Edward River
COUNCIL

Edward River Council

Transport Asset Management Plan

May 2019

Version No.: 0.2

How to use this Plan

This Asset Management Plan (AMP) is a tactical document to support Councils understanding of its Transport assets, service levels, risks, and to provide operational and capital expenditure forecasts that will deliver the community outcomes detailed in the Community Strategy 2030. The AMP is set out in the following format to support easy navigation of its contents such that specific information can be readily identified to suit the reader's need.

- **Executive Summary**
  This provides an overview suitable for obtaining a high-level understanding of the key issues and outcomes of the AMP. This is intended for senior decision makers and is supported by the detail in the following sections that make up the body of the AMP.
- **Section 1 - Introduction**
  This section is the introduction that defines the plan's purpose, its scope, and how the AMP aligns with corporate objectives and goals. It 'sets the scene' for the AMP and how it relates to the wider organisational plan framework.
- **Section 2 - Data Details**
  Defines the AMP's data inputs and assumptions. It includes the Asset Summary, Prior Year Infrastructure Delivery, Asset Age, Asset Condition Assessment Criteria, Results Summary, Asset profiling, Hierarchy, Useful Life, and Data Confidence ratings.
- **Sections 3, 4, and 5 – AMP Inputs (Service levels, Risk and Growth)**
  Defines Council's service levels, current risks and demand considerations that have been used in developing this AMP. This is the basis on which the following sections have been developed.
- **Sections 6, 7, 8, 9, and 10 - 10-year forecasts**
  Provides the detailed 'output' of the AMP development process with forecasts over a 10-year horizon of the works required to maintain the current service levels, mitigate identified risks, and cater for service growth and increased demand.
- **Sections 11, 12, and 13 - Financial forecasts**
  focus on the financial aspects of delivering these service levels including anticipated 'financial sustainability' performance. This section is particularly relevant to inform decision making and guide continual improvement in both the AMP and achieving corporate goals.
- **Section 14 – Findings and Recommendations**
  Provides a summary of the key issues and actions to be considered by Council. It includes a statement on the reliability and confidence of information to also be considered.
- **Section 15 – AMP Improvement Plan**
  Provides an action plan to improve future iterations of the AMP, particularly the improvement of the plan's accuracy and reliance as a decision-making tool.
- **Appendices**
  Information which is required in the AMP as reference is in the appendices. It also includes detailed works programs for new and renewal capital works that align with funding requirements and are to be aligned with short to medium term detailed operational planning.

Document Control

Distribution / Stakeholder list

All key stakeholders are to be included on the distribution list.

Name	Initial	Date	Title / Business Unit
Oliver McNulty			*Director Infrastructure*
Mark Dalzell			*Manager Engineering & Assets*
Michael Todd			*Assets & Procurement Administrator*
Warwick Newell			*Manager Operations*
Rindayi Matienga			*Manager Finance*

** Stakeholders are to initial the final document to indicate that the report has been sighted and reviewed.*

Revision History

Document Version	Date	Comments	Author	Reviewer
0.1	*14/01/2019*	*Initial Draft*	*Randall Scott*	*Michael Todd*
0.2	*22/03/2019*	*Revised Draft*	*Randall Scott*	*Hans Muller*
0.3	*23/04/2019*	*Including Council changes*	*Randall Scott*	*Peterson Asante*

Certification

As the Principal officer/Asset Custodian responsible for preparing this AMP, I certify that it:

- Has been based on a series of assumptions and the best available data at the time;
- Provides a rationale for and underpins the renewal funding as specified in the related 10-year service financial forecasts; and
- Provides a strong platform from which to continue asset management advancement by identifying several areas for further improvement.

Principal Officer (if applicable): _____Signature: _____

Asset Custodian: _____Signature: _____

Date: _____

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Executive Summary

Purpose

The purpose of this Asset Management Plan (AMP) is to consolidate Councils understanding of its Transport assets, service levels, risks, and to provide operational and capital expenditure forecasts that will deliver the community outcomes detailed in the Community Strategy 2030.

The plan will support informed decision making, guide Long Term Financial Planning budget requirements and provide a path to further improve the accuracy and confidence in future iterations of this Plan.

Scope

This Asset Management Plan (AMP) covers the Transport assets (the Assets) that support the delivery of services to the Edward River Council (Council) Community. It has been prepared based on the International Infrastructure Management Manual (IIMM) the recognised guideline for asset management in Australia.

This AMP uses data available within Council in 2017 including Council's audited financial asset register, based on revaluations undertaken by APV in 2017. Where possible, the financial register has been supplemented by historical condition data.

The Assets

The Transport assets are valued at $277.1M and are apportioned into asset categories as detailed in Table 1 and shown in Figure 1 below.

Table 1 Transport Assets Summary

Asset Type	Quantity	Replacement Value (June 2018)
Bridges	*15*	*$7,134,745*
Footpath	*446*	*$7,387,341*
Other Road Assets	*79*	*$4,088,685*
Roads	*6,098*	*$204,596,536*
Kerb & Gutter	*1,514*	*$24,894,463*
Bulk Earthworks	*1,498*	*$27,471,002*
Traffic Sign	*2,281*	*$1,493,274*
Total	*11,931*	*$277,066,046*

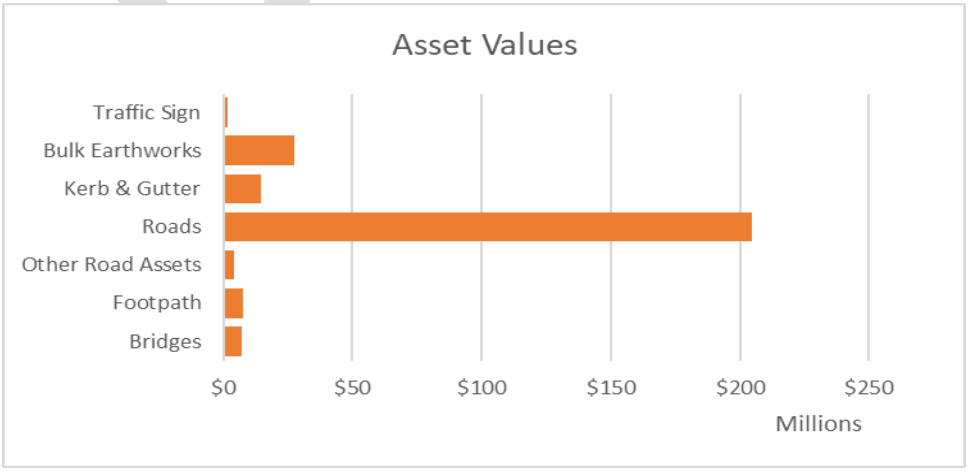


Figure 1: Transport Assets Summary

Asset Condition

Most of the transport assets (80.1%) are in “as New”, “Good” or “Fair” condition. Of the remaining assets 4.9% ($13.6) of the asset base is in very poor condition, with an additional 15.0% ($41.4M) considered in poor condition and requiring attention. It should be noted that 14.8% of the underground transport assets (road formation, sub-base and base coarse components) have an estimated condition rating based on age and surface condition.

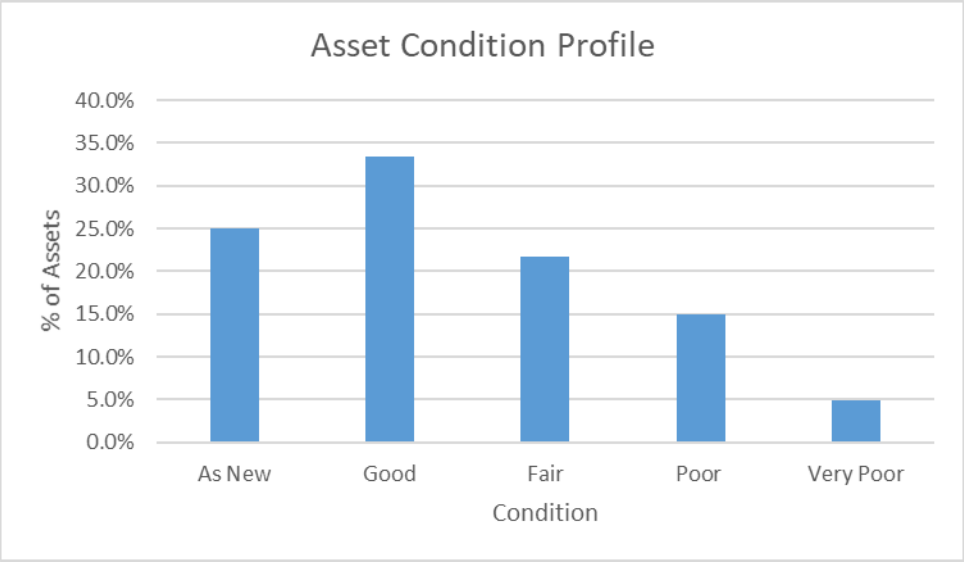


Figure 2: Transport Assets Condition Profile

Are We Meeting Our Adopted Service Levels?

Yes, Council is meeting its current level of service. Additionally, Council is currently developing levels of service standards and performance measures. The maintenance and operations expenditure projections in this AMP are based on historical spending and therefore it may be assumed that similar future funding and if supported with appropriate investment in renewals will continue to provide current service levels.

Are We Managing Growth?

Yes, Council is managing growth. This AMP uses Council’s adopted growth rate of 1%. The current assets are expected to meet the required service capacity for increased population, Council must consider the future implications that a growing asset base has on its operations and maintenance costs.

Are We Managing Our Risks?

Council has a ‘duty of care’ to the community, its customers, in relation to the management of the assets. The risks were assessed by Council based on their likelihood and consequences to generate solutions to mitigate or eliminate them. It is expected that the current maintenance activities will continue to assist in mitigating the service risks to an acceptable level. Additional funding is required to mitigate risks associated with AM practices and reliance on this AMP.

The Financials

Based on renewing current assets at the end of their useful lives, meeting current levels of service and to meet the adopted 1% annual demand growth, over the next 10 years the projected asset expenditure requirements are:

- Renewals (end of life) - $58.33M
- New and Upgrade - $8.15M
- Operations and Maintenance - $33.16M

This gives a total required expenditure of $99.64M as shown in *Table 2*.

Table 2 10-Year Forecast Expenditure

Financial Year Ending	Risk Treatment	New or Upgrade	Operations	Maintenance	Renewals	Total
2020	*$0*	*$150,000*	*$225,922*	*$2,754,790*	*$5,428,396*	*$8,559,108*
2021	*$0*	*$0*	*$225,922*	*$2,823,660*	*$6,115,500*	*$9,165,082*
2022	*$0*	*$0*	*$225,922*	*$2,894,251*	*$6,032,262*	*$9,152,435*
2023	*$0*	*$0*	*$225,922*	*$2,966,608*	*$6,001,950*	*$9,194,480*
2024	*$0*	*$8,000,000*	*$232,442*	*$3,040,773*	*$5,927,359*	*$17,200,574*
2025	*$0*	*$0*	*$232,442*	*$3,116,792*	*$5,796,299*	*$9,145,533*
2026	*$0*	*$0*	*$232,442*	*$3,194,712*	*$5,839,863*	*$9,267,017*
2027	*$0*	*$0*	*$232,442*	*$3,274,580*	*$5,729,457*	*$9,236,479*
2028	*$0*	*$0*	*$232,442*	*$3,356,444*	*$5,705,113*	*$9,293,999*
2029	*$0*	*$0*	*$232,442*	*$3,440,355*	*$5,754,574*	*$9,427,372*
Total	***$0***	***$8,150,000***	***$2,298,341***	***$30,862,964***	***$58,330,774***	***$99,642,079***

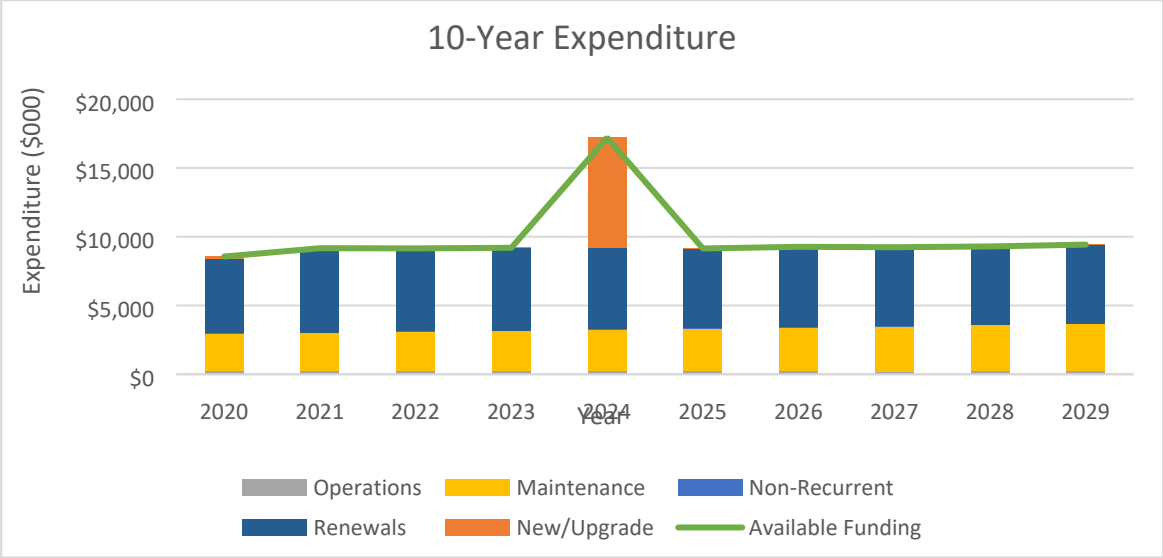


Figure 3: 10 Year Expenditure Forecasts

Council's Long-Term Financial Plan (LTFP) has allocated funding for transport Capital expenditure as shown in *Table 3 Long Term Financial Plan* below. In preparing this plan is has been assumed that the Current levels of operation and maintenance funding will continue.

Council's LTFP fully funds the transport new/upgrade, asset renewals, operations and maintenance programs.

Table 3 Long Term Financial Plan

Financial Year Ending	New/Upgrade	Operations & Maintenance	Renewals	Total
2020	$150,000	$2,980,712	$5,428,396	$8,559,108
2021	$0	$3,049,582	$6,115,500	$9,165,082
2022	$0	$3,120,173	$6,032,262	$9,152,435
2023	$0	$3,192,530	$6,001,950	$9,194,480
2024	$8,000,000	$3,273,215	$5,927,359	$17,200,574
2025	$0	$3,349,234	$5,796,299	$9,145,533
2026	$0	$3,427,154	$5,839,863	$9,267,017
2027	$0	$3,507,022	$5,729,457	$9,236,479
2028	$0	$3,588,886	$5,705,113	$9,293,999
2029	$0	$3,672,797	$5,754,574	$9,427,372
Total	**$8,150,000**	**$33,161,305**	**$58,330,774**	**$99,642,079**

Can We Financially Sustain our Current Levels of Service?

Yes, Council can financially sustain its current Level of Service. Based on the analysis of Council's expenditure requirements for asset renewal, operations and maintenance, there is enough funding in the LTFP to sustain current service levels.

Other Considerations

The renewals requirements are based on valuation data which uses a 'straight line' deterioration or consumption model. Although the assets are approaching the end of their theoretical lives this has not generally been verified through observation. Decisions made using this AMP should consider appropriate reliance on this data. The data includes estimated condition details for 14.6% of the assets and therefore default values for remaining life have been assigned. Based on the IIMM data confidence rating model

Grade	Description	Accuracy
1	Accurate	100%
2	Minor Inaccuracies	95%
3	50% Estimated	80%
4	Significant Data Estimated	70%
5	All Data Estimated	60%

Council's data is considered grade 3 - 50% estimated with an accuracy of 80%.

The financial reporting of operations, maintenance and capital expenditure is not adequate to support detailed asset management activities and planning. This AMP includes assumptions for the allocation of spending to this asset class.

This AMP does not include funding required to support the improvement initiatives identified necessary to improve accuracy and reliance.

There are seven (7) bridge and airport assets that have been identified as being at risk with the taxiway requiring immediate attention.

The 10-year expenditure forecast for the delivery of transport services is $99.5M or $9.95M per annum. The available funding in the LTFP is aligned to these figures.

What is the way forward?

1. Council adopt the LTFP, AMP and associated works programs
2. Council confirm the condition, standard asset lives, and remaining life estimates of its transport assets.
3. Consideration be given to annualising (levelling) the transport funding allocation in the Long-Term Financial Plan at $8.2M per annum with the new/upgrade and renewal programs being adjusted to comply with this funding level.
4. Prior to the adoption of the attached renewal plan, individual projects and the data held in the register be validated by inspection and where discrepancies exist the Plan and the recorded data be amended.
5. The initiatives identified in the AMP improvement plan be implemented.
6. Initiate a process or system for collecting, storing and verifying asset date for future AMP improvements

AMP Summary

Edward River Council
State of the Assets - Transport
18-May-19

Asset Value

Asset Class	Replacement Cost	Accumulated Depreciation	Current Value	Average Annual Asset Consumption
Footpath	$7,387,341	$3,283,265	$4,104,978	$150,611
Roads	$204,596,536	$61,024,676	$143,571,861	$3,646,006
Other Road Assets	$4,088,685	$641,883	$3,446,802	$62,102
Bridges	$7,134,745	$2,246,909	$4,888,023	$54,178
Kerb & Gutter	$24,894,463	$2,989,883	$11,543,558	$99,713
Bulk Earthworks	$27,471,002	$0	$27,471,002	$0
Traffic Sign	$1,493,274	$373,477	$1,092,776	$40,504
Total	**$277,066,046**	**$70,560,092**	**$196,119,001**	**$4,053,114**

Asset Condition

Current Levels of Service

The levels of service for the services that the transport assets deliver have been defined. Council has conducted a base budget review to establish the link between operations and maintenance activities, and levels of service. The next step is to develop the TechOne system to track maintenance expenditure

Current Risks

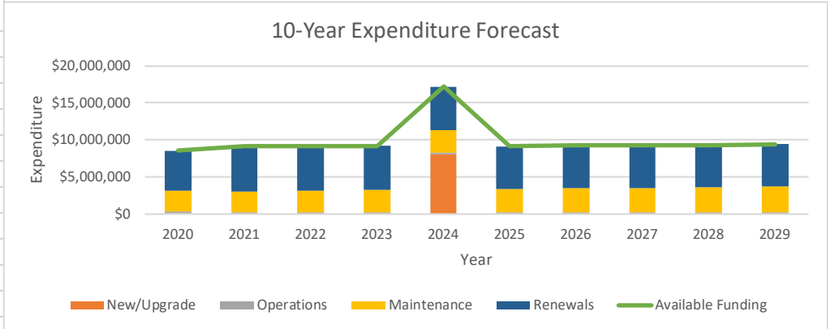
Council has identified several risks for the infrastructure assets. Most risks under road infrastructure are safety related.

