (budget) operations, maintenance and capital renewal funding is $1,688,000 per year giving a 10 year funding shortfall of ($2,884,000) per year and a 10 year sustainability indicator of 0.37. This indicates that Council has 37% of the projected expenditures needed to provide the services documented in the asset management plan.

Short Term – 5 year financial planning period

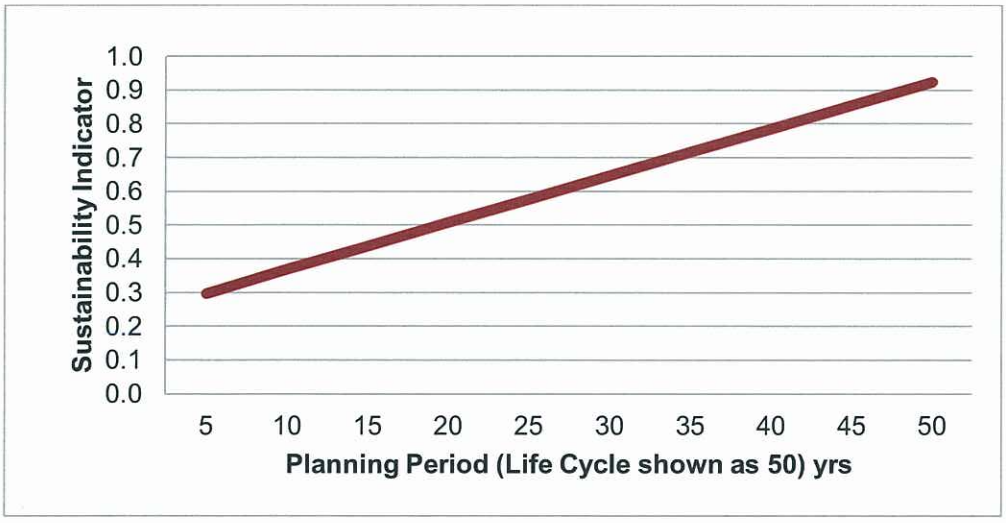
The projected operations, maintenance and capital renewal expenditure required over the first 5 years of the planning period is $5,525,000 per year.

Estimated (budget) operations, maintenance and capital renewal funding is $1,638,000 per year giving a 5 year funding shortfall of ($3,887,000). This is 30% of projected expenditures giving a 5 year sustainability indicator of 0.30.

Financial Sustainability Indicators

Figure 7A shows the financial sustainability indicators over the 10 year planning period and for the long term life cycle.

Figure 7A: Financial Sustainability Indicators



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

Figure 8 shows the projected asset renewals in the 10 year planning period from Appendix B. The projected asset renewals are compared to budgeted renewal expenditure in the capital works program and capital renewal expenditure in year 1 of the planning period in Figure 8.

Figure 8: Projected and Budgeted Renewal Expenditure

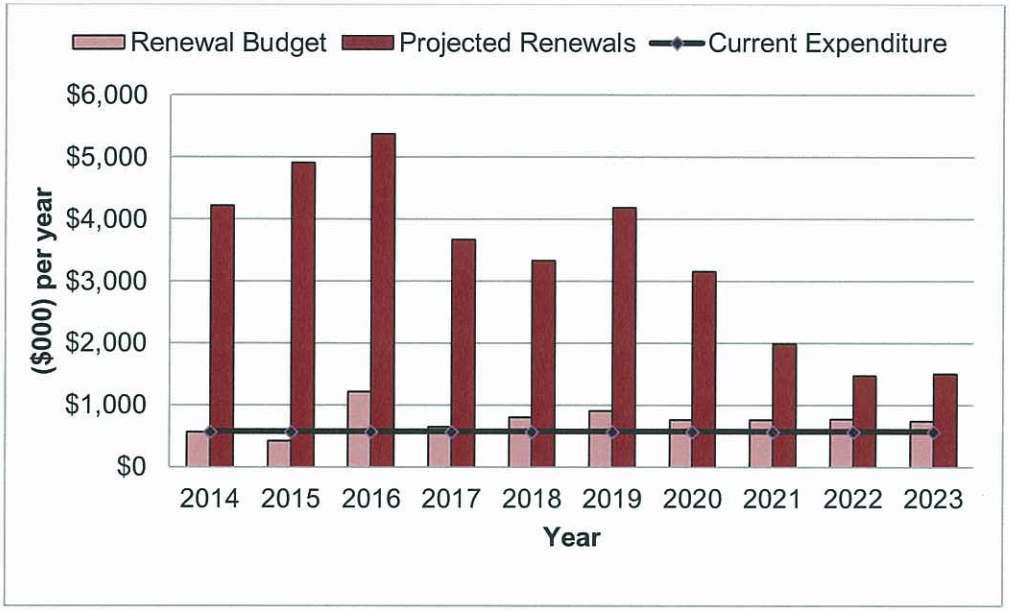


Table 6.1.1 shows the shortfall between projected and budgeted renewals

Table 6.1.1: Projected and Budgeted Renewals and Expenditure Shortfall

Year	Projected Renewals ($000)	Planned Renewal (Budget) ($000)	Renewal Funding Shortfall ($000) (-ve Gap, +ve Surplus)	Cumulative Shortfall ($000) (-ve Gap, +ve Surplus)
2014	$4,221	$571	-$3,650	-$3,650
2015	$4,912	$425	-$4,487	-$8,137
2016	$5,380	$1,221	-$4,159	-$12,296
2017	$3,678	$647	-$3,031	-$15,327
2018	$3,339	$810	-$2,529	-$17,856
2019	$4,197	$911	-$3,286	-$21,142
2020	$3,159	$770	-$2,389	-$23,531
2021	$1,994	$760	-$1,234	-$24,765
2022	$1,475	$780	-$695	-$25,460
2023	$1,504	$740	-$764	-$26,224

Note: *A negative shortfall indicates a funding gap; a positive shortfall indicates a surplus for that year.*

Providing services in a sustainable manner will require matching of projected asset renewals to meet agreed service levels with planned capital works programs and available revenue.

A gap between projected asset renewals, planned asset renewals and funding indicates that further work is required to manage required service levels and funding to eliminate any funding gap.

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

6.1.2 Expenditure projections for long term financial plan

Table 6.1.2 shows the projected expenditures for the 10 year long term financial plan.

Expenditure projections are in current (non-inflated) values. Disposals are shown as net expenditures (revenues are negative).

Table 6.1.2: Expenditure Projections for Long Term Financial Plan ($000)

Year	Operations ($000)	Maintenance ($000)	Projected Capital Renewal ($000)	Capital Upgrade/ New ($000)	Disposals ($000)
2014	$116	$2,064	$4,221	$2,087	$0
2015	$140	$793	$4,912	$1,775	$0
2016	$169	$874	$5,380	$872	$0
2017	$209	$746	$3,678	$1,336	$0
2018	$232	$753	$3,339	$1,190	$0
2019	$252	$789	$4,197	$1,028	$0
2020	$271	$823	$3,159	$1,114	$0
2021	$292	$859	$1,994	$1,196	$0
2022	$315	$898	$1,475	$1,120	$0
2023	$336	$935	$1,504	$1,330	$0

Note: *All projected expenditures are in* 2014 values

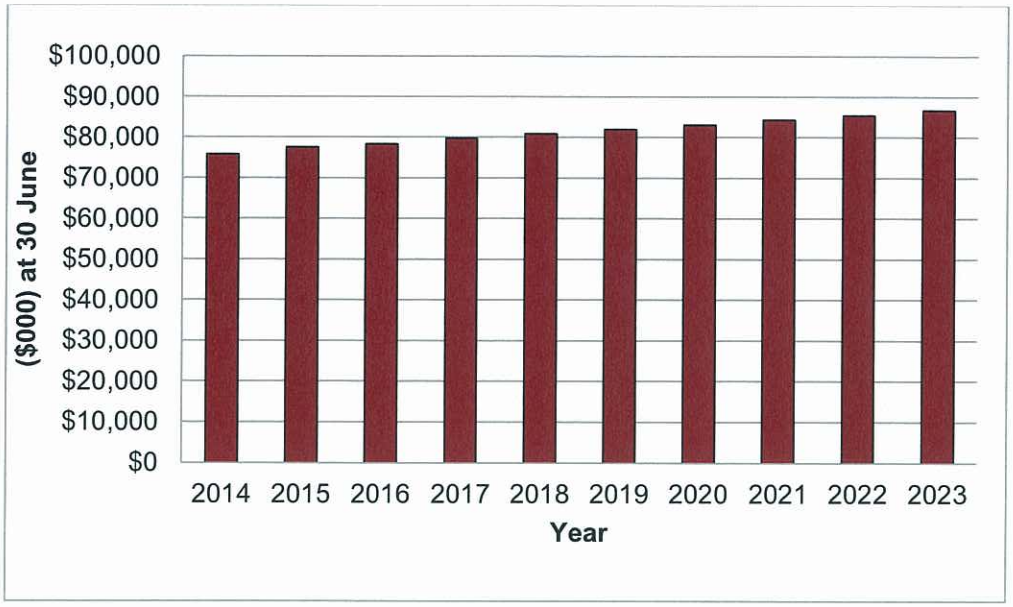
6.2 Funding Strategy

Projected expenditure identified in Section 6.1 is to be funded from future operating and capital budgets. The funding strategy is detailed in the organisation's 10 year long term financial plan.

