



TRANSPORT

Asset Management Plan



Version II

December 2014

1. EXECUTIVE SUMMARY

Context

Council provides a Road Transport network to ensure that Gloucester Shire has an extensive transport network which is accessible, safe and efficient for motorists, cyclists and pedestrians. The Roads and Maritime Services NSW (RMS) funding assistance toward regional roads is acknowledged.

This plan is concerned with roads and their associated components as follows:

The Transport Service

The transport network comprises:

- 278 - Bridges & Causeways
- 330km Sealed Roads
- 444km Unsealed Roads
- 51km Kerb & Gutter
- 12.7km Footpaths
- Roadside furniture (Signs, Guideposts, Bins, Rest Areas etc)

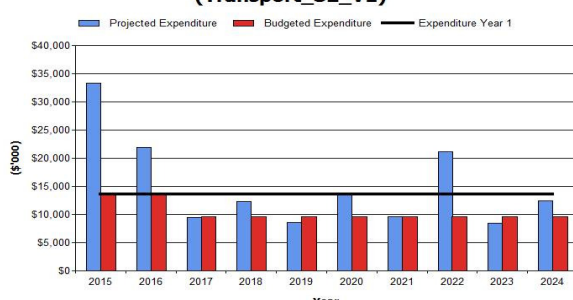
These infrastructure assets have a replacement value of \$323Million. This includes the formation and earthworks; the depreciable value is \$173Million.

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 **\$151Million** or **\$15Million** per year.

Council's estimated available funding for this period is \$96Million or \$9.6Million per year. Note, this includes a \$8M Federal grant for renewal of sections of The Bucketts Way to be spent in 2015/16. There is therefore a funding shortfall of **-\$5.4Million** per year which is 64% 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 service levels.

Gloucester SC - Projected and Budget Expenditure for (Transport_S2_V1)



What we will do

Council plans to operate and maintain the Road Transport network to achieve the following strategic objectives as developed through the CSP.

- Ensure the Road transport network is maintained at a safe and functional standard as set out in this asset management plan.
- Improve Roads, and Footpaths within funding constraints.
- Efficient use of Councils Resources.

This report assumes the road transport network is growing at a rate of 0.15 % per annum (based on historical growth statistics). While increased population will result in an increase in general rates income and developer charges collected, it will also result in higher traffic volumes which will result in reduced pavement lives and the possibility of increased congestion.

What we cannot do

Council does not have enough funding to provide all services at the community's desired service levels or provide new or improved levels of service.

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:

- Sealed Road Network: Reduction in vehicle travel speed, damage to vehicles from poor road condition. Distorted and damaged road surfaces can 'catch out' a driver causing loss of control leading to possible injury or death.
- Unsealed road network: Loss of all weather access
- Culverts & Bridges: Loss of access - damage to vehicles
- Causeways (wet crossings): Loss of access or damage to vehicles and possible loss of life
- Financial: Not undertaking timely renewals greatly increases maintenance and renewal costs.

The Next Steps

The actions resulting from this revised asset management plan are:

- Council has since June 2013 and will continue to engage with the community to seek agreement on affordable levels of service & funding.
- Determine resource requirements, and ensure their availability;
- Adopt fully costed renewal and upgrade programs and a long-term financial plan for managing assets once funding levels are assured;
- Improve asset information and knowledge; develop a 2nd generation AM Plan.

- Seek additional funding from State & Federal Government. The Bucketts Way renewal funding is an example of this.
- Review council's development strategies to reduce the impact on transport assets.
- Explore the notion of redirecting future road asset upgrade and expansion budgets to renewal projects as a priority,
- Actively oppose any transfer of asset ownership to Council from other authorities.
- Make application to IPART for a substantial Special Rate Variation (SRV).

Questions you may have

What is this plan about?

This asset management plan covers the infrastructure assets that serve the Gloucester Community's Transportation needs. These assets include Roads, Bridges, Culverts & Causeways, Footpaths and roadside furniture throughout the Council area that enable people to travel safely about their business in the community.

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 transport 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. This can be attributed to three main causes

1. Rate Pegging: the value of rates received has declined in real terms in comparison with the cost to provide the service;
2. Falling value of Federal Assistance Grants (FAG): FAG grants have fallen from 1% of

total federal budget revenues to 0.5% over the last 20 Years.

3. Cost shifting from other levels of government consumes approximately 7% of council resources.

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 tradeoffs between service levels and costs to ensure that the community receives the best return from infrastructure,
5. Identifying assets surplus to needs for disposal to make saving in future operations and maintenance costs
6. Consulting with the community to ensure that 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.
9. Make application to IPART for a Special Rate Variation (SRV)

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 Transportation assets, the service level reduction may include: reduced frequency of grading of gravel roads; speed reductions on sealed roads; catastrophic failure or at the very least weight restrictions on bridges & causeways.

What can we do?

Council can develop options and priorities for future Transportation asset 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..

What would be the effect of a Special Rate Variation?

A special rate variation would, over time, provide an increased revenue stream which may, depending on the quantum of the rise, provide sufficient funds to address the backlog of works.

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:

- Gloucester Community Strategic Plan 2022
- Gloucester Council Resourcing Strategy
- Gloucester Council Four Year Delivery Program

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

Table 2.1: Assets covered by this Plan

Asset category	Amount	Replacement Value (\$M)
Bridges & Causeways	278	44.71
Roadside furniture	-	9.58
Footpaths	12.7km	2.77
Roads (Value includes road formations)	774km	307.56
Kerb & Gutter	51km	5.84
TOTAL		370.46*

*Equivalent to \$133,000 per household (Rates assessment)

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 'purchase', 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, objectives and strategies.

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

Council's vision is:

**We want to work together to preserve this special place,
To value and protect our environment,
To care and contribute to our community, and
To build a sound and prosperous future**

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

Objective	Strategy	How Objectives & Strategies are addressed in AMP
1.1 Public assets and infrastructure will be planned, managed and funded to meet agreed levels of service	1.1.2 Strengthen Council's asset management capability 1.1.3 Resource and implement a prioritised maintenance program for all public assets, incorporating a risk management approach 1.1.5 Continue to engage with the community in relation to acceptable service levels for all public assets	<ul style="list-style-type: none"> • This Plan analyses current transport assets data and current management practices • Future management options are investigated and recommendations documented that will assist in maintaining the road network at an agreed level of service • Conduct community consultation surveys to establish agreed, financially sustainable, levels of service
1.2 Ensure the road system meets the transport needs of the community.	1.2.1 Ensure road standard levels of service identified in Council's Asset Management System are achieved 1.2.3 Review and improve road maintenance practices and procedures	<ul style="list-style-type: none"> • Sets works priorities and minimum target service levels for assets • Develops effective methods to program and carry out performance, and condition monitoring and reporting of assets • Detailed annual reporting of asset condition
1.6 Enhance the viability of public infrastructure.	1.6.3 Seek State and Federal government contributions for provision and maintenance of public infrastructure	<ul style="list-style-type: none"> • This Plan analyses current transport assets data and current management practices and provides clear financial sustainability indices

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

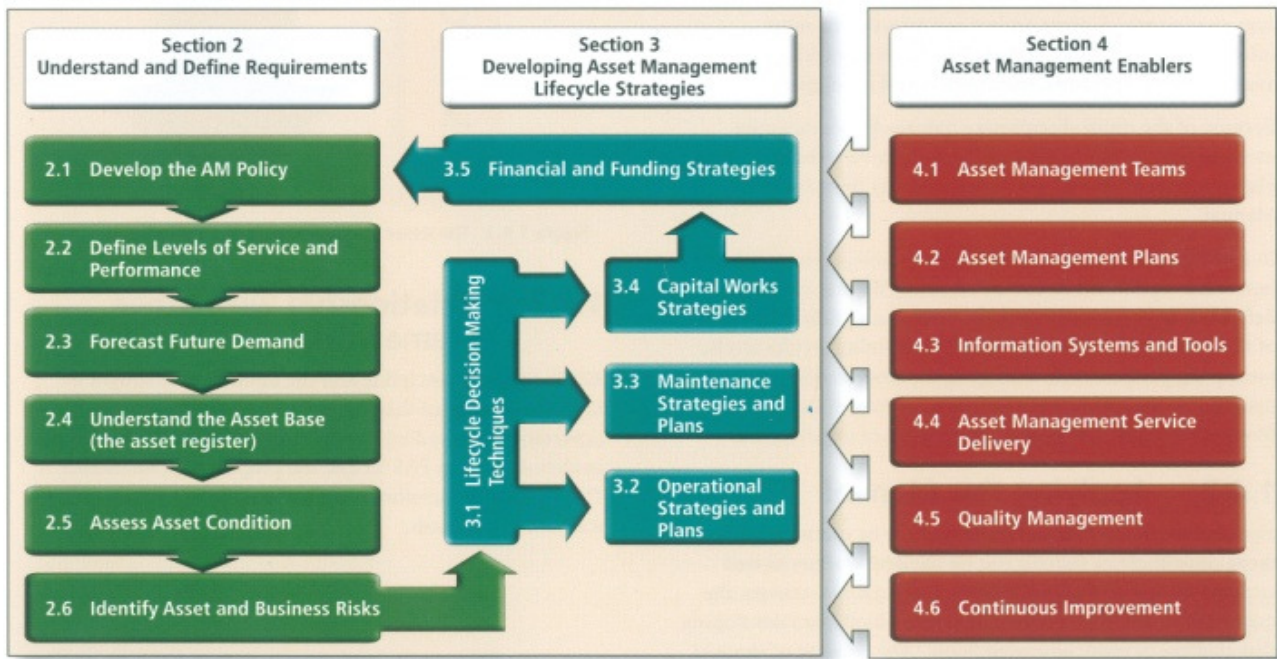


Figure 1.3.1: The Asset Management Process

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 Manual². 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

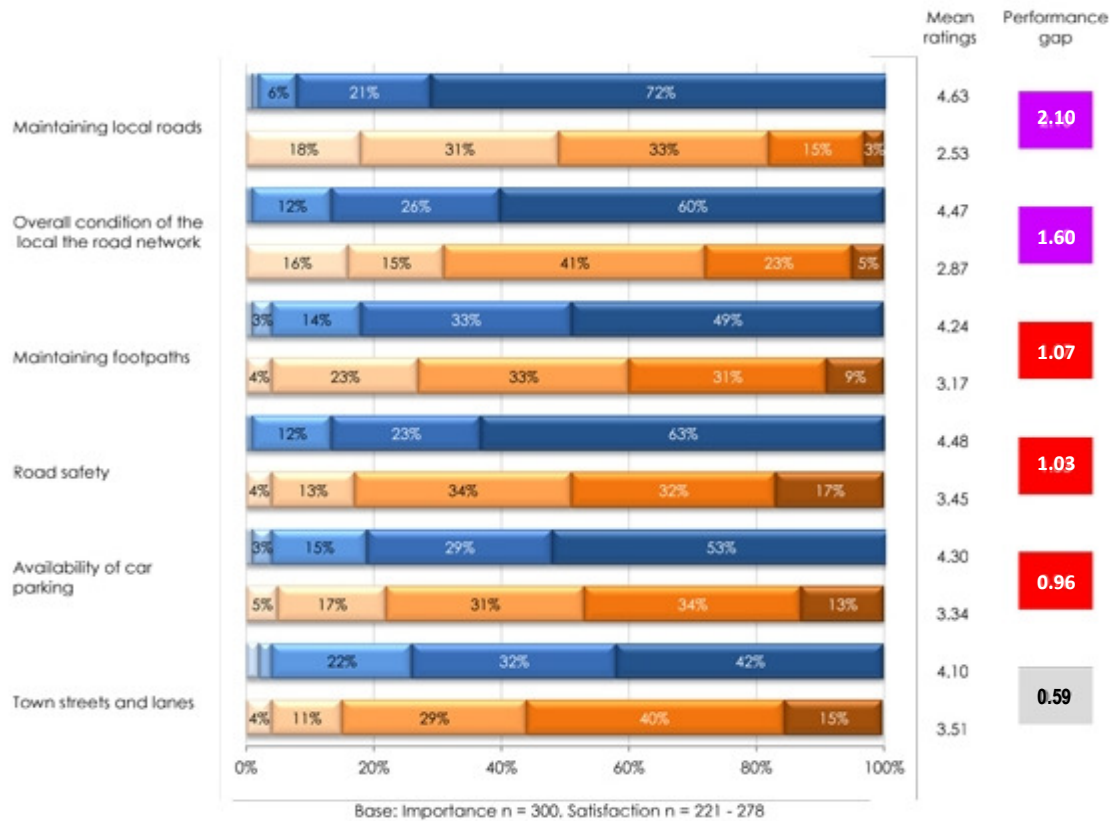
This 'core' asset management plan is prepared to facilitate community consultation initially through feedback on public display of draft asset management plans prior to adoption by Council. Future revisions of the asset management plan will incorporate community consultation on service levels and costs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

² IPWEA, 2006.

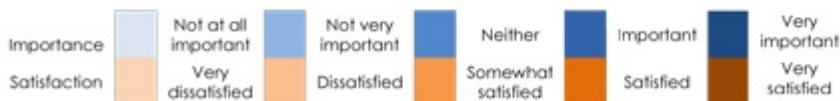
3. LEVELS OF SERVICE

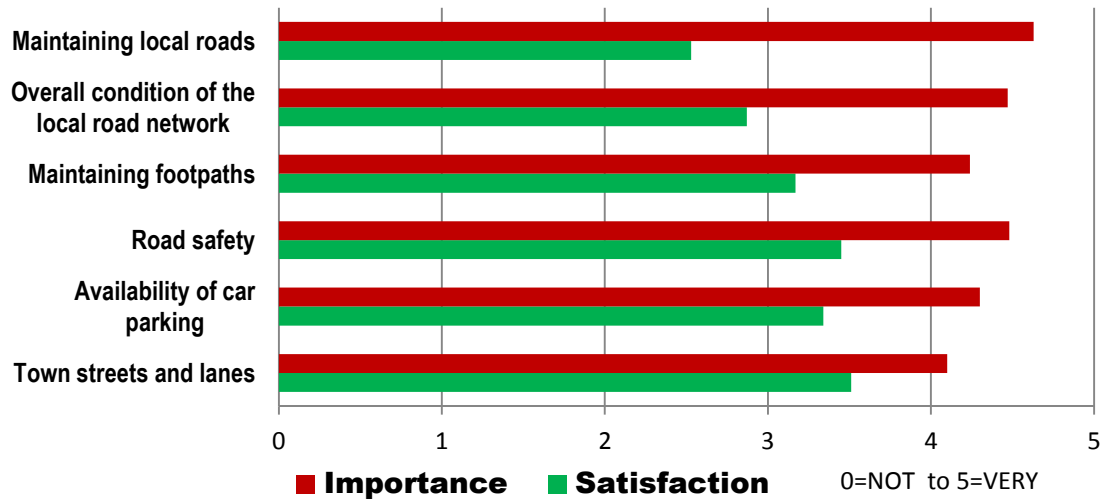
3.1 Customer Research and Expectations

Council has not carried out any detailed research on customer expectations however during the preparation of the Community Strategic Plan, consultation and input from the Community was achieved through a number of on-line surveys, Community workshops and Focus Groups; undertaken during August and September of 2011. The results are shown in the following graphs.



Mean ratings: 1 = not at all important and very dissatisfied
5 = very important and very satisfied





This was a “broad brush” exercise and the results provide a reflection of the community’s interpretation of Council’s general performance only.