Financial Forecasts

Expenditure ($000)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
Renewal	$5,197	$3,506	$4,080	$4,519	$4,433	$5,219	$4,387	$5,325	$6,741	$6,026	**$49,433**
New/Upgrade	$150	$0	$0	$0	$8,000	$0	$0	$0	$0	$0	**$8,150**
Maint. & Ops	$2,981	$3,050	$3,120	$3,193	$3,273	$3,349	$3,427	$3,507	$3,589	$3,673	**$33,161**
Total	**$8,327**	**$6,556**	**$7,200**	**$7,712**	**$15,706**	**$8,569**	**$7,815**	**$8,832**	**$10,329**	**$9,699**	**$90,744**
Long Term Financial Plan ($'000)											
Renewal	$5,428	$6,116	$6,032	$6,002	$5,927	$5,796	$5,840	$5,729	$5,705	$5,755	**$58,331**
New/Upgrade	$150	$0	$0	$0	$8,000	$0	$0	$0	$0	$0	**$8,150**
Maint. & Ops	$2,981	$3,050	$3,120	$3,193	$3,273	$3,349	$3,427	$3,507	$3,589	$3,673	**$33,161**
Total	**$8,559**	**$9,165**	**$9,152**	**$9,194**	**$17,201**	**$9,146**	**$9,267**	**$9,236**	**$9,294**	**$9,427**	**$99,642**
Surplus	**$232**	**$2,609**	**$1,953**	**$1,483**	**$1,495**	**$577**	**$1,452**	**$404**	**-$1,035**	**-$271**	**$8,898**
Cumulative Surplus	**$232**	**$2,841**	**$4,794**	**$6,276**	**$7,771**	**$8,348**	**$9,801**	**$10,205**	**$9,170**	**$8,898**	

Conclusion

The forecast expenditure on Council's Transport assets is based on the use of default values and estimated data. The levels of funding are provided to inform the development of a Long-Term Financial Plan that will form the basis of sustainability forcasts.



Sustainability

		Target	Value
Consumption Ratio	Indicates the Written Down Value of Council's Depreciable assets relative to their 'as new' value in up to date prices (highlights aged condition)	40%-80%	**75%**
10-year service Sustainability Ratio	Indicates whether Council's funding for Infrastructure asset class is sufficient for the long-term delivery of current service levels	>90%	**100%**
New/Upgrade Funding Ratio	Indicates the extent to which the planned new/upgrade projects are funded in the long-term budget allocation.	100%	**100%**
Renewal Funding Ratio	Indicates the extent to which the proposed renewal works are funded in the long-term budget allocation.	100%	**118%**
Operations & Maintenance	Assumed that current expenditure levels for operations and maintenance actibities will be maintained for the 10-year planning period.	100%	**100%**

Council's Infrastructure services are sustainable (Assuming Expenditure forecasts are fully funded).

The funding ratios indicate the levels of funding for the 10-year planning period to operate and maintain the Infrastructure assets.

Comments:

Introduction

Purpose

The purpose of this Asset Management Plan (AMP or Plan) is to:

- Consolidate Edward River Council's (Council's) understanding of its assets within the transport asset class
- Document levels of service and risk
- Provide short- and medium-term capital works plans
- Support informed decision making and guide Long-Term Financial Planning budget requirements
- Provide a plan to work towards improved accuracy and confidence in future iterations of this Plan.

Scope

This AMP relates to the management of Transport Infrastructure assets (the Assets) which are recognised as assets owned by Council. Assets in this class typically comprise of the following classes:

- Roads
- Kerb & Channel
- Footpaths
- Other Road Assets
- Bridges.
- Bulk earthworks.
- Traffic Signs

Corporate Context

In 2009 a new Integrated Planning and Reporting (IP&R) framework for NSW local government was introduced. The IP&R framework requires councils to prepare a suite of long-term strategic documents, including a Community Strategic Plan, Resourcing Strategy and Delivery Program, as well as an annual Operational Plan. Integration of these strategic documents is key to effective long-term planning and assist us in providing ratepayers with the best level of service that we can.

Figure 4 illustrates how the IP&R framework ensures that local planning and reporting is informed, relevant, and responsive to community needs.

Figure 4 Integrated Planning and Reporting Hierarchy

Community Strategic Plan

The Community Strategic Plan is the highest-level plan that Council prepares. The purpose of the Plan is to identify our community's main priorities and aspirations for the future and to plan strategies for achieving these goals. In doing this, the planning process considers the issues and pressures that may impact the community and the level of resources that will realistically be available to achieve its aspirations.

Informed by extensive community and stakeholder consultation, the Edward River 2030 Community Strategic Plan seeks to answer four key questions:

- Where are we now?
- Where do we want to be in 10 years?
- How will we get there?
- How will we know when we have arrived?

At an operational level, the *Community Strategic Plan* is implemented through Council's Delivery Program and annual Operational Plans, which outline the activities and actions that are the responsibility of Council in achieving our shared vision.

Resourcing Strategy

The *Edward River 2030 Community Strategic Plan* provides a vehicle for expressing our community's long-term aspirations. However, the vision set out in this Plan will not be achieved without sufficient resources – time, money, assets, and people – to carry them out.

The Resourcing Strategy comprises the following components:

- **Asset Management Planning:** Council's asset management planning is supported by a governance model that includes an Asset Management Policy, Asset Management Strategy, and individual Asset Management Plans for all assets under Council's control.

  The Asset Management Plans are based on 'whole of life' asset management from planning, purchase, operation, and maintenance – to disposal of assets. These plans support the Asset Management Strategy in forecasting community requirements and the capacity to meet them on a short-, medium-, and long-term basis.

- **Long Term Financial Planning:** The Long-Term Financial Plan (LTFP) tests community aspirations as contained in the Community Strategic Plan against the financial realities of delivering on those aspirations. The LTFP integrates with Edward River 2030 through the Delivery Program and one-year Operational Plan.
- **Workforce Management Planning:** The Workforce Management Plan addresses the human resourcing requirements of the Community Strategic Plan, including what people, skills, experience and expertise are required to achieve its strategic objectives.

This AMP is prepared under the above hierarchy and direction of Council's mission, values, goals and objectives.

Through consultation with government, community, business, and industry, we have developed a clear vision as to what we want the Edward River region to look like in 2030.

During this consultation, we developed a vision for the Edward River to strive toward:

We are the centre of the Southern Riverina. Home to a connected and engaged community, driven by a diverse economy. We work together to lead our community, achieve our potential and embrace our future.

This vision is designed to encourage commitment to our future and engender a sense of common purpose and responsibility in all stakeholders responsible for delivering Edward River 2030.

In 2030, our community wants the Edward River region to be:

A great place to live

A prosperous and vibrant economy

A valued and enhanced natural environment

A region with quality and sustainable infrastructure

A community working together to achieve its full potential

Relationship to Other Asset Related Council Documents

This AMP aligns and should be read in conjunction with the framework of Council documents as shown in Figure 5 below:

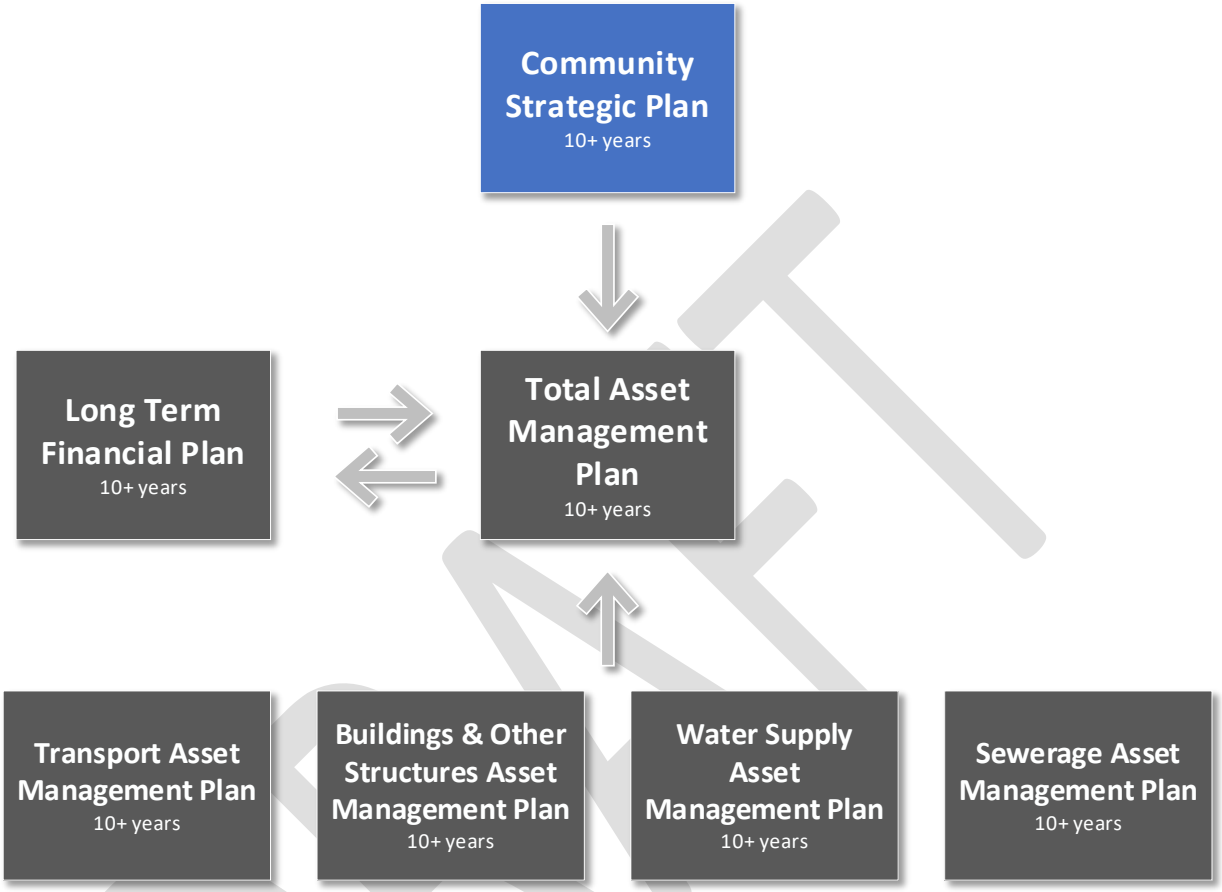


Figure 5 Asset Management Document Hierarchy

The table below shows the key documents that support this AMP:

Document	*How Related*	*Reference*
AMP Related Documents		
Asset Management Policy	The Asset Management Policy includes the defining principles of asset management within Council. This AMP supports such principles by: • Considering the entire life cycle of the assets, • Supporting the development of cost-effective management strategies for the long term, • providing a defined level of service which can be monitored and used as the basis for aligning affordability with community aspirations, • understanding and meeting the demands of growth through demand management and asset investment,	

Document	How Related	Reference
	• managing risks associated with the assets; and • Defining actions required to support continuous improvement in asset management practices.	
Condition Assessment Plan	Contains the methodologies, defect assessment procedures, and the condition rating system used to formally assess the structural integrity and appearance of assets.	
Service Level Agreement (including Maintenance Specifications)	Contains all maintenance and operational specification requirements for assets under this AMP.	
Risk Register	Contains all identified asset related risks applicable to this AMP.	
Maintenance Manual	Contains details on how maintenance activities are to be delivered to meet adopted levels of service.	
Other Related Documents		
Land Development Guidelines	Contains design and construction details for new assets.	Council website
Others…		
External/Specialist Reports	Catchment Analysis, etc.	

Stakeholder Input

Various stakeholders were considered in the preparation of this AMP who will have different roles in implementing its outcomes. These stakeholders and their role are shown in Table 4.

Table 4: Key Stakeholders

Key Stakeholder	Role
Councillors	• Represent needs of community. • Allocate resources to meet Council's objectives in providing services while managing risks. • Ensure the organisation is financially sustainable. • Custodians of the assets and services, providing the interface with the community regarding the levels of service, good governance, and management practices.
CEO	• Manage organisation operational activities and future planning strategic direction.
Director Corporate Services	• Long-Term Financial Plans and operational financial data. • Defining information requirements for audit and reporting purposes.
Director Infrastructure	• Manage delivery of the AMP and initiatives.

	• Capital works projects planning and deliver. • Operational and service levels, data information and analysis.
Community and Ratepayers	• User of services. • Source of funding.
State and Commonwealth Government	• Active in the management of assets and services across the region.
Council Staff	• Directly involved with the renewal, maintenance and operation of the network and the management framework, both operationally and financially. • Delivery of operational plans informed by this AMP.
Emergency Services	• Respond to community needs and emergency situations.

Legislative Requirements

Council is required to meet many legislative requirements including Federal and State legislation and regulations. Key relevant legislation is shown in Table 5.

Table 5: Legislative Requirements

Legislation	*Requirement*
Local Government Act NSW (1993)	**8B Principles of sound financial management** The following principles of sound financial management apply to councils: (c) Councils should have effective financial and asset management, including sound policies and processes for the following: (i) performance management and reporting, (ii) asset maintenance and enhancement, **403 Resourcing strategy** (1) A council must have a long-term strategy (called its **"resourcing strategy"**) for the provision of the resources required to implement the strategies established by the community strategic plan that the council is responsible for. (2) The resourcing strategy is to include long-term financial planning, workforce management planning and asset management planning.
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	AASB 116, AASB1031 Accounting rules setting out Council requirements for maintaining accounting standards and the financial reporting of assets

This Transport AMP contributes to supporting Council's legislative requirements.

Plan Maturity

This AMP is targeted at a first cut, 'core-level' AMP as defined in the International Infrastructure Management Manual. Detailed information is in Table 6 below.

Core level AMP's are developed to meet minimum legislative and organisational requirements and provide basic technical management outputs, including:

- Statements on current levels or aspirational levels of service
- Forward asset replacement programs
- Associated cash flow projections.

Table 6 Core Level Asset Management Capabilities

AM CATEGORY	Core Assessment requirements
Asset Management Plans	• Plan contains basic information on assets, service levels, planned works, and financial forecasts (5-10 years) and future improvements. • The plan also includes executive summary, description of services and key/critical assets, top-down condition and performance description, future demand forecasts, description of supporting AM processes, 10-year financial forecasts, and 3-year AM improvement plan.

Other "Core" Assessment requirements that can be included in the AMP include the following:

Risk Management	• Risk framework developed. • Critical assets and high risks identified. • Documented risk management strategies for critical assets and high risks.
Quality Management	• Defined quality policy and basic Quality Management System. • All critical activity processes documented.
Levels of Service and Performance Management	• Customer groups defined, and requirements informally understood. • Levels of service and performance measures in place covering a range of service attributes. • Annual reporting against performance targets.
Demand Forecasting	• Demand forecasts based on robust projection of a primary demand factor (e.g.: population growth) and extrapolation of historic trends. • Risk associated with demand change broadly understood and documented. • Demand management is considered in major asset planning.
Operational Planning	• Emergency response plan is developed. • Asset utilisation is measured for critical asset groups and is routinely analysed.
Maintenance Planning	• Asset criticality considered in response processes. • Fault tracking and closure process. • Strategy for prescriptive versus performance-based maintenance developed. • Key maintenance objectives established and measured.
Capital Works Planning	• Projects have been collated from a wide range of sources such as hydraulic models, operational staff, and risk processes. • Capital projects for the next three years are fully scoped and estimated.
Financial and Funding Strategies	• 10+ year financial forecasts based on current AMP outputs. • Significant assumptions are specific and well-reasoned. • Expenditure captured at a level useful for AM analysis.
Asset Register Data	• Sufficient information to complete asset valuation — basic physical information recorded in a spreadsheet or similar (e.g. location, size, type), but may be based on broad assumptions or not complete. • Replacement cost and asset age/life. • Asset hierarchy, asset identification and asset attribute systems documented.
Asset Condition	• Condition assessment programme in place for major asset types, prioritised based on asset risk. • Data supports asset life assessment. • Data management standards and processes documented. • Programme for data improvement developed.

Information Systems	• Asset register enables hierarchical reporting (at component to facility level). • Customer request tracking and planned maintenance functionality enabled. • System enables manual reports to be generated for valuation, renewal forecasting.
Service Delivery Mechanisms	• Service delivery roles clearly allocated (internal and external), with contracts in place for external service provision.

Existing Infrastructure Base

This section provides an overview of the infrastructure assets covered by this AMP. The overview provides an understanding of the age, value, and condition of Council's existing infrastructure asset base.

Asset Summary

A summary of the Transport assets covered by the AMP are included in Table 7.

Table 7: Asset Summary

Asset Type	Quantity	Replacement Value (June 2018)
Bridges	*15*	*$7,134,745*
Footpath	*446*	*$7,387,341*
Other Road Assets	*79*	*$4,088,685*
Roads	*6,098*	*$204,596,536*
Kerb & Gutter	*1,514*	*$24,894,463*
Bulk Earthworks	*1,498*	*$27,471,002*
Traffic Sign	*2,281*	*$1,493,274*
Total	*11,931*	*$277,066,046*

The total Lengths for Transport assets are shown in Table 8: Transport network lengths with 99% of the footpath and kerb & Gutter assets being located in Deniliquin.

Table 8: Transport network lengths

Asset or Component Type	No. of Assets	Length (Kms)
Formation	1,467	1,551.1
Pavement	4,180	4,327.1
Seal	1,934	1,086.6
Footpath	446	45.8
Kerb & Gutter	1,514	113.9

Asset Hierarchy and Useful Life

Implementing an asset hierarchy is one of the most important steps in building an effective asset management program. Such a hierarchy provides both context and organization to the asset register.