6.3 Valuation Forecasts

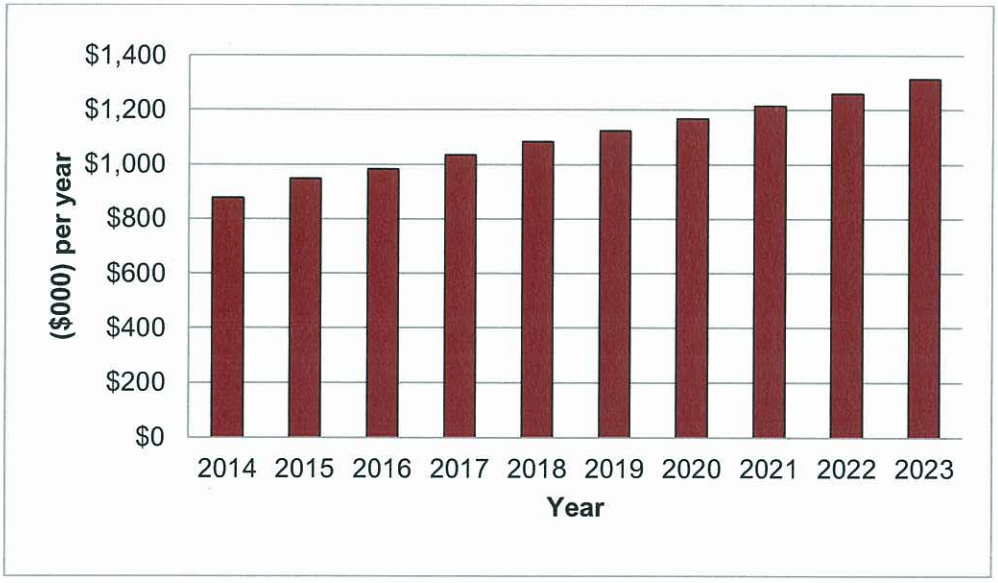
Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. Figure 9 shows the projected replacement cost asset values over the planning period in 2014 dollar values.

Figure 9: Projected Asset Values



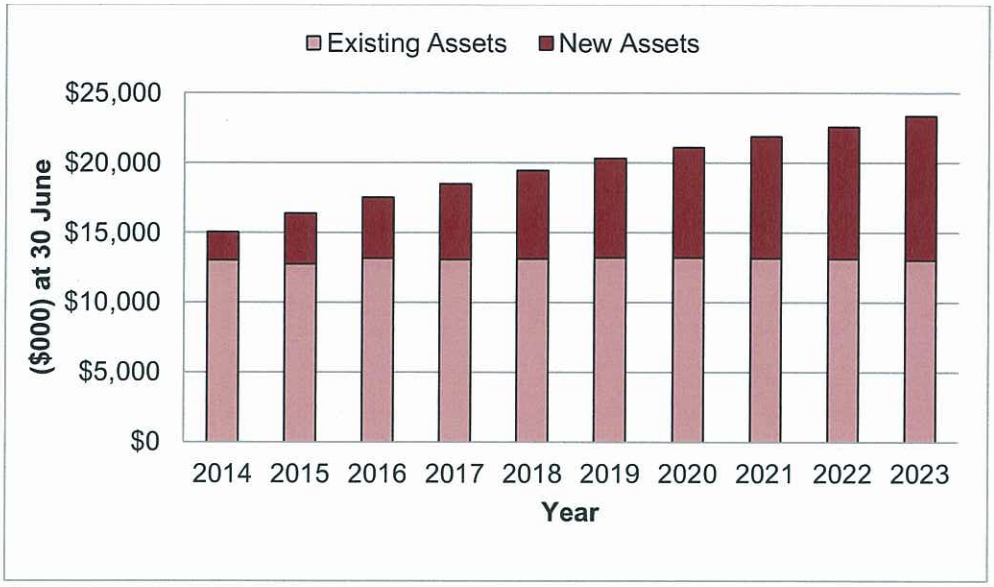
Depreciation expense values are forecast in line with asset values as shown in Figure 10.

Figure 10: Projected Depreciation Expense



The depreciated replacement cost (current replacement cost less accumulated depreciation) will vary over the forecast period depending on the rates of addition of new assets, disposal of old assets and consumption and renewal of existing assets. Forecast of the assets' depreciated replacement cost is shown in Figure 11. The effect of contributed and new assets on the depreciated replacement cost is shown in the light colour bar.

Figure 11: Projected Depreciated Replacement Cost



6.4 Key Assumptions made in Financial Forecasts

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

Key assumptions made in this asset management plan are:

- Roads and Bridges assets will remain in Council's care, control and management throughout the planning period.
- Maintenance costs are largely based on historical expenditure and it is assumed there will be no significant increases in service requirements.
- Valuation and condition information prepared by Cardno BSD in March 2011 has determined the asset values

7. ASSET MANAGEMENT PRACTICES

7.1 Accounting/Financial Systems

7.1.1 Accounting and financial systems

The Shire of York uses the SynergySoft financial software for its financial management system and uses RoMan and the integrated asset register module in SynergySoft for asset accounting purposes.

7.1.2 Accountabilities for financial systems

Accountabilities and responsibilities are divided between the Deputy Chief Executive Officer and Finance Staff.

7.1.3 Accounting standards and regulations

As well as complying with Australian Accounting Standards, the Shire must comply with the Western Australia Local Government Act 1995 and the Local Government (Finance) Regulations 1996. Accounting Standard AASB116 – "Property, Plant and Equipment" is the significant regulatory requirement relevant to accounting for assets.

7.1.4 Capital/maintenance threshold

The Shire, as a general rule, applies a Capital Threshold limit of $1,000 for expenditure that is expensed in the current year. Expenditure over $1,000 on an asset is classed as capital expenditure and capitalised against the asset.

7.1.5 Required changes to accounting financial systems arising from this AM Plan

The general ledger in SynergySoft may require recoding to allow Council to differentiate between operational costs, maintenance costs, upgrades/expansion, new and renewal costs. Further research is required to ascertain if this recoding is necessary.

7.2 Asset Management Systems

7.2.1 Asset management system

The Asset Management system consists of the RoMan database and current operating procedures.

7.2.2 Asset registers

The Shire maintains an Asset Register in SynergySoft in conjunction with the RoMan database for this asset class.

7.2.3 Linkage from asset management to financial system

The linkage from the financial system to the asset register is integrated, with officers inputting data into the creditors system which links through to the Asset Register module; and then the Shire utilises a bureau service from Cardno BSD to manage the input into the RoMan system.

7.2.4 Accountabilities for asset management system and data

Accountabilities and responsibilities are divided between the Finance staff and the Works Manager. The Works Manager provides information on the relevant assets and allocates costs associated with payroll and purchasing systems. The Finance staff create the records within the Asset Register and post expenditure direct to the general ledger and update the Asset Register. Road data is then forwarded to Cardno BSD to update to RoMan database.

7.2.5 Required changes to asset management system arising from this AM Plan

No changes have been identified to the asset management system, but subsequent revisions of this Roads and Bridges Asset Management Plan may identify further improvements to the existing system.

7.3 Information Flow Requirements and Processes

The key information flows *into* this asset management plan are:

- Council strategic and operational plans,
- Service requests from the community,
- Network asset information,
- The unit rates for categories of work/materials,
- Current levels of service, expenditures, service deficiencies and service risks,
- Projections of various factors affecting future demand for services and new assets acquired by Council,
- Future capital works programs,
- Financial asset values.

The key information flows *from* this asset management plan are:

- The projected Works Program and trends,
- The resulting budget and long term financial plan expenditure projections.
- Financial sustainability indicators.

These will impact the Long Term Financial Plan, Corporate Business Plan, Annual Budget and Departmental Business Plans and Budgets.

7.4 Standards and Guidelines

Standards, guidelines and policy documents referenced in this asset management plan are:

- Shire of York Asset Capitalisation Threshold Policy
- Shire of York Asset Management Policy
- Shire of York Asset Management Strategy
- Australian Standards
- Australian Road Research Board Sealed and Unsealed Roads Management Manuals

8. PLAN IMPROVEMENT AND MONITORING

8.1 Performance Measures

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

- The degree to which the required cashflows identified in this asset management plan are incorporated into the organisation's long term financial plan and Community/Strategic Planning processes and documents,
- The degree to which 1-5 year detailed works programs, budgets, business plans and organisational structures take into account the 'global' works program trends provided by the asset management plan;

8.2 Improvement Plan

The asset management improvement plan generated from this asset management plan is shown in Table 8.2.

Table 8.2: Improvement Plan

Task No	Task	Responsibility	Resources Required	Timeline
1	Conduct detailed inspection of all Roads Renewal Projections to determine affordable renewal requirements.	Works Manager	Internal	June 2014
2	Assess the first year of the Plan against actual costs	Works Manager	Internal	June 2015
3	Prepare and prioritise a long term plan and ranking systems for renewal & upgrade/new expenditure	CEO/Works Manager	Internal	June 2015
4	Review of road maintenance practices to ensure alignment with service level requirements.	CEO/Works Manager	Internal	Annually
5	Ongoing rolling program of data collection (every 4 years).	Works Manager	External Contractor	Every 3 Yrs
6	Review service levels and commence internal and Elected Member consultation on service level provision	CEO/Works Manager	Internal	June 2016
7	Community consultation on service level provision	CEO	TBA	June 2016

8.3 Monitoring and Review Procedures

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

The Plan has a life of 3 years and a major revision is to be done within six months of its expiry.