More detailed community consultation will be undertaken 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
Local Government Act	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery. Integrated Planning and Reporting.
Roads Act 1993	Sets out the rights for the use of public roads, confers certain road related functions on road authorities and regulates the carrying out of various activities.
Work Health and Safety Act 2011	Sets out an employee’s obligations to provide a safe work environment for all users, including processes and documentation.
Environment Planning & Assessment Act 1979	Encourages the proper management, development and conservation of natural and artificial resources, for the purpose of promoting the social and economic welfare of the community and a better environment.
Civil Liability Amendment (Personal Responsibility) Act 2002	Sets out a road authority’s responsibility in the development and implementation of appropriate inspection and maintenance programs subject to the availability of financial and other resources.
Native Vegetation Act	The responsibilities and powers of Council in providing protection for native vegetation.
Australian Accounting Standards Board - AASB 116, AASB1031	Accounting rules setting out Council requirements for maintaining accounting standards and the financial reporting of assets.

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

The standard of service must be balanced against the cost of providing the service. Council may need to review the LOS in the future in accordance with customer demand and industry trends.

Council's current service levels are detailed in Table 3.3.

Table 3.3: Current Service Levels

TECHNICAL LEVELS OF SERVICE				
Service Criteria	Service Target			Compliance Measure
Ongoing repair potholes	Repair wheel path potholes deeper than 50mm within two weeks of being identified			Less than 2 justified complaints per month
Average Routine Grade (Grader Roller Watercart) across the network	Rural Sealed (ie US Shldr)	0.1	Grades/yr	Less than 10 justified complaints per month
	Rural Unsealed	2	Grades/yr	
Progressively convert gravel collector road surfaces to sealed surfaces, excluding unsealed shoulders adjacent to table drains	No gravel surfaces by 2040 for top 4 Collector Roads			Annual budget allocations set to achieve target and spent each year.
Keep culvert inlet and outlets clean	Program routine maintenance of culverts every 4 years			Less than 2 justified complaints per month
Ensure signs are legible, accurate and correctly installed	Program works as required and within one month of being identified.			Less than 2 justified complaints per month
Attend asset replacement before assets become unserviceable	Allocate funding required to eliminate Condition 5 assets			90% of required funding allocated each financial years budget
Control grass growth on unsealed shoulders or sealed roads	Slash at intervals to ensure a maximum height of 300mm is not exceeded. Twice per year (average)			Less than 2 justified complaints per month

3.4 Desired Levels of Service

At present, indications of desired levels of service are obtained from various sources including, service requests and correspondence. Council has yet to quantify desired levels of service (but for this Plan it assumes that the current levels of service are appropriate). A revision of this assumption will be done progressively in future revisions of this asset management plan.

Although Council assumes that the current listed levels of service are also the desired levels of service, it is obvious from above table (Technical LOS) that some of the current 'key performance measures' (KPM) are not being met. These will undoubtedly have funding and LOS consequences in the short term and beyond.

Additionally, the future condition of many road assets may also deteriorate more rapidly should sustained wet conditions (as experienced in 2011-12) again be encountered.

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 over the next 20 years 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	5,035	6,138	Increase users, reduce serviceability, increase maintenance intensity and frequency, need renewal, upgrade and new assets.
Demographics	0 to 14years = 18% 15 to 29 years = 12% 30 to 49 years = 24% 50 to 64 years = 21% 65years plus = 24%	0 to 14years = 15% 15 to 29 years = 10% 30 to 49 years = 23% 50 to 64 years = 22% 65 plus years = 29%	Significant increase of the over 65 year's age group may affect footpath facilities. Availability of footpaths and their condition need to be improved. Footpath hazards should also be reduced. Moreover, greater attention may be necessary for traffic control services.
Agricultural Practice	Primarily beef grazing with some dairy & forestry.	Greatly reduced dairy & forestry. Increased mining.	Increased mining activity will generate increased freight tasks, Increases in the carrying capacity of haulage vehicles e.g. B double trucks and greatly increased numbers of heavy haulage vehicles. All contributing to a rapid deterioration of road pavements
Climate Change	Hot Summers, Autumn storms and generally dry winters with annual snow falls on the Barrington Tops	Increased incidence of High-intensity Rainfall events throughout the year. Reduced snowfalls.	Reduced pavement life (both sealed and unsealed). Increased levels of damage to bridges & culverts. Increased frequency of road closures.

4.2 Changes in Technology

Technology changes forecast to affect the delivery of services covered by this plan are detailed in Table 4.2.

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

Technology Change	Effect on Service Delivery
Footpath grinding instead of frequent replacement	Lesser requirement to replace, hence longer asset use life
Composite (Timber/Concrete) Bridge Construction	More cost effective & efficient “in-house” construction
In-situ pavement stabilisation	Increased pavement life and reduce rehabilitation costs
Recycling of pavement materials	Saving costs and natural resources
Implementation of Pavement Management System	Optimised decision making by considering lifecycle costs
Upgrading of IT hardware and asset system software. For example, AIMS, GIS, data collection hardware incorporating GPS	Positive - improvements in the management, analysis and reporting of transport infrastructure assets
Increased tonnage allowed on Semi-trailers and mandating B-doubles on classified roads	Increased maintenance costs due to impact from increased weight.

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. Demand management practices include non-asset solutions, insuring against risks and managing failures.

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.

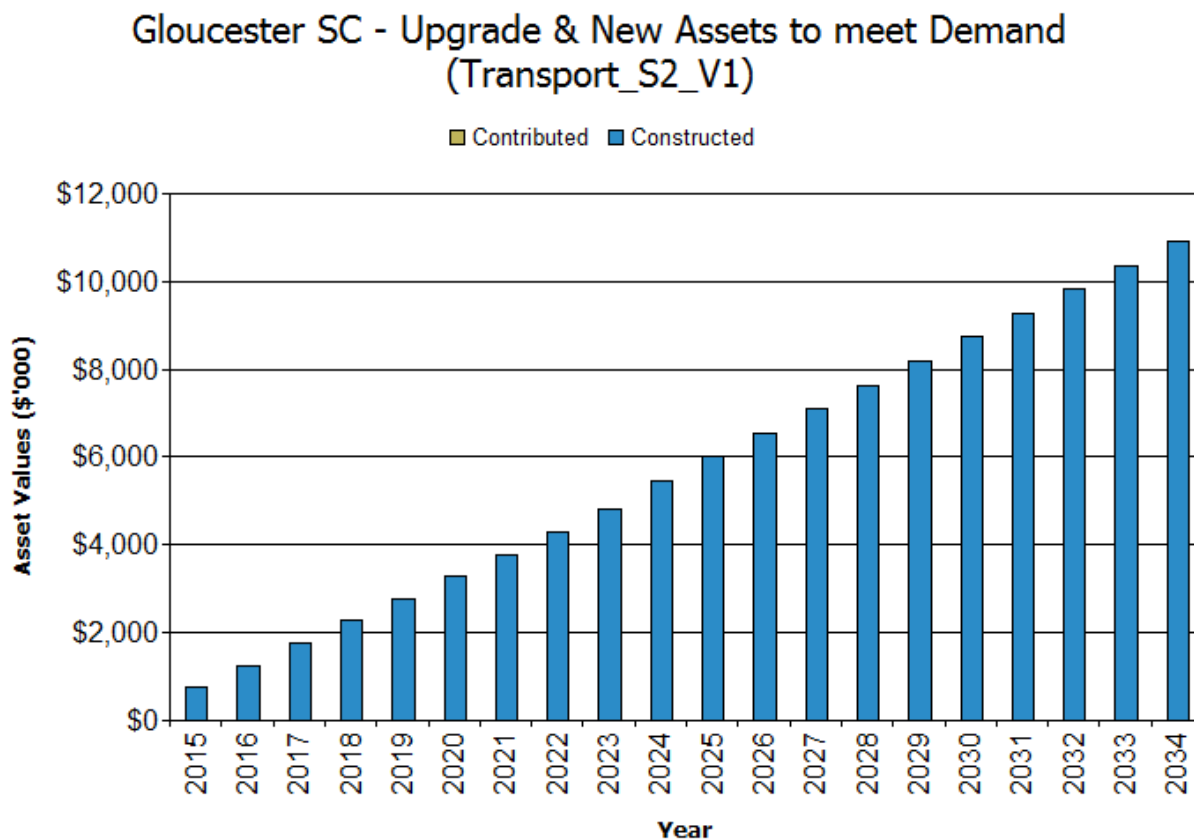
Table 4.3: Demand Management Plan Summary

Service Activity	Demand Management Plan
Community Engagement	Engage with the community to identify justifiable community needs from other expectations.
Customer Requests	Analyse customer requests to optimise the use and performance of existing road services and look for non-asset based solutions to meet demand for services
Traffic	Improved road and pavement performance through road mass restrictions and reducing traffic volumes
Explanatory marketing and education campaigns	Manage community expectations through explanatory marketing and education campaigns

4.4 New Assets for Growth

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

Figure 1: New Assets for Growth



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. To undertake life cycle asset management, means considering all management options and strategies as part of the asset lifecycle, from planning to disposal. The objective of managing the assets in this manner is to look at long- term cost impacts (or savings) when making asset management decisions. Fig 5.1 below provides a graphical representation of the asset lifecycle including each of the stages an asset passes through during its life.

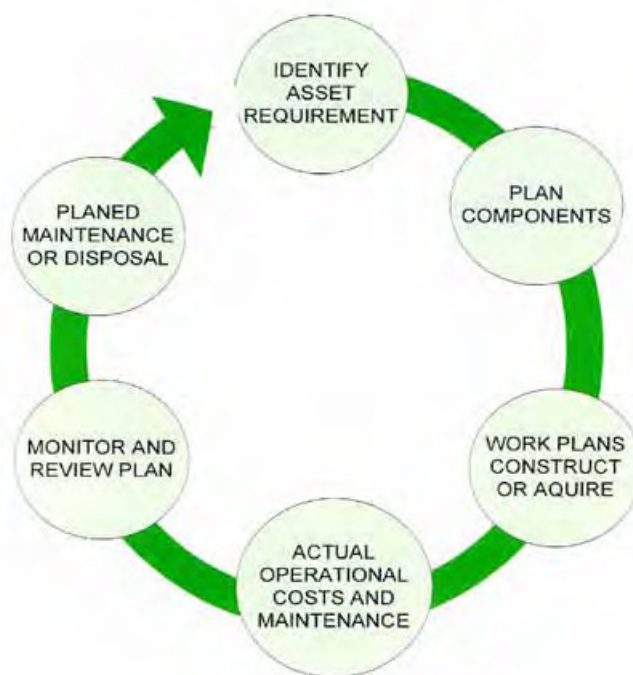


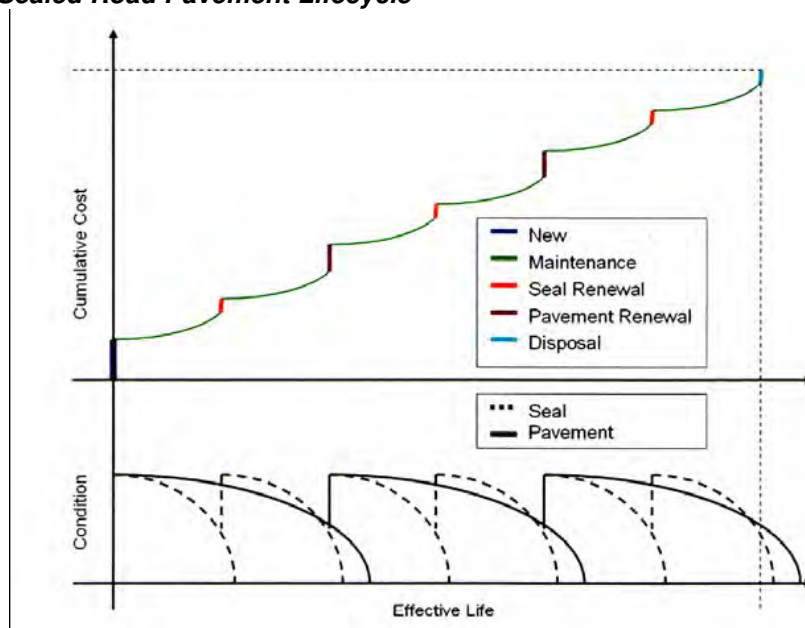
Figure 5.1 Asset Lifecycle

A model for the lifecycle for sealed road pavements is presented later in this section. The model relates particularly to the maintenance and renewal stages of asset life (refer to figure 5.2.)

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

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

Figure 5.2 Sealed Road Pavement Lifecycle



5.1 Background Data

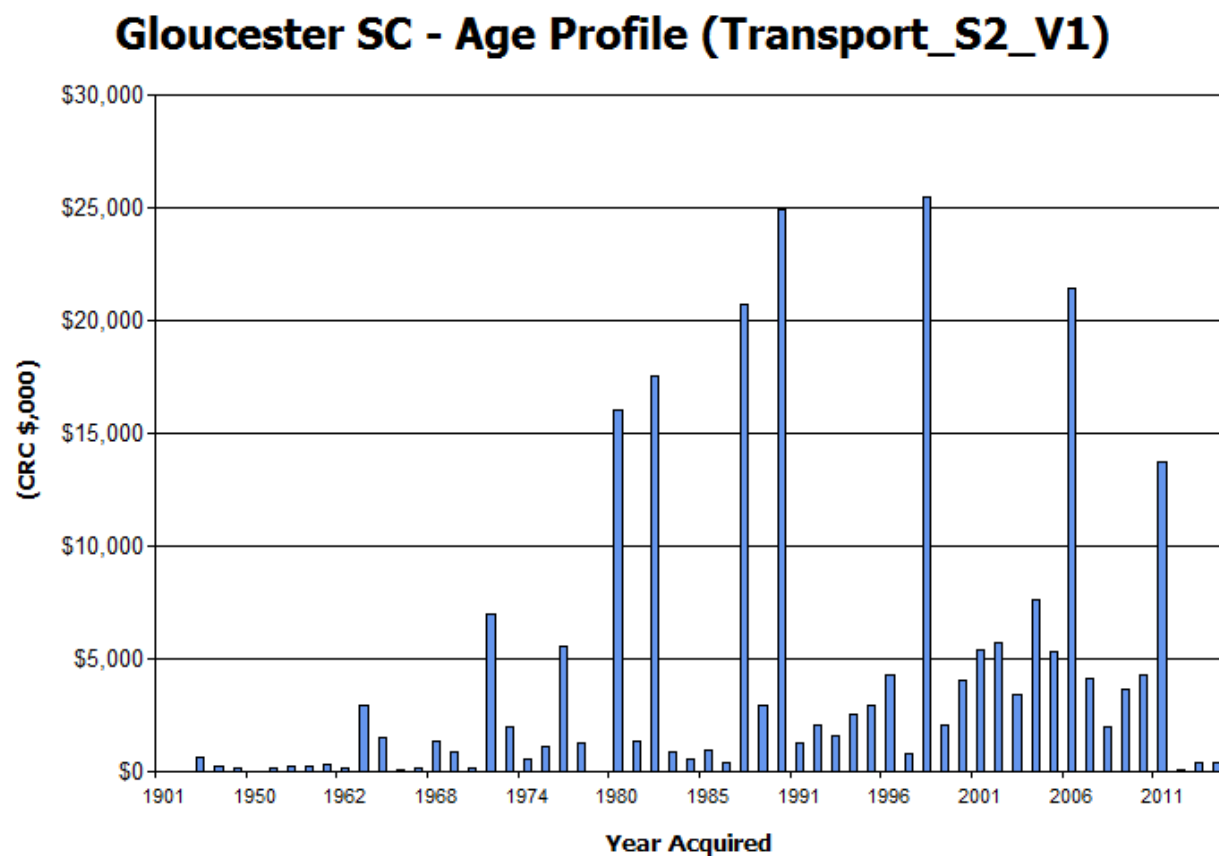
5.1.1 Physical parameters

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

- Roads,
- Bridges,
- Culverts & Pipes
- Carparks,
- Footpaths,
- Cycleways,
- Kerb and Gutter,
- Traffic Control facilities
- Roadside furniture.