The asset register is the fundamental building block for asset management and when organised in hierarchical order is the vehicle by which the information system most effectively enables the assessment of the assets as individual components, composite assets, or groups of assets.

While it is not absolutely necessary to organise asset records in a hierarchical structure (they could simply be listed in date of creation order for example), doing so greatly simplifies the search for the proper record when entering data and greatly facilitates the roll up/drill down concept for data reporting.

An asset's useful life is the period over which a depreciable asset is expected to be fully consumed. This period can be significantly impacted by Council's maintenance practices.

The useful life of an asset is initially based on the manufacturer's recommended (expected) life. This is subject to change however, based on historical evidence of the impact of the local environment on the expected life.

The hierarchy and useful lives of Council's assets are provided in Table 9: Asset Lives and Hierarchy.

Table 9: Asset Lives and Hierarchy

Asset Class	Asset type	Component Type	Standard Life
Bridge	Bridge	Complete	100
Footpaths	Footpath	Complete	60
Kerb & Channel	Kerb & Channel	Complete	Range 80 – 130 Adopt 100
Other Road Assets	Fence	Fence	50
	Car Park	Formation	200
		Pavement	80
		Surface - Sealed	20
	Truckalizer	Formation	200
		Surface - Sealed	20
	Airport Taxiway	Formation	200
		Pavement	80
		Surface - Sealed	20
	Access Track	Formation	200
	Airport Runway	Formation	200
		Pavement	80
		Surface - Sealed	20
Roads	Sealed Road	Formation	200
		Pavement	80
		Surface - Sealed	20
	Unsealed Road	Formation	200
		Pavement	20
Traffic Signs	Traffic Sign	All Signs	25

Asset Remaining Useful Life

The remaining useful lives of the assets are based on:

- Inspections by a suitable qualified person
- Calculated from supplied construction dates and adopted asset lives, or
- Estimated from the condition of the asset as a percentage of the expected life.

A summary of the value of transport assets categorised by their asset type and remaining lives is listed in Table 10 and displayed in Figure 6.

Table 10: Asset Remaining Lives by Replacement Values

Remaining Life	Bridges	Footpath	Other Road Assets	Roads	Kerb & Gutter	Bulk Earthworks	Traffic Sign
0	$0	$0	$0	$0	$0	$0	$0
5	$0	$796,800	$601,143	$18,225,378	$1,871,271	$0	$249,999
10	$0	$701,401	$0	$24,842,043	$1,923,907	$0	$242,999
15	$0	$0	$53,258	$22,043,571	$4,936,323	$0	$272,965
20	$0	$0	$189,027	$15,677,854	$0	$0	$3,956
25	$0	$3,814,948	$29,783	$7,856,030	$0	$0	$592,270
30	$0	$69,059	$0	$7,746,619	$0	$0	$2,160
35	$0	$54,930	$0	$9,046,541	$0	$0	$0
40	$0	$200,032	$0	$8,540,390	$0	$0	$80,335
45	$511,488	$1,537,292	$0	$7,224,387	$0	$0	$0
50	$2,966,674	$52,257	$1,268,581	$21,319,942	$20,000	$0	$0
55	$1,139,832	$123,567	$0	$6,452,145	$0	$0	$0
60	$0	$59,913	$0	$7,610,965	$0	$0	$0
65	$0	$23,188	$0	$6,115,021	$5,705,079	$0	$0
70	$0	$174,552	$301,105	$24,794,436	$0	$0	$29,978
75	$85,932	$0	$0	$9,586,310	$0	$0	$0
80	$91,800	$0	$588,375	$5,744,047	$67,715	$0	$0
85	$1,661,326	$0	$414,120	$2,161,648	$0	$27,471,002	$0
90	$420,651	$0	$649,132	$4,217,566	$3,344,112	$0	$0
95	$0	$25,798	$0	$25,603	$0	$0	$0
100	$257,043	$0	$0	$166,973	$0	$0	$0
110	$0	$0	$0	$0	$112,901	$0	$0
115	$0	$0	$0	$196,928	$0	$0	$0
125	$0	$0	$0	$0	$1,571,403	$0	$0
130	$0	$0	$0	$0	$78,772	$0	$0
150	$0	$0	$0	$26,310	$0	$0	$0

$21.7M to be completed in the next 5 years.

The bulk earthworks have been given a nominal remaining life of 100 years.

The assets in with remaining life less than 10 years have been included in *Appendix C – Renewal Plan* along with their current condition rating.

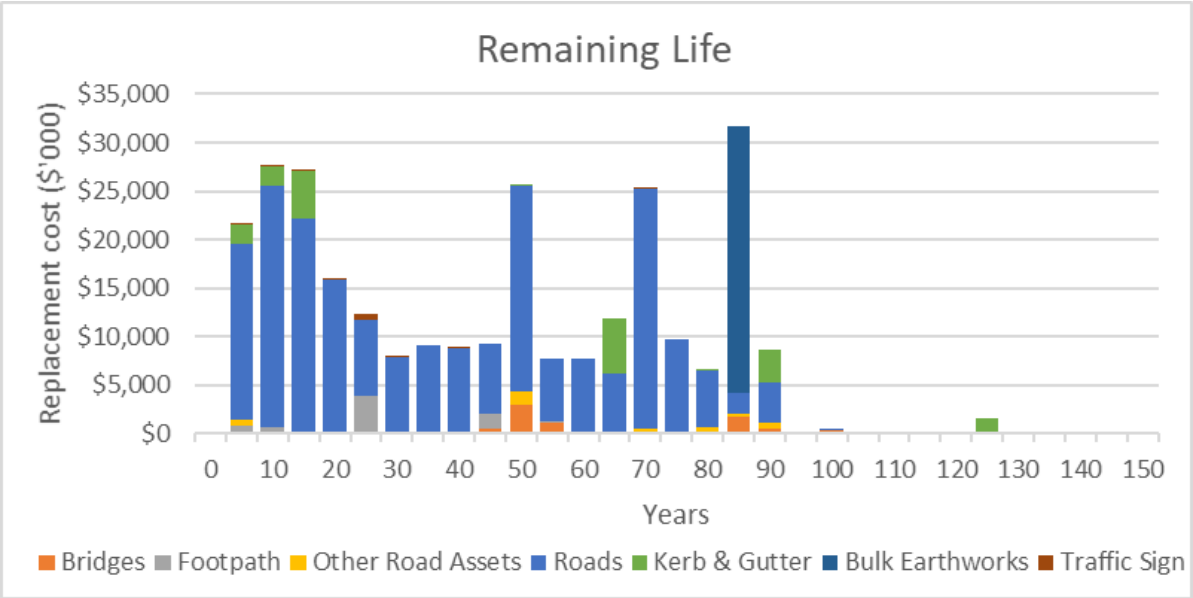


Figure 6: Asset Remaining Life

Age Profile

The age profile of the assets can be seen in Figure 7 below.

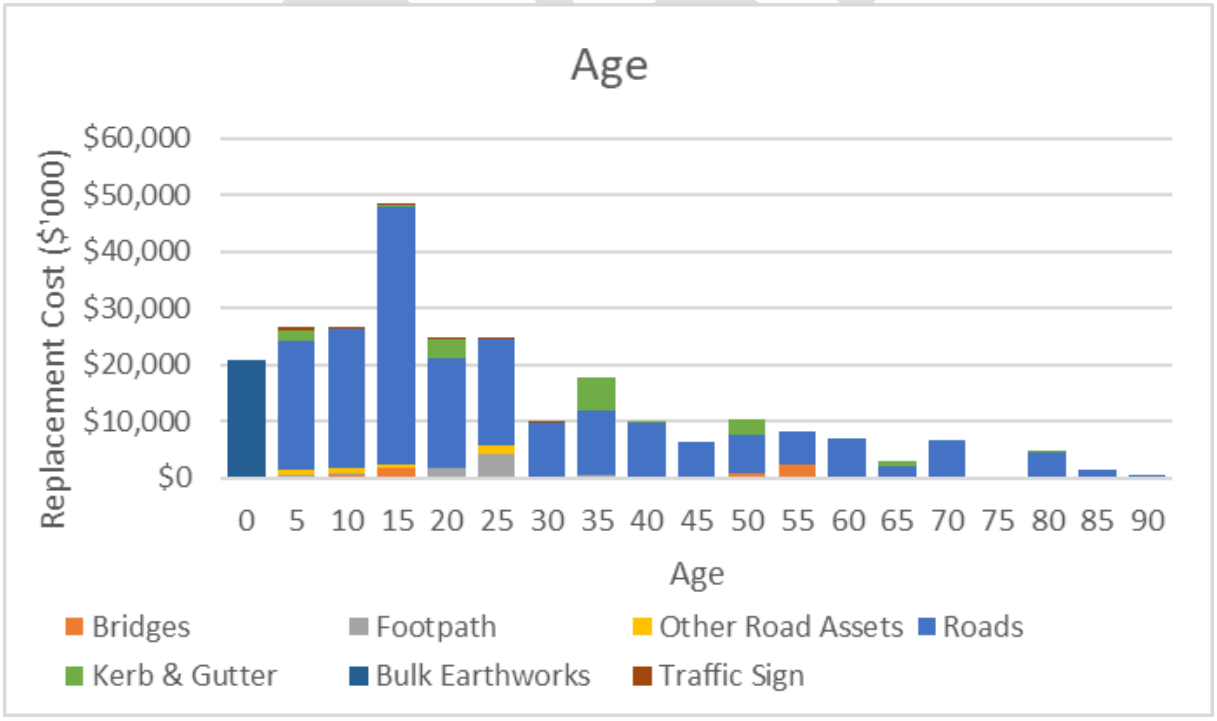


Figure 7: Asset Age Profile

Asset Condition

Edward River Council engaged Britten Holdings to undertake the bitumen sealed surface survey, which involved the visual inspection of all of the Council sealed roads across the network to assess the condition and durability of the sealed surface.

Each road segment was assessed individually and scored in accordance with pre-defined defect criteria. Condition assessments were completed and recorded for the 1042 sealed road segments and intersections, based on the original asset schedules provided. The total length of the network surveyed was 745 km and covered an area of 7,033,126m2.

This bitumen seal survey project was commissioned to better understand the needs for sustaining the investment in the sealed road surfaces that have been progressively developed to serve the community, for all sealed Shire roads.

The immediate project outputs included:

- Summarised network condition profiles for all sealed road segments to understand the future program and treatment needs;
- Hierarchy and road category-based condition profiles to better understand where retreatment activities need to be focused.
- suggested retreatments and indicative costing, for a 10-year program, (based on 2018/2019 costs), for the road network / segments according to condition / needs. The retreatment program refers to the different products available that will match local circumstances and needs, and potentially extend the durability of the sealed surfaces.
- Detailed road and segment listing itemising individual scoring factors and measured outputs.
- Suggested maintenance and rehabilitation programs to be considered outside of the bitumen retreatment program.

The investment in bitumen sealed surfaces, (or current replacement value), of the 745 kms of road network assessed, was estimated to be $55,076,085 (based on current industry standard rates relevant to Council).

This survey and its outputs are essential inputs for this Roads Asset Management Plan and the Asset Register, improving the lifecycle management for the sealed surface assets to maximise the asset lives and service provision, and to provide for accurate representations of renewal costs in the financial framework.

Survey Methodology

Visual inspections were undertaken for each sealed road segment specified by the Shire. For each segment, defects in the road's sealed surface were identified and given a score between 0-5 for the following attributes.

- **Cracking**
  Cracks are fissures resulting from partial or complete fractures of the pavement surface ranging from isolated single cracks to an interconnected pattern extending over the entire pavement surface. Cracking has many detrimental effects, including the loss of waterproofing and load spreading ability that usually leads to accelerated deterioration of the pavement condition. the total area of cracking identified across both criteria prior to producing a raw condition rating score.
- **Stone Loss**
  Loss of Aggregate applies to both sprayed seals and asphalt wearing courses. The loss of aggregate from a sprayed seal is usually referred to as stripping. The loss of aggregate in asphalt wearing courses is usually referred to as ravelling. Loss of Aggregate from sprayed seals (stripping) and from asphalt wearing courses (ravelling) is a distress that is related to the loss of adhesion between the aggregate and the

bitumen binder. The loss of bond between aggregate and bitumen that leads to a loss of aggregate usually occurs towards the end of the wearing course useful life, typically due to oxidation of bitumen over time.

- **Binder Condition**
  Bitumen hardens under the influence of heat and oxygen in the air. The main factors that influence the rate of binder hardening (oxidation) are the prevailing climatic conditions, the bitumen thickness and exposure to air. Generally, the hotter and drier the environment the quicker the binder will harden. Oxidation cannot be measured simply by a visual assessment only, a physical stone test is essential. The binder condition is evaluated by physically removing aggregate particles from the sprayed seal and visually assessing the viscosity and adhesion of the binder on the bottom of the aggregate particles.

- **Patching**
  When the seal has had a repair patch or pothole applied this can affect the comfort and safety of the road user. Often the underlying cause of the structural defect is not remedied by the patch. Potholes are caused by age and brittleness of the binder, the level of binder around the aggregate, amount of stripping, the amount of wet weather and the volume of traffic. When a road starts to require regular pothole patching, this is clear evidence that the road should be scheduled for a reseal.

- **Texture & Binder Level**
  Surface Texture is assessed on the condition of the surface where traffic runs, i.e. typically a wheel path. Surface Texture defects include stripping, flushing or bleeding on spray sealed surfaces, and flushing, delamination and ravelling on asphalt surfaces. These defects may occur in isolation or concurrently in a segment. Surface texture score is determined on a sprayed seal by the smoothness of the surface caused by stone wear, stone loss, stone deterioration or excessive bitumen which will lead to surface damage and an unsafe travelling surface.

Additional information is also recorded at the time of inspection, recording the existing sealed surface and dimensions allowing confirmation of asset properties, as well enabling areas for calculating future retreatment costs. Proposed types of treatments are also identified, including suggested timeframes for such works, and also the capture of segments requiring extensive preparatory works, and where reconstruction is possibly required.

Condition Assessment

Condition scores for the assessment criteria were recorded in the field based on the rating framework presented in the following Table. The five-point condition rating scale is used to give adequate spread / definition to the condition rating, because the assessment criteria are not considered equal in terms of the 'scoring' process. The critical defects are weighted to provide the emphasis on the criteria that could lead to the rapid deterioration of the sealed surface, (and the underlying pavement). The weighting applied is recorded in the following Table, demonstrating the higher degree of criticality for Cracking and Binder defects.

Table 11 Condition Assessment Weightings

Survey Score	Cracking	Stone loss	Binder Condition	Patching	Texture Loss	Binder Level
0	0	0	0	0	0	0
1	4	4	9	4	4	4
3	11	9	27	9	9	9
5	15	11	40	12	11	11

An overall score out of 100 is generated based on the summation of defect scores and can be sorted from best to worst condition to determine the overall network condition profile. The following is a small example.

Table 12 Example Condition Assessments

Road ID	Road Name	Cracking Score	Stone Loss Score	Binder Condition Score	Patching Score	Texture Score	Binder Level Score	Overall Condition Score
RD00041	BARHAM RD	5	0	3	5	1	3	67
RD00038	BARHAM RD	1	0	3	1	1	3	48
RD00047	BARHAM RD	0	0	1	1	1	3	26
RD01661	BARHAM RD	0	0	3	0	0	0	27
RD0000857	Barnes Rd	0	0	3	0	3	1	40
RD0000049	Barnes Rd	3	0	5	1	3	1	68
RD0000856	Barnes Rd	0	0	3	0	3	1	40
RD0000855	Barnes Rd	0	0	3	0	3	1	40
RD0000048	Barnes Rd	1	0	5	1	1	3	61
RD0000913	Bartletts Rd	0	0	3	0	0	3	36

Condition Profile

The condition assessment undertaken for each road segment provides a tool to prioritise the specified segments for retreatment in the recommended treatment year. The following chart presents the condition profile information on a 0 - 10 scale, with a '0' score being in 'as new' condition and '10' being 'unserviceable, (recorded by area).

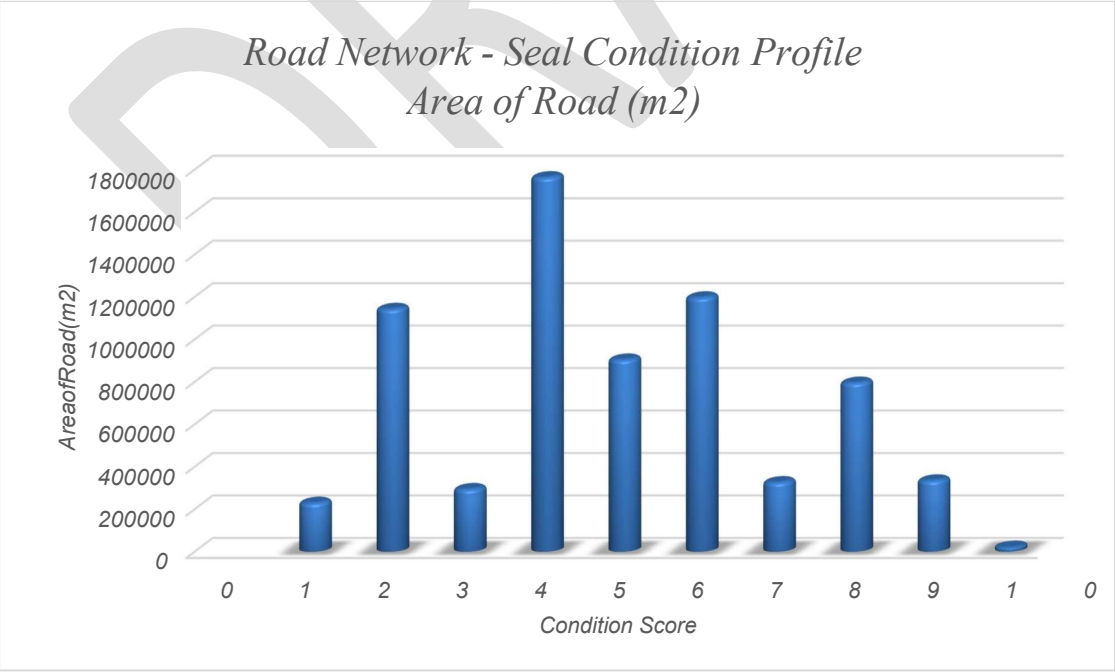


Figure 8 Seal Condition Profile

The chart indicates that 16.44% of the surveyed network, (1,153,570 m2 by area), was assessed as being at the end of its useful life (Cond 8-10) and short-term intervention will be required to preserve the integrity of the road and maintain adequate service levels. Extensive

preparatory works may be required in a portion of these roads prior to sealing. These roads should form part of the 2018/19 sealing program at minimum.