REFERENCES

Shire of York Plan for the Future

Shire of York 2013/14 Annual Budget

Shire of York Long Term Financial Plan 2013/14 – 2022/23

Shire of York RoMan 10 Year Predicted Works Program, December 2013

Shire of York RoMan Road Asset Valuations and Condition Ratings, March 2011

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APPENDICES

Appendix A Maintenance Response Levels of Service

ROUTINE MAINTENANCE ITEMS	INTERVENTION LEVELS	RESPONSE TIME BY CLASS				
		Regional	Distributor	Access	Local	Formed
1.0 -UNSEALED ROADS & SHOULDERS						
1.1 Pothole Maintenance	Any pothole with depth > 300mm	2 Weeks	4 Weeks	12 Weeks	16 Weeks	20 Weeks
1.2 Repair of general pavement defects	Scouring or corrugations > 100mm depth and length < 20m	6 Weeks	10 Weeks	12 Weeks	12 Weeks	N/A
1.3 Management of loose material	Loose material > 100mm depth at any location on the pavement and < 20m²	2 Weeks	4 Weeks	4 Weeks	4 Weeks	N/A
1.4 Maintenance of shoulders and verges	Any scouring, corrugations or potholing with depth > 100mm	2 Weeks	2 Weeks	4 Weeks	4 Weeks	N/A
2.0 -SEALED ROADS						
2.1 Pothole Maintenance	Any pothole with depth > 75mm	2 Weeks	4 Weeks	8 Weeks	12 Weeks	N/A
	Any pothole with depth > 40mm and dimension of 350mm	2 Weeks	4 Weeks	8 Weeks	12 Weeks	N/A
2.2 Seal Texture Maintenance	Crocodile cracking > 10m²	8 Weeks	8 Weeks	16 Weeks	16 Weeks	N/A
	Longitudinal cracking > 20m²	16 Weeks	16 Weeks	32 Weeks	52 Weeks	N/A
	Flushing > 5m²	16 Weeks	16 Weeks	32 Weeks	52 Weeks	N/A
	Stripping > 5m²	16 Weeks	16 Weeks	32 Weeks	52 Weeks	N/A
2.3 Edge Break Maintenance	Edge break > 250mm from nominal seal edge	1 Week	1 Week	2 Weeks	4 Weeks	N/A
2.4 Edge Drop Off Maintenance	Edge drop with depth > 100mm and > 20m length	1 Week	1 Week	2 Weeks	4 Weeks	N/A
3.0 - DRAINAGE						
3.1 Table drain and open drain maintenance	Isolated blockages (> 10 lm and/or > 2m³)	4 Weeks	8 Weeks	12 Weeks	16 Weeks	24 Weeks
3.2 Kerb and gutter maintenance	> 50% of cross sectional area blocked	8 weeks	8 Weeks	16 Weeks	16 Weeks	N/A
	Isolated blockages (< 5 lm and/or > 30% cross sectional area)	16 Weeks	16 Weeks	24 Weeks	24 Weeks	N/A
4.0 - ROADSIDE, VERGE & SAFETY						
4.1 Guideposts Replacement	Identify & replace all missing or damaged guideposts	4 Weeks	8 Weeks	12 Weeks	16 Weeks	N/A
4.2 Delineator Replacement	For all traffic devices that have delineators, replace any missing or damaged delineators	4 Weeks	8 Weeks	12 Weeks	16 Weeks	N/A
4.3 Sign Straightening	Intervention require when sign is: (a) leaning from vertical and/or rotated from correct position > 45°. (b) vertically displaced by > 0.5m.	4 Weeks	4 Weeks	6 Weeks	8 Weeks	N/A
4.4 Management of sight distance to signs	Vegetation that impedes sight distance to signs from distance of 200m from approaching vehicle	4 Weeks	6 Weeks	8 Weeks	12 Weeks	N/A

Appendix B Projected 10 year Capital Renewal Works Program

Road No.	Road Name	Works Description	Start SLK	End SLK	Renewal Year	Renewal Cost
255	Andrews Avenue	Resurface AC Overlay	0.36	0.63	2014	$22,619
245	Attfield Road North	Resurface AC Overlay	0.77	0.81	2014	$12,491
89	Avon Terrace	Resurface AC Overlay	2.25	2.32	2014	$36,334
89	Avon Terrace	Resurface CS	0.52	0.62	2014	$25,564
89	Avon Terrace	Rehabilitation	1.35	1.57	2014	$97,143
122	Barker Street	Resurface CS	0.00	0.80	2014	$6,484
160	Birch Street	Resurface CS	0.00	0.16	2014	$27,888
107	Bland Road	Resurface CS	2.01	2.08	2014	$7,400
168	Bland Street Section 1	Gravel Sheet	0.00	0.19	2014	$4,620
138	Bouverie Road	Resurface CS	0.00	0.54	2014	$57,088
82	Boyle Road	Resurface CS	0.28	0.32	2014	$2,819
153	Brook Street	Resurface CS	0.00	0.07	2014	$11,184
98	Broome Street	Resurface CS	0.00	0.25	2014	$51,186
86	Buckingham Road	Gravel Sheet	0.00	0.85	2014	$16,830
86	Buckingham Road	Gravel Sheet	3.01	3.60	2014	$13,629
5	Burges Siding Road	Resurface CS	0.83	1.56	2014	$155,262
108	Carter Road	Resurface CS	1.60	1.61	2014	$1,074
129	Clifford Street	Resurface CS	0.18	0.51	2014	$108,647
140	Cowan Road	Resurface CS	0.05	0.90	2014	$85,633
248	Cowan Track	Resurface CS	0.00	0.05	2014	$3,524
505	Cowring Street	Gravel Sheet	0.00	0.60	2014	$17,820
177	Davis Street	Resurface CS	0.09	0.15	2014	$4,968
8	Doodenanning Road	Resurface CS	6.11	6.67	2014	$128,517
182	Edwards Street	Resurface CS	0.00	0.15	2014	$16,122
208	Ensign Dale Court	Resurface CS	0.00	0.36	2014	$37,424
95	Ford Street	Rehabilitation	1.05	1.09	2014	$23,554
95	Ford Street	Resurface CS	1.16	1.28	2014	$14,801
123	Forrest Street	Resurface CS	0.56	0.80	2014	$59,610
75	Gaults Road	Gravel Sheet	0.00	0.21	2014	$4,851
101	Georgiana Street	Resurface CS	0.39	0.45	2014	$10,043
126	Gilford Street	Resurface CS	0.00	0.34	2014	$35,945
224	Golf Club Access Road	Resurface CS	0.00	0.50	2014	$18,150
150	Greenhills Road	Resurface CS	0.00	0.20	2014	$4,067
150	Greenhills Road	Resurface CS	3.24	3.50	2014	$29,282
91	Grey Street	Resurface CS	0.00	0.12	2014	$31,374
190	Guilfoyle Road	Gravel Sheet	0.00	0.23	2014	$6,072
7	Gwambygine East Road	Gravel Sheet	10.69	12.68	2014	$91,938
46	Hammersley Siding Road	Resurface CS	9.28	9.50	2014	$23,258
185	Harvey Street	Resurface CS	0.00	0.06	2014	$13,293
117	Herbert Road	Resurface CS	0.14	0.38	2014	$22,413
136	Hope Street	Resurface CS	0.00	0.43	2014	$81,195
127	Howick Street	Resurface CS	0.00	0.27	2014	$74,513
99	Joaquina Street	Resurface CS	0.00	0.20	2014	$4,088
79	Keebles Road	Gravel Sheet	0.00	2.10	2014	$59,598
256	Langford Road	Resurface AC Overlay	0.00	0.20	2014	$5,064
256	Langford Road	Resurface AC Overlay	0.51	0.53	2014	$5,064
204	Lee Crescent	Resurface CS	0.26	0.52	2014	$45,318
191	Little Street	Resurface CS	0.22	0.35	2014	$11,453
212	Lott Road	Gravel Sheet	0.00	0.45	2014	$11,880
158	Lowe Street	Resurface CS	0.00	0.27	2014	$71,376

Road No.	Road Name	Works Description	Start SLK	End SLK	Renewal Year	Renewal Cost
53	Luelf Road	Gravel Sheet	3.24	3.59	2014	$9,240
181	Macartney Street	Resurface CS	0.00	0.11	2014	$31,635
181	Macartney Street	Resurface AC Overlay	0.11	0.18	2014	$29,245
181	Macartney Street	Resurface CS	0.18	0.38	2014	$55,282
35	Mackie Road	Gravel Sheet	0.00	2.11	2014	$83,556
167	Mansfield Street	Resurface CS	0.00	0.32	2014	$36,649
171	Maxwell Street	Resurface AC Overlay	0.00	0.20	2014	$6,161
125	Meares Street	Resurface CS	0.35	0.47	2014	$11,841
44	Mercer Road	Gravel Sheet	4.60	5.40	2014	$18,480
74	Mills Road	Gravel Sheet	0.00	1.05	2014	$24,255
10	Mokine Road	Resurface CS	0.00	0.05	2014	$13,014
10	Mokine Road	Gravel Sheet	12.06	13.57	2014	$59,796
183	Monger Street	Resurface CS	0.00	0.20	2014	$26,726
116	Mount Street	Resurface CS	0.00	0.21	2014	$45,754
184	Neville Street	Gravel Sheet	0.00	0.14	2014	$4,158
251	Newcastle Court	Resurface CS	0.00	0.04	2014	$5,578
119	Newcastle Street	Resurface CS	0.68	1.45	2014	$123,562
202	Pelham Street	Resurface CS	0.00	0.02	2014	$2,925
96	Pool Street	Resurface CS	0.00	0.27	2014	$59,611
96	Pool Street	Rehabilitation CS	0.60	0.64	2014	$11,620
156	Pool Street Section 2	Rehabilitation CS	0.00	0.10	2014	$15,106
157	Pool Street Section 3	Gravel Sheet	0.00	0.03	2014	$1,188
149	Qualen Road	Gravel Sheet	0.00	1.90	2014	$50,160
19	Qualen West Road	Resurface CS	9.30	9.36	2014	$9,586
6	Quellington Road	Resurface CS	11.14	11.17	2014	$3,137
6	Quellington Road	Resurface CS	16.28	17.60	2014	$144,146
250	Railway Circle	Resurface CS	0.00	0.12	2014	$25,778
152	Railway Road	Resurface CS	0.00	0.27	2014	$53,161
128	Redmile Road	Reconstruction CS	0.00	0.27	2014	$45,550
81	Rickey's Siding Road	Gravel Sheet	0.53	0.86	2014	$8,712
154	River Street Section 2	Resurface CS	0.00	0.14	2014	$12,334
21	Sandgate Road	Gravel Sheet	3.49	4.24	2014	$14,850
111	Scarpia Street	Resurface CS	0.00	0.26	2014	$36,791
137	Scott Street	Resurface CS	0.00	0.33	2014	$63,271
131	Seabrook Street	Resurface CS	0.00	0.17	2014	$25,185
234	Seventh Road	Resurface CS	0.00	0.03	2014	$2,220
94	South Street	Rehabilitation CS	0.00	0.11	2014	$25,564
33	Station Road	Gravel Sheet	3.11	4.00	2014	$29,370
133	Steere Road	Resurface CS	0.00	0.36	2014	$52,138
210	Sylvester Court	Resurface CS	0.00	0.30	2014	$28,544
13	Talbot Hall Road	Gravel Sheet	0.00	2.76	2014	$91,080
3	Talbot Road	Rehabilitation CS	8.91	10.77	2014	$243,148
3	Talbot Road	Resurface CS	10.77	11.43	2014	$99,699
3	Talbot Road	Resurface CS	15.58	15.97	2014	$80,265
34	Taylor Road	Gravel Sheet	1.81	4.23	2014	$79,860
92	Tenth Road	Resurface CS	0.00	1.07	2014	$155,417
18	Trews Road	Resurface CS	1.05	1.12	2014	$8,264
90	Ulster Road	Resurface CS	0.61	2.52	2014	$373,670
49	Wilberforce Road	Gravel Sheet	3.76	5.84	2014	$68,640
1	York-Tammin Road	Resurface CS	10.51	10.53	2014	$4,195
						$4,220,587