The age profile of the assets include in this AM Plan is shown in Figure 2. **The age profile shown has been compiled primarily from condition data and therefore does not provide an accurate picture of asset age.** This does NOT affect the overall integrity of the plan and will be rectified in future revisions of this plan.

Figure 2: Asset Age Profile



The age profile will be further developed in future revisions of the asset management plan.

5.1.2 Asset capacity and performance

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

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

Table 5.1.2: Known Service Performance Deficiencies

Location	Service Deficiency
Roads – Various locations	Past low reseal budgets have resulted in a significant backlog of reseal work which is resulting in pavement damage and increasing amounts of rehabilitation needed before a reseal can be done. There is a high economic risk if pavements are damaged by delaying reseals. Use of local natural gravels of low strength and high plasticity has resulted in extensive pavement damage following wet weather requiring increasing amounts of rehabilitation. High Risk
Kerb - Various Locations	Kerb inspections show extensive areas of damaged kerb. A risk based priority program is needed. Medium Risk
Traffic facilities	Many traffic control items (guardrails and netting fences in particular) are approaching end of life. This area has received minimal expenditure in the past. Approx \$300K per year needed for the next 10 years. High Risk

The above service deficiencies were identified by asset inspections during preparation of the asset register.

5.1.3 Asset condition

Asset condition indicators are usually visually assessed and need to be comprehensively measured across the whole road network by prescribed methodology. The adopted structure enables the allocation of resources to get this assessment back on track. Ideally full inspections should be carried out at least once every year on local assets. This requires the allocation of resources to undertake inspections, record and interpret the results something that Gloucester Council has not been quick to embrace.

Visual assessment considers indicators such as:

- Seal cracking (area, extent and type)
- Surface rutting
- Seal edge break
- Potholes
- Wear or disintegration of the bitumen seal
- Shape of the road profile

Surface roughness on sealed roads is a condition indicator, which is also measured but requires the use of special equipment. In special circumstances structural indicators such as pavement deflection is measured where pavement strength is an important factor.

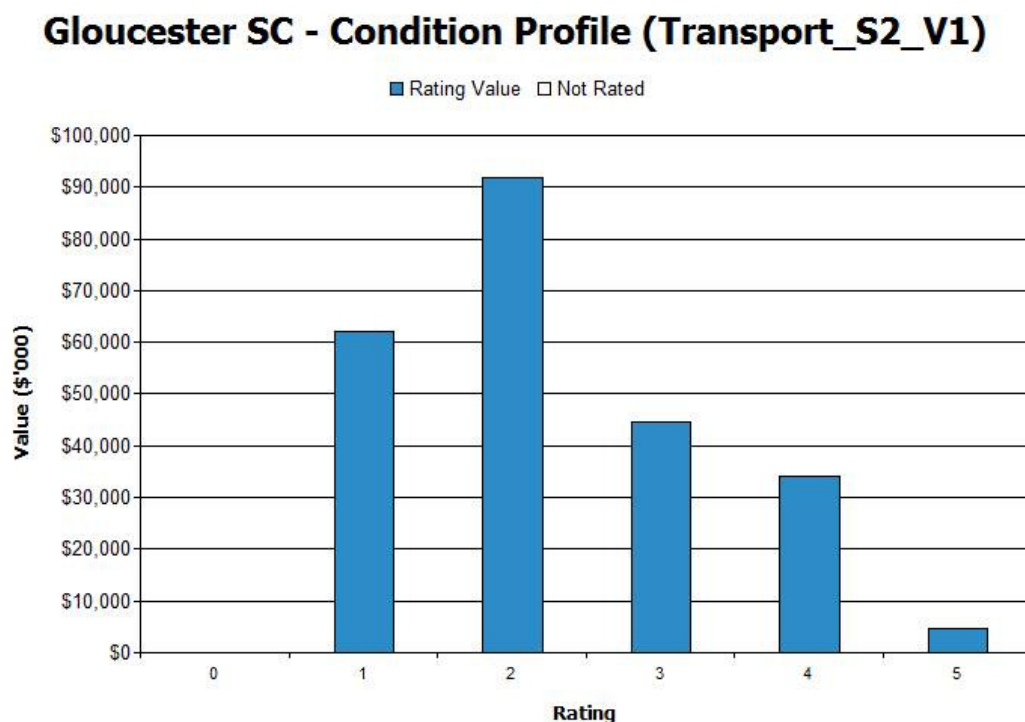
Applying a consistent and repeatable measurement of the above condition indicators provides a reliable basis for comparison of the condition of roads in the network at a given time as well as to determine if there is a trend in the rate of degradation over time between measurements.

“Drive by” or in field visual inspections are carried out several times a year so as to maintain a current appreciation of the condition of the road network and to identify any noticeable changes in condition of particular roads, which may occur. This information can come from various levels including Management, Works Officers or Grader Operators. Maintenance requests from road users are treated separately under the Customer Request System.

Obviously the more detailed the inspection the more accurate the assessment. This is best carried out by dividing the asset network into segments of equal age/condition.

The condition profile of assets included within this AM Plan is shown in Figure 3. It must be remembered that this covers ALL types of transport assets from guide posts and road signs to regional roads.

Figure 3: Asset Condition Profile



Condition is measured using a 1 – 5 rating system³ as detailed in Table 5.1.3.

Table 5.1.3: IIMM Description of Condition

Condition	Condition Score	Condition Description	Wear	Maintenance Requirement	Functionality
Excellent	1	Chance of failure is minimal	Negligible wear	No problem beyond normal maintenance	Easily performing required function
Good	2	Chance of failure is minimal	All wear within design tolerance	No problem beyond normal maintenance	Adequately performing required function
Fair	3	Chance of failure is low but present	Wear approaching allowable limits	Problem that will require prioritised attention	Performing function but possibly not effectively
Poor	4	There is a real chance of failure	Wear beyond allowable limits	Problem identified requiring immediate attention	At lowest level of acceptability in performing required function
Broken/ Damaged	5	Failed	Substantial deterioration	Dangerous or Broken down	Not performing function

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

5.1.4 Asset valuations

The value of assets recorded in the asset register as at 30 June 2014, covered by this asset management plan is shown below. Assets were last revalued at 30 June 2014.

Current Replacement Cost	\$322,928,000 (Includes road formations which are non depreciable)
Depreciable Amount	\$173,249,000
Depreciated Replacement Cost	\$126,982,000
Annual Depreciation Expense	\$5,308,000

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

Asset Consumption (Depreciation/Depreciable Amount)	3.1%
Asset renewal (Capital renewal exp/Depreciable amount)	3.1%
Annual Upgrade/New (Capital upgrade exp/Depreciable amount)	0.40%
Annual Upgrade/New (Including contributed assets)	0.40%

Council is currently renewing assets at **0.80%** of the rate they are being consumed and increasing its asset stock by **0.40%** 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

Council has adopted a Road Network Hierarchy which defines those public roads which are maintained by Council and from which consideration is given to selecting appropriate projects within the annual Works Programmes. For each classification we have dimensional standards correlating to the road's traffic function, which become the objective standard for construction when a road is due for upgrading.

Road performance is regularly monitored to assess if a road's physical attributes are adequately serving the transport function of the road. If a road's carriageway width or horizontal alignment for example, are inadequate for the traffic carried by the road then consideration should be given to including it in the programme to upgrade it to an appropriate standard. Road Hierarchy and School Bus Service Routes are tools that can be used in making this assessment. These plans are similarly a product of compiled road use information such as traffic volumes, traffic accident statistics, traffic desire paths and trip generation patterns.

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.

Table 5.1.5: Road Network Hierarchy

Road Hierarchy	Definition
Class 1 – Arterial Roads	Roads that connect Gloucester with State & National Highways i.e. The Bucketts Way & Thunderbolts Way
Class 2 – Collector Roads	Through roads that connect towns and villages with Class 1 Roads i.e. Scone Rd, Bundook Rd, Jacks/Waukivory Rd and Wallanbah Rd.
Class 3 – Through Local traffic Roads	Roads linking Class 4 & 5 roads with Class 1 & 2 roads
Class 4 – Urban Local Roads	Roads within the urban area whose function is to provide access to abutting properties
Class 5 – Urban Roads - Other	Roads within the urban area whose function is to provide limited access to abutting properties e.g. rear lanes
Class 6 – Rural Local Roads - Sealed	Roads whose function is to provide access to abutting properties
Class 7 – Rural Local Roads Unsealed	Roads whose function is to provide access to abutting properties
Class 8 –Limited Maintenance Roads	Formed Roads providing conditional access to abutting properties.
Class 9 –Unmaintained Roads	Roads either formed or unformed not providing regular access to abutting properties, which council has resolved not to maintain.

Service Hierarchy	Service Level Objective
Class 1 – Arterial Roads	Minimum 2 x 3.25m sealed lanes plus 0.6m shoulders
Class 2 – Collector Roads	Minimum 2 x 3.0m sealed lanes
Class 3 – Through Local traffic Roads	Minimum 2 x 2.8m sealed lanes
Class 4 – Urban Local Traffic Roads	Minimum 2 x 2.5m sealed lanes
Class 5 – Urban Roads – Other	Weight limited sealed access with central drainage
Class 6 – Rural Local Roads - Sealed	Minimum 4.0m sealed, all weather access without restriction
Class 7 – Rural Local Roads Unsealed	All weather unsealed access without restriction
Class 8 –Limited Maintenance Roads	Limited maintenance – user assessment required and signposted accordingly
Class 9 –Unmaintained Roads	Not maintained – Council to undertake assessment of structures(if any) and signposted accordingly

5.2 Risk Management Plan

An assessment of risks⁴ 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.

⁴ Gloucester Shire Council Transport Risk Management Plan

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
Sealed Road Network	Reduction in vehicle travel speed - damage to vehicles from poor road condition	High	Develop road hierarchy and reseal schedule for all roads at 15 year cycle. Introduce speed limits on badly affected roads. Report on funding needs to council.	\$30,000 (Investigations & reports)
Unsealed road network	Loss of all weather access	High	Develop road hierarchy and resheet schedule. Report on funding needs to council	\$20,000 (Investigations & reports)
Culverts	Loss of access - damage to vehicles	High	Investigate culvert condition using mix of visual and CCTV assessments. Report on funding needs to council	\$30,000 (Investigations & reports)
Causeways (wet crossings)	Loss of access - damage to vehicles possible loss of life	High	Investigate upgrade of signage to "real time" level-based electronic signage. Report on funding needs to council.	\$10,000 (Investigations & reports)

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 repainting, building roof replacement, etc. This work 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
2014	\$2,409,000
2013	\$5,368,000*
2012	\$3,205,300*
2011	\$2,101,800
2010	\$2,227,500
2009	\$1,688,400

**Includes flood restoration disaster funding*

Current maintenance expenditure levels 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

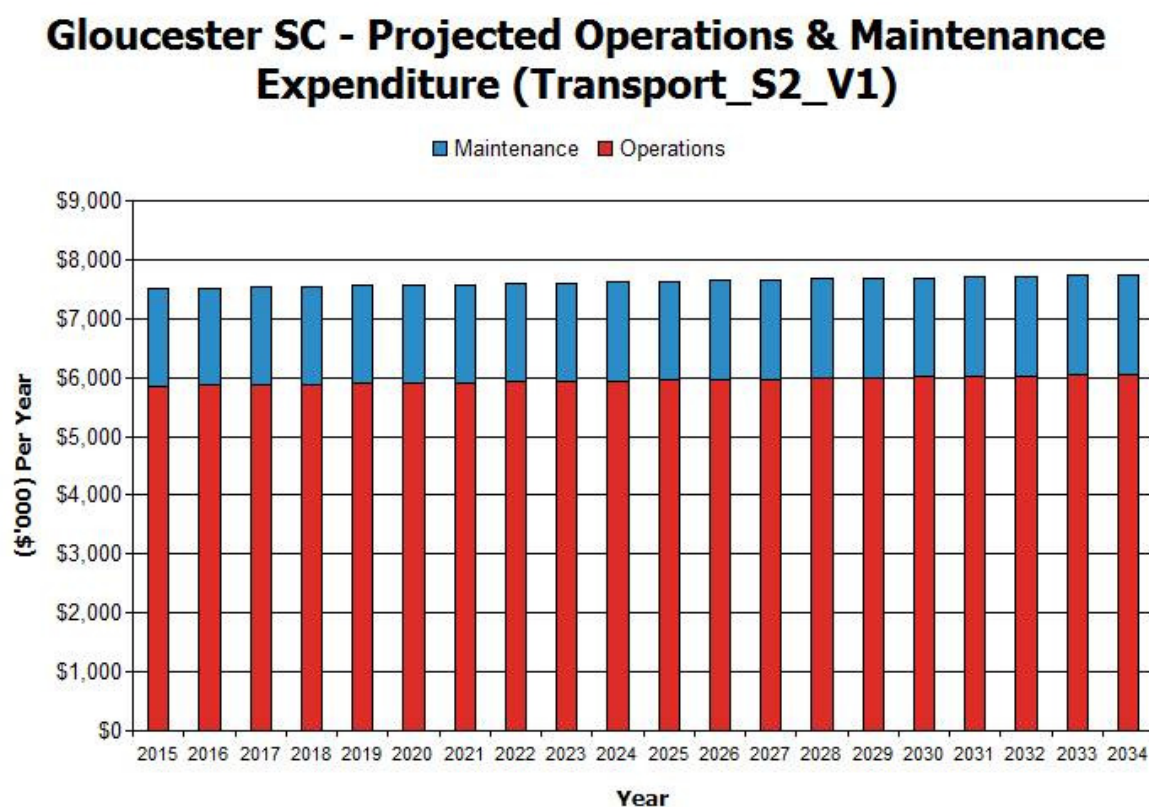
Maintenance work is carried out in accordance with the following Standards and Specifications.

- Australian Road Research Board Sealed Roads Manual
- Australian Road Research Board Unsealed Roads Manual
- Australian Road Research Board Local Roads Bridge Management Manual

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



Maintenance expenses include:

RMS (RTA) 3x3 Program and Maintenance & Improvement grants for Regional Roads,

Council's annual budget votes for Maintenance & Repair of: Sealed & Unsealed Roads, Bridges, Urban Streets, Kerb & Gutter, Street Trees, Footpaths, Car Parking, Bus Shelters & Street Seats, Signs and other ancillary infrastructure facilities.

Operations expenses include: Principle and interest on Infrastructure loans and Council's annual budget votes for engineering and works support operating expenses.

Deferred maintenance, ie 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. Future revisions of this plan will address this risk.

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 which 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 estimates of remaining life obtained from the Asset Register data to project the renewal costs for renewal years using acquisition year and useful life. Candidate proposals are inspected to verify accuracy of remaining life estimate and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programmes.

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
Condition/remaining life	60%
Road hierarchy	30%
Current/future service capacity/specification	10%
Total	100%

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. An example of low cost renewal, in lieu of full pavement reconstruction, is pavement rehabilitation work or spraying an enrichment seal.