The bar chart below represents identical data to the above graphs, but instead separates the condition scores by road hierarchy.

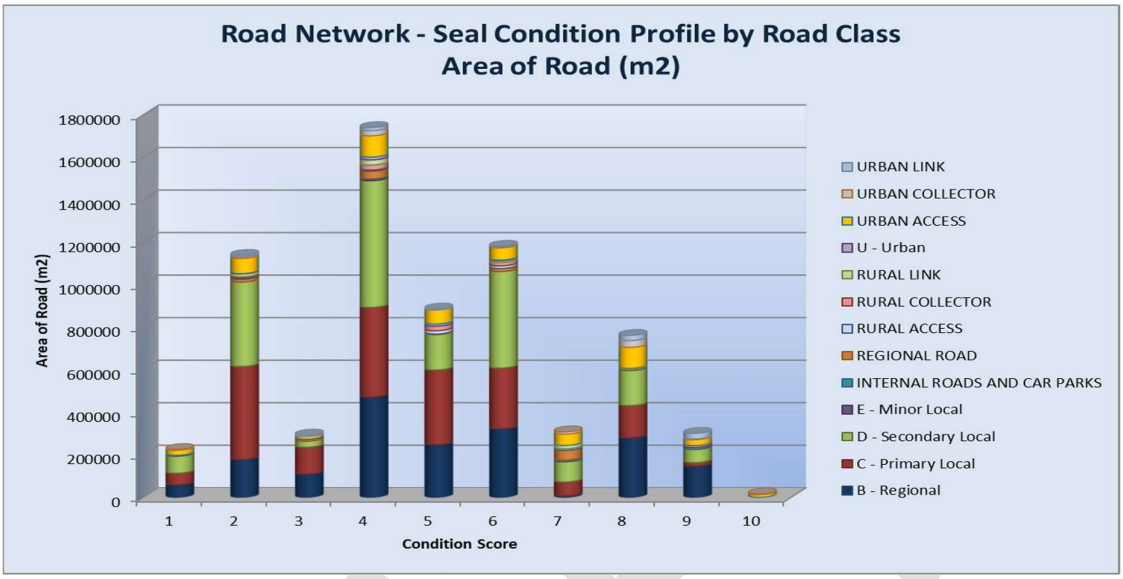


Figure 9 Seal Condition profile by Road Hierarchy

The results of the seal condition assessment with recommended treatments and renewal time table have been incorporated into the transport Asset Register with the condition assessments aligned with Council's standard condition ratings as indicated in Table 13: Structural Condition Grading Model.

Table 13: Structural Condition Grading Model

Grade	*Condition*	*%Remaining Useful Life*	*Description*
1	Very Good	>70%	Sound physical condition. No signs of deterioration Only normal maintenance required.
2	Good	70% - >50%	Acceptable physical condition; minor deterioration visible, no short-term failure risk. Minor defects only. Only minor work required, if any.
3	Fair	50% - >10%	Acceptable physical condition; minimal short-term failure risk but potential for deterioration in long-term. Minor defects only. Minor components or isolated sections of the asset may need replacement or repair now but asset functions safely at adequate level of service. Work may be required but asset is serviceable. Maintenance required to restore the asset to an acceptable level of service.
4	Poor	10% - >4%	Significant deterioration evident. Failure likely in short-term. Likely need to replace most or all of the asset. No immediate risk to health or safety but works are required to ensure asset remains safe. Substantial work required in short-term, asset barely serviceable. Asset requires renewal – works to be programmed.
5	Very Poor	<4%	Failed or failure imminent. Immediate need to replace most or the entire asset. Health and safety hazards exist which present a possible risk to public safety, or asset cannot be serviced/operated without risk to personnel. Asset is effectively unserviceable. Major work or replacement required urgently.

Most of the transport assets (83.5%) are in “as New”, “Good” or “Fair” condition. Of the remaining assets 4.2% ($11.3M) of the transport asset base is in very poor condition, with an additional 12.3% ($32.8M) considered in poor condition and requiring attention. It should be noted that 14.8% of the covered transport assets (road formation, sub-base and base coarse components) have an estimated condition rating based on age and surface condition.

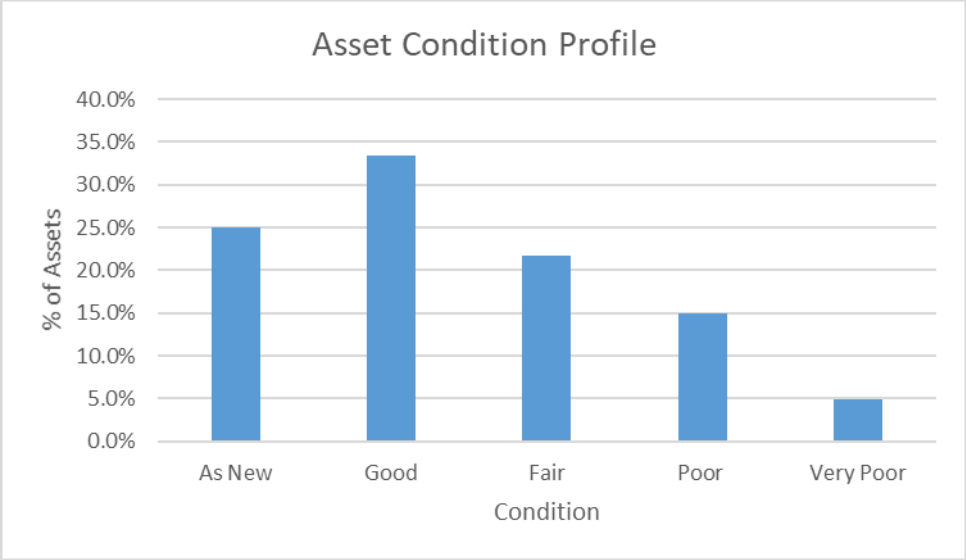


Figure 10: Transport Assets Condition Profile

The summary of asset condition by asset type shown in *Figure 11* indicates that the two major areas contributing to the failing assets and deserving further consideration are the Roads and the Kerb & Gutter Assets.

Table 14: Asset Condition Profile (as a percentage of the Asset Base)

Asset Type	Condition (% of Asset Base)					
	As New	Good	Fair	Poor	Very Poor	Total
Bridges	0.1	0.9	1.6	0.0	0.0	2.6
Footpath	0.2	0.7	1.6	0.2	0.0	2.7
Other Road Assets	0.5	0.3	0.5	0.2	0.0	1.5
Roads	21.0	22.6	15.7	10.7	3.8	73.8
Kerb & Gutter	0.6	1.3	2.1	3.9	1.1	9.0
Bulk Earthworks	2.4	7.5	0.0	0.0	0.0	9.9
Traffic Sign	0.2	0.2	0.1	0.0	0.0	0.5
Total	25.0	33.5	21.7	14.9	4.9	100.0

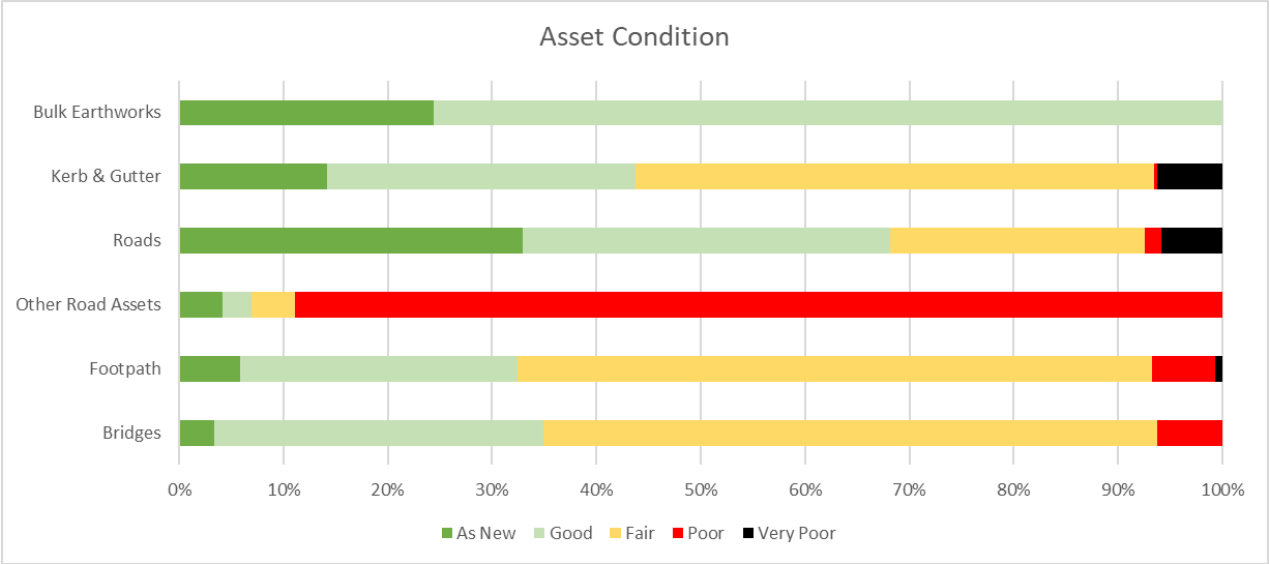


Figure 11: Asset Condition Profile by asset type

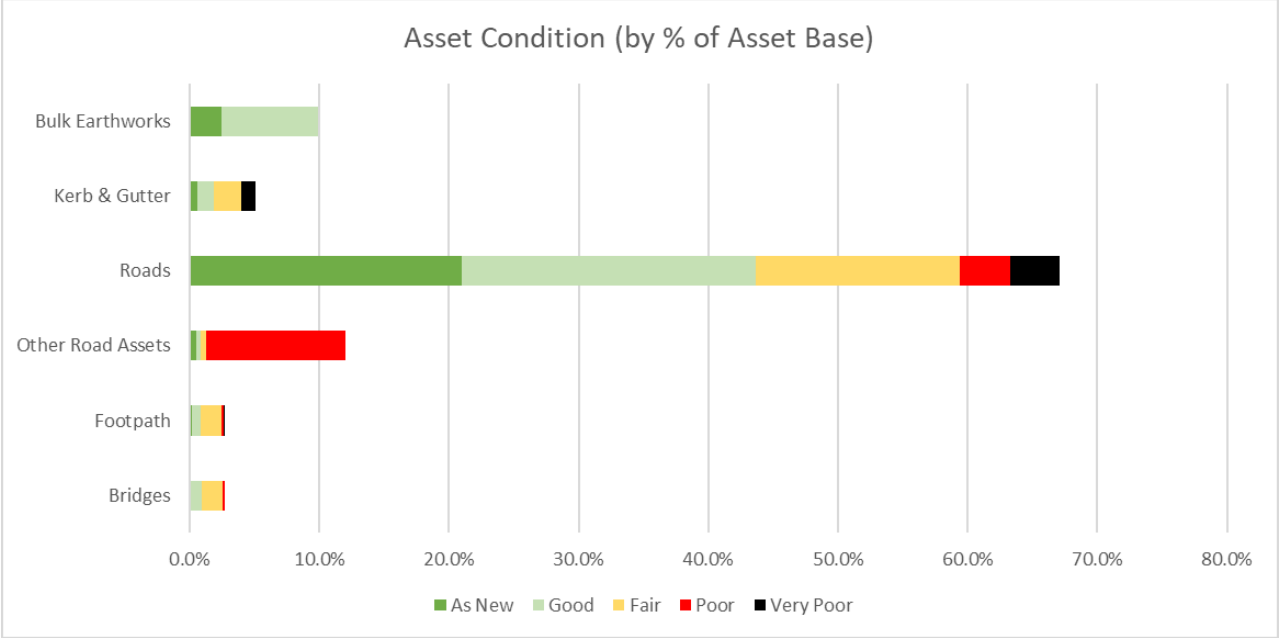


Figure 12: Asset Condition Profile by percentage of Asset Base

Figure 12: Asset Condition Profile by percentage of Asset Base show that 73.8% (by value) of the transport assets are in the Roads Asset Class.

Note:

The remaining life data indicated $21.7M of works needs to be undertaken in the next 5 years while the condition data identified $44.1M of significantly deteriorated, failing or failed assets. This variation indicates a mis-alignment between the Financial and Technical asset data sets.

Asset Criticality

A critical asset is an asset for which the financial, business or service level consequences of failure are sufficiently severe to justify proactive inspection and rehabilitation. Critical assets have a lower threshold for action than non-critical assets.

Although critical assets have a high consequence of failure, they don't necessarily have a high likelihood of failure

Asset Criticality is a measure of how critical an asset is to the functioning of and/or the services provided by Council.

The importance or degree of asset criticality has been proposed to be based on the consequences of failure, i.e. consequences of failure are assigned a criticality factor.

Elements that may impact on asset criticality include:

- Safety
- Cost of Failure
- Complexity
- Severity of Duty
- Impact of failure
- Impact on Environment
- Location
- Loss of service
- Number of Customers Serviced
- Site function
- Public image impact

Social, environmental & economic factors may be considered.

Social may include

- Community disruption
- Health and safety
- Litigation

Environmental factors that may need to be considered are

- natural waterways
- parks
- national parks
- recreational grounds

Economic

- business and commercial activities being disrupted
- costs to the community

Criticality has been assigned using the ratings in

Table 15 Criticality Ratings

Criticality Rating				
1	*2*	*3*	*4*	*5*
Insignificant	*Minor*	*Moderate*	*Major*	*Extreme*

Based on the above criteria preliminary criticality levels have been assigned by asset types as indicated in *Table 16* below. The resultant criticality profile is shown in *Figure 13* and *Table 17*.

Further iterations of this plan will develop council's asset criticality models and improve the quality of the criticality assessment for individual assets.

Table 16: Asset Criticality Levels (Default value based on Asset Type)

Asset Class	Asset type	Component Type	Criticality Ratings
Bridges	Bridge		4
Other Road Assets	Airport Taxiway	Pavement	4
	Airport Runway	Pavement	5
Traffic Signs	Traffic Sign	Regulatory	3
		Warning	3
		Hazard	3
All other Asset Classes			2

Table 17: Transport Network Criticality by Current Replacement Cost

	Replacement Cost				
Asset type	*Insignificant*	*Minor*	*Moderate*	*Major*	*Extreme*
Bridges	*$1,359,304*	*$1,042,030*	*$257,043*		*$4,476,369*
Footpath	*$430,805*	*$2,007,405*	*$4,949,132*		
Other Road Assets	*$996,497*	*$1,374,892*	*$1,717,295*		*$0*
Roads	*$160,367,659*	*$25,148,498*	*$19,080,379*		
Kerb & Gutter	*$1,670,175*	*$4,227,256*	*$8,635,823*		
Bulk Earthworks	*$27,314,594*	*$45,283*	*$111,125*		
Traffic Sign	*$281,111*	*$409,158*	*$803,005*		

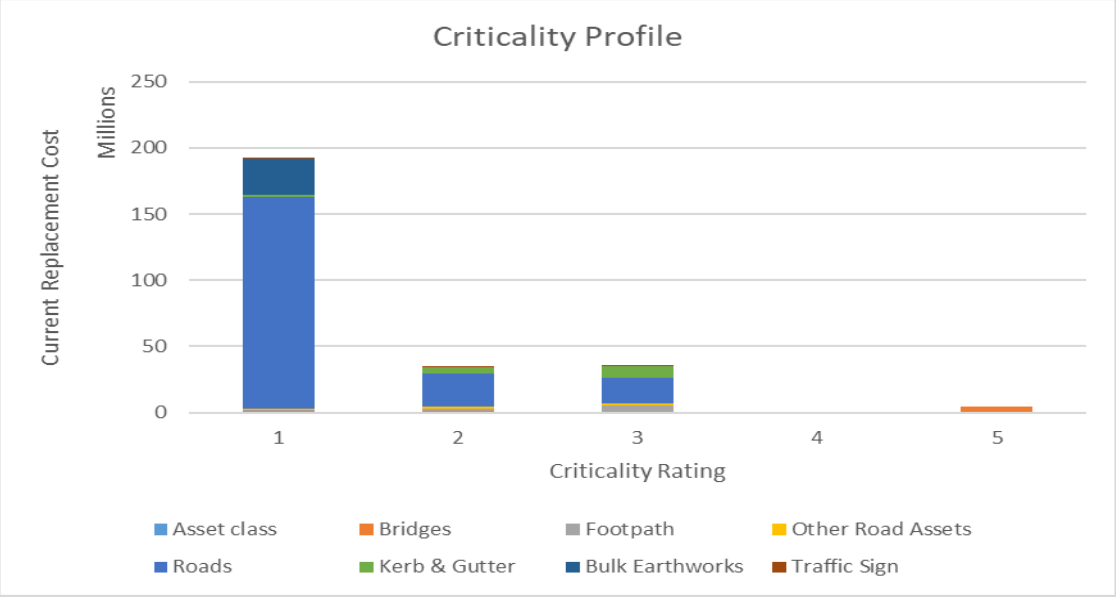


Figure 13: Transport Network Criticality Profile

Data Confidence

The lifecycle assessment is only as precise as the accuracy of the data Council holds. This data includes revaluation data of the assets, financial data, and asset register details.

Table 18: Data Confidence Rating

Grade	*Description*	*Accuracy*
1	Accurate	100%
2	Minor Inaccuracies	95%
3	50% Estimated	80%
4	Significant Data Estimated	70%
5	All Data Estimated	60%

(Section 4.3.7 of the IIMM, Version 3.0, 2006)

The valuation method adopted by Council's valuers breaks an asset into a short-life part and a long-life part with the condition assessed on the short-life part and the remaining life calculated from the weighted average of the remaining lives of both parts. This achieves the financial goal of reducing the annual depreciation expense however, it is not practicable from an asset management perspective as the condition and remaining life do not align.