Road No.	Road Name	Works Description	Start SLK	End SLK	Renewal Year	Renewal Cost
104	Alfred Street	Resurface CS	0.35	0.62	2015	$30,447
255	Andrews Avenue	Reconstruction	0.02	0.36	2015	$67,292
606	Attfield Access	Gravel Sheet	0.00	0.44	2015	$8,712
245	Attifield Road North	Reconstruction	0.00	0.49	2015	$99,048
89	Avon Terrace	Reconstruction	0.00	0.22	2015	$62,388
89	Avon Terrace	Resurface CS	0.62	0.98	2015	$92,030
89	Avon Terrace	Reconstruction	0.98	1.29	2015	$101,647
89	Avon Terrace	Rehabilitation	1.29	1.35	2015	$19,347
89	Avon Terrace	Reconstruction	1.57	1.69	2015	$49,982
89	Avon Terrace	Resurface AC Overlay	1.95	2.25	2015	$155,718
37	Badgin Road	Gravel Sheet	0.00	5.11	2015	$185,493
162	Bayly Road	Resurface CS	0.00	1.10	2015	$178,948
17	Berry Brow Road	Gravel Sheet	0.00	1.70	2015	$61,710
5	Burges Siding Road	Resurface AC Overlay	0.00	0.03	2015	$9,495
242	Cemetery Road	Reconstruction	0.02	0.23	2015	$24,814
20	Cut Hill Road	Resurface CS	0.04	1.14	2015	$138,975
8	Doodenanning Road	Resurface CS	1.79	6.11	2015	$451,786
110	Eleventh Road	Resurface CS	1.06	1.39	2015	$34,888
95	Ford Street	Resurface CS	0.00	0.37	2015	$41,724
253	Foreman Drive	Reconstruction	0.00	0.43	2015	$74,943
101	Georgiana Street	Reconstruction	0.77	1.23	2015	$77,454
60	Hardy Road	Gravel Sheet	0.00	3.01	2015	$109,263
105	Henry Road	Resurface CS	0.57	1.05	2015	$43,979
117	Herbert Road	Resurface AC Overlay	0.86	0.94	2015	$43,550
117	Herbert Road	Resurface CS	0.94	1.03	2015	$15,420
99	Joaquina Street	Resurface AC Overlay	0.02	0.19	2015	$83,218
256	Langford Road	Resurface CS	0.02	0.51	2015	$51,803
53	Luelf Road	Gravel Sheet	0.11	3.24	2015	$113,619
35	Mackie road	Gravel Sheet	2.11	4.56	2015	$98,637
2	Mannavale Road	Resurface CS	8.75	9.96	2015	$123,027
202	Pelham Street	Resurface CS	0.02	0.34	2015	$37,777
149	Qualen Road	Gravel Sheet	2.70	7.20	2015	$118,800
19	Qualen West Road	Resurface CS	7.06	8.04	2015	$156,579
6	Quellington Road	Resurface CS	11.17	13.42	2015	$235,305
94	South Street	Reconstruction	0.11	0.76	2015	$151,540
4	Spencers Brook-York Road	Resurface CS	16.12	16.15	2015	$6,362
4	Spencers Brook-York Road	Resurface CS	18.64	19.54	2015	$156,870
4	Spencers Brook-York Road	Reconstruction	20.20	20.83	2015	$232,805
3	Talbot Road	Reconstruction	5.73	5.86	2015	$33,026
3	Talbot Road	Reconstruction	6.89	8.91	2015	$272,979
3	Talbot Road	Resurface CS	14.44	15.58	2015	$119,221
9	Top Beverley-York Road	Resurface CS	0.04	0.40	2015	$83,664
18	Trews Road	Resurface CS	0.33	1.05	2015	$125,496
49	Wilberforce Road	Gravel Sheet	0.93	3.59	2015	$87,780
189	William Street	Resurface CS	0.00	0.35	2015	$62,022
1	York-Tammin Road	Resurface CS	10.53	11.52	2015	$207,068
1	York-Tammin Road	Resurface CS	19.99	21.07	2015	$175,696
						$4,912,347

Road No.	Road Name	Works Description	Start SLK	End SLK	Renewal Year	Renewal Cost
84	Cub Hotel Road	Gravel Sheet	0.00	1.93	2016	$76,428
8	Doodenanning road	Gravel Sheet	10.11	11.94	2016	$90,585
150	Greenhills Road	Resurface CS	0.02	3.24	2016	$420,934
150	Greenhills Road	Resurface CS	3.50	4.86	2016	$216,942
7	Gwambygine East Road	Resurface CS	0.30	1.61	2016	$126,952
7	Gwambygine East Road	Gravel Sheet	8.01	10.69	2016	$123,816
117	Herbert Road	Resurface CS	1.03	1.34	2016	$32,773
25	Lennard Road	Gravel Sheet	0.00	4.85	2016	$192,060
2	Mannavale Road	Resurface CS	6.37	8.75	2016	$241,986
2	Mannavale Road	Resurface CS	9.96	13.35	2016	$344,678
10	Mokine road	Rehabilitation	6.30	8.82	2016	$395,312
76	Narraloggan Road	Gravel Sheet	0.48	1.20	2016	$19,008
19	Qualen West Road	Resurface CS	8.04	9.30	2016	$201,316
6	Quellington Road	Reconstruction	0.00	7.86	2016	$977,627
6	Quellington Road	Resurface CS	9.83	11.10	2016	$221,361
6	Quellington Road	Resurface CS	13.42	16.28	2016	$304,144
4	Spencers Brook-York Road	Resurface CS	15.03	16.12	2016	$231,151
133	Steere Road	Resurface CS	0.36	1.63	2016	$125,313
13	Talbot Hall Road	Gravel Sheet	3.16	7.37	2016	$133,373
3	Talbot Road	Rehabilitation	5.86	6.72	2016	$122,417
29	Warding Road	Gravel Sheet	0.00	3.34	2016	$154,308
1	York-Tammin Road	Resurface CS	21.07	22.40	2016	$216,364
1	York-Tammin Road	Resurface CS	27.03	29.39	2016	$411,350
						$5,380,198

Road No.	Road Name	Works Description	Start SLK	End SLK	Renewal Year	Renewal Cost
255	Andrews Avenue	Resurface CS	0.40	0.59	2017	$11,215
255	Andrews Avenue	Resurface CS	0.63	0.69	2017	$3,542
255	Andrews Avenue	Resurface AC Overlay	0.69	0.73	2017	$5,655
255	Andrews Avenue	Resurface CS	0.73	0.82	2017	$5,312
255	Andrews Avenue	Resurface AC Overlay	0.82	0.84	2017	$2,827
51	Ashworth Road	Gravel Sheet	2.72	6.10	2017	$118,232
245	Attfield Road North	Resurface CS	0.49	0.77	2017	$60,192
245	Attfield Road North	Resurface CS	0.81	0.95	2017	$30,096
89	Avon Terrace	Resurface CS	0.22	0.52	2017	$80,178
107	Bland Road	Resurface CS	0.00	1.10	2017	$207,707
86	Buckingham Road	Resurface CS	0.86	2.70	2017	$330,298
254	Camfield Place	Resurface AC Overlay	0.00	0.02	2017	$2,532
254	Camfield Place	Resurface CS	0.02	0.25	2017	$12,158
134	Cardwell Road	Resurface CS	0.00	0.79	2017	$98,180
108	Carter Road	Resurface CS	0.00	0.19	2017	$10,211
108	Carter Road	Resurface CS	0.57	1.06	2017	$26,333
129	Clifford Street	Resurface AC Overlay	0.51	0.53	2017	$5,908
177	Davis Street	Resurface CS	0.00	0.09	2017	$3,726
151	Dinsdale Road	Resurface CS	0.00	0.61	2017	$37,548
8	Doodenanning Road	Resurface CS	0.00	0.34	2017	$46,422
8	Doodenanning Road	Gravel Sheet	10.07	10.11	2017	$1,980
8	Doodenanning Road	Gravel Sheet	11.94	12.03	2017	$4,455
8	Doodenanning Road	Gravel Sheet	12.80	19.09	2017	$265,241
110	Eleventh Road	Resurface CS	0.00	1.06	2017	$49,195
211	Forbes Street	Resurface CS	0.00	0.32	2017	$17,197