5.4.2 Renewal standards

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

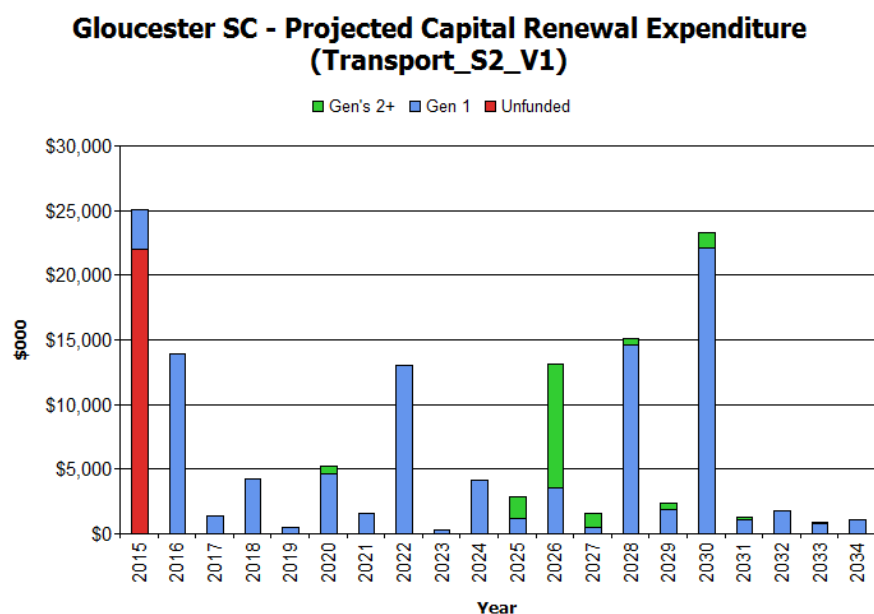
- Austroads Pavement Design Guide
- RTA and Council specifications.

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 date of an assets projected renewal is predicated upon the date of acquisition/construction, see note on "Age Profile" page 15.

The projected capital renewal program is shown in Appendix B-1.

Figure 5: Projected Capital Renewal Expenditure



Deferred renewal, ie 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 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
Current/future service capacity/specification	60%
Condition/remaining life	30%
Road hierarchy	10%
Total	100%

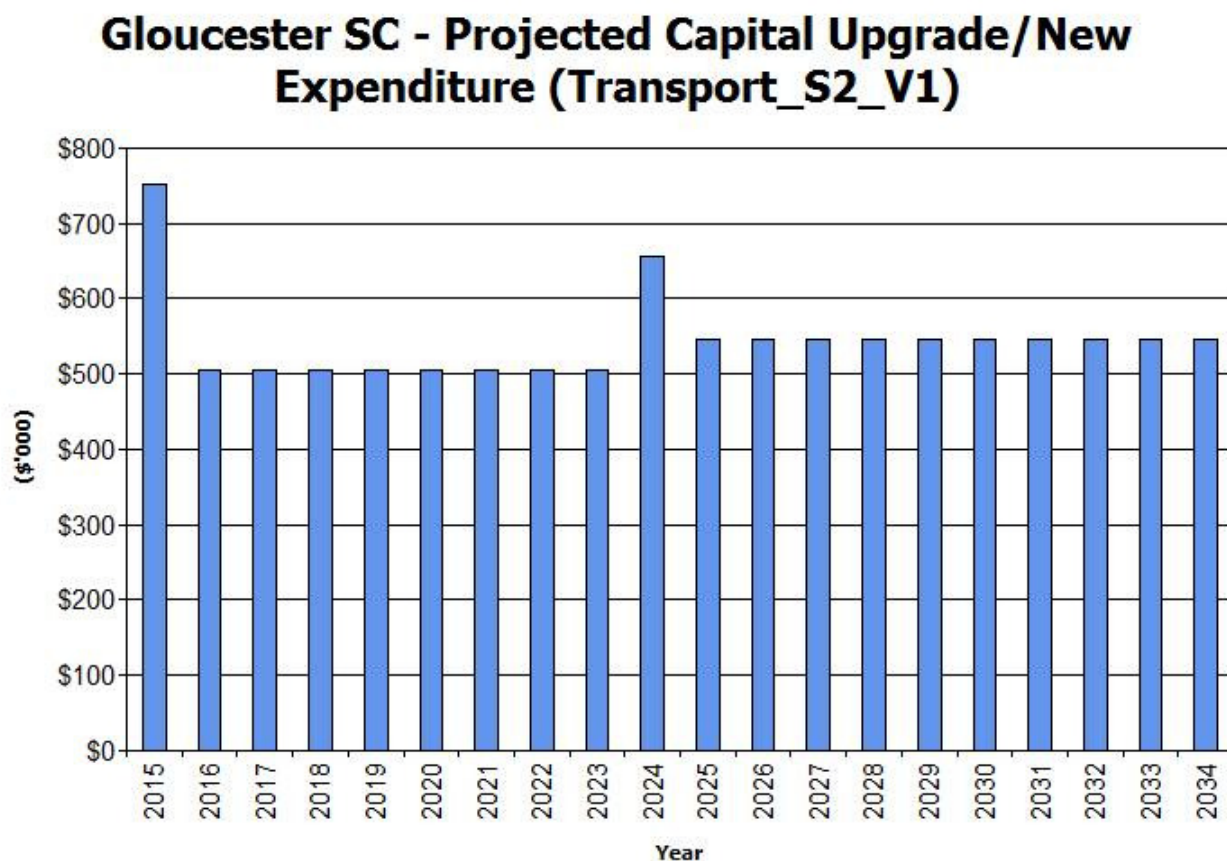
5.5.2 Standards and specifications

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, grants and Section 94 funding 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.

The ability to dispose of transport assets is very limited however council is in the process of classifying all its roads which will have the effect of restricting maintenance on class 8 roads and removing all class 9 roads from future maintenance and renewal.

6. FINANCIAL SUMMARY

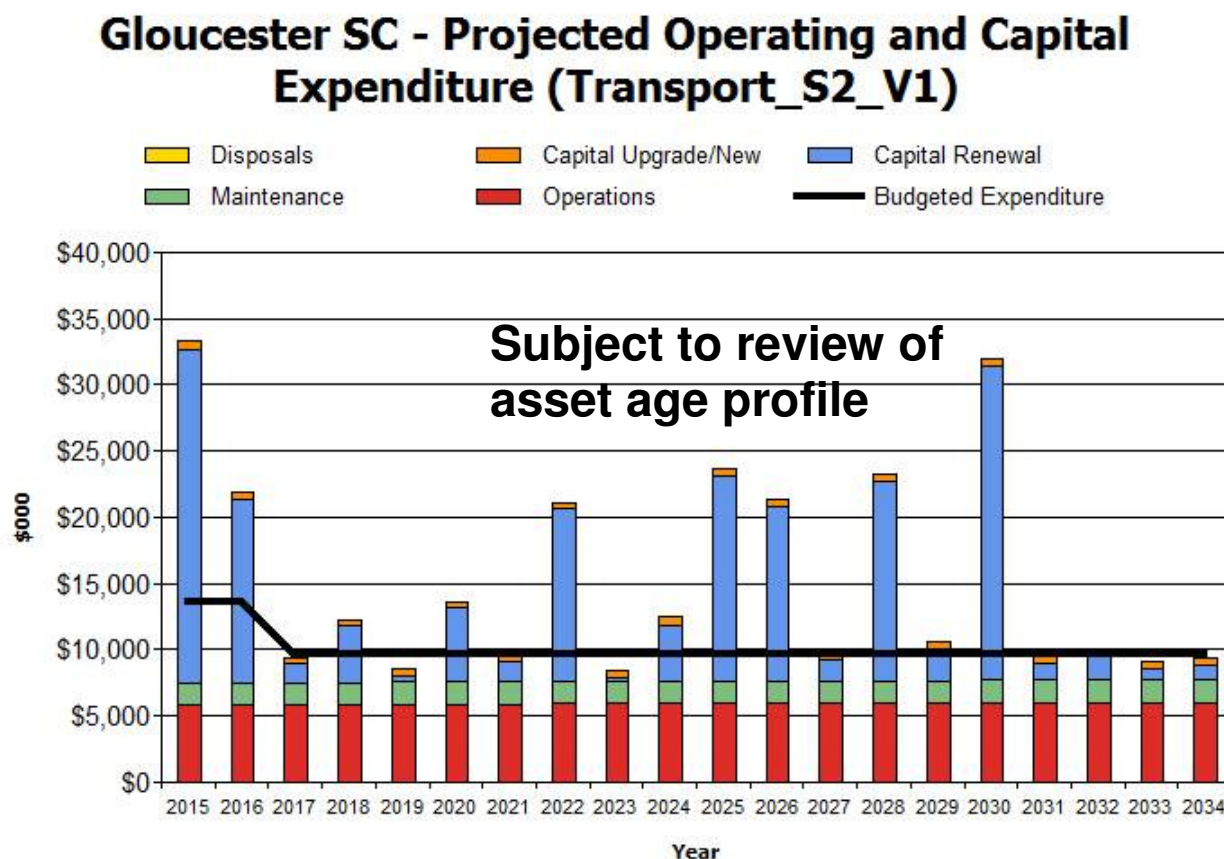
This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset 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 **\$12.871M** 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 **\$9.653M** (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 life cycle gap for services covered by this asset management plan is **-\$3.218M** per year (-ve = gap, +ve = surplus). Giving a life cycle sustainability index of **75%**

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.

Medium Term (10 yrs) Sustainability	P.A.
10 yr Ops, Maint & Renewal Projected Expenditure	\$14,553
10 yr Ops, Maint & Renewal Planned (Budget) Exp	\$9,653
10 yr Funding Shortfall [10 yr proj. exp. - planned (Budget) exp.]	-\$4,900
10 yr Sustainability Indicator [10 yr planned exp. / proj. exp.]	66%

This indicates that Council has only 66% of the projected expenditures needed to provide the services documented in the asset management plan.

Medium Term – 5 year financial planning period

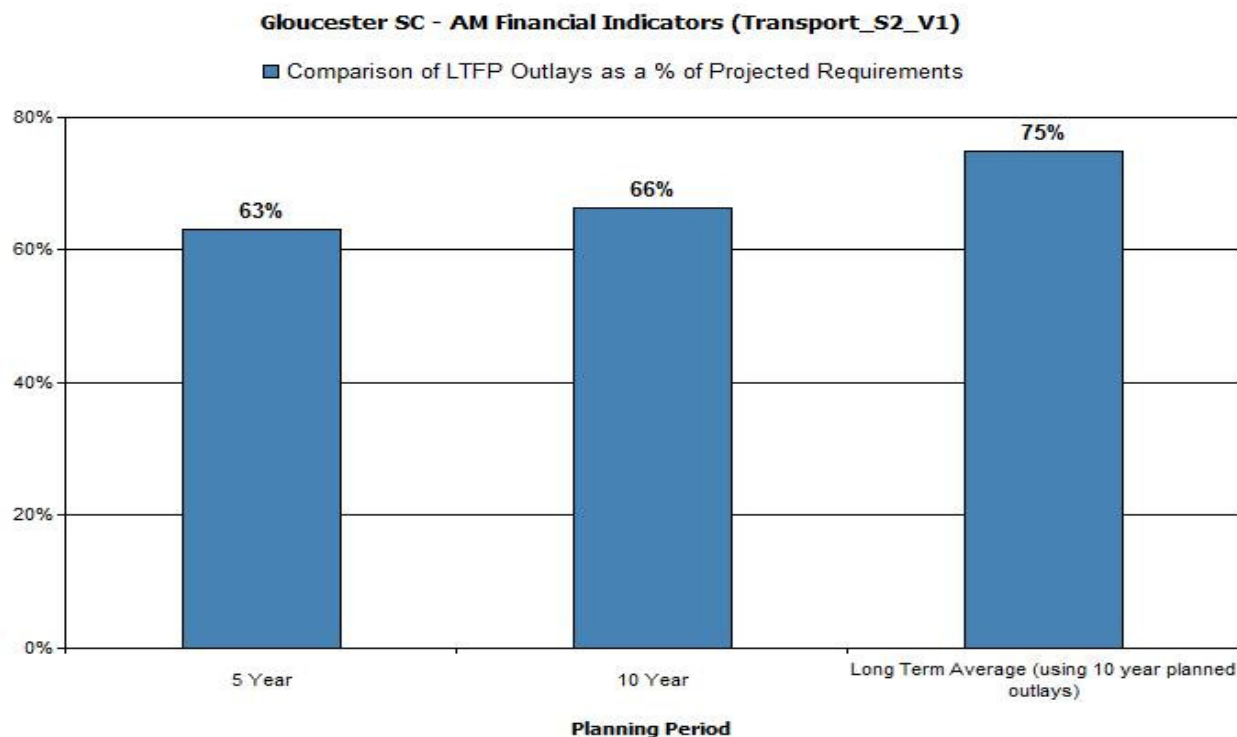
The projected operations, maintenance and capital renewal expenditure required over the first 5 years of the planning period is :

Short Term (5 yrs) Sustainability	P.A.
5 yr Ops, Maint & Renewal Projected Expenditure	\$16,562
5 yr Ops, Maint & Renewal Planned (Budget) Exp	\$10,453
5 yr Funding Shortfall [5 yr proj. exp. - planned (budget) exp.]	-\$6,109
5 yr Sustainability Indicator [5 yr planned exp. / proj. exp.]	63%

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



Just like any household or other organisation, a Council's long-term financial sustainability is dependent upon ensuring that, on average over time, its expenses are less than associated revenues. In essence this requires current day citizens to fully meet the cost of services provided for them by their Council. This is a Sustainability indicator > 1.0.

If a Council is not generating an operating surplus in most periods then it is unlikely to be operating sustainably. It means that the cost of services provided to the community exceeds revenue generated. The change of an operating deficit into a surplus can only occur by ensuring in future that revenues are increased and/or that costs are reduced (at least relative to revenue increases, either by reducing service levels or improving productivity).

If a Council is operating with a significant deficit over several years and its strategic management and long-term financial plans do not provide clear proposals for this to be turned around then it is inevitable that it will face major financial shocks in future. The Council effectively is in the same position as individuals living beyond their means. Sooner or later they will be caught by the consequences. For a Council the problem is likely to come to a head when existing major assets fail. The Council would then need to choose between large rate rises (not available under rate pegging) or not replacing assets thereby effectively providing its community with a lower standard of service.

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. NOTE: The graph should be read with caution as expenditure figures are inflated by the \$8M Federal grant for renewal of sections of The Bucketts Way to be spent in 2014/15 & 2015/16 years.