The transport assets with a condition assessment of 4 poor and 5 very poor have been given default values for their remaining lives of 2 years and 5 years respectively. This ensures that assets are included in the development of annual, 4-year and 10-year renewal programs. This development included validation on site by suitably qualified officers prior to final submission.

The transport data has been given subjective data confidence grade of 3.

Further iterations of this plan will develop council's data confidence models and improve the quality of the assessment for each asset class.

Levels of Service

Level of Service Document Hierarchy

- ***Edward River Community Strategy 2030***

  The Community Strategy establishes, through community consultation, Council's aspirational goals and objectives for the delivery of Transport services.

- ***Asset Management Plan***

  This Asset Management Plan (AMP) develops technical measures against which the aspirational goals and objectives can be measured (Technical Levels of Service).

- ***Service Level Agreement***

  The service level agreement (SLA) is a formal agreement between those responsible for the assets and the services they deliver, and the operational areas of Council charged with maintaining, operating, and upgrading existing assets or constructing new infrastructure.

- ***Activity Specification***

  The activity specification defines the target performance measures for maintenance, operations, or construction activities. It sets routine inspection and maintenance frequencies and for reactive maintenance sets intervention levels, response times, activity duration targets.

- ***Maintenance Management Plan***

  The Maintenance Management Plan (MMP) details how each activity is to be completed and may include the following:

  - Standard Operating Procedures
  - Work Instructions
  - Hazard Risk Assessment
  - References to Equipment Maintenance Manuals (particularly fleet, plant, mechanical and electrical assets)

Community Strategy 2030 (Community Levels of Service)

The Community Strategy relevant to this AMP is

Outcome 4 - A region with quality and sustainable infrastructure

The outcome target relevant to Transport services is:

4.2 Our road network is a source of pride

Table 19: Council's Goals

Council Role
• *Effectively maintain council roads and footpaths.* • *Undertake sound asset management planning and asset mapping.* • *Focus on reducing our asset backlog with our road network as a targeted area for improvement.* • *Where appropriate, upgrade existing or provide new infrastructure.* • *Implement streetscape improvement projects across our town centres and town entrances.*

In addition to Council's transport aspirational goal and roles as detailed The outcome target relevant to Transport services is:

4.2 Our road network is a source of pride

Table 19: Council's Goals

Council Role
• *Effectively maintain council roads and footpaths.* • *Undertake sound asset management planning and asset mapping.* • *Focus on reducing our asset backlog with our road network as a targeted area for improvement.* • *Where appropriate, upgrade existing or provide new infrastructure.* • *Implement streetscape improvement projects across our town centres and town entrances.*

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

Community levels of service measures used in this service management plan are:

- *Quality - How good is the service?*
- *Function - Does it meet users' needs?*
- *Capacity/Utilisation - Is the service over or under used?*

These community levels of service promised by Council are outlined in Table 20.

Table 20: Community Levels of Service

Service Level Outcome	Principle Activity	Strategic Elements	Performance Outcome	Assessed by
Reliability	Effectively maintained Council Roads and Footpaths	Roads, drains, footpaths, bridges and cycleways are high quality, free flowing and safe	A well-connected, well designed and free flowing road network	Number of Complaints
Quality		Transport network is of good quality and safe	Long-term asset management planning of roads and road-related infrastructure	Compliance with standards and guidelines Condition of roads & associated assets Number of Complaints
Function		People can access what they need. Stormwater dissipates.	Appropriate infrastructure to support access to services, information and facilities	Survey of travel times within standards Number of Complaints
Condition		Roads, drains, footpaths, bridges and cycleways are in good condition	Stewardship of assets through effective planning for asset provision, maintenance and renewal	Inspections and condition rating Number of Complaints

Technical Levels of Service

Technical levels of service support the community levels of service by turning subjective requirements of the Community Levels of Service into objective assessments. These technical measures aim to quantify the performance of the assets and services they provide and relate to the allocation of resources to service activities that the organisation undertakes to best achieve the desired community outcomes and demonstrate effective organisational performance.

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 an appropriate service condition (e.g. road patching, unsealed road grading, building and structure repairs),
- Renewal – the activities that return the service capability of an asset up to that which it had originally (e.g. frequency and cost of road resurfacing and pavement reconstruction, pipeline replacement and building component replacement),
- Upgrade – the activities to provide an higher level of service (e.g. widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or

- New – a new service that did not exist previously (e.g. a new library).

Asset managers plan, implement and control technical service levels to influence the community service levels.[1]

These technical Levels of Service are outlined in Table 21 by asset classification.

[1] *IPWEA, 2011, IIMM, p 2.22*

Table 21: Technical Levels of Service

Asset Class	**Transport**		
Service Statement	**Council has Effectively maintained Roads and Footpaths that are fit for purpose.**		
Performance Measure	**Community feedback through surveys or complaints and the average condition of the road network.**		
Service Factors	**Community Levels of Service**	**Technical Levels of Service**	**Performance Measures**
Quality			
Condition	*Well maintained roads.* *Do not pond water.* *Looks well Maintained.*	*Operations & Maintenance* • *Inspect assets on a routine basis to identify their condition.* • *Inspect assets on a routine basis to identify and address any defect and safety concerns.* • *Maintain assets in a tidy, safe, and functional condition.*	*30% of asset base condition assessed annually.* *Defect inspect 90% of roads.* *<1 complaint per month.*
		Renewal • *Renew/replace when the ride ability becomes unacceptable and maintenance becomes more expensive than reseal/rehabilitation.* • *Renew/replace road pavement at, or nearing, its end of useful life.*	*Road Condition.* *90% delivery of renewal programs.*
Function			
Access	*Road design complies with applicable standards.* *Adequate Capacity.*	*New/Upgrade* • *Provide new/upgraded infrastructure to cater for community growth in accordance with community demand.* • *Provide new/upgraded infrastructure as required to comply with industry standards or statutory requirements.* • *Ensure new/upgraded infrastructure is designed and constructed in accordance with Council's Guidelines.*	*90% delivery of CAPEX programs.* *100% Compliance with design standards and guidelines.*
Capacity/Utilisation			
Cost Effectiveness	*Maintenance delivered as scheduled and on budget.* *Re-use of materials.* *Use highly productive road construction techniques and machinery.*	*New/upgraded* • *Ensure new/upgraded infrastructure is designed and constructed in accordance with Council's Guidelines.*	*Maintenance delivered to budget.* *95% compliance with SLA and Activity Specification.* *100% Compliance with design standards and guidelines* *Customer surveys.*

Growth

Development

The new assets required to meet development growth will be acquired free of cost from land developments and constructed/acquired by Council.

Acquiring these new assets will commit Council to fund on-going operations, maintenance and renewal 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, maintenance and renewal costs.

Demand

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

Specific to Council, the demand factor that may impact on service delivery are summarised in Table 22.

Table 22: Demand Impact

Demand Driver	*Current Position*	*Projected Position*	*Potential Impact*	*Response Required*
Community Growth*	8949 residents	*No current prediction available.	Population growth will result in an increase in asset use and have an impact on the lifecycle cost of the assets.	There is not enough growth to have a significant impact on services.
Demographic*	Median age 44.7 22.2% >65 years of age	*No current prediction available.	Increases in the median age increases the importance for service accessibility.	The average population being relatively young will increase the need for community Transport infrastructure.
Tourism	Tourism and related industries account for less than XX% of the total employed in the Council area.	*No current prediction available.	An increase in visitors to the area will have a larger effect on infrastructure services.	Council will not have to increase size of the asset base specifically for tourism increases.

*(*Australian Bureau of Statistics – [Edward River Council])*

Growth/Demand Response

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.

Non-asset solutions focus on providing the required service without the need for Council to own the assets and management actions including reducing demand for the service, reducing the level of service (allowing some assets to deteriorate beyond current service levels) or educating customers to accept appropriate asset failures.

Opportunities for demand will be developed in future revisions of this asset management plan.

Council's current adopted growth rate is 1% per annum. There is existing capacity in the Transport network to cater for this level of growth for the foreseeable future.

Risk Management

Risk Management Objectives

Council has a 'duty of care' to the community in relation to management of the assets and appropriate management of risk. Council must reduce risk where it is reasonable to do so. Risks that affect Council include:

- Risks associated with the loss of service by the failure of critical assets
- Financial risks from a lack of due diligence in the management of funding for the renewal, maintenance, and operation of the assets.
- Operational risks where data and information are not maintained to standards which enable competent decision making and management outputs.

The objectives to be achieved in managing risks under the AMP are:

- Identify high risk assets
- Maintain Levels of Service
- Mitigate risks to the public
- Reduce the number and magnitude of unplanned asset failures.

Managing risks involves identifying, assessing and determining risk management option.

Risk options vary depending on several factors, including but not limited to:

- Available resources and funding,
- Risk assessment level and
- Network demand.

In this way, it may be reasonable to mitigate a lower risk when it is not practical to mitigate a high risk.

For each identified risk Council can elect to adopt one of the following positions:

- *Take the risk*
- *Transfer the risk*
- *Treat the risk*
- *Terminate the risk*

Risk Assessment Method

Risks vary in both likelihood and consequence. Analysing risks in a risk matrix can help to quantify the risk to then identify necessary treatment actions. The risk matrix used to assess Council's risks is shown below.

LIKELIHOOD	CONSEQUENCES				
	1	2	3	4	5
	Negligible	Minor	Moderate	Major	Catastrophic
A. Rare	Low	Low	Low	Moderate	High
B. Unlikely	Low	Low	Moderate	High	High
C. Possible	Low	Moderate	Moderate	High	Extreme
D. Likely	Moderate	Moderate	High	Extreme	Extreme
E. Almost Certain	Moderate	High	High	Extreme	Extreme

The options to 'treat' risks are broadly outlined below.

Risk Assessment	Treatment Options
Low (L)	Acceptable Risk • Unlikely to require specific application of resources • Manage by routine procedures • Monitor, review and react.
Moderate (M)	Acceptable Risk • Unlikely to cause much damage and/or threaten the efficiency and effectiveness of the activity • Treatment plans to be developed and implemented by operational managers • Manage by specific monitoring or response procedures.
High Risk (H)	Generally unacceptable • Likely to cause some damage, disruption, or breach of controls • Senior management attention needed, and management responsibility specified • Treatment plans to be developed and reported to executives.
Extreme (E)	Not acceptable • Likely to threaten the survival or continued effective function of the organisation, either financially or politically • Must be managed by senior management with detailed treatment plan in place • Immediate action required.

Risk Analysis - Asset Failure

The asset risk has been calculated using the criticality of the asset as a measure of the consequence of failure and the condition rating as the likelihood of the asset failing. A risk rating was assigned to every Transport asset.

Table 23 and Table 24 quantify the number of assets at each level of risk, Council's risk exposure to asset failure in the Transport network, and the assets assessed as having an extreme risk of failure.

Table 23 Risk Rating Matrix

	Consequence				
Likelihood	1	2	3	4	5
1		3354	658	3	
2		1787	422	6	
3		1544	197	9	1
4		646	64	3	
5		158	34	3	

The seven (7) assets with an extreme risk rating are included in Table 24 below. Three of these assets have a condition rating of 5 therefore it can be assumed that they are already included in Council's transport renewal program. For all other assets it is suggested that a review of their condition be undertaken, and their inspection frequency be increased accordingly.

Table 24 Extreme Risks

Asset Number	Asset Class	Asset type	Component Type	Condition	Current Replacement Cost
BC0000359	Bridges	Bridge		4	$302,022
BC0000394	Bridges	Bridge		5	$420,651
BC0000518	Bridges	Bridge		4	$85,932
BC0000609	Bridges	Bridge		4	$91,800
RD01682	Other Road Assets	Airport Runway	Pavement	3	$1,124,299
RD01704	Other Road Assets	Airport Taxiway 5	Pavement	5	
RD01706	Other Road Assets	Airport Taxiway 6	Pavement	5	

Risk Analysis - Operational Activities

Table 25: Transport Operational Risk Assessment

Asset at Risk	Risk ID	Critical Incident	Cause	Likelihood	Consequences	Rating
Transport	*T1*	*Insufficient knowledge of infrastructure*	*Poor capitalisation and data capture processes.*	*Almost Certain*	*Moderate*	*High*
Transport	*T2*	*Failure to deliver CAPEX and OPEX programs*	*Insufficient forward planning and design*	*Almost Certain*	*Moderate*	*High*
Transport	*T3*	*Barrier or railing damage*	*Traffic Accident*	*Possible*	*Major*	*High*
Transport	*T4*	*Cracking – Expansion and contraction*	*Seasonal temperature and humidity variations*	*Possible*	*Moderate*	*Moderate*
Transport	*T5*	*Impact Defects*	*Falling trees, falling truck loads.*	*Unlikely*	*Minor*	*Low*
Transport	*T6*	*Lifting*	*Earth movement*	*Likely*	*Moderate*	*High*
Transport	*T7*	*Potholes*	• *Extreme weather events* • *Heavy Vehicles*	*Almost Certain*	*Moderate*	*High*
Transport	*T8*	*Rutting*	• *Heavy weather* • *Increase in traffic*	*Almost Certain*	*Moderate*	*High*
Transport	*T9*	*Edge breaks*	*Heavy vehicles*	*Almost Certain*	*Moderate*	*High*
Transport	*T10*	*Road Becomes Unusable*	*Road not renewed in time as the data against that road was not recorded correctly.*	*Likely*	*Major*	*Extreme*

Operational Risk Report

The risk report resulting from the assessment is included as Table 26 below.

Table 26: Risk Report

ID	Risk Description	Risk Assessment	Action	Proposed Treatment Options	Estimated Cost	Target Risk Result
T2	Assets are being acquired or created and recorded in the asset register. The information recorded is not appropriate. (e.g. Asset Name: “Capital works”)	High	Treat	Improve processes and procedure documentation Train staff Improve data recording of Ops & Maint. Exp Improve asset data recording, capitalisation and management	$TBA	Moderate
T3	Annual works programs are not being delivered. (plan, design and construct within a single year)	High	Treat	Amend budgets to include Forward Planning and Forward Design allocations.	Nil	Moderate
T4	Broken Barriers or railing will no longer function correctly in the event of another accident	High	Treat	Renew/replace damaged barrier reactively	NIL	NIL
T5	Cracking make the road more difficult to drive on	Moderate	Treat	Addressed under routine maintenance plan	NIL	NIL
T6	Impact defects make the road more difficult to drive on	Low	Treat	Addressed under routine maintenance plan	NIL	NIL
T7	Lifting of road surface causes an uneven road surface potentially causing an accident	High	Take	Renew road segment only if the lifting is considered significant and dangerous	NIL	NIL
T8	Potholes continue to erode away and affect the condition of the pavement and formation of the road.	High	Treat	Addressed under routine maintenance	NIL	NIL

T9	Rutting significantly affects the steering of the vehicle and could cause an accident	High	Treat	Addressed under routine maintenance	NIL	NIL
T10	Edge breaks of the pavement erode more of the road	High	Treat	Addressed under routine maintenance	NIL	NIL
T11	Delayed Renewals Leaving Roads in Unusable Condition	Extreme	Treat	Improve processes and documentation Train staff	$TBA	Low

TBA (To Be Assessed) are reactive in nature and will be addressed when the issue arises

Long Term Funding

The available funding was estimated based on the financial model provided by Council. The Capital expenditure has been extracted from Council's Financial Model, however the operations and maintenance expenditure funding forecasts are imbedded in the model data and not clearly identified by asset class. Therefore, these operational expenditure funding forecasts are based on current levels of expenditure. The assumption being that this level of funding is enough to deliver the current service levels.

The forecasts estimated in this AMP should be used as an indication of expenditure levels and distribution required for the Long-Term Financial Plan.

Long Term Financial Plan Summary

The LTFP funding available for operations, maintenance and infrastructure renewals is shown in Table 27 and Figure 14. The total allocation over the term of the LTFP is $87.2M or $8.72M per annum.

Table 27: Long Term Financial Plan

Financial Year Ending	*New/Upgrade*	*Operations & Maintenance*	*Renewals*	*Total*
2020	*$150,000*	*$2,980,712*	*$5,428,396*	*$8,559,108*
2021	*$0*	*$3,049,582*	*$6,115,500*	*$9,165,082*
2022	*$0*	*$3,120,173*	*$6,032,262*	*$9,152,435*
2023	*$0*	*$3,192,530*	*$6,001,950*	*$9,194,480*
2024	*$8,000,000*	*$3,273,215*	*$5,927,359*	*$17,200,574*
2025	*$0*	*$3,349,234*	*$5,796,299*	*$9,145,533*
2026	*$0*	*$3,427,154*	*$5,839,863*	*$9,267,017*
2027	*$0*	*$3,507,022*	*$5,729,457*	*$9,236,479*
2028	*$0*	*$3,588,886*	*$5,705,113*	*$9,293,999*
2029	*$0*	*$3,672,797*	*$5,754,574*	*$9,427,372*
Total	**$8,150,000**	**$33,161,305**	**$58,330,774**	**$99,642,079**

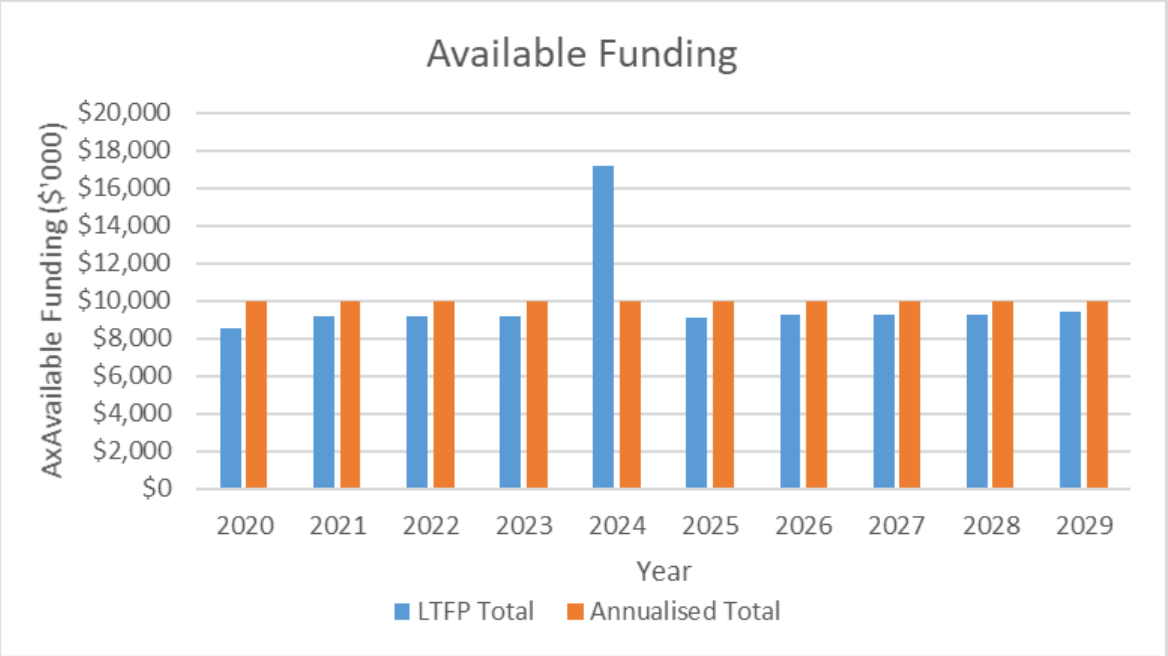


Figure 14: Transport Network funding in the Long-Term Financial Plan

Operations & Maintenance

Operations and Maintenance activities relate to the day-to-day running and upkeep of assets, the costs of which are particularly significant for dynamic/short-lived assets.