Road No.	Road Name	Works Description	Start SLK	End SLK	Renewal Year	Renewal Cost
95	Ford Street	Resurface CS	0.37	0.68	2017	$25,945
95	Ford Street	Resurface CS	0.81	1.05	2017	$22,836
123	Forrest Street	Resurface CS	0.47	0.56	2017	$21,962
103	Fraser Street	Resurface CS	0.00	0.31	2017	$21,849
124	George Street	Resurface CS	0.16	0.41	2017	$50,111
101	Georgiana Street	Resurface CS	0.00	0.04	2017	$9,412
142	Glebe Street	Resurface AC Overlay	0.00	0.53	2017	$58,552
117	Herbert Road	Resurface CS	0.07	0.14	2017	$2,960
221	Lewis Road	Resurface CS	0.00	0.37	2017	$79,539
170	Main Camp Road	Resurface CS	0.15	0.27	2017	$6,343
2	Mannavale Road	Resurface CS	6.20	6.37	2017	$9,286
165	Maud Street	Resurface CS	0.00	0.25	2017	$63,910
10	Mokine Road	Resurface CS	11.85	12.06	2017	$12,765
198	Morris Edwards Drive	Resurface CS	2.67	2.70	2017	$5,839
118	New Street	Resurface CS	0.00	0.36	2017	$118,175
119	Newcastle Street	Resurface CS	0.00	0.24	2017	$57,170
119	Newcastle Street	Resurface CS	1.45	1.52	2017	$4,317
114	Ninth Road	Resurface CS	1.02	1.27	2017	$12,995
109	North Road	Resurface CS	0.00	0.18	2017	$9,515
106	Osnaburg Road	Resurface CS	0.45	0.56	2017	$6,008
11	Ovens Road	Gravel Sheet	0.00	8.32	2017	$329,472
215	Plaudit Street	Resurface CS	0.18	0.26	2017	$13,744
157	Pool Street Section 3	Resurface CS	0.13	0.14	2017	$3,573
19	Qualen West Road	Resurface CS	5.33	7.06	2017	$276,411
130	Suburban Road	Resurface CS	0.00	0.08	2017	$19,057
130	Suburban Road	Resurface AC Overlay	0.08	0.14	2017	$14,432
130	Suburban Road	Resurface CS	0.14	0.50	2017	$140,137
3	Talbot Road	Resurface CS	6.72	6.89	2017	$39,014
34	Taylor Road	Gravel Sheet	0.00	1.81	2017	$59,730
139	Thompson Street	Resurface CS	0.00	0.22	2017	$12,598
201	Trigg Street	Resurface CS	0.00	0.23	2017	$12,158
1	York-Tammin Road	Resurface AC Overlay	0.00	0.04	2017	$8,018
1	York-Tammin Road	Rehabilitation	25.27	27.03	2017	$213,734
1	York-Tammin Road	Rehabilitation	29.39	33.51	2017	$500,337
						$3,678,244

Road No.	Road Name	Works Description	Start SLK	End SLK	Renewal Year	Renewal Cost
40	Allen Road	Resurface CS	0.00	0.02	2018	$1,057
51	Ashworth Road	Resurface CS	6.10	6.94	2018	$44,402
143	Attfield Street	Resurface CS	0.00	1.53	2018	$79,959
89	Avon Terrace	Resurface AC Overlay	1.69	1.73	2018	$11,900
107	Bland Road	Resurface CS	1.10	1.61	2018	$26,959
169	Bland Street Section 2	Resurface CS	0.00	0.02	2018	$722
82	Boyle Road	Resurface CS	0.00	0.07	2018	$6,299
93	Brunswick Road Section 1	Resurface CS	0.00	0.02	2018	$1,092
86	Buckingham Road	Resurface CS	0.85	0.86	2018	$1,917
108	Carter Road	Resurface CS	1.06	1.60	2018	$29,020
163	Chandos Road	Resurface CS	1.30	1.86	2018	$27,135
129	Clifford Street	Resurface CS	0.00	0.18	2018	$47,061
226	Cold Harbour Road	Resurface CS	0.35	0.57	2018	$11,629

Road No.	Road Name	Works Description	Start SLK	End SLK	Renewal Year	Renewal Cost
140	Cowan Road	Resurface CS	0.00	0.05	2018	$3,304
176	Craig Street	Resurface CS	0.00	0.09	2018	$3,964
38	Cubbine Road	Resurface CS	6.70	7.42	2018	$117,130
20	Cut Hill Road	Resurface CS	0.00	0.04	2018	$11,620
550	Dovey Court (Gwambygine)	Resurface CS	0.00	0.05	2018	$2,643
216	Durable Street	Resurface CS	0.00	0.09	2018	$3,964
121	Elizabeth Street	Resurface CS	0.00	0.21	2018	$16,933
214	Fisher Street	Resurface CS	0.00	0.24	2018	$15,646
95	Ford Street	Resurface CS	0.68	0.81	2018	$12,026
95	Ford Street	Resurface CS	1.09	1.16	2018	$6,845
123	Forrest Street	Resurface CS	0.00	0.47	2018	$26,324
101	Georgiana Street	Resurface CS	0.04	0.39	2018	$89,474
16	Greenhills South Road	Gravel Sheet	0.91	4.19	2018	$151,536
7	Gwambygine East Road	Resurface CS	0.00	0.17	2018	$29,631
7	Gwambygine East Road	Resurface CS	0.22	0.25	2018	$1,665
7	Gwambygine East Road	Resurface CS	12.68	12.70	2018	$1,057
217	Hoops Road	Resurface CS	0.00	0.02	2018	$1,163
204	Lee Crescent	Resurface CS	0.00	0.05	2018	$2,643
209	Lightly Place	Resurface CS	0.00	0.28	2018	$12,334
170	Main Camp Road	Resurface CS	0.02	0.13	2018	$5,815
69	Marwick Road	Resurface CS	0.00	1.26	2018	$71,044
171	Maxwell Street	Resurface CS	0.02	0.32	2018	$19,540
10	Mokine Road	Resurface CS	0.05	2.40	2018	$280,628
198	Morris Edwards Drive	Resurface CS	0.00	0.05	2018	$2,995
198	Morris Edwards Drive	Resurface CS	2.70	2.73	2018	$6,536
119	Newcastle Street	Resurface CS	0.24	0.68	2018	$31,786
106	Osnaburg Road	Resurface CS	0.00	0.45	2018	$24,580
27	Parker Road	Resurface CS	2.30	2.33	2018	$2,379
157	Pool Street Section 3	Resurface CS	0.14	0.48	2018	$121,487
19	Qualen West Road	Resurface CS	0.00	0.05	2018	$5,286
218	Riverside Court	Resurface CS	0.00	0.28	2018	$14,801
178	Roe Street	Resurface CS	0.18	0.32	2018	$7,154
115	Sixth Road	Resurface CS	0.00	0.45	2018	$65,362
4	Spencers Brook-York Road	Resurface CS	13.43	15.03	2018	$345,027
4	Spencers Brook-York Road	Resurface CS	17.85	18.64	2018	$137,697
260	Springs Road	Resurface CS	0.00	0.45	2018	$16,651
130	Suburban Road	Resurface CS	0.50	0.63	2018	$19,638
3	Talbot Road	Resurface CS	0.00	0.99	2018	$198,440
3	Talbot Road	Rehabilitation	0.99	5.73	2018	$575,626
12	Talbot West Road	Gravel Sheet	0.00	4.20	2018	$217,404
92	Tenth Road	Resurface CS	1.10	1.40	2018	$16,387
246	Tip Road	Resurface CS	0.00	0.60	2018	$3,277
90	Ulster Road	Resurface CS	0.00	0.07	2018	$6,907
90	Ulster Road	Resurface CS	0.11	0.61	2018	$141,357
29	Warding Road	Gravel Sheet	3.34	6.36	2018	$131,551
120	Wheeler Street	Resurface CS	0.00	0.57	2018	$71,247
						$3,339,656

Road No.	Road Name	Works Description	Start SLK	End SLK	Renewal Year	Renewal Cost
143	Attfield Street	Resurface CS	0.13	0.52	2019	$19,928
143	Attfield Street	Gravel Sheet	1.53	1.89	2019	$4,752