Figure 8: Projected and Budgeted Renewal Expenditure

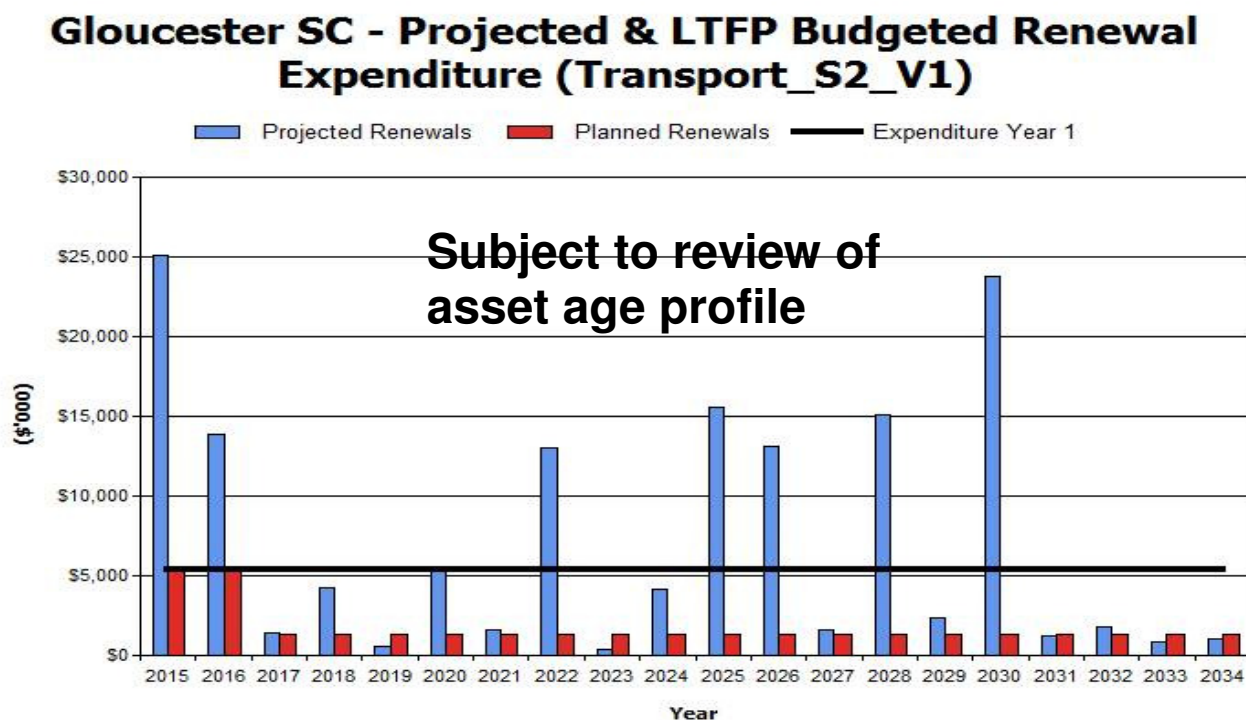


Table 6.1.1 shows the shortfall between projected and budgeted renewals

Table 6.1.1: Projected and Budgeted Renewals and Expenditure Shortfall All dollar values are in (\$'000)'s

Year End	Projected	LTFP Renewal	Renewal	Cumulative Shortfall
2015	\$25,098	\$5,349	\$-19,749	\$-19,749
2016	\$13,883	\$5,349	\$-8,534	\$-28,283
2017	\$1,398	\$1,349	\$-50	\$-28,333
2018	\$4,241	\$1,349	\$-2,892	\$-31,225
2019	\$527	\$1,349	\$821	\$-30,404
2020	\$5,588	\$1,349	\$-4,239	\$-34,643
2021	\$1,591	\$1,349	\$-242	\$-34,885
2022	\$13,052	\$1,349	\$-11,704	\$-46,588
2023	\$342	\$1,349	\$1,007	\$-45,581
2024	\$4,182	\$1,349	\$-2,833	\$-48,414
2025	\$15,534	\$1,349	\$-14,186	\$-62,600
2026	\$13,152	\$1,349	\$-11,804	\$-74,404
2027	\$1,626	\$1,349	\$-278	\$-74,681
2028	\$15,103	\$1,349	\$-13,755	\$-88,436
2029	\$2,336	\$1,349	\$-988	\$-89,424
2030	\$23,755	\$1,349	\$-22,406	\$-111,830
2031	\$1,256	\$1,349	\$92	\$-111,738
2032	\$1,799	\$1,349	\$-451	\$-112,189
2033	\$864	\$1,349	\$485	\$-111,704
2034	\$1,064	\$1,349	\$285	\$-111,419

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	Maintenance	Projected	Capital	Disposals
2015	\$5,857	\$1,648	\$25,098	\$752	\$0
2016	\$5,871	\$1,651	\$13,883	\$506	\$0
2017	\$5,880	\$1,654	\$1,398	\$506	\$0
2018	\$5,889	\$1,657	\$4,241	\$506	\$0
2019	\$5,898	\$1,659	\$527	\$506	\$0
2020	\$5,908	\$1,662	\$5,588	\$506	\$0
2021	\$5,917	\$1,664	\$1,591	\$506	\$0
2022	\$5,926	\$1,667	\$13,052	\$506	\$0
2023	\$5,935	\$1,670	\$342	\$506	\$0
2024	\$5,944	\$1,672	\$4,182	\$656	\$0
2025	\$5,956	\$1,675	\$15,534	\$546	\$0
2026	\$5,966	\$1,678	\$13,152	\$546	\$0
2027	\$5,976	\$1,681	\$1,626	\$546	\$0
2028	\$5,986	\$1,684	\$15,103	\$546	\$0
2029	\$5,996	\$1,687	\$2,336	\$546	\$0
2030	\$6,006	\$1,689	\$23,755	\$546	\$0
2031	\$6,016	\$1,692	\$1,256	\$546	\$0
2032	\$6,025	\$1,695	\$1,799	\$546	\$0
2033	\$6,035	\$1,698	\$864	\$546	\$0
2034	\$6,045	\$1,700	\$1,064	\$546	\$0

Note: All projected expenditures are in 2014 values and All dollar values are in (\$'000)'s

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.

Council 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 what will be the result if the gap is not funded such as:

- Reduced levels of service.
- Reduced customer satisfaction levels.
- Increased risk/safety.
- Greater proportion of assets in poor condition

6.2 Funding Strategy & Recommendations

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

Achieving the financial strategy will require;

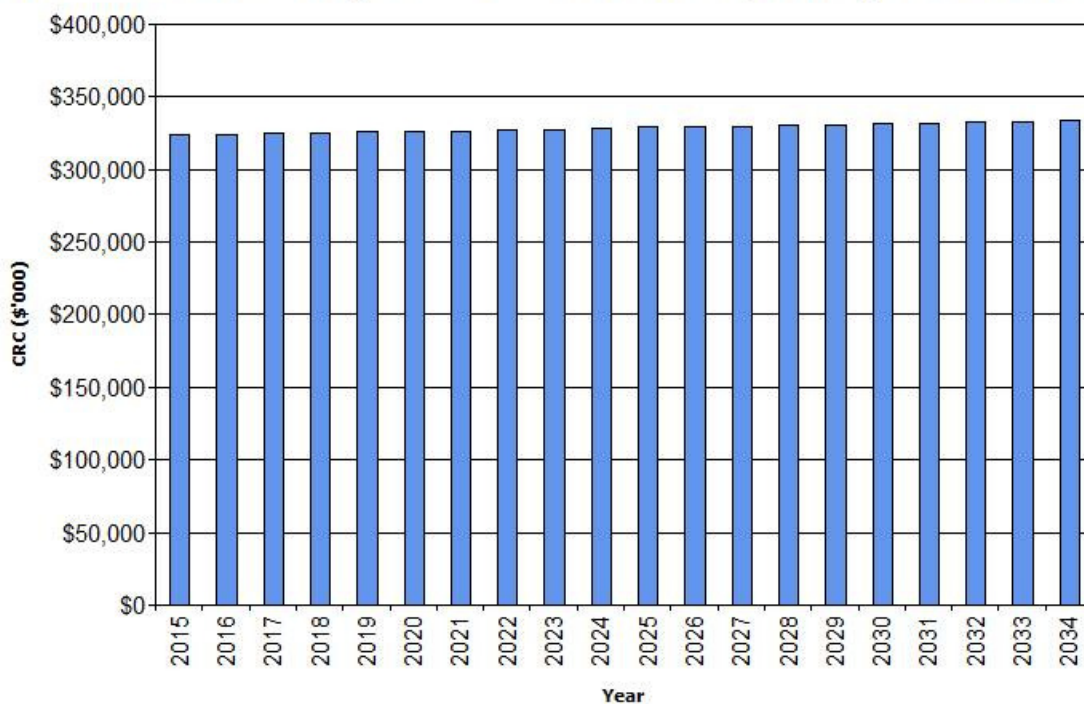
1. Engaging with the community to gain agreement on service levels for our transport infrastructure,
2. Further developing and refining our Asset Management System to ensure it reflects comprehensive and current information regarding our transport infrastructure,
3. Making continuous improvements to our road maintenance activities in order to gain maximum efficiency and value for money
4. Plea to State and Federal Governments for funding assistance to address our infrastructure funding crisis
5. Establishing policies to direct rural subdivision and dwelling construction to areas where acceptable road standards can provide access, or required road upgrading can be achieved to minimum public standards
6. Reviewing section 94 contributions for essential capital upgrades, and where Council's unfunded liability can be achieved
7. Minimising transport assets, by sale of surplus roads and refusal of transfer of assets from Government Authorities
8. Make application to IPART for a substantial Special Rate Variation (SRV).

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.

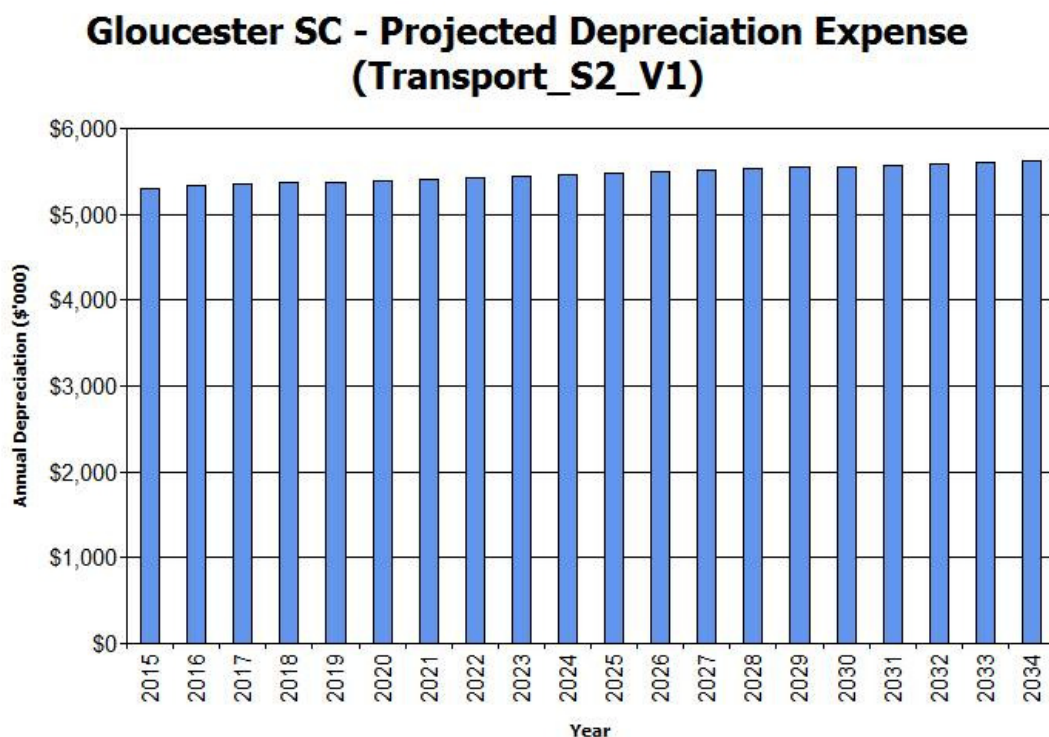
Figure 9: Projected Asset Values

Gloucester SC - Projected Asset Values (Transport_S2_V1)



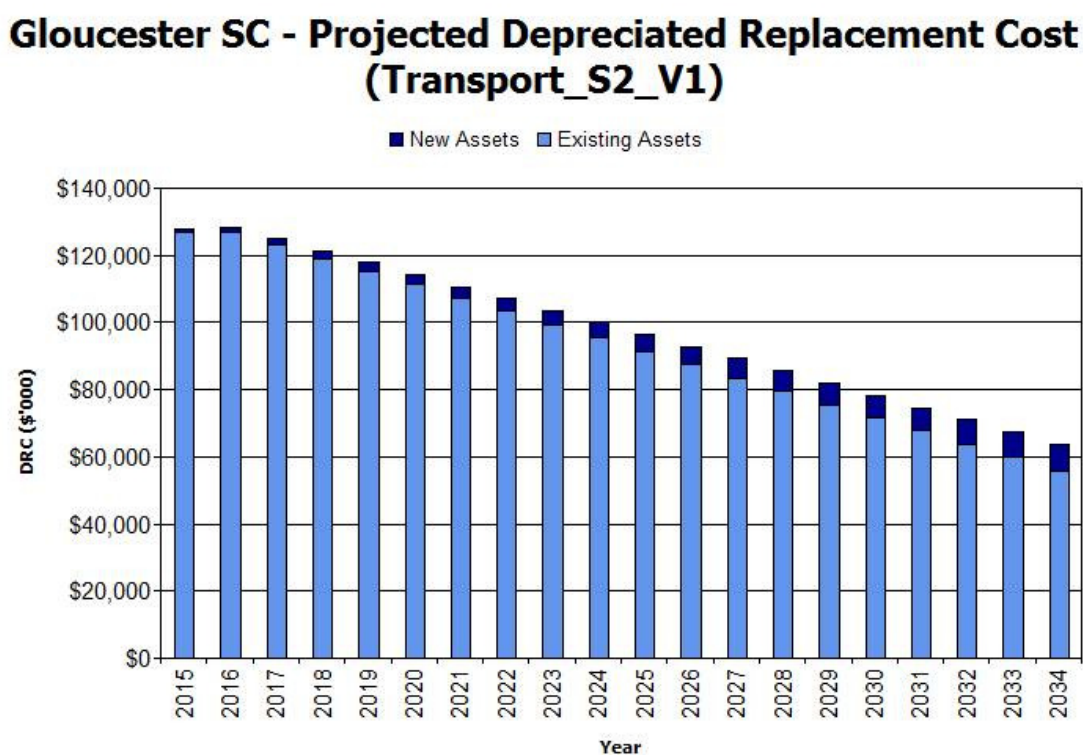
Depreciation expense values are forecast in line with asset values as shown in Figure 10.

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:

- The current levels of service will remain constant over the life of this TAMP.
- The treatment and maintenance costs are based on Council's current schedule of rates and may not directly compare to Councils internal service provision actual costs.
- All predicted financial figures are based on 2013/14 rates and are not adjusted by the inflation rate for the particular year of works.

Accuracy of future financial forecasts may be improved in future revisions of this asset management plan by the following actions:

- Consult with the community and other stakeholders to finalise the levels of service currently being delivered.
- Improving the accuracy of the current asset register;
- Improving asset inspection procedures;
- Refining useful lives for all asset classes;
- Refining planned maintenance and renewal for asset classes;
- Refinement of growth forecasts used in the current plan;
- Refining accurate unit rates for asset classes.
- Refine and improve the prediction modelling (life cycle paths and decision matrices).

7. ASSET MANAGEMENT PRACTICES

7.1 Accounting/Financial Systems

Council uses CIVICA's 'Authority' as its corporate computer system. Authority has a suite of accounting/financial modules to meet all day to day operational and reporting requirements.

The Finance Manager is delegated the statutory responsibility as Council's 'Responsible Accounting Officer'. The Responsible Accounting Officer is to ensure that Council has adequate control systems, processes and procedures in place and these being applied to meet all financial operating and reporting requirements.

The Local Government Act 1993 (Act) Chapter 13 sets out requirements for management reporting, accounting, auditing and financial reporting requirements for Council. The NSW Division of Local Government also issues the 'Local Government Code of Accounting Practice and Financial Reporting', which assist in the interpretation and application of the Act, and the application of Australian Accounting Standards to the audit and financial reporting functions.