Operations expenditure is recurrent expenditure, which is continuously required to provide a service. In common use the term typically includes, eg power, fuel, staff, plant equipment, street sweeping, mowing, on-costs and overheads but excludes maintenance and depreciation.

Maintenance activities are those necessary for retaining an asset as near as practicable to its original condition, including regular ongoing day-to-day work necessary to keep assets functioning and in good repair. It is operating expenditure required to ensure that the asset reaches its expected useful life.

Maintenance Specifications

The links below contain the maintenance specification details (A summary of maintenance activities is attached in *Appendix B – Maintenance Activity Specification*.

Table 28 Operations and Maintenance Documents

Maintenance Specification Details		
Document	*Status*	*Document Reference*
Transport SLA	Up to Date	Draft
Activity Specification	Up to Date	Draft
Maintenance Manual	To be Drafted	

Operations & Maintenance Program

Currently maintenance is managed based on historical information and trends. The maintenance service objectives are to:

- Maintain Council's infrastructure in a safe, serviceable and aesthetic condition to the satisfaction of Council and the community;
- Maintain and preserve the functionality and value of the existing assets;
- To provide and maintain a safe environment for the community within the constraints of Council's financial capacity and resource capability, while displaying a reasonable "duty of care"; and
- Ensure the provision of a high standard of customer service and that customer requests are responded to quickly efficiently.

Council's future operations and maintenance expenditure is based on last financial year's financial statements. This data only provided very limited granularity and insight into the operations and maintenance work it represents. The operations and maintenance expenditure is not broken down into specific tasks. From this data it is not possible to assess whether the level of operations and maintenance being conducted is appropriate or how it will change over the planning period.

The associated increase in required operations and maintenance expenditure has been included Council's adopted growth rate (2.5%).

The projected operations and maintenance expenditure can be seen in *Table* 29 and Figure 15 below.

Table 29 Forecast Operations and Maintenance expenditure

Financial Year Ending	*Operations*	*Maintenance*	*Total*
2020	$225,800	$2,754,790	$2,980,590
2021	$225,800	$2,823,660	$3,049,460
2022	$225,800	$2,894,251	$3,120,051
2023	$225,800	$2,966,608	$3,192,408
2024	$225,800	$3,040,773	$3,266,573
2025	$225,800	$3,116,792	$3,342,592
2026	$225,800	$3,194,712	$3,420,512
2027	$225,800	$3,274,580	$3,500,380
2028	$225,800	$3,356,444	$3,582,244
2029	$225,800	$3,440,355	$3,666,155
Totals	**$2,258,000**	**$30,862,964**	**$33,120,964**

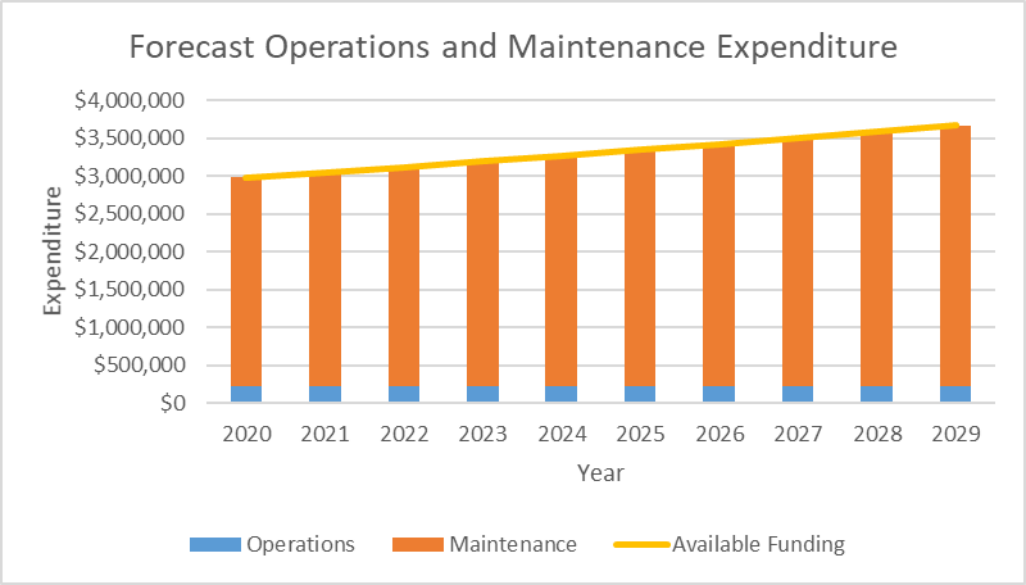


Figure 15: Operations and Maintenance Expenditure Forecasts

The annualised expenditure on operations and maintenance activities for the next 10 years is $3,312,096 per annum

During the condition assessment survey, immediate road maintenance remedial works were identified, as well as any preparatory works required prior to future resealing treatments. These works include any significant shape correction, crack filling and pavement repairs.

In addition, shoulder grading has also been identified on road segments to lower or reshape the road shoulder and improve drainage from the road surface. Ponding of water at the road edge can expedite the deterioration of the road pavement, and significantly increase maintenance costs, as well as bringing forward the timeliness of rehabilitation to renew the road pavement.

These maintenance works have been listed in the Condition Assessment report, however the additional maintenance expenditure has not been quantified and will require inclusion as non-current expenditure in the budget submission documents.

Maintenance Expenditure Ratio

A following ratio is calculated based on the current transport maintenance expenditure ($2.755M) as a percentage of the current replacement value of the transport assets.

Table 30: Operations & Maintenance Funding Ratio

Maintenance Expenditure Ratio	1.03%

This compares favourably to the estimated maintenance expenditure levels based on the depreciation of assets with a condition greater than or equal to 3. The estimated expenditure level is shown in *Table 31 Depreciation Expense levels*.

Table 31 Depreciation Expense levels

Condition	*Annual Depreciation*
3	*$962,633*
4	*$884,261*
5	*$161,313*
Total	***$2,008,207***

The annual depreciation total represents 0.71% of the current replacement cost of the asset base.

Renewals Planning

Renewal expenditure does not increase the asset's design capacity but restores, rehabilitates, replaces, or renews an existing asset to its original or lesser required service potential. Work over and above restoring an asset to original service potential is classed as upgrade or new works expenditure.

The renewals are based on the asset valuation data. Additionally, the assets that had been programmed in Council's capital works program have been included for comparison.

The renewals forecasting includes 3 different approaches as follows:

Depreciation Renewals

This is a 'top down' approach that uses the depreciation or 'consumption' rate as a guide to how much Council should be investing in renewals to effectively maintain the assets. This is calculated from the financial register using valuation data. This does not necessarily reflect the technical condition of the assets or the potential impact on the life of the asset due to changes in maintenance and operational practices.

Condition Renewals

This is a more rigorous 'bottom up' approach that uses the condition of each asset and develops a renewal program on timely investment of expenditure to renew the asset at the end of its life. The forecast renewal expenditure is then more representative of when the expenditure is required. The recommendations of the condition assessment project have been included in this analysis.

Planned Renewals

Council's planned renewals program currently aligns with the condition renewals model. This is higher than the depreciation model suggesting that there are transport assets approaching the end of their service life and requiring attention.

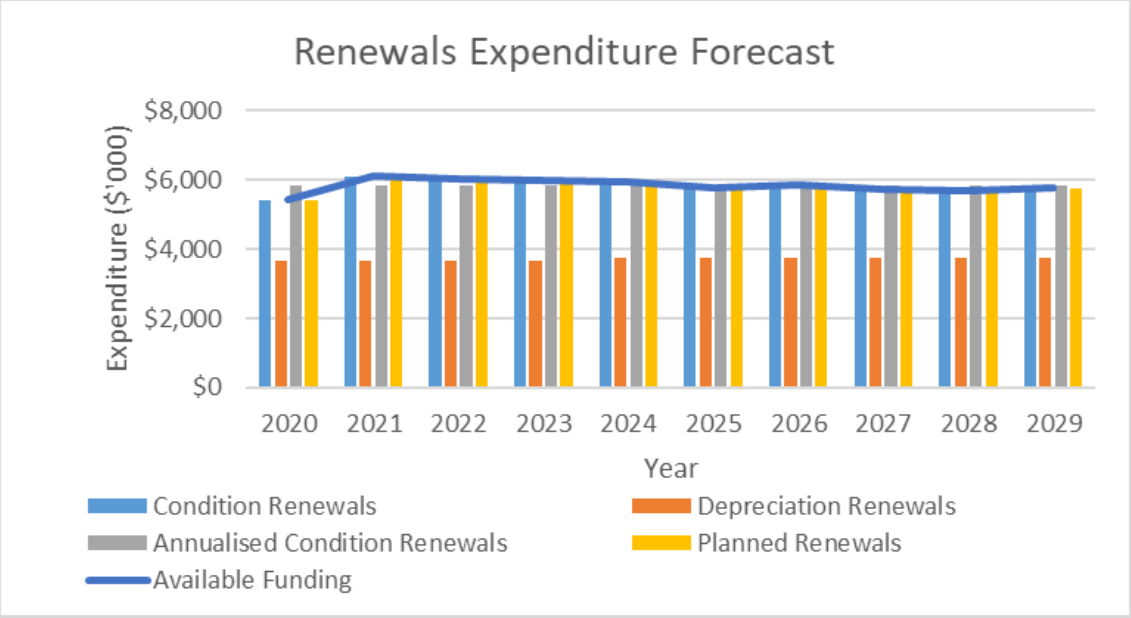


Figure 16 Comparative Renewal Expenditure

Table 32 Forecast renewal expenditure

Financial Year Ending	Condition Renewals	Annualised Condition Renewals	Planned Renewals	Depreciation Renewals
2020	$5,428,396	$5,833,077	$5,428,396	$3,649,777
2021	$6,115,500	$5,833,077	$6,115,500	$3,649,777
2022	$6,032,262	$5,833,077	$6,032,262	$3,649,777
2023	$6,001,950	$5,833,077	$6,001,950	$3,649,777
2024	$5,927,359	$5,833,077	$5,927,359	$3,755,104
2025	$5,796,299	$5,833,077	$5,796,299	$3,755,104
2026	$5,839,863	$5,833,077	$5,839,863	$3,755,104
2027	$5,729,457	$5,833,077	$5,729,457	$3,755,104
2028	$5,705,113	$5,833,077	$5,705,113	$3,755,104
2029	$5,754,574	$5,833,077	$5,754,574	$3,755,104
Total	**$58,330,774**	**$58,330,774**	**$58,330,774**	**$37,129,734**

Renewals Program

This renewal requirement does not include any amount dedicated to a renewal project which upgrades or increases the level of service. Any additional amount for this is to be reported through the New and Upgrade Requirement within the *New and Upgrade* chapter of this AMP.

This plan provides an indicative program information for the renewal of the assets.

The renewal plan based on the condition and remaining life data held against each asset in the asset register has been prepared and is attached in Appendix C – Renewal Plan.

Prior to the adoption of the renewal plan, a review of individual projects and the data held in the register will be validated by inspection and where discrepancies exist the Plan and the recorded data will be amended.

An important outcome from the condition assessments was the development of an indicative retreatment program, the detailed reseal program is included in Appendix C – Renewal Plan. This reseal program is based on raw information from the data analysis with no effort for 'smoothing' of the program peaks or troughs.

The selection of different types of treatments for each individual road are vital to the durability and "whole of life cost" of the road surface, reference was made to the Australian Asphalt Pavements Association, (AAPA), publication, Advisory Note No: 7, to support the selection of products for the retreatments based on climatic conditions and traffic circumstances.

Sections of roadway that have significant pavement and surface defects such as patching, wheel path rutting, and fatigue cracking have been identified for future rehabilitation instead of recommending further surface retreatments. These sections of roadway should be inspected for severity and have been listed in the 10-year works program.

Comparative Renewals Funding Ratio

A following ratio is calculated based on the available renewal funding in the LTFP against the condition based and depreciation-based renewal expenditure forecasts. The Ratio for the different assessment methods is included in *Table 33: Renewal Funding Ratio*.

Table 33: Renewal Funding Ratio

Expenditure Type	*Condition Based*
Asset Renewal Funding Ratio	1.04

A ratio above indicates that Council has allocated funds in the LTFP sufficient to renew transport assets as they reach the end of their useful life.

Renewal Conclusion

Review of the condition assessment information and the dataset shows that the sealed surfaces have been well managed in the past. The assessment represents an opportunity to move from a cyclical reseal program to a condition and needs based program, offering potential to improve the investment in and durability of the sealed surfaces. The changes will mean little impact on the Levels of Service, but the management of the assets will be more succinct.

The outcomes should provide an improved overall perception by the road users of the quality of service provided. It will be imperative to maintain the currency of the dataset, and there must be a commitment to the resources for the data updates for reseal program and costs as completed, so that that data can be used to inform future estimates.

New and Upgrade

New and Upgrade expenditure is for the provision of, or improvement to, an asset where the outlay can reasonably be expected to provide benefits beyond the year of outlay, including a value management approach that aims to produce the most economic and creative solutions.

New/Upgrade Prioritisation Approach

The considerations taken into account when prioritising new/upgrade Projects. The discussion may include some example criteria as documented below:

- New/upgrade projects that involved legislative drivers were prioritised over others that did not, to ensure compliance with statutory requirements.
- Once the legislation assessment was completed, projects were assessed against alignment with approved Council plans, policies, and strategies. This was essential to ensure projects were not being developed outside the scope of strategic Council documents.
- A risk assessment was undertaken, to identify projects with higher risk. This was necessary to identify the consequences and impacts if projects were not undertaken. Projects identified as higher risk were prioritised over those with a lower risk.
- An assessment of community growth and demand based on technical levels of service on services within the Council area was undertaken. This highlighted that projects associated with growth areas such as the northern growth corridor warranted being prioritised over those not located in such an area.
- For projects concerning the upgrade of existing assets, these were given priority over new assets in order to maximise / enhance existing infrastructure before investing in new, additional assets
- Include evidence of a value management approach taking into consideration the Whole of Life costs of each project

New / Upgrade Program

It is an objective of the Community Strategy to undertake projects that generate new infrastructure or upgrade existing infrastructure, therefore Council is currently reviewing its Long-Term Financial Plan to determine if after funding asset operations, maintenance and renewal there is funding available for these works.

Planned New/Upgrade works:

Aerodrome	Install ULP tanks	2020	$150,000
	Main Runway Reconstruction	2024	$5,000,000
	Airport Facilities	2024	$3,000,000

These works are fully funded in the LTFP

Disposal / Rationalisation

Council has undertaken a review of the configuration, type and location of Transport assets and the service delivery process relevant to the activity, when an asset becomes uneconomical to maintain or rehabilitate, or is no longer required.

There is currently no information regarding any assets that may have been disposed of. It has been assumed that all assets on the register are in use.

Disposals

There have been no assets identified for disposal however some asset recorded in the asset register no longer exist, therefore a disposal plan will need to be developed once the asset data issues have been addressed.

Forecast Expenditure

Financial Summary

The forecast expenditure to deliver the planned New/upgrade program, the condition renewal plan and sustain the current level of operations and maintenance is outlined in Table 34 below. This gives a 10-year total of $46.4M.

Table 34: 10-Year Forecast Expenditure

Financial Year Ending	Risk Treatment	New or Upgrade	Operations	Maintenance	Renewals	Total
2020	$0	$150,000	$225,922	$2,754,790	$5,428,396	$8,559,108
2021	$0	$0	$225,922	$2,823,660	$6,115,500	$9,165,082
2022	$0	$0	$225,922	$2,894,251	$6,032,262	$9,152,435
2023	$0	$0	$225,922	$2,966,608	$6,001,950	$9,194,480
2024	$0	$8,000,000	$232,442	$3,040,773	$5,927,359	$17,200,574
2025	$0	$0	$232,442	$3,116,792	$5,796,299	$9,145,533
2026	$0	$0	$232,442	$3,194,712	$5,839,863	$9,267,017
2027	$0	$0	$232,442	$3,274,580	$5,729,457	$9,236,479
2028	$0	$0	$232,442	$3,356,444	$5,705,113	$9,293,999
2029	$0	$0	$232,442	$3,440,355	$5,754,574	$9,427,372
Total	**$0**	**$8,150,000**	**$2,298,341**	**$30,862,964**	**$58,330,774**	**$99,642,079**

The estimated available funding forecast is outlined in Table 27: Long Term Financial Plan above.

The comparison of the projected 10-year expenditure and the funding included in the LTFP can be seen in Figure 17 below.