Road No.	Road Name	Works Description	Start SLK	End SLK	Renewal Year	Renewal Cost
107	Bland Road	Resurface CS	1.61	2.01	2019	$21,144
169	Bland Street Section 2	Gravel Sheet	0.02	0.15	2019	$1,502
15	Boyercutty Road	Gravel Sheet	1.30	1.77	2019	$10,082
82	Boyle Road	Gravel Sheet	1.26	2.06	2019	$10,560
93	Brunswick Road Section 1	Gravel Sheet	0.02	0.18	2019	$2,640
605	Burges Siding Access	Gravel Sheet	0.00	0.15	2019	$1,980
43	Cameron Road	Gravel Sheet	10.28	10.44	2019	$2,640
108	Carter Road	Resurface CS	0.19	0.57	2019	$20,422
108	Carter Road	Gravel Sheet	1.61	2.12	2019	$7,573
226	Cold Harbour Road	Resurface CS	0.00	0.35	2019	$18,501
38	Cubbine Road	Resurface CS	0.00	1.62	2019	$263,542
8	Doodenanning Road	Resurface CS	6.67	10.07	2019	$582,529
8	Doodenanning Road	Resurface CS	12.03	12.80	2019	$47,486
550	Dovey Court	Gravel Sheet	0.05	0.47	2019	$8,316
213	Eaton Street	Gravel Sheet	0.00	0.07	2019	$693
200	Emmet Place	Gravel Sheet	0.00	0.01	2019	$990
208	Ensign Dale Court	Gravel Sheet	0.36	0.40	2019	$990
192	Fish Street	Gravel Sheet	0.00	0.09	2019	$1,039
61	Flea pool Road	Gravel Sheet	8.01	8.31	2019	$4,950
142	Glebe Street	Resurface AC Overlay	0.15	0.17	2019	$3,840
247	Greenhills Rail Access	Gravel Sheet	0.00	0.41	2019	$5,412
52	Gunapin Ridge Road	Gravel Sheet	5.70	6.20	2019	$9,900
7	Gwambygine East Road	Gravel Sheet	7.58	8.01	2019	$9,933
117	Herbert Road	Gravel Sheet	0.00	0.07	2019	$1,040
223	Janet Millet Lane	Resurface AC Overlay	0.00	0.01	2019	$1,266
204	Lee Crescent	Gravel Sheet	0.19	0.26	2019	$693
31	Leeming Road	Gravel Sheet	1.50	1.70	2019	$3,960
191	Little Street	Gravel Sheet	0.00	0.10	2019	$1,980
170	Main Camp Road	Resurface AC Overlay	0.00	0.02	2019	$2,532
170	Main Camp Road	Resurface AC Overlay	0.13	0.15	2019	$2,532
2	Mannavale Road	Rehabilitation	1.86	6.20	2019	$491,913
244	McDougall Road	Gravel Sheet	1.97	2.30	2019	$5,445
74	Mills Road	Gravel Sheet	4.50	5.09	2019	$7,788
63	Moore Road	Gravel Sheet	1.51	2.53	2019	$18,513
225	Morris Edwards Track	Gravel Sheet	0.00	0.61	2019	$5,838
175	Morse Place	Gravel Sheet	0.00	0.22	2019	$2,904
116	Mount Street	Gravel Sheet	0.21	0.30	2019	$2,079
249	Myanarra Road	Gravel Sheet	0.88	1.83	2019	$10,973
76	Narraloggan Road	Gravel Sheet	3.03	3.56	2019	$6,996
76	Narraloggan Road	Gravel Sheet	5.51	6.08	2019	$8,464
68	Needling Hills Road	Gravel Sheet	0.00	0.73	2019	$9,636
119	Newcastle Street	Resurface CS	1.52	2.41	2019	$58,023
109	North Road	Gravel Sheet	0.18	0.54	2019	$5,940
109	North Road	Gravel Sheet	1.29	1.39	2019	$1,320
161	Nugent Road	Resurface CS	0.00	0.55	2019	$29,073
66	Osborn Road	Resurface CS	0.00	1.22	2019	$54,816
27	Parker Road	Gravel Sheet	0.97	1.63	2019	$15,246
27	Parker Road	Gravel Sheet	2.10	2.30	2019	$3,960
219	Penny Drive	Resurface CS	0.00	3.09	2019	$439,846
502	Penny Lane (Kauring)	Gravel Sheet	0.00	0.26	2019	$3,861
501	Penny Street (Kauring)	Gravel Sheet	0.44	0.72	2019	$5,544
42	Piccadilly Road	Gravel Sheet	0.00	0.90	2019	$14,850

Road No.	Road Name	Works Description	Start SLK	End SLK	Renewal Year	Renewal Cost
205	Piccadilly Trail	Gravel Sheet	0.00	0.75	2019	$12,375
503	Rail Trail (Kauring)	Gravel Sheet	0.00	0.20	2019	$2,640
71	Railway Road	Gravel Sheet	0.00	0.08	2019	$2,640
154	River Street Section 2	Gravel Sheet	0.14	0.20	2019	$1,247
218	Riverside Court	Gravel Sheet	0.28	0.38	2019	$1,320
178	Roe Street	Gravel Sheet	0.32	0.40	2019	$1,584
23	Sees Road	Gravel Sheet	0.00	0.90	2019	$14,850
23	Sees Road	Gravel Sheet	6.00	6.38	2019	$6,772
234	Seventh Road	Gravel Sheet	0.03	0.08	2019	$825
179	Sidney Road	Gravel Sheet	0.00	0.12	2019	$1,584
4	Spencers Brook-York Road	Rehabilitation	3.72	11.73	2019	$907,885
172	Spices Road	Gravel Sheet	0.00	0.88	2019	$11.616
39	St Jacks Road	Gravel Sheet	1.00	1.36	2019	$5.346
33	Station Road	Gravel Sheet	0.00	1.30	2019	$25,740
33	Station Road	Gravel Sheet	1.90	3.11	2019	$19,965
13	Talbot Hall Road	Gravel Sheet	2.76	3.16	2019	$6,600
3	Talbot Road	Resurface CS	11.43	14.44	2019	$489,035
34	Taylor Road	Gravel Sheet	4.23	4.26	2019	$495
9	Top Beverley-York Road	Resurface CS	5.83	7.92	2019	$345,736
252	Trews Court	Gravel Sheet	0.00	0.12	2019	$1,980
233	Twelth Road	Gravel Sheet	0.00	0.27	2019	$3,564
506	Unnamed Road (Kauring)	Gravel Sheet	0.00	0.40	2019	$4,620
203	Water Street	Gravel Sheet	0.00	0.16	2019	$2,112
50	Waterfall Road	Gravel Sheet	6.45	6.70	2019	$4,125
50	Waterfall Road	Gravel Sheet	7.29	8.40	2019	$18,315
120	Wheeler Street	Resurface AC Overlay	0.30	0.37	2019	$10,044
49	Wilberforce Road	Gravel Sheet	0.00	0.93	2019	$15,343
						$4,196,733

Road No.	Road Name	Works Description	Start SLK	End SLK	Renewal Year	Renewal Cost
40	Allen Road	Gravel Sheet	0.02	3.61	2020	$57,737
51	Ashworth Road	Gravel Sheet	0.84	2.26	2020	$23,430
26	Bogling road	Gravel Sheet	0.00	2.80	2020	$50,820
43	Cameron Road	Gravel Sheet	10.44	11.98	2020	$25,410
61	Flea Pool Road	Gravel Sheet	0.00	2.52	2020	$49,896
46	Hamersley Siding Road	Gravel Sheet	8.36	9.28	2020	$19,734
31	Leeming Road	Gravel Sheet	0.00	1.27	2020	$25,146
35	Mackie Road	Gravel Sheet	6.80	8.92	2020	$41,976
2	Mannavale Road	Resurface CS	0.00	1.86	2020	$119,622
69	Marwick Road	Resurface CS	1.26	4.04	2020	$452,250
244	McDougall Road	Gravel Sheet	0.00	1.97	2020	$32,505
10	Mokine Road	Gravel Sheet	8.87	9.77	2020	$23,760
63	Moore Road	Gravel Sheet	0.00	1.51	2020	$24,915
6	Quellington Road	Resurface CS	7.86	9.83	2020	$325,885
4	Spencers Brook-York Road	Resurface CS	16.15	17.85	2020	$351,526
9	Top Beverley-York Road	Resurface CS	3.14	5.83	2020	$170,632
9	Top Beverley-York Road	Resurface CS	7.92	14.08	2020	$811,179
1	York-Tammin Road	Resurface CS	7.29	10.51	2020	$204,251
1	York-Tammin Road	Resurface CS	22.40	25.27	2020	$348,533
						$3,159,207

Road No.	Road Name	Works Description	Start SLK	End SLK	Renewal Year	Renewal Cost
104	Alfred Road	Rehabilitation CS	0.00	0.23	2021	$39,569
40	Allen Road	Gravel Sheet	3.61	6.14	2021	$40,075
100	Bird Street	Rehabilitation CS	0.00	0.29	2021	$49,892
15	Boyercutty Road	Gravel Sheet	5.10	7.18	2021	$41,184
38	Cubbine Road	Resurface CS	1.62	6.70	2021	$170,068
103	Fraser Street	Rehabilitation CS	0.31	0.59	2021	$47,604
220	Glass Court	Rehabilitation CS	0.00	0.13	2021	$15,787
142	Glebe Street	Resurface AC Overlay	0.17	0.38	2021	$40,322
24	Grass Valley South Road	Gravel Sheet	0.00	2.13	2021	$38,659
91	Grey Street	Rehabilitation CS	0.12	0.49	2021	$99,662
91	Grey Street	Rehabilitation CS	0.85	1.03	2021	$33,517
7	Gwambygine Road	Gravel Sheet	5.70	7.58	2021	$43,428
102	Harriott Street	Rehabilitation CS	0.00	0.54	2021	$89,866
48	Karabine Road	Gravel Sheet	0.00	2.91	2021	$57,618
28	Knotts Road	Resurface CS	0.00	4.68	2021	$247,385
25	Lennard Road	Gravel Sheet	5.30	7.55	2021	$44,550
144	Lincoln Street	Rehabilitation CS	0.00	0.27	2021	$42,524
181	Macartney Street	Rehabilitation CS	0.38	1.07	2021	$132,673
10	Mokine Road	Gravel Sheet	10.07	11.85	2021	$44,378
198	Morris Edwards Drive	Resurface CS	0.05	2.67	2021	$154,651
96	Pool Street	Rehabilitation CS	0.27	0.60	2021	$70,840
156	Pool Street Section 2	Rehabilitation CS	0.10	0.24	2021	$24,086
23	Sees Road	Gravel Sheet	6.38	8.74	2021	$42,834
4	Spencers Brook-York Road	Resurface CS	0.00	3.72	2021	$183,530
4	Spencers Brook-York Road	Rehabilitation CS	11.73	11.80	2021	$15,018
9	Top Beverley Road	Rehabilitation CS	0.00	0.04	2021	$15,463
132	View Street	Rehabilitation CS	0.00	0.21	2021	$28,053
1	York-Tammin Road	Resurface CS	0.04	2.07	2021	$141,287
						$1,994,523