The Government Code of Accounting Practice and Financial Reporting also provides a mechanism which ensures appropriate accounting policies and practices are adopted. For infrastructure, significant accounting policies are detailed in the annual financial reports. These include policies on the acquisition of assets, initial asset recognition, subsequent costs, asset revaluations, capitalisation thresholds, depreciation and disposal and de-recognition.

It is possible that changes will be required to accounting policies and practices resulting from this TAMP. These will be assessed and implemented as soon as practical.

7.2 Asset Management Systems

Councils adopted Asset Management System is 'AIM' (Asset and Infrastructure Management) a component of CIVICA's 'Authority' System.

AIM links to the Authority accounting system through the use of Work Orders and Tasks. Asset Valuations can be stored in AIM but are also stored in the Capital Value Record (CVR) component of Authority.

The Manager Assets is ultimately responsible for Asset Management Systems. AIM securely stores asset data by restricting access to staff delegated with the responsibility of updating information.

The development of the AIM hierarchy for all Road assets is incomplete. Council has begun the process to revalue Road Assets at Fair Value and part of this process is the segmentation and componentisation of its road assets. Capacity, Condition and Valuation data relating to these road assets may then be bulk loaded into AIM.

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 assets 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, Strategic Longer-Term Plan, annual budget and departmental business plans and budgets.

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.	Finalise desired levels of service by establishing current performance and setting performance targets. Have these Levels of Service adopted by Council.	Assets Manager General Manager	Staff Time	Dec 2014
2.	Bulk upload all new segmented and componentised road asset data into AIM	Assets Manager I.T. Manager	Civica	Completed
3.	Consider growth in modelling	Assets Manager	-	Completed
4.	Separation and determination of capital upgrade expenditure from capital renewal expenditure and capital new expenditure	Assets Manager	Finance Manager, Staff Time	Completed
5.	Improved delineation of planned, cyclic and reactive maintenance activities	Assets Manager	Staff Time	Completed
6.	Develop improved asset information flow processes	Assets Manager	Finance Section	Completed
7.	Obtain Council approval of this Plan	General Manager	-	September 2014
8.	Review response maintenance levels of service for reactive maintenance	Assets Manager	Staff Time	Completed
9.	Develop Councils Data collection manuals to ensure repeatability and on-going improvement of condition data collection and modelling processes	Assets Manager	Staff Time	Completed
10.	Test the current levels of service, to determine 'a confidence level' for reasonableness	Assets Manager	Staff Time	Dec 2014
11.	Test the current levels of service to determine if they are achievable for current budgets.	Assets Manager	Staff Time	Dec 2014
12.	Undertake a consultation exercise with stakeholders to determine if the levels of service are appropriate and meet community expectations.	Assets Manager	Survey consultants	Dec 2014
13.	Review budget allocations to ensure they match levels of service.	Manager Tech Services	-	Completed
14.	Assess the structure and resources within Council, to ensure that the TAMP can be effectively implemented.	General Manager	-	Completed

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 4 years and is due for revision and updating within 2 years of each Council election.

9 Impact of Modelled Special Rate Variations (SRVs)

The financial modelling presented thus far in this AMP is based upon the current income council receives from all sources. While rate income currently provides less than half of council's total income it is the largest single source of revenue. Although limited by rate pegging, there is the capacity to increase this component by applying to the Independent Pricing and Regulatory Tribunal (IPART) for an increase, over and above the CPI, for one or more years.

9.1 SRVs Modelled

Faced with the inevitable result of underfunding of asset renewals council has modelled the impact of 4 different SRV increases they are:

- | | |
|-------|---|
| V1 | Status Quo - 2.5% CP Only) |
| 1. V3 | 10.5% SRV +2.5%CPI for 3 Years then 2.5%CPI annually, |
| 2. V4 | 10.5% SRV +2.5%CPI for 3+3 Years then 2.5%CPI annually, |
| 3. V5 | 15.5%SRV + 2.5.%CPI for 5 Years then 2.5%CPI annually. |

These are detailed on the following pages.

9.2 SRV Comparisons

The following section contains graphs and tables comparing the impact of the modelled SRVs on the financial capacity of Council to maintain its transport assets to a level of service acceptable to the community in the short, medium and long term.

In "Report 3" the life cycle costs and life cycle expenditure comparison highlights the difference between present outlays and the average cost of providing the service over the long term (CPI). The life cycle expenditure is less than the life cycle cost in all but the 18% SRV and then only in the long term (30 years) in that scenario.

9.3 Conclusion

It is clear from the modelling undertaken, that scenario V5 (15.5%SRV + 2.5.%CPI for 5 Years) is required for council to reach a sustainable level of asset maintenance and renewals. However following extensive public consultation Council has resolved to apply to IPART for a 10.5% SRV +CPI over 3 Years as being the maximum rise currently affordable by the rate payers.

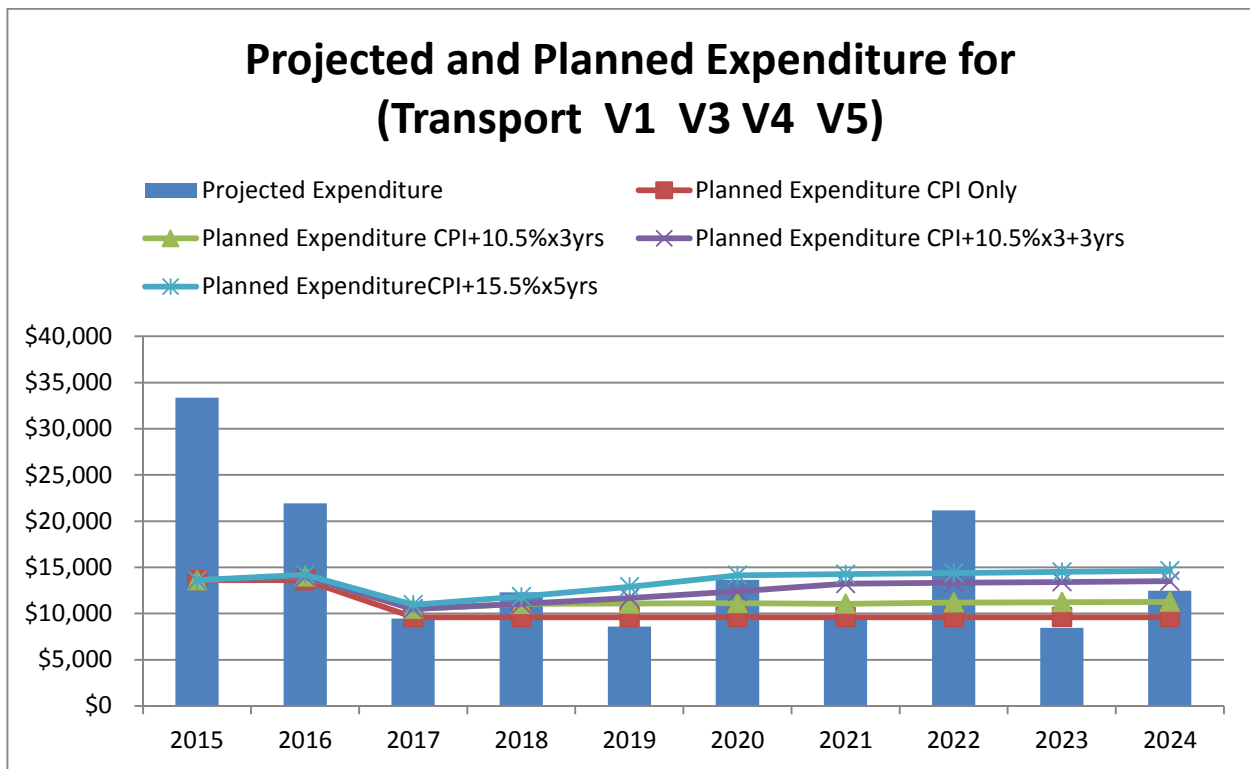
9.4 Capital Renewal Works Programs

Appendix B contains four (4) sets of capital renewal works programs.

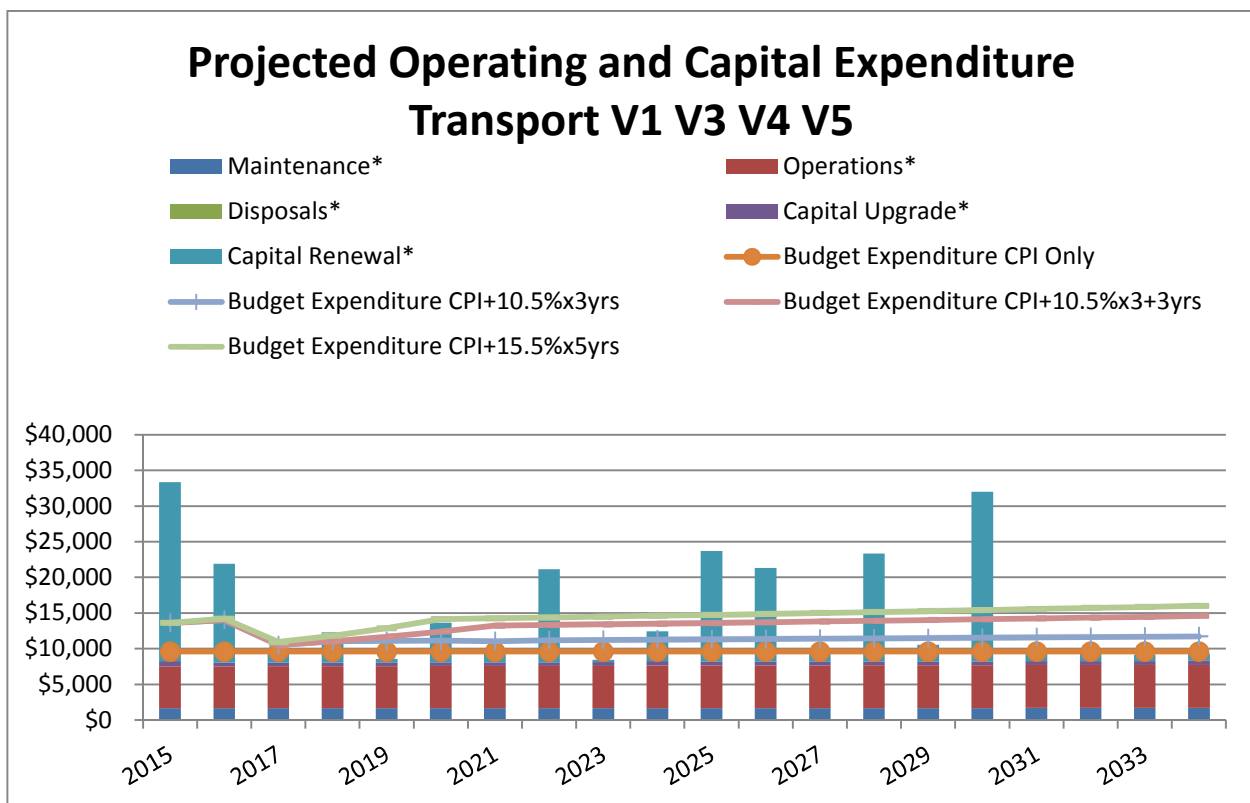
- B-1 is a projected 10 year Capital Renewal Works Program produced from the "Date Aquired" and "Expected Life" columns of the asset register, thus it plans renewals **purely on the age of the asset** without reference to current condition (good or bad) of the asset nor does it have any alignment to available funding.
- B-2, B-3 and B4 have been produced from the condition assessment of the assets. They are therefore prepared on a "needs" basis and are framed within, and limited by, the planned expenditure provided by each of the SRV yields.

B2	Page 165
B3	Page 193
B4	Page 221

Projected and planned expenditure for each of the modelled SRVs are compared in the graph below.



The financial projections for each of the modelled SRVs are shown in the Figure below 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.



Report 3 – Comparison - Sustainability of Service Delivery

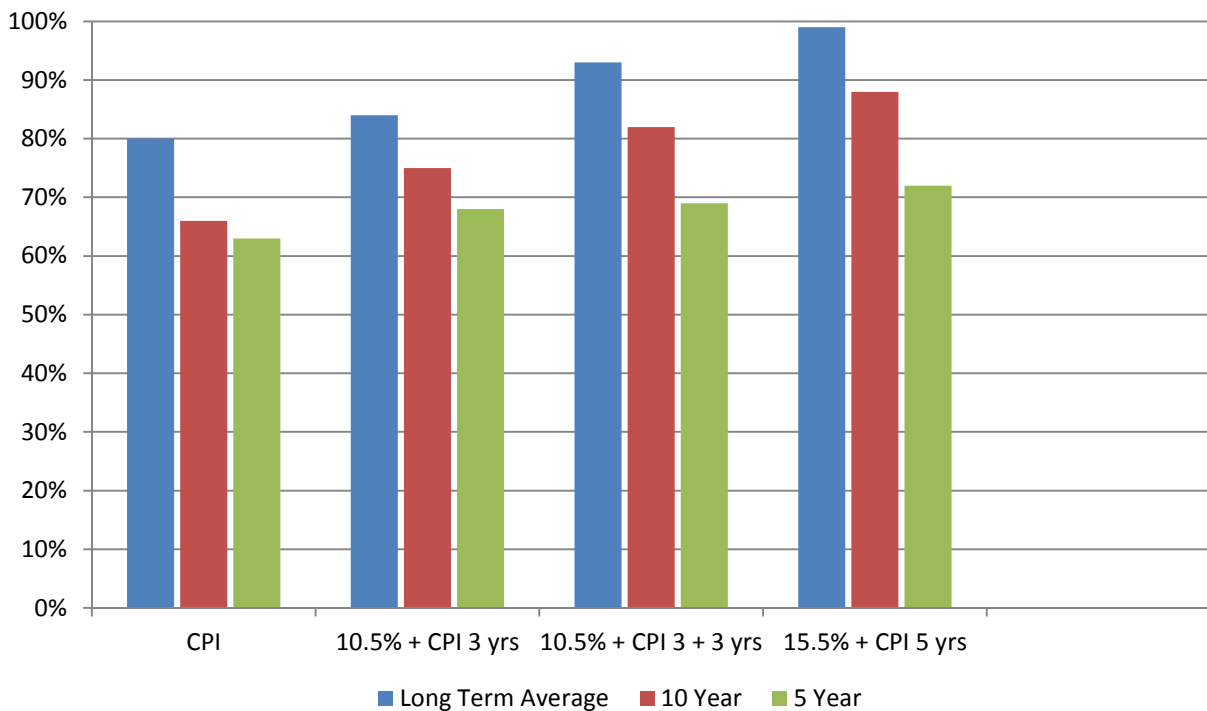
The table below provides a clear comparison between the financial situation of the preceding chapters (CPI) and the options proposed in the SRV modelling.