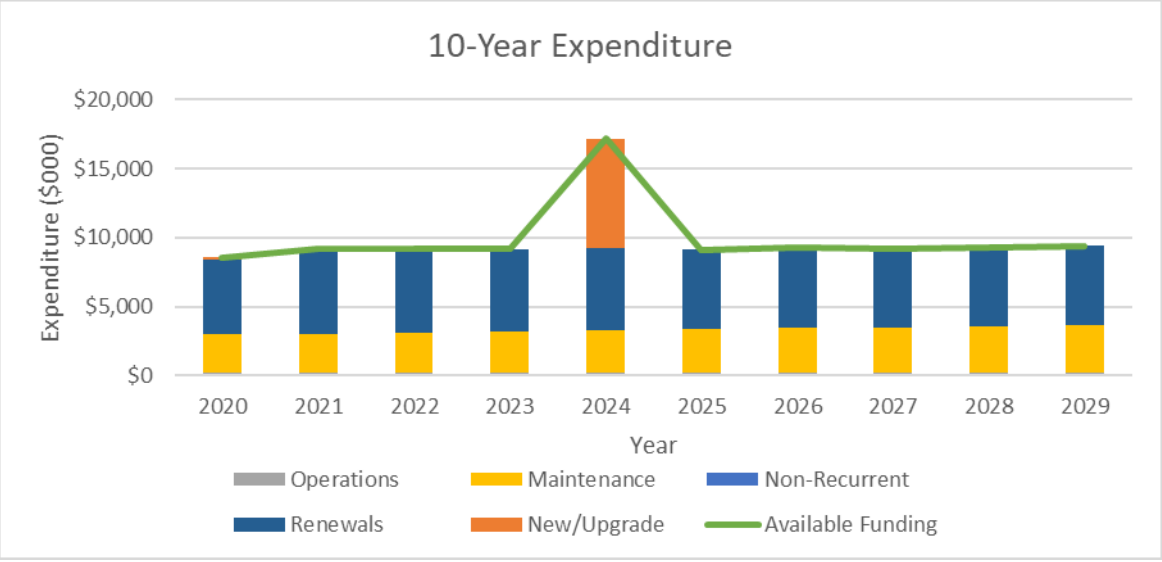


Figure 17: Expenditure Forecast

The 10-year LTFP aligns with the planned works and the condition based renewals programs.

Asset Values

The valuation is based on:

- A review of the asset register;
- Unit rates based on Council's construction costs and published rates; and
- Condition assessments to determine remaining useful life.

Table 35: Asset Valuations

Asset Class	Replacement Cost	Accumulated Depreciation	Fair Value	Annual Depreciation
Transport	$266,704,837	$70,560,092	$196,119,001	$3,975,753

Asset values are forecast to remain the same no new/upgrade capital works are planned at this stage.

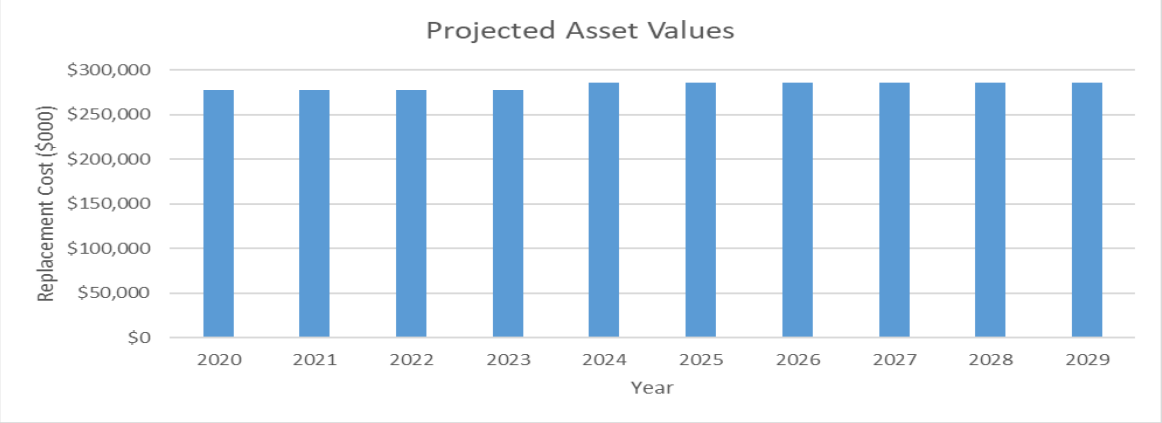


Figure 18: Asset Valuation Forecast

shows the projected asset values over the planning period. The depreciation expense can be seen in Figure 19 below.

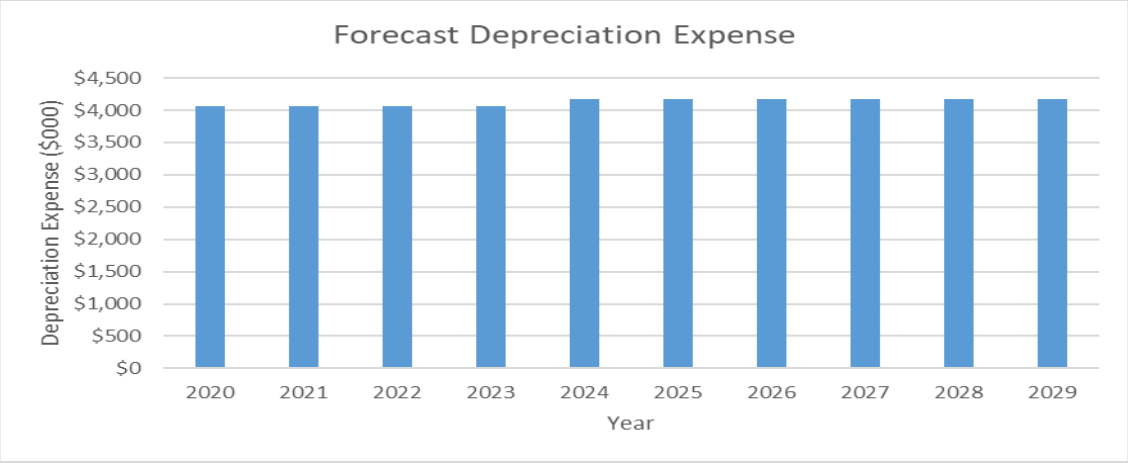


Figure 19: Projected Depreciation Expense

The value of the depreciated assets will vary over the planning period depending on the rates of addition of new assets, disposal of old assets and consumption and renewal of existing assets. The projected value of the depreciated assets is expected to increase as the expenditure on renewals is more than the depreciation rate, this can be seen in Figure 20.

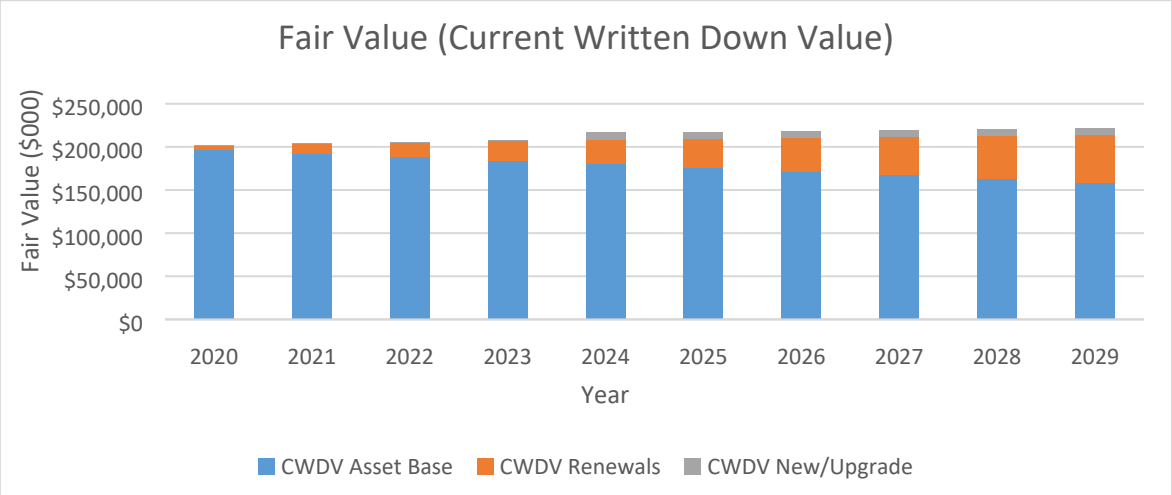


Figure 20: Projected Value of Depreciated Assets

Performance Ratios and Sustainability

Annual Ratios

The sustainability outputs are provided to demonstrate the trends that the currently anticipated expenditure will have on key measures. Capital Expenditure for 2017-2018 is shown in Table 36.

Table 36: Capital Expenditure 2017-2018

Year	*Capital Renewal Expenditure*	*Capital New/Upgrade Expenditure*	*Total Capital Expenditure*
2017-2018	*$4,535,613*	*$4,535,613*	*$9,071,226*

Consumption Ratio

The consumption ratio provides a measure of the percentage of the asset base consumed to date and an indication of how fast the assets are being consumed each year and whether investment may require adjustment.

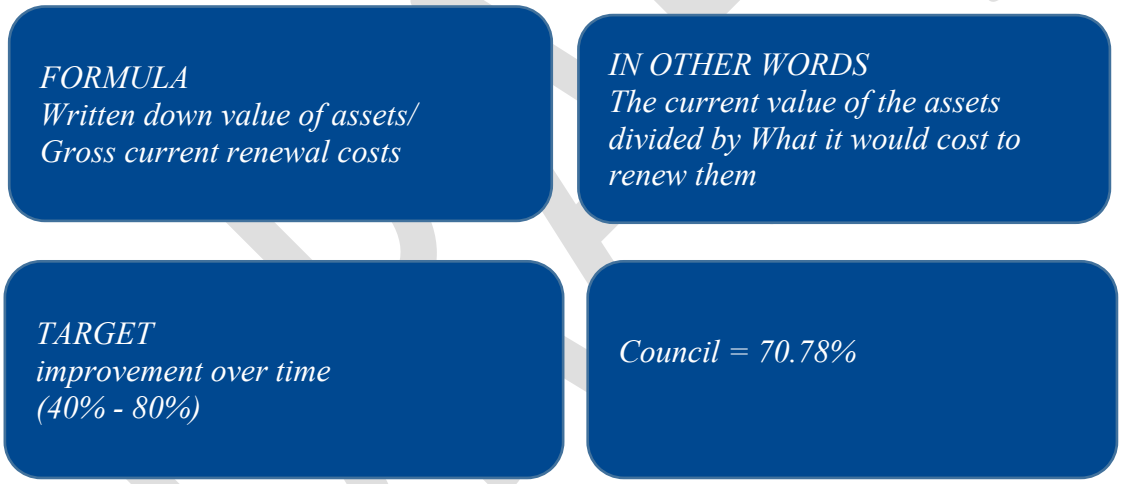


Table 37: Annual Asset Consumption

Annual Asset Consumption (Depreciation/Depreciable Amount)	*1.46%*

The Annual Asset Renewal Ratio provides a measure of the rate of investment in renewals.

Table 38: Annual Asset Renewal

Annual Asset Renewal (Capital Renewal Expenditure/Depreciable Amount)	*1.64%*

The Annual New & Upgrade ratio provides an indication of the rate of growth of the asset base.

Table 39: Annual New & Upgrade Ratio

Annual New/Upgrade *(Capital New & Upgrade / Depreciable Amount)*	1.66%

Sustainability Ratio (Levels of Service)

Knowing the extent and timing of any required increase in funding will assist Council in providing services to their communities in a financially sustainable manner.

There are three key indicators for service delivery sustainability that have been considered in the analysis of the services provided by this asset class. These indicators are:

- Medium term ratios 5 and 10 year.
  This ratio compares the projected operations, maintenance and capital renewal expenditures to the available funding. The Capital renewal estimate is based on the condition of the asset base. This also includes the operations and maintenance expenditure incurred because of planned new and upgraded assets.
  It is an indication of the expenditure required to deliver current levels of service to existing customers and cater for growth.
- Whole of life ratio
  This ratio compares the projected operations, maintenance and capital renewal expenditures to the available funding. The Capital renewal estimate is based on the average annual renewal costs modelled over 100 years.
  It is an indication of the expenditure required to deliver current levels of service to the current customer base over the life of the current asset base.

These forecast expenditures have been compared to funding allocations for the same expenditure types in the 10-year period to identify any funding discrepancies.

FORMULA
Life Cycle Costs (Ops, Maint, Renewal)
Funding Allocation

IN OTHER WORDS
Average annual ops, maint, and renewal costs
Average allocated funding

TARGET
A percentage greater than 90%

Council
5-year = 1002%
10-year = 100%
Whole of Life = 224%

Table 40: Service Sustainability

	5 Year Financial Planning Period	*10 Year Financial Planning Period*	*Annualised Whole of Life Costs*
Forecast Expenditure	*$45,121,679*	*$91,492,079*	*$4,079,270*
Forecast Budget	*$45,121,679*	*$91,492,079*	*$9,149,208*
Funding Surplus	*$0*	*$0*	*$5,069,937*
Funding Ratio	*1.00*	*1.00*	*2.24*

The funding ratios in Table 40 reinforce that there is sufficient funding in the LTFP to deliver Council's Transport services at their current level for the next 10 years.

Plan Improvement

Performance Measures

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

- The degree to which the required cash flows identified in the development of the final plan are incorporated into Council'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;
- The degree to which the existing and projected service levels and service consequences (what we cannot do), risks and residual risks are incorporated into the Council's Strategic Plan associated plans,
- The Asset Renewal Funding Ratio achieving the target of 1.0.

Monitoring and Review Procedures

This 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.

This plan has a life of three years and is due for major review in 2019.

Improvement Plan

An asset management improvement plan generated from this asset management plan is shown in **Error! Reference source not found.**.

Task No.	Task	Responsibility	Resources Required	Timeline
1	Develop a condition assessment program, supported by a data management procedure and Condition assessment manuals	Manager Engineering & Assets	Consultant	May 2019
2	Develop an asset criticality model for this asset class	Manager Engineering & Assets	Consultant	May 2019
3	Confirm current levels of service for the assets and identify future demand impacts on levels of service.	Manager Engineering & Assets	Consultant	May 2019
4	Review asset naming descriptions. Update where necessary.	Manager Engineering & Assets	Staff	Aug 2019
5	Conduct asset inspections, condition assessments and valuation based on new data set.	Manager Engineering & Assets	Consultant	June 2019
6	Develop priority ranking system for renewal/maintenance program.	Manager Engineering & Assets	Consultant	May 2019
7	Review Asset Management processes and procedures and establish new or update as necessary.	Manager Engineering & Assets	Consultant	May 2020
8	Prepare assets financial inputs for financial reporting.	Manager Finance	Staff	July 2019
9	Develop distinction between operations, maintenance and capital works. Consider in this assessment the distinction between maintenance and renewal works. Also consider/review Council's Asset Capitalisation policy.	Manager Engineering & Assets	Consultant	May 2019
10	Develop an asset data confidence model to prioritise data improvement activities	Manager Engineering & Assets	Consultant	June 2019
11	Develop a corporate demand management plan and associated models.	Manager Engineering & Assets	Consultant	Sept 2019
12	Apply the demand management plan to all asset groups, at each level to ensure	Manager Engineering &		

	that Council understands the funding needs to deliver the works.	Assets		
13	Align the Long-Term Financial Plan to the expenditure forecasts found in this Asset Management Plan	Manager Engineering & Assets		
14	Review standard lives for asset components.	Manager Engineering & Assets		
15	Assess remaining life against asset condition	Manager Engineering & Assets		
16	Undertake an annual review and update of this asset management plan.	Manager Engineering & Assets		

Plan

Evaluation of findings

Most of the transport assets (83.5%) are in “as New”, “Good” or “Fair” condition. Of the remaining assets 4.2% ($11.3M) of the transport asset base is in very poor condition, with an additional 12.3% ($32.8M) considered in poor condition and requiring attention. It should be noted that 14.8% of the covered transport assets (road formation, sub-base and base coarse components) have an estimated condition rating based on age and surface condition.

There are seven (7) identified components that have been identified as being at risk and requiring immediate attention. Off these three are in the current works program and are being renewed.

The funding ratios reinforce that there is funding in the LTFP to deliver Council’s Transport services at their current level for the next 10 years.

Way Forward

1. Council adopts the current LTFP, AMP and supporting works programs
2. Council confirm the condition, standard asset lives, and remaining life estimates of its transport assets.
3. Consideration be given to annualising (levelling) the funding allocation in the Long-Term Financial Plan with the renewal programs being adjusted to comply with this funding level.
4. Prior to the adoption of the attached renewal plan, individual projects and the data held in the register be validated by inspection and where discrepancies exist the Plan and the recorded data be amended.
5. The initiatives identified in the AMP improvement plan be implemented.

Appendix A - Asset Management Practices

Council is currently using TechOne financial system for asset accounting processes and related reporting functions. Asset data included in the system is directly integrated with the financial system.

The intention is to record, further develop and consolidate the processes used for asset and services management, and then review the systems available which will complement those processes. The timeframe for that review will be established in the Asset and Services Management Practices Improvement Strategy.

The finance module is the responsibility of the finance department. The engineering and finance departments are jointly responsible for ensuring the integrity of the system and asset financial information overall.

TechOne has an asset database module that Council uses to monitor their assets. In this way the asset and financial data bases can be aligned. The key information flows into this asset management plan are:

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

These will impact the Long-Term Financial Plan, Strategic Longer-Term Plan, annual budget and departmental business plans and budgets.