Road No.	Road Name	Works Description	Start SLK	End SLK	Renewal Year	Renewal Cost
104	Alfred Street	Resurface CS	0.23	0.35	2022	$9,515
51	Ashworth Road	Resurface CS	2.26	2.72	2022	$28,368
166	Barratt Street	Resurface CS	0.00	0.12	2022	$6,766
15	Boyercutty Road	Gravel Sheet	2.10	4.70	2022	$60,060
15	Boyercutty Road	Resurface CS	7.18	7.29	2022	$6,978
153	Brook Street	Resurface CS	0.07	0.21	2022	$6,414
159	Brunswick Road Section 2	Resurface CS	0.10	0.80	2022	$46,869
5	Burges Siding Road	Resurface CS	0.06	0.21	2022	$9,250
5	Burges Siding Road	Resurface CS	0.25	0.73	2022	$29,602
164	Crawford Court	Resurface CS	0.00	0.34	2022	$20,369
113	Eighth Road	Resurface CS	0.00	0.36	2022	$45,904
124	George Street	Resurface CS	0.00	0.16	2022	$8,317
91	Grey Street	Resurface CS	0.49	0.85	2022	$81,608
7	Gwambygine East Road	Resurface CS	1.61	2.54	2022	$57,353
46	Hamersley Siding Road	Resurface CS	0.00	0.66	2022	$42,446
105	Henry Road	Resurface CS	0.00	0.57	2022	$33,143
117	Herbert Road	Resurface CS	0.38	0.86	2022	$19,030
217	Hoops Road	Resurface CS	0.02	0.43	2022	$18,060
53	Luelf Road	Resurface CS	0.00	0.11	2022	$6,784

Road No.	Road Name	Works Description	Start SLK	End SLK	Renewal Year	Renewal Cost
35	Mackie Road	Gravel Sheet	4.56	6.80	2022	$49,526
125	Meares Street	Resurface CS	0.00	0.35	2022	$19,426
10	Mokine Road	Resurface CS	4.06	6.30	2022	$138,141
10	Mokine Road	Resurface CS	8.82	8.87	2022	$3,084
10	Mokine Road	Resurface CS	9.77	10.07	2022	$19,030
10	Mokine Road	Gravel Sheet	14.42	17.75	2022	$69,231
114	Ninth Road	Resurface CS	0.00	1.02	2022	$53,018
109	North Road	Resurface CS	1.39	1.60	2022	$8,325
106	Osnaburg Road	Resurface CS	0.56	1.61	2022	$59,203
157	Pool Street Section 3	Resurface CS	0.03	0.13	2022	$8,193
135	Radnor Road	Resurface CS	0.00	0.46	2022	$26,606
141	River Street	Resurface CS	0.00	0.13	2022	$9,162
178	Roe Street	Resurface CS	0.00	0.15	2022	$8,193
23	Sees Road	Resurface CS	0.90	1.13	2022	$13,171
23	Sees Road	Gravel Sheet	1.13	6.00	2022	$80,355
4	Spencers Brook-York Road	Resurface AC Overlay	11.80	11.86	2022	$9,242
4	Spencers Brook-York Road	Resurface CS	13.24	13.43	2022	$18,078
12	Talbot West Road	Resurface CS	30.90	32.69	2022	$97,773
14	Wambyn Road	Gravel Sheet	5.59	9.88	2022	$100,515
14	Wambyn Road	Resurface CS	9.88	10.18	2022	$23,523
1	York-Tammin Road	Resurface CS	5.34	7.29	2022	$123,693
						$1,474,324

Road No.	Road Name	Works Description	Start SLK	End SLK	Renewal Year	Renewal Cost
255	Andrews Avenue	Resurface AC Overlay	0.00	0.02	2023	$2,827
5	Burges Siding Road	Resurface AC Overlay	0.03	0.06	2023	$4,747
5	Burges Siding Road	Resurface AC Overlay	0.21	0.25	2023	$5,908
242	Cemetery Road	Resurface AC Overlay	0.00	0.02	2023	$1,688
140	Cowan Road	Resurface AC Overlay	0.44	0.48	2023	$5,064
20	Cuthill Road	Rehabilitation CS	1.14	2.18	2023	$147,347
8	Doodenanning Road	Resurface CS	0.34	1.76	2023	$82,567
7	Gwambygine East Road	Resurface CS	2.54	5.70	2023	$155,902
46	Hamersley Siding Road	Gravel Sheet	0.66	8.36	2023	$160,083
112	Knight Street	Resurface CS	0.00	0.50	2023	$31,275
10	Mokine Road	Resurface CS	2.40	4.06	2023	$102,372
109	North Road	Resurface CS	1.60	4.00	2023	$105,720
42	Piccadilly Road	Gravel Sheet	0.90	6.53	2023	$105,900
174	Prunster Road Section 1	Resurface CS	0.00	1.66	2023	$89,210
19	Qualen West Road	Resurface CS	9.36	13.28	2023	$189,944
4	Spencers Brook-York Road	Resurface CS	11.86	13.24	2023	$88,752
12	Talbot West Road	Resurface CS	19.42	21.02	2023	$101,491
90	Ulster Road	Resurface AC Overlay	0.07	0.11	2023	$9,453
14	Wambyn Road	Gravel Sheet	0.00	5.59	2023	$114,371
						$1,504,623

Appendix C Planned Upgrade/Exp/New 10 year Capital Works Program

Road No.	Road Name	Works Description	Upgrade Year	Cost
	Greenhills South Road	Extend Seal to Boundary	2014	$98,000
	Quellington Road	Widen Seal	2014	$110,000
	Talbot Road	Widen Seal	2014	$90,000
	York-Tammin Road	Final Seal	2014	$45,000
	York-Tammin Road	Final Seal	2014	$105,843
	Spencers Brook Road	Widen, Seal, Drain & Clear	2014	$294,177
	Talbot West Road	Final Seal	2014	$40,000
	Bland Road	Widen, Seal and Kerb	2014	$60,000
	Quellington Road	Final Seal	2014	$25,500
	Ashworth Road	Widen, Seal & Extend Seal	2014	$98,000
	Mokine Road	Final Seal and Extend Seal	2014	$110,000
	Morse St	Drain, Gravel and Seal	2014	$24,000
	Chamberlain/Newcastle Streets	Final Seal	2014	$18,500
	York Estates Road Works	Construct	2014	$50,000
	Radnor Road East	Upgrade	2014	$8,000
	York Town Streets	Upgrades	2014	$232,862
	Talbot West to Qualen West Rd	Intersection Upgrade	2014	$32,649
	Quellington Rd-Mannavale Rd	Intersection Upgrade	2014	$32,499
	Spencers Brook Road-Wilberforce Road Intersection	Upgrade	2014	$15,000
	Northam/Cranbrook Road-Ovens Road Intersection	Upgrade	2014	$12,000
	Developer Subdivision Roads	Construct	2014	$75,000
	Town Roads Drainage Works	Upgrade	2014	$510,000
				$2,087,030

Road No.	Road Name	Works Description	Upgrade Year	Cost
	Howick Street Area	Upgrade	2015	$110,000
	Quellington Road	Widen Seal	2015	$160,000
	Spencers Brook Road	Final Seal	2015	$30,000
	Spencers Brook Road	Widen, Drain and Seal	2015	$420,000
	Talbot West Road	Final Seal	2015	$35,000
	Ashworth Road	Widen & Seal	2015	$30,000
	Bland Road	Widen, Seal & Kerb	2015	$30,000
	Ovens Road	Seal	2015	$30,000
	Mokine Road	Final Seal	2015	$45,000
	Mackie Road	Widen, Gravel & Drain	2015	$109,000
	Knight Street	Widen, Drain, Seal & Kerb	2015	$60,000
	Various Streets	Reseal, Kerbing & Drainage	2015	$100,000
	Various Streets	Upgrades	2015	$80,000

Road No.	Road Name	Works Description	Upgrade Year	Cost
	Developer Subdivisions	New Works	2015	$90,000
	Talbot West-Qualen West Road	Intersection Upgrade	2015	$54,201
	Quellington-Mannavale Road	Intersection Upgrade	2015	$91,501
	Quellington Road	Remove Crest	2015	$150,000
	Town Roads Drainage Works	West Boundary to Railway system upgrade	2015	$150,000
				$1,774,702

Road No.	Road Name	Works Description	Upgrade Year	Cost
	Horwick Street Area	Upgrades	2016	$106,580
	Cameron Road	Gravel Sheet & Seal Intersections	2016	$80,000
	Gwambygine East Road	Extend Seal	2016	$100,000
	Spencers Brook Road	Final Seal	2016	$90,000
	Ovens Road	Seal	2016	$25,000
	Various Streets	Kerbing, Drainage & Reseals	2016	$100,000
	Various Streets	Upgrades	2016	$40,000
	Developer subdivisions	New Roads	2016	$90,000
	Road Safety Upgrades	Subject to safety audit	2016	$90,000
	Town Roads Drainage Works	West Boundary to Railway system upgrade	2016	$150,000
				$871,580