All dollar values are in (\$'000)'s

Note: these each include a CPI estimated at 2.5%

SRV Option	CPI	10.5% + CPI 3 yrs	10.5% + CPI 3 + 3 yrs	15.5% + CPI 5 yrs
Asset Renewal Funding Ratio	31%	46%	59%	70%
Long Term - Life Cycle Costs				
Life Cycle Cost [average 10 years projected ops, maint exp and deprn.]	\$12,060	\$12,871	\$12,871	\$12,871
Life Cycle Exp [average 10 years LTFP budget ops, maint & capital renewal exp]	\$9,653	\$10,860	\$11,918	\$12,786
Life Cycle Gap [life cycle expenditure – life cycle cost (-ve = gap)]	-\$2,406	-\$2,011	-\$953	-\$85
Life Cycle Indicator [life cycle expenditure / life cycle cost]	80%	84%	93%	99%
Medium Term - 10 year financial planning period				
10 yr Ops, Maint & Renewal Projected Expenditure	\$14,593	\$14,553	\$14,553	\$14,553
10 yr Ops, Maint & Renewal LTFP Budget Exp	\$9,653	\$10,860	\$11,918	\$12,786
10 year financing shortfall [10 yr proj exp - LTFP Budget exp]	-\$4,939	-\$3,693	-\$2,635	-\$1,766
10 year financing indicator [LTFP Budget exp / 10 yr proj exp]	66%	75%	82%	88%
Medium Term – 5 year financial planning period				
5 yr Ops, Maint & Renewal Projected Expenditure	\$16,582	\$16,562	\$16,562	\$16,562
5 yr Ops, Maint & Renewal LTFP Budget Exp	\$10,453	\$11,296	\$11,415	\$11,945
5 year financing shortfall [5 yr proj exp - LTFP Budget exp]	-\$6,128	-\$5,266	-\$5,147	-\$4,618
5 year financing indicator [LTFP Budget exp / 5 yr proj exp]	63%	68%	69%	72%

Figure 7A Financial Sustainability Indicators
Comparison of LTFP Outlays as a % of Projected Requirements



REFERENCES

- DVC, 2006, *Asset Investment Guidelines*, Glossary, Department for Victorian Communities, Local Government Victoria, Melbourne, <http://www.dpcd.vic.gov.au/localgovernment/publications-and-research/asset-management-and-financial>.
- IPWEA, 2006, *International Infrastructure Management Manual*, Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au.
- IPWEA, 2008, *NAMS.PLUS Asset Management* Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au/namsplus.
- IPWEA, 2009, *Australian Infrastructure Financial Management Guidelines*, Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au/AIFMG.
- IPWEA, 2011, *Asset Management for Small, Rural or Remote Communities* Practice Note, Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au/AM4SRRC.

Works Program 10.5%SRV+CPI - 3 Years			
YEAR 1			
2015/16			
\$412,400			
Road Name	Segment No. & Description	Treatment	Cost
Hume St	Seg005: Church St to Billabong Ln	Reconstruction	\$32,000
Memorial Ln	Seg001: Hume St to Bent St	Reconstruction	\$23,000
Tate St	Seg004: Int - Tate St and Lowe St	Reconstruction	\$16,000
Tate St	Seg005: Lowe St to Johnson St	Reconstruction	\$115,000
Church St	Seg006: Queen St to Denison St	Renew Pedo Crossing Blisters	\$55,000
Church St	Seg008: Denison St to King St	Renew Pedo Crossing Blisters	\$55,000
Carters Rd	Nashs Causeway	Renew	\$18,000
Bowman Farm Rd	Seg020: Dundee Brdg to Forbes Rd	Replace Chain Wire Fence	\$14,200
Bowman Farm Rd	Seg020: Dundee Brdg to Forbes Rd	Replace Chain Wire Fence	\$14,200
Bowman Farm Rd	Seg020: Dundee Brdg to Forbes Rd	Replace Chain Wire Fence	\$9,600
Bowman Farm Rd	Seg020: Dundee Brdg to Forbes Rd	Replace Chain Wire Fence	\$14,200
Bowman Farm Rd	Seg020: Dundee Brdg to Forbes Rd	Replace Chain Wire Fence	\$11,500
Bowman Farm Rd	Seg010: Thunderbolts Way to Dundee Brdg	Replace Sign - Medium	\$280
Bowman Farm Rd	Seg010: Thunderbolts Way to Dundee Brdg	Replace Chain Wire Fence	\$12,300
Crowthers Rd	Seg030: Top Hill CH 1.71 to End Maint CH 2.84	Replace Sign - Medium	\$280
Deards Lane	Seg010: Upper Avon Rd to End CH 1.54	Replace Sign - Small	\$240
Elliot St	Seg002: Ravenshaw St to Barrington St	Replace Sign - Medium	\$280
Faukland Rd	Seg070: Rheinbergers Cwy to Gloucester Tops Rd	Replace Sign - Medium	\$280
Faukland Rd	Seg070: Rheinbergers Cwy to Gloucester Tops Rd	Sign - Small - Double	\$350
Survey, Design, Supervision & Administration			\$20,700
Surplus / Deficit			-\$10

Works Program 10.5%SRV+CPI - 3 Years			
YEAR 2			
2016/17			
\$888,700			
Road Name	Segment No. & Description	Treatment	Cost
Billabong Lane	Seg001: Denison St to King St	Reconstruction	\$63,000
Billabong Lane	Seg002: King St to Hume St	Reconstruction	\$28,000
Boundary St	Seg007: Int - Boundary St and Philip St	Reconstruction	\$17,000
Bundook Rd	Seg010: Bucketts Way to Bottom Hill CH 1.49	Rehabilitation	\$323,000
Collaroy Ave	Seg010: Thunderbolts Way to End CH 0.97	Reseal	\$70,000
King St	Seg005: Int - King St and Billabong Ln	Reconstruction	\$13,000
Billabong Park	Billabong Car Park to Bridge	Replace Footpath	\$4,100

Denison Street	Seg003: Market St to Barrington St - North Side	Replace Footpath	\$8,400
Church Street	Seg004: Tyrell St to Queen St - East Side	Replace Footpath	\$13,000
Scone Road	Geales	Renew	\$258,000
Barrington East Rd	Seg020: CH 1.72 to McRaes Culvert	Replace Chain Wire Fence	\$16,700
Barrington East Rd	Seg030: McRaes Culvert to CH 5.45	Replace Chain Wire Fence	\$11,200
Barrington West Rd	Seg030: Merchants Brdg to CH 6.49	Replace Chain Wire Fence	\$9,000
Bowman Farm Rd	Seg010: Thunderbolts Way to Dundee Brdg	Replace Chain Wire Fence	\$6,800
Bundook Rd	Seg010: Bucketts Way to Bottom Hill CH 1.49	Replace Sign - Medium	\$290
Bundook Rd	Seg210: Grid CH 20.69 to Bottom Cutting	Replace Sign - Large	\$780
Bundook Rd	Seg210: Grid CH 20.69 to Bottom Cutting	Replace Sign - Medium	\$290
Bundook Rd	Seg220: Bottom Cutting to Easton St	Replace Sign - Medium	\$290
Bundook Rd	Seg220: Bottom Cutting to Easton St	Replace Sign - Medium	\$290
Church St	Seg013: Int - Church St and Bent St	Replace Sign - Small	\$240
Oaky Creek Rd	Seg010: Bowman Farm Rd to End CH 2.42	Replace Sign - Small	\$260
Queen St	Seg004: Barrington St to Church St	Replace Sign - Small	\$220
Queen St	Seg004: Barrington St to Church St	Replace Sign - Small Double	\$290

Survey, Design, Supervision & Administration \$44,500

Surplus / Deficit \$50

Works Program 10.5%SRV+CPI - 3 Years			
YEAR 3			
2017/18			
\$1,437,500			
Road Name	Segment No. & Description	Treatment	Cost
Britten St	Seg010: Cemetery Rd to End CH 0.36	Reconstruction	\$136,000
Hume St	Seg004: Barrington St to Church St	Reconstruction	\$157,000
Tate St	Seg001: Cemetery Rd to Kendall St	Reseal	\$49,000
Tate St	Seg002: Int - Tate St and Kendall St	Reconstruction	\$17,000
Tate St	Seg003: Kendall St to Lowe St	Reconstruction	\$132,000
Denison Street	Seg004: Barrington St to Church St - North Side	Replace Footpath	\$15,300
Queen Street	Seg004: Barrington St to Church St - South Side	Replace Footpath	\$32,600
Callaghans Creek Rd	Callaghans Creek Bridge	Replace	\$725,000
Doonayr Rd	Whites Causeway	Renew	\$95,000
Barrington West Rd	Seg010: Thunderbolts Way to Moores Brdg	Replace Sign - Large	\$800
Barrington West Rd	Seg010: Thunderbolts Way to Moores Brdg	Replace Sign - Medium	\$300
Barrington West Rd	Seg010: Thunderbolts Way to Moores Brdg	Replace Sign - Small	\$250
Beatties Island Rd	Seg010: Bundook Rd to End CH 1.30	Replace Sign - Small	\$250
Billabong Lane	Seg002: King St to Hume St	Replace Sign - Small Double	\$330
Gloucester Tops Dry Rd	Seg010: Gloucester Tops Rd to Rawdon Vale Rd	Replace Sign - Small	\$250
Gloucester Tops Rd	Seg030: 395 Roadside to Faulkland Rd	Replace Sign - Medium	\$300

Gloucester Tops Rd	Seg050: Walnut Park to Half Moon Yards No 2 Brdg	Replace Sign - Medium	\$300
Gloucester Tops Rd	Seg190: No 3 Cwy to No 4 Cwy	Replace Sign - Medium	\$300
Henley St	Seg007: Int - Henley St and High St	Replace Sign - Medium	\$300
Market Street	Seg003: Int - Market St and Queen St	Replace Sign - Medium	\$300
Tate St	Seg004: Int - Tate St and Lowe St	Replace Sign - Small	\$250
Wallanbah Rd	Seg020: 84 Roadside to Berts Brdg	Replace Pipe/Headwall	\$1,860
Woko Rd	Seg010: Thunderbolts Way to End CH 1.40	Replace Sign - Small	\$250
Woods Rd	Seg010: Thunderbolts Way to CH 0.49	Replace Sign - Medium	\$300
Woods Rd	Seg030: CH 0.64 to End of Seal	Replace Sign - Medium	\$300

Survey, Design, Supervision & Administration \$71,900

Surplus / Deficit \$60

Works Program 10.5%SRV+CPI - 3 Years			
YEAR 4			
2018/19			
\$1,473,500			
Road Name	Segment No. & Description	Treatment	Cost
Barrington East Rd	Seg020: CH 1.72 to McRaes Culvert	Rehabilitation	\$330,000
Bowman Farm Rd	Seg010: Thunderbolts Way to Dundee Bridge	Rehabilitation	\$297,000
Campbell St	Seg002: Kendall St to Lowe St	Reseal	\$13,000
Campbell St	Seg003: Int - Campbell St and Lowe St	Reseal	\$3,000
Campbell St	Seg001: Int - Campbell St and Kendall St	Rehabilitation	\$10,000
Cemetery Rd	Seg006: Tate St to Church St	Rehabilitation	\$33,000
Denison St	Seg003: Market St to Barrington St	Reconstruction	\$65,000
Faulkland Rd	Seg020: Andrews CH 2.10 to Stantons Ln	Reseal	\$53,000
Faulkland Rd	Seg030: Stantons Ln to Scott Hoys	Rehabilitation	\$198,000
Kendall St	Seg001: Tate St to Campbell St	Rehabilitation	\$279,000
Market St	Seg004: Queen St to Denison St	Rehabilitation	\$48,000
Market St	Seg005: Int - Market St and Denison St	Reconstruction	\$21,000
RSL Ln	Seg001: Denison St to End CH 0.05	Reconstruction	\$13,000
Mud Hut Road	No 2 Causeway	Renew	\$14,400
Callaghans Creek Rd	Seg090: Tiri Rd to Callaghans Ck Brdg	Replace Guardrail - Timber	\$11,000
Callaghans Creek Rd	Seg090: Tiri Rd to Callaghans Ck Brdg	Replace Guardrail - Timber	\$11,000

Survey, Design, Supervision & Administration \$73,700

Surplus / Deficit \$400

Works Program 10.5%SRV+CPI - 3 Years			
YEAR 5			
2019/20			
\$1,510,300			
Road Name	Segment No. & Description	Treatment	Cost
Barrington East Rd	Seg010: Thunderbolts Way to CH 1.72	Rehabilitation	\$410,000
Barrington St	Seg007: Int - Barrington St and Queen St	Reconstruction	\$39,000
Bundook Rd	Seg020: Bottom Hill CH 1.49 to CH 2.84	Rehabilitation	\$327,000
Hume St	Seg003: Ravenshaw St to Barrington St	Rehabilitation	\$102,000
Market St	Seg003: Int - Market St and Queen St	Reconstruction	\$39,000
Queen St	Seg002: Ravenshaw St to Market St	Reconstruction	\$133,000
Queen St	Seg003: Market St to Barrington St	Reseal	\$64,000
Railway St	Seg003: Int - Railway St and King St	Reconstruction	\$22,000
Railway St	Seg004: King St to Hume St	Reseal	\$17,000
Ravenshaw St	Seg011: Int - Ravenshaw St and Queen St	Reconstruction	\$33,000
Barrington Street	Seg014: Hume St to Elliot St - East Side	Replace Footpath	\$10,400
Billabong Park	Boundary St - Denison Street	Replace Footpath	\$25,500
Queen Street	Seg004: Barrington St to Church St - North Side	Replace Footpath	\$16,700
Moppy Creek Rd	Lauries Bridge	Replace	\$95,000
Barrington East Rd	Seg010: Thunderbolts Way to CH 1.72	Replace Chain Wire Fence	\$9,000
Barrington East Rd	Seg010: Thunderbolts Way to CH 1.72	Replace Chain Wire Fence	\$9,000
Barrington East Rd	Seg010: Thunderbolts Way to CH 1.72	Replace Chain Wire Fence	\$7,000
Barrington East Rd	Seg010: Thunderbolts Way to CH 1.72	Replace Chain Wire Fence	\$9,000
Barrington East Rd	Seg010: Thunderbolts Way to CH 1.72	Replace Chain Wire Fence	\$17,000
Giro Rd	Seg060: Hungry Hill Ck Brdg to End Maint CH 20.18	Replace Sign - Medium	\$290
Kauthi Rd	Seg010: Thunderbolts Way to End CH 3.00	Replace Sign - Medium	\$260
King St	Seg004: Church St to Billabong Ln	Replace Sign - Small	\$220
Moppy Close	Seg001: Dangar Rd to End CH 0.23	Replace Sign - Small	\$220
Scone Rd	Seg050: Copeland Culvert to Gravel Dump CH 9.08	Replace Chain Wire Fence	\$49,200
Survey, Design, Supervision & Administration			\$75,600
Surplus / Deficit			-\$90