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

- *Council Corporate Plan (2013-2018).*
- *Council Operational Plan (2015/2016)*
- *Council Asset Management Policy*
- *Council Asset Management Strategy*
- *National Construction Code of Australia*
- *Disability and Discrimination Act*
- *Applicable Australian Standards associated with asset maintenance, renewal and upgrade works.*

Appendix B – Maintenance Activity Specification

Activity No	Activity	Description	Hierarchy	Inspection Frequency	Intervention Level	Maintenance Frequency	Response time	Target Duration	Complaints Target	Asset Custodian	Service Provider	GL Code	Comment
1	Inspections	Defect inspections on all road, footpath, kerb and channel and drainages	Urban Roads Sealed	Three monthly	Inspection cycle and after rain event	per inspection cycle	1 month of when due	Two weeks	200 complaints per year for all roads		Supervisor Roads	OP 1076	There isn't a separate number for Footpath Inspections and they are generally just booked out to the individual road OP number Regional Roads are booked out to individual road numbers State Roads & Highways are booked out to OP 1000 & 1001 OP 1525 1527 & 1529 are for Drainage Inspections and no numbers for Levee & Weir Inspections
			Urban Roads Unseal	Three monthly	Inspection cycle and after rain event	per inspection cycle	1 month of when due	Two weeks			Supervisor Roads	OP 1076	
			Rural Roads Sealed	Three monthly	Inspection cycle and after rain event	per inspection cycle	1 month of when due	Two weeks			Supervisor Roads	OP 1077	
			Rural Roads Unsealed	Three Monthly	Inspection cycle and after rain event	per inspection cycle	1 month of when due	Two weeks			Supervisor Roads	OP 1077	
			Urban Drainage	Three Monthly or after heavy rain evert	Inspection cycle and after rain event	per inspection cycle	1 month of when due	Two weeks	50 annually for drainage and levees		Supervisor Roads		
			Levees and Weirs	12 monthly (Prior to flood season)	Inspection cycle and after rain event	per inspection cycle	1 month of when due	Two weeks			Supervisor Roads		
			Footpath Inspection High traffic areas	6 Monthly	Inspection cycle and after rain event	Inspection cycle	1 month of when due	1 week	100 annually		Supervisor Roads		
			Footpath Inspection other areas	Annually	Inspection cycle and after rain event	Inspection cycle	1 month of when due	Two weeks			Supervisor Roads		
2	Unsealed road grading	Grading Road Surface & Drainage Profile Maintenance	Gravel Roads	Three monthly	Wheel Ruts, shoving – >100mm measured valley to crest	As required as per inspection and storm damage	2 week response time	6-8km per day for light grading 3km per day for heavy grading	25 complaints per year		Supervisor Roads	OPs for individual roads	Fire break maintenance on Gollops Roads is considered a strategic fire break, and funding by RFS. Heavy grading will drop considerably as a number of factors are considered.ie clearing of back cut and cleaning of culverts etc.
					Shoving						Supervisor Roads		
					Insufficient Cross fall – Water ponds or cross fall of 1% or flatter on >20% of road sub length						Supervisor Roads		
					Excessive Cross – Cross fall 8% or steeper on >20% of road sub length						Supervisor Roads		
					Insufficient Formation width – Width of running course (Access 7m, Distributer 7m, Major 6m, Minor 5m, Minor <12vpd 4m)						Supervisor Roads		
					Unsealed roadway defects (namely windows of material, scour channels, corrugations, soft slippery texture, loose material, roughness) – Safe travel speed to less than 70% of environmental speed or rutting and or potholing and or						Supervisor Roads		

Activity No	Activity	Description	Hierarchy	Inspection Frequency	Intervention Level	Maintenance Frequency	Response time	Target Duration	Complaints Target	Asset Custodian	Service Provider	GL Code	Comment
					corrugations < 50mm over 20% of road sub length.								
					Clear Obstructions to culverts and maintain profile						Supervisor Roads		
			Earth roads	Three monthly	As per above	Annually	When graders in area	5-6 for heavy grade, 6-8km per day for light grade	10 per year		Supervisor Roads		
3	Bridge Inspection	Various levels of bridge inspection to identify defects	All bridges	Level 1 - Annually	Frequency Cycle and after flooding event	Frequency Cycle	Within 2 weeks due	One bridge inspection 2 hours	2 bridge complaints per year for all bridges		Supervisor Roads	Regional Road Bridge OP 1065 - 1073 Urban Local Road Bridges OP 1478	Regional roads would be booked out to individual bridges maintenance
			All bridges	Level 2 - Biannually	Frequency Cycle and after flooding event	Frequency Cycle	Within 2 weeks due	One bridge inspection 4 hours			Supervisor Roads		
			All bridges	Level 3 – 4 Yearly	Frequency Cycle	Frequency Cycle	Within 4 weeks due				Supervisor Roads		
4	Road Furniture	Signage, Guideposts, and guardrail/barriers	Regulatory/Warning Signs Missing	Three monthly	Sign Missing, knocked over	As required	2 Days	4 hours	10 Per Year for all signage		Supervisor Roads		
			Regulatory Warning Signs Damaged	Three monthly	Sign faded, damaged	As required	90 Days	4 hours			Supervisor Roads	OP 1075 / 1482	
			Other signs missing	Three monthly	Sign Missing, knocked over	As required	90 Days	4 hours			Supervisor Roads		
			Other signs damaged	Three monthly	Sign faded, damaged	As required	180 days	4 hours			Supervisor Roads		
			Guardrail	Three monthly	Damage preventing normal operation of the guardrail, ie, impact damage	As required	14 days	1 day to repair	2 Per year for all guardrail		Supervisor Roads		For critical guardrail repairs would be assessed ASAP and referred to external bridge building contractor and charged to individual road
			Guardrail critical location	Three monthly	Damage preventing normal operation of the guardrail, ie, impact damage	As required	7 days	1 day to repair			Supervisor Roads		
5	Vegetation Control	Control of trees, shrubs and noxious weeds on all roads	Nature Strips	As required	Vegetation impending the function of asset	as required	2 Weeks	When necessary	1 year		Supervisor Roads		State RMCC Ground vegetation control OP1005 Otherwise the individual road maintenance numbers are used
			Medians	As per inspection time frame	200mm height	Once a month 4 times per year	2 weeks		1 year		Supervisor Roads		
			Town Entrances	As required	Height exceeds 300mm	As required	2Weeks	Twice a year	1 year		Supervisor Roads		
			Rural Roads	As per inspection time frame	Trees or limbs likely to fall close to road way. Shrubs close to signage. Grass more than 300mm. Noxious weeds anytime	Twice per year. Noxious weeds any	2 weeks	When necessary	1		Supervisor Roads		
			Footpaths	As per inspection time frame	Visible from 6 metres	3 Weeks	2 Weeks	As necessary	1		Supervisor Roads		
6	Slashing	Tractor slashing on Rural roads and Urban roads	Rural Roads	As per inspection time frame	Height of vegetation exceeds 300mmMaintain firebreaks	As required	2weeks	3 weeks	1		Supervisor Roads		
			Urban Roads	As per inspection time frame	Height of vegetation exceeds	As required	2 weeks	1 week	1		Supervisor Roads		

Activity No	Activity	Description	Hierarchy	Inspection Frequency	Intervention Level	Maintenance Frequency	Response time	Target Duration	Complaints Target	Asset Custodian	Service Provider	GL Code	Comment
					300mmMaintain firebreaks								
7	Weed Spraying	Weed Spraying rural and urban roads	Shoulder of road Rural and Urban	As per inspection cycle	Height of vegetation exceeds 200mmin pedestrian zones. Height of vegetation exceeds 300mm in areas in rural and urban areas. Vegetation that encroaches into vegetation-free zone Impending the function of or causing damage to a asset. Noxious weeds and fire breaks.	As required	2 weeks	4 weeks	2		Supervisor Roads		
											Supervisor Roads		
			Traffic islands Urban	As per inspection cycle	As required	As required	2 weeks	1 weeks	1		Supervisor Roads		
8	Drainage works	Drainage on rural and urban roads	Urban pipes and drains	As per inspection cycle	The depth of scour exceeds 300mm. Water ponding or restricting flow due to defective or blocked drain-or causing hazard on road or to property. Headwall cracked, needing repair or placement. Pipe or culvert collapsed or misaligned, needing repair or replacement. Defective or blocked subsurface drain including faulty or blocked outlets and flush points. Obstructions in table drains onto road. Obstructions in table drains>300mm	As per inspection cycle	On request Immediately After rain event As per inspection cycle	1 day	50 per year		Supervisor Roads	OP 1526 1528 1530	RMCC are OP1013 & 1014 Rural Roads are booked out to individual road Op numbers
			Open Drains	Annual	When growth impedes flow spraying and excavation works as required	As per inspection cycle of customer request	Within 2 weeks of request or after rain event As per inspection cycle	Up to a week depending on scope of work	10 per year		Supervisor Roads		
9	Litter/Rubbish Cleaning	On Rural and Urban Road side litter collection	Rural area	As per inspection cycle. As needed	Presence of debris that reduces skid resistance of the road surface. Build-up of aggregate or debris on road way requiring removal. Non-critical spills or slippery area.	As required as per inspection cycle	1 Day	1 Week	1		Supervisor Roads	RMCC – OP1006 Booked to individual Road maintenance OP numbers	

Activity No	Activity	Description	Hierarchy	Inspection Frequency	Intervention Level	Maintenance Frequency	Response time	Target Duration	Complaints Target	Asset Custodian	Service Provider	GL Code	Comment
					Critical large spills of oil, or other slippery substances. Small object with a maximum dimension of <100. Large object with a maximum dimension of >200mm								
			Urban area	As per inspection cycle. As needed	As Above						Supervisor Roads		
10	Grids	Cleaning and maintenance of grids in Rural area	Rural roads	As per inspection cycle. As needed. Or as required	Broken grid wings. Broken rails that will cause damage to a vehicle	As per inspection cycle. As needed. Or as required	As per inspection cycle. As needed. Or as required	As per inspection cycle. As needed. Or as required	1		Supervisor Roads	OP 1483 OP 1484	
11	Emergency Call Outs		Emergency trailer	Unknown	Unknown	Trailer once a month	Within the hour	Until site is cleaned up	Unknown		Supervisor Roads	These can be Police or Emergency Services for traffic control, clean ups, street sweeping, heavy plant for fire control and are issued separate OP number for each job	
12	Pot Hole repair	Pot hole repair for Urban and Rural Roads	Sealed Roads	Per Inspection cycle	P1 pothole with diameter <600mm and does not constitute hazard to vehicle. P2 Pothole with dimension <600mm and or depth >40mm and/or hazardous to vehicles. P3 pothole on unsealed pavement with diameter <600mm and does not constitute a hazard to vehicles. P4 Extra-large potholes on unsealed pavement with diameter >600mm and/or depth >100mm or critical location.	As per inspection cycle. As needed. Or customer request	Within a week depending on intervention level	Less than hour	20 per year		Supervisor Roads		
			Unsealed Roads	Per Inspection cycle	As above	As above	As above	Less than an hour once on site	As above		Supervisor Roads	OPs as per individual road list	
13	Dust Suppression	Minimise dust	Gravel Roads	As required	On requests or as needed	As required	2 weeks When plant is available	1 day to a week depending	2 per year		Supervisor Roads	OP as per road list or	

Activity No	Activity	Description	Hierarchy	Inspection Frequency	Intervention Level	Maintenance Frequency	Response time	Target Duration	Complaints Target	Asset Custodian	Service Provider	GL Code	Comment
								on product used					
			Earth Roads	As required	On requests or as needed	As required	2 weeks When plant is available	1 day to a week depending on product used	2 per year		Supervisor Roads	CP if funding approved	
14	Heavy Patches small area	Road failure	ERC roads	As per inspection	Deformation >150mm deep and/or water ponding and/or hazardous to vehicles.	AS required	7 days	1 day	10 per year		Supervisor Roads	OP as per road list	
15	Major Heavy Patches		Rural roads	Per inspection cycle	More than 20m2 or as inspection priority	Per inspection cycle	As per work plan or as directed	Priority 1 Week if asset non-functional	10 Per year		Supervisor Roads	OP as per road list	
			Urban Roads	Per inspection cycle							Supervisor Roads	OP as per road list	
16	Gravel Shoulders on sealed road (Edge Drops)		All ERC Roads sealed	Per inspection cycle	Edge drop off >100mm	3 Months or when required	2 weeks when grader in area	6 to 8km per day	2 per year		Supervisor Roads	OP as per road list	
17	Edge Breaks	Breaking of bitumen edge	All ERC Roads	Per inspection cycle	Edge break >100mm	Per inspection cycle	As needed. Or as required	100m per hour	1 per Year		Supervisor Roads	Large edge breaks will need shoulder grading. OP as per road list	
18	Jet Patching	Repair road surface	Sealed roads	Per inspection cycle	Edge Breaks	Per inspection cycle	2 weeks or as requested	50 m per hour	2 per year		Supervisor Roads	OP as per list	
			Sealed roads	Per inspection cycle	Rutting	Per inspection cycle	2 weeks or as requested	50 metres per hour depending on depth	2 per year		Supervisor Roads	OP as per list	
19	Traffic Island Work	Delineation painting minor repairs cleaning & weed control	Traffic Islands – RMCC	Fortnightly	As required	As required	Within week	½ to 1 day	N/A		Supervisor Roads	OP as per list	
			Other traffic islands	As per maintenance schedule	As required or customer request	As required	Within week	½ to 1 day	N/A		Supervisor Roads	OP as per list	
20	Kerb and Channel Minor Repairs		All ERC K and G	Three monthly	K &G causing damage under 10 metres	Per inspection cycle	1 Month of due date	1 day to 1 week	20 per year		Supervisor Roads	OP 1486	
21	Footpath Replacement	Urban and Rural Areas	Footpaths	As per inspection time frame	Trip 1 - 20mm to 50mm. Trip 2 - with step >10mmand <20mm. water ponding Depression. Water ponding. Missing path	Per inspection Cycle	2 weeks	1 day to 1 week	10 per Year		Supervisor Roads	OP1487	
22	Footpath Maintenance	Patching & grinding of footpaths	All footpaths	As per inspection time frame or Customer request	Trip 1 - 20mm to 50mm. Trip 2 - with step >10mmand <20mm. water ponding Depression. Water ponding.	As required	Within 2 weeks	½ to 1 day	5 Yearly		Supervisor Roads	OP 1487	
23	Drainage work	Installation and repairs to Pits Pipes and	Drainage pits and Pipes	Three monthly	Pit Lids – Broken or Damaged	Per inspection cycle &	As soon as possible	1-2 hours	5 Per year		Supervisor Roads	OP 1526	

Activity No	Activity	Description	Hierarchy	Inspection Frequency	Intervention Level	Maintenance Frequency	Response time	Target Duration	Complaints Target	Asset Custodian	Service Provider	GL Code	Comment
		Culverts				customer request							
			Drainage pits and Pipes	Three monthly	Replace -	Per inspection cycle & customer request	1 to 2 weeks depending on supplies	1 day depending on scope	5 Per year		Supervisor Roads	OP 1527	
			Drainage pits and Pipes	Three monthly	Culvert Maintenance – Cracked or damaged pipes and headwalls	Per inspection cycle & customer request	As soon as possible depending on severity and location	1 day depending on scope	5 Per year		Supervisor Roads	OP 1528	
			Drainage pits and Pipes	(WATER & SEWER CREW)	Litter Trap Maintenance						Supervisor Roads	OP 1529	
			Drainage pits and Pipes	(WATER & SEWER CREW)	Blockages						Supervisor Roads	OP 1530	
24	Line Marking	New lines and maintenance of existing lines		Roads – Line Marking	As per inspection cycle and customer request	Renewal – line marking faded	Annual scheduled spaying by contractor or as needed	Scheduled or within 2 weeks depending on safety issues	1 – 2 weeks for contractors 1 – 5 days depending on scope of other	5 per year	Supervisor Roads	OP as per list for particular road or	
				Roads – Line Marking		New – No line marking	At completion of Project				Supervisor Roads	CP for New work on capital projects	
25	Levee Inspections & Maintenance		Levee & Weir Inspection	Annual and prior to a flood event	As determined by inspection	After Annual Inspection	Immediately leading up to a flood event and within six months after annual inspection	1 - 2 weeks			Supervisor Roads	OP 1544	
			Levee Vegetation Control	Seasonal	As determined by inspection	After Annual Inspection	As above	1 – 2 weeks for mowing and or spraying	1-2 per year		Supervisor Roads	OP 1546	
			Levee Bank Fence & Gates Maintenance	Annual	As determined by inspection	After Annual Inspection	As above	Dependant on type of structure and defect	2-3 per year		Supervisor Roads		
			Levee Pump Maintenance	Annual	As determined by inspection	After Annual Inspection	As above	1 day per pump			Supervisor Roads	OP 1545	
			Weir Maintenance	Annual	As determined by inspection	After Annual Inspection	As above	Dependant on type of structure and defect			Supervisor Roads		
26	Sealed Road Construction	Construction and Re-construction and sealing of Road	Sub Base Test	At completion							Supervisor Roads	CP issued for each new project	
			Base Test	At completion							Supervisor Roads	CP issued for each new project	
			Wearing Surface	At completion							Supervisor Roads	CP issued for each new project	
			Kerb & Gutter	At completion							Supervisor Roads	CP issued for each new project	
			Drainage	At completion							Supervisor Roads	CP issued for each new project	

Activity No	Activity	Description	Hierarchy	Inspection Frequency	Intervention Level	Maintenance Frequency	Response time	Target Duration	Complaints Target	Asset Custodian	Service Provider	GL Code	Comment
27	Unsealed Road Regravel Works										Supervisor Roads		
28	Footpath Ramps and Disabled Access		Ramps	Annual	Depending on inspection result	Depending on inspection or customer request	Within 1 month	2 days	6 per year		Supervisor Roads	CP for each project	
29	Car Parks	Public Car Parks Inspection & Maintenance	Sealed surface	As per activity above							Supervisor Roads	OPs 1446 1448 1452-1459	
			Kerb & Gutter	As per activity above							Supervisor Roads		
			Parking Bays	As per activity above							Supervisor Roads		
			Vegetation Maintenance	As per activity above							Supervisor Roads		
			Litter Trap Maintenance	WATER & SEWER CREW							Supervisor Roads		
30	Boat Ramps	Boat Ramps Inspection & Maintenance	Boat Ramps	Prior to Cod Opening Christmas Easter and Fishing Competition and customer request or storm damage	Dependant on inspection	AS per inspection cycle	1 day for emergency work	Depending on scope of works	6 per year		Supervisor Roads	OP 1489 - 1493	
							Monthly for maintenance over the summer				Supervisor Roads		

Appendix C – Renewal Plans

Asset type	Facility Name	Component Type	Component Name	Condition	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Grand Total
Travel Lanes	**Pretty Pine**	Pavement	**Sub-base**	5	$837,396										$837,396
Travel Lanes	**Pretty Pine**	Pavement	**Sub-base**	4		$840,000	$840,000								$1,680,000
Travel Lanes	**Conargo**	Pavement	**Sub-base**	4				$215,000							$215,000
Travel Lanes	**Conargo**	Pavement	**Base-course**	1				$285,000							$285,000
Travel Lanes	**Conargo**	Pavement	**Base-course**	1				$340,000							$340,000
Travel