Road No.	Road Name	Works Description	Upgrade Year	Cost
	Top Beverley Road	Widen & Seal	2017	$90,000
	Quellington Road	Shoulder Upgrade	2017	$76,000
	Talbot Hall – Qualen West Rd	Seal 400m	2017	$45,000
	Talbot Hall – Talbot Rd	Seal 400m	2017	$45,000
	York-Tammin Road	Widen and Seal	2017	$450,000
	Doodenanning Road	Extend Seal	2017	$120,000
	Various Streets	Kerbing, Drainage & Reseals	2017	$160,000
	Various Streets	Upgrades	2017	$20,000
	Developer subdivisions	New Roads	2017	$90,000
	Road Safety Upgrades	Subject to safety audit	2017	$90,000
	Town Roads Drainage Works	West Boundary to Railway system upgrade	2017	$150,000
				$1,336,000

Road No.	Road Name	Works Description	Upgrade Year	Cost
	York-Tammin Road	Seal	2018	$245,000
	Spencers Brook Road	Widen & Seal	2018	$205,000
	Doodenanning Road	Final Seal	2018	$60,000
	Helena Road	Clear, Widen and Drain	2018	$70,000
	Bogling Road	Clear, Widen and Drain	2018	$60,000
	Grass Valley Road	Clear, Widen and Drain	2018	$60,000
	Mackie Road	Widen, Gravel & Drain	2018	$60,000
	Various Streets	Kerbing, Drain & Reseals	2018	$200,000
	Various Streets	Upgrades	2018	$50,000
	Developer subdivisions	New Roads	2018	$90,000
	Road Safety Upgrades	Subject to safety audit	2018	$90,000
				$1,190,000

Road No.	Road Name	Works Description	Upgrade Year	Cost
	Talbot West Road	Upgrades	2019	$48,000
	Spencers Brook Road	Widen & Seal	2019	$129,000
	York-Tammin Road	Widen & Seal	2019	$148,000
	Talbot Road	Widen & Seal	2019	$120,000
	Leeming Road	Seal	2019	$63,000
	Various Streets	Kerbing, Drainage & Reseals	2019	$250,000
	Various Streets	Upgrades	2019	$90,000
	Developer subdivisions	New Roads	2019	$90,000
	Road Safety Upgrades	Subject to safety audit	2019	$90,000
				$1,028,000

Road No.	Road Name	Works Description	Upgrade Year	Cost
	Doodenanning Road	Extend Seal	2020	$120,000
	Spencers Brook Road	Final Seal	2020	$60,000
	York-Tammin Road	Widen & Seal	2020	$120,000
	Mannavale Road	Widen, Drain & Seal	2020	$180,000
	Leeming Road	Final Seal	2020	$18,000
	Mackie Road	Seal 600m from Quairading Road	2020	$63,000
	Berry Brow Road	Seal 600m from Lakes Road	2020	$63,000
	Various Streets	Kerbing, Drainage & Reseals	2020	$250,000
	Various Streets	Upgrades	2020	$60,000
	Developer subdivisions	New Roads	2020	$90,000
	Road Safety Upgrades	Subject to safety audit	2020	$90,000
				$1,114,000

Road No.	Road Name	Works Description	Upgrade Year	Cost
	Narraloggan Road	Clear, Form & Gravel	2021	$60,000
	Top Beverley Road	Final Seal	2021	$90,000
	Spencers Brook Road	Final Seal from Burges to Mackie	2021	$120,000
	Marwick road	Widen & Seal	2021	$120,000
	Talbot Hall Road	Gravel & Seal	2021	$150,000
	Mackie Road	Final Seal	2021	$18,000
	Mackie Road	Seal 600m from Goldfields Road	2021	$60,000
	Berry Brow Road	Final Seal	2021	$18,000
	Various Streets	Kerbing, Drainage & Reseals	2021	$200,000
	Various Streets	Upgrades	2021	$80,000
	Developer subdivisions	New Roads	2021	$90,000
	Road Safety Upgrades	Subject to safety audit	2021	$90,000
	Town Roads Drainage Works	Town Drainage System upgrade	2021	$100,000
				$1,196,000

Road No.	Road Name	Works Description	Upgrade Year	Cost
	Cut Hill Road	Widen & Seal	2022	$100,000
	Mackie Road	Extend Seal	2022	$120,000
	Marwick Road	Final Seal	2022	$100,000
	Quonamining Road	Clear, Form & Gravel	2022	$70,000
	Moore Road	Clear, Form & Gravel	2022	$70,000
	Mackie Road	Final Seal	2022	$20,000
	Talbot Hall Road	Final Seal	2022	$70,000
	Various Streets	Kerbing, Drainage & Reseals	2022	$200,000
	Various Streets	Upgrades	2022	$90,000
	Developer subdivisions	New Roads	2022	$90,000
	Road Safety Upgrades	Subject to safety audit	2022	$90,000
	Town Roads Drainage Works	Town Drainage System upgrade	2022	$100,000
				$1,120,000

Road No.	Road Name	Works Description	Upgrade Year	Cost
	Cut Hill Road	Final Seal	2023	$40,000
	Mackie Road	Final Seal	2023	$70,000
	Wambyn Road	Extend Seal	2023	$100,000

Road No.	Road Name	Works Description	Upgrade Year	Cost
	Spencers Brook Road	Drain, Widen, Seal, Reseal	2023	$210,000
	Cameron Road	Seal 600m at intersections	2023	$80,000
	Hamersley Siding Road	Extend Seal	2023	$70,000
	Station Road	Seal	2023	$50,000
	Various Streets	Kerbing, Drainage & Reseals	2023	$200,000
	Various Streets	Upgrades	2023	$80,000
	Developer subdivisions	New Roads	2023	$90,000
	Road Safety Upgrades	Subject to safety audit	2023	$90,000
	Town Roads Drainage Works	Town Drainage System upgrade	2023	$250,000
				$1,330,000

Appendix D Abbreviations

AAAC	Average annual asset consumption
AMP	Asset management plan
ARI	Average recurrence interval
BOD	Biochemical (biological) oxygen demand
CRC	Current replacement cost
CWMS	Community wastewater management systems
DA	Depreciable amount
EF	Earthworks/formation
IRMP	Infrastructure risk management plan
LCC	Life Cycle cost
LCE	Life cycle expenditure
MMS	Maintenance management system
PCI	Pavement condition index
RV	Residual value
SS	Suspended solids
vph	Vehicles per hour

Appendix E Glossary

Annual service cost (ASC)

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

Asset

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

Asset class

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

Asset condition assessment

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

Asset management (AM)

The combination of management, financial, economic, engineering and other practices applied to physical assets with the objective of providing the required level of service in the most cost effective manner.

Average annual asset consumption (AAAC)*

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

Borrowings

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

Capital expenditure

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

Capital expenditure - expansion

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

Capital expenditure - new

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

Capital expenditure - renewal

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

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

Capital funding
Funding to pay for capital expenditure.

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

Capital investment expenditure
See capital expenditure definition

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

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

Class of assets
See asset class definition

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

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

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

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

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

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

Economic life
See useful life definition.

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

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

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

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

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

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

Investment property
Property held to earn rentals or for capital appreciation or both, rather than for:
(a) use in the production or supply of goods or services or for administrative purposes; or
(b) sale in the ordinary course of business.

Key performance indicator
A qualitative or quantitative measure of a service or activity used to compare actual performance against a standard or other target. Performance indicators commonly relate to statutory limits, safety, responsiveness, cost, comfort, asset performance, reliability, efficiency, environmental protection and customer satisfaction.

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

Life Cycle Cost
1. **Total LCC** The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, rehabilitation and disposal costs.
2. **Average LCC** The life cycle cost (LCC) is average cost to provide the service over the longest asset life cycle. It comprises annual operations, maintenance and asset consumption expense, represented by depreciation expense. The Life Cycle Cost does not indicate the funds required to provide the service in a particular year.

Life Cycle Expenditure
The Life Cycle Expenditure (LCE) is the actual or planned annual operations, maintenance and capital renewal expenditure incurred in providing the service in a particular year. Life Cycle Expenditure may be compared to average Life Cycle Cost to give an initial indicator of life cycle sustainability.

Loans / borrowings
See borrowings.

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

- **Planned maintenance**
  Repair work that is identified and managed through a maintenance management system (MMS). MMS activities include inspection, assessing the condition against failure/breakdown criteria/experience, prioritising scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.
- **Reactive maintenance**
  Unplanned repair work that is carried out in response to service requests and management/supervisory directions.
- **Significant maintenance**
  Maintenance work to repair components or replace sub-components that needs to be identified as a specific maintenance item in the maintenance budget.
- **Unplanned maintenance**
  Corrective work required in the short-term to restore an asset to working condition so it can continue to deliver the required service or to maintain its level of security and integrity.

Maintenance and renewal gap
Difference between estimated budgets and projected required expenditures for maintenance and renewal of assets to achieve/maintain specified service levels, totalled over a defined time (e.g. 5, 10 and 15 years).

Maintenance and renewal sustainability index

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

Maintenance expenditure

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

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

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

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

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

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

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

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

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

Rate of annual asset consumption
A measure of average annual consumption of assets (AAAC) expressed as a percentage of the depreciable amount (AAAC/DA). Depreciation may be used for AAAC.

Rate of annual asset renewal
A measure of the rate at which assets are being renewed per annum expressed as a percentage of depreciable amount (capital renewal expenditure/DA).

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

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

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

Recurrent funding
Funding to pay for recurrent expenditure.

Rehabilitation
See capital renewal expenditure definition above.

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

Renewal
See capital renewal expenditure definition above.

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

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

Risk management
The application of a formal process to the range of possible values relating to key factors associated with a risk in order to determine the resultant ranges of outcomes and their probability of occurrence.

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

Service potential
The total future service capacity of an asset. It is normally determined by reference to the operating capacity and economic life of an asset. A measure of service potential is used in the not-for-profit sector/public sector to value assets, particularly those not producing a cash flow.

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

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

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

Sub-component
Smaller individual parts that make up a component part.

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

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

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

Source: IPWEA, 2009, Glossary