Works Program 10.5%SRV+CPI - 3 Years			
YEAR 6			
2020/21			
\$1,548,100			
Road Name	Segment No. & Description	Treatment	Cost
Barrington West Rd	Seg010: Thunderbolts Way to Moores Brdg	Rehabilitation	\$411,000
Church St	Seg001: Int - Church St and Cowper St	Reconstruction	\$18,000
Church St	Seg002: Cowper St to Tyrell St	Reconstruction	\$87,000
Cowper St	Seg001: Northgate St to Ravenshaw St	Rehabilitation	\$95,000
Cowper St	Seg002: Ravenshaw St to Barrington St	Rehabilitation	\$105,000
Gregson St	Seg001: Railway St to Ravenshaw St	Reconstruction	\$286,000
King St	Seg002: Ravenshaw St to Barrington St	Rehabilitation	\$106,000
Market Street	Seg004: Queen St to Denison St - West Side	Replace Footpath	\$10,100
Ravenshaw Street	Seg018: Hume St to Elliot St West Side	Replace Footpath	\$10,500
Ravenshaw Street	Seg020: Elliot St to Gregson St - West Side	Replace Footpath	\$10,800
Ravenshaw Street	Seg022: Gregson St to Philip St - West Side	Replace Footpath	\$11,500
Pitlochry Road	No 9 Causeway	Renew	\$34,000
Pitlochry Road	No 10 Causeway	Renew	\$34,000
Pitlochry Road	No 11 Causeway	Renew	\$25,000
Pitlochry Road	Pitlochry 1 Culvert	Renew	\$25,000
Bundook Rd	Seg020: Bottom Hill CH 1.49 to CH 2.84	Replace Chain Wire Fence	\$13,400
Bundook Rd	Seg040: Tugrabahk Brdg to Railway Brdg	Replace Chain Wire Fence	\$13,400
Bundook Rd	Seg040: Tugrabahk Brdg to Railway Brdg	Replace Chain Wire Fence	\$9,100
Bundook Rd	Seg040: Tugrabahk Brdg to Railway Brdg	Replace Chain Wire Fence	\$12,300
Bundook Rd	Seg040: Tugrabahk Brdg to Railway Brdg	Replace Chain Wire Fence	\$10,200
Bundook Rd	Seg040: Tugrabahk Brdg to Railway Brdg	Replace Chain Wire Fence	\$12,300
Bundook Rd	Seg040: Tugrabahk Brdg to Railway Brdg	Replace Chain Wire Fence	\$9,100
Church St	Seg003: Int - Church St and Tyrell St	Replace Sign - Small	\$290
Gloucester Tops Rd	Seg030: 395 Roadside to Faulkland Rd	Replace Chain Wire Fence	\$39,600
Gloucester Tops Rd	Seg030: 395 Roadside to Faulkland Rd	Replace Chain Wire Fence	\$22,800
Kia Ora Rd	Seg010: Bowman Farm Rd to Top Bend CH 0.85	Replace Chain Wire Fence	\$13,400
Kia Ora Rd	Seg010: Bowman Farm Rd to Top Bend CH 0.85	Replace Chain Wire Fence	\$13,400
Railway St	Seg011: Gregson St to Philip St	Replace Sign - Medium Double	\$370
Scone Rd	Seg030: Webecks Brdg to Copeland Brdg	Replace Guardrail - Timber	\$8,000
Scone Rd	Seg030: Webecks Brdg to Copeland Brdg	Replace Guardrail - Timber	\$8,000
Scone Rd	Seg040: Copeland Brdg to Copeland Culvert	Replace Guardrail - Timber	\$8,000
Scone Rd	Seg040: Copeland Brdg to Copeland Culvert	Replace Guardrail - Timber	\$8,000
Survey, Design, Supervision & Administration			\$77,500
Surplus / Deficit			\$40

Works Program 10.5%SRV+CPI - 3 Years			
YEAR 7			
2021/22			
\$1,586,800			
Road Name	Segment No. & Description	Treatment	Cost
Barrington St	Seg003: Int - Barrington St and Cowper St	Reconstruction	\$27,000
Barrington St	Seg004: Cowper St to Tyrell St	Reseal	\$19,000
Barrington St	Seg006: Tyrell St to Queen St	Reseal	\$20,000
Berrico Creek Rd	Seg010: Gloucester Tops Rd to End of Seal	Rehabilitation	\$25,000
Boundary St	Seg005: Int - Boundary St and Hume St	Reconstruction	\$24,000
Cook St	Seg001: Northgate St to Ravenshaw St	Rehabilitation	\$113,000
Henderson St	Seg001: Clement St to Higgins Cl	Reseal	\$20,000
Henderson St	Seg002: Int - Henderson St and Higgins Cl	Reconstruction	\$24,000
Henderson St	Seg003: Higgins Cl to Laurie St	Reseal	\$28,000
Henderson St	Seg004: Int - Henderson St and Laurie St	Reconstruction	\$17,000
Irrawang Rd	Seg010: Thunderbolts Way to End of Seal	Rehabilitation	\$145,000
Onslow St	Seg001: Church St to End CH 0.92	Reconstruction	\$82,000
Railway St	Seg011: Gregson St to Philip St	Reconstruction	\$72,000
Ravenshaw St	Seg001: Int - Ravenshaw St and Manning St	Reseal	\$3,000
Ravenshaw St	Seg002: Manning St to Bowman St	Rehabilitation	\$38,000
Ravenshaw St	Seg025: Int - Ravenshaw St and Hay St	Reseal	\$4,000
Ravenshaw St	Seg026: Hay St to Margaret St	Reseal	\$31,000
Ravenshaw St	Seg027: Int - Ravenshaw St and Margaret St	Reconstruction	\$17,000
Ravenshaw St	Seg028: Margaret St to Clement St	Reseal	\$32,000
Waukivory Rd	Seg050: McKinleys Ln to Predeboms CH 8.12	Rehabilitation	\$592,000
Church Street	Seg018: Onslow St to Hawdon St - East Side	Replace Footpath	\$37,700
King Street	Seg003: Barrington St to Church St - North Side	Replace Footpath	\$20,200
Ravenshaw Street - West	Seg026: Hay St to Margaret St - West Side	Replace Footpath	\$20,300
Ravenshaw Street - West	Seg028: Margaret St to Clement St - West Side	Replace Footpath	\$11,000
Pitlochry Road	No 5 Causeway	Renew	\$20,000
Pitlochry Road	No 6 Causeway	Renew	\$21,600
Pitlochry Road	No 8 Causeway	Renew	\$29,700
Barrington East Rd	Seg010: Thunderbolts Way to CH 1.72	Replace Sign - Small	\$240
Barrington East Rd	Seg010: Thunderbolts Way to CH 1.72	Replace Sign - Small	\$240
Barrington East Rd	Seg010: Thunderbolts Way to CH 1.72	Replace Sign - Medium - Double	\$510
Barrington East Rd	Seg010: Thunderbolts Way to CH 1.72	Replace Sign - Medium - Double	\$510
Barrington East Rd	Seg010: Thunderbolts Way to CH 1.72	Replace Sign - Medium	\$360
Barrington East Rd	Seg010: Thunderbolts Way to CH 1.72	Replace Sign - Medium - Double	\$1,022
Barrington East Rd	Seg010: Thunderbolts Way to CH 1.72	Replace Sign - Medium	\$372
Callaghans Creek Rd	Seg030: River CH 2.27 to Bundook Brdg	Replace Sign - Medium	\$340

Callaghans Creek Rd	Seg030: River CH 2.27 to Bundook Brdg	Replace Sign - Medium	\$340
Denison St	Seg004: Barrington St to Church St	Replace Sign - Medium	\$340
Denison St	Seg004: Barrington St to Church St	Replace Sign - Small	\$290
Denison St	Seg005: Church St to Billabong Ln	Replace Sign - Small Double	\$380
Denison St	Seg005: Church St to Billabong Ln	Replace Sign - Medium	\$340
Fairbairns Rd	Seg010: Bucketts Way to Grantham Rd	Replace Sign - Medium	\$340
Fairbairns Rd	Seg010: Bucketts Way to Grantham Rd	Replace Sign - Medium	\$340
Faulkland Rd	Seg010: Buckets Way to Andrews CH 2.10	Replace Sign - Medium	\$340
Faulkland Rd	Seg010: Buckets Way to Andrews CH 2.10	Replace Sign - Medium	\$340
Northgate St	Seg002: Macleay St to Manning St	Replace Sign - Medium	\$340
Philip St	Seg001: 81 Philip St to Railway St	Replace Sign - Medium	\$350
Philip St	Seg001: 81 Philip St to Railway St	Replace Sign - Medium	\$350
Philip St	Seg006: Ravenshaw St to Barrington St	Replace Sign - Medium	\$350
Philip St	Seg006: Ravenshaw St to Barrington St	Replace Sign - Medium	\$350
Queen St	Seg004: Barrington St to Church St	Replace Sign - Small - Double	\$390
Ravenshaw St	Seg028: Margaret St to Clement St	Replace Sign - Small	\$300
Scone Rd	Seg010: Thunderbolts Way to 203 Roadside	Replace Sign - Large	\$710
Scone Rd	Seg010: Thunderbolts Way to 203 Roadside	Replace Sign - Large	\$710
Scone Rd	Seg010: Thunderbolts Way to 203 Roadside	Replace Sign - Medium	\$260
Scone Rd	Seg010: Thunderbolts Way to 203 Roadside	Replace Sign - Medium	\$260
Scone Rd	Seg020: 203 Roadside to Webecks Brdg	Replace Sign - Medium	\$260
Scone Rd	Seg030: Webecks Brdg to Copeland Brdg	Replace Sign - Medium	\$260
Scone Rd	Seg040: Copeland Brdg to Copeland Culvert	Replace Sign - Medium	\$260
Scone Rd	Seg040: Copeland Brdg to Copeland Culvert	Replace Sign - Medium Double	\$370
Scone Rd	Seg050: Copeland Culvert to Gravel Dump CH 9.08	Replace Sign - Large	\$710
Scone Rd	Seg050: Copeland Culvert to Gravel Dump CH 9.08	Replace Sign - Medium	\$260
Scone Rd	Seg050: Copeland Culvert to Gravel Dump CH 9.08	Replace Sign - Medium Double	\$370
Scone Rd	Seg050: Copeland Culvert to Gravel Dump CH 9.08	Replace Sign - Medium Double	\$370

Survey, Design, Supervision & Administration \$79,400

Surplus / Deficit \$26

Works Program 10.5%SRV+CPI - 3 Years

YEAR 8

2022/23

\$1,626,400

Road Name	Segment No. & Description	Treatment	Cost
Cemetery Rd	Seg002: Int - Cemetery Rd and Britten St	Reseal	\$2,000
Cemetery Rd	Seg003: Britten St to Clement St	Reseal	\$15,000
Cemetery Rd	Seg004: Clement St to Tate St	Reseal	\$20,000

Cemetery Rd	Seg005: Int - Cemetery Rd and Tate St	Reseal	\$4,000
Denison St	Seg006: Int - Denison St and Billabong Ln	Rehabilitation	\$13,000
Denison St	Seg008: Billabong Ln to Boundary St	Rehabilitation	\$87,000
Dunmore St	Seg010: Thunderbolts Way to Kenmore St	Rehabilitation	\$42,000
Gardiners Ln	Seg001: Church St to End CH 0.13	Reseal	\$9,000
Hume St	Seg001: Railway St to Railway St	Rehabilitation	\$32,000
Hume St	Seg002: Railway St to Ravenshaw St	Rehabilitation	\$145,000
King St	Seg001: Railway St to Ravenshaw St	Rehabilitation	\$148,000
Lowe St	Seg001: Tate St to Campbell St	Reseal	\$98,000
Market St	Seg001: Int - Market St and Tyrell St	Reconstruction	\$25,000
Market St	Seg002: Tyrell St to Queen St	Reseal	\$20,000
Northgate St	Seg001: Int - Northgate St and Macleay St	Reseal	\$3,000
Northgate St	Seg007: Int - Northgate St and Cook St	Reseal	\$3,000
Northgate St	Seg013: Int - Northgate St and Queen St	Reseal	\$4,000
Philip St	Seg003: Railway St to Avon St	Reseal	\$26,000
Philip St	Seg004: Int - Philip St and Avon St	Reseal	\$7,000
Queen St	Seg001: Northgate St to Ravenshaw St	Rehabilitation	\$80,000
Railway St	Seg005: Int - Railway St and Hume St	Rehabilitation	\$15,000
Railway St	Seg006: Int - Railway St and Hume St	Reseal	\$6,000
Railway St	Seg007: Hume St to Elliot St	Reseal	\$25,000
Railway St	Seg008: Int - Railway St and Elliot St	Reseal	\$6,000
Railway St	Seg009: Elliot St to Gregson St	Reseal	\$16,000
Railway St	Seg010: Int - Railway St and Gregson St	Reseal	\$4,000
Waukivory Rd	Seg060: Predeboms CH 8.12 to Vitners CH 9.37	Rehabilitation	\$495,000
Pitlochry Road	No 1 Causeway	Renew	\$7,000
Pitlochry Road	No 2 Causeway	Renew	\$39,000
Pitlochry Road	No 3 Causeway	Renew	\$22,000
Pitlochry Road	No 4 Causeway	Renew	\$22,000
Barrington Hall	Argyle St, Barrington	Refurbish Hall	\$105,000

Survey, Design, Supervision & Administration \$81,400

Surplus / Deficit \$0

Works Program 10.5%SRV+CPI - 3 Years			
YEAR 9			
2023/24			
\$1,667,100			
Road Name	Segment No. & Description	Treatment	Cost
Avon St	Seg001: Philip St to Hay St	Reconstruction	\$85,000
Barrington St	Seg010: Denison St to King St	Reseal	\$20,000
Barrington St	Seg011: Int - Barrington St and King St	Reseal	\$7,000

Barrington St	Seg015: Int - Barrington St and Elliot St	Reseal	\$6,000
Barrington St	Seg016: Elliot St to Gregson St	Reseal	\$21,000
Gloucester Tops Rd	Seg020: Splinters Brdg to 395 Roadside	Rehabilitation	\$577,000
Gloucester Tops Rd	Seg050: Walnut Park to Half Moon Yards No 2 Brdg	Rehabilitation	\$579,000
Gloucester Tops Rd	Seg060: Half Moon Yds No 2 Brdg to Berrico Ck Brdg	Reseal	\$158,000
Barrington Street	Seg008: Queen St to Denison St - West Side	Replace Footpath	\$10,100
Barrington Street	Seg016: Elliot St to Gregson St - East Side	Replace Footpath	\$10,800
Barrington Street	Seg018: Gregson St to Philip St - East Side	Replace Footpath	\$11,300
Church Street	Seg016: Philip St to Onslow St - East Side	Replace Footpath	\$27,800
Ravenshaw Street	Seg012: Queen St to Denison St - West Side	Replace Footpath	\$10,400
Ravenshaw Street	Seg014: Denison St to King St - West Side	Replace Footpath	\$10,200
Ravenshaw Street	Seg024: Philip St to Hay St - East Side	Replace Footpath	\$11,900
Survey, Design, Supervision & Administration			\$81,400
Surplus / Deficit			-\$500

Works Program 10.5%SRV+CPI - 3 Years			
YEAR 10			
2024/25			
\$1,709,000			
Road Name	Segment No. & Description	Treatment	Cost
Barrington St	Seg012: King St to Hume St	Reseal	\$21,000
Barrington St	Seg013: Int - Barrington St and Hume St	Reseal	\$7,000
Barrington St	Seg014: Hume St to Elliot St	Reseal	\$21,000
Barrington West Rd	Seg030: Merchants Brdg to CH 6.49	Reseal	\$255,000
Bowman St	Seg001: Northgate St to Ravenshaw St	Rehabilitation	\$142,000
Bundook Rd	Seg050: Railway Brdg to CH 5.38	Rehabilitation	\$358,000
Bundook Rd	Seg060: CH 5.38 to Skibo Gate	Rehabilitation	\$224,000
Kurrajong Cr	Seg001: Hay St to End CH 0.02	Reseal	\$6,000
Barrington St	Seg020: Philip St to Hay St	Reseal	\$23,000
Gloucester Tops Rd	Seg030: 395 Roadside to Faulkland Rd	Reseal	\$246,000
Wallanbah Rd	Seg010: Bucketts Way to 84 Roadside	Rehabilitation	\$241,000
Cowper Street	Seg003: Barrington St to Church St - South Side	Replace Footpath	\$20,000
Denison Street - South	Seg002: Ravenshaw St to Market St - South Side	Replace Footpath	\$10,100
Denison Street - South	Seg003: Market St to Barrington St - South Side	Replace Footpath	\$10,100
Ravenshaw Street - East	Seg026: Hay St to Margaret St - East Side	Replace Footpath	\$16,600
Ravenshaw Street - East	Seg028: Margaret St to Clement St - East Side	Replace Footpath	\$23,000
Survey, Design, Supervision & Administration			\$85,500
Surplus / Deficit			-\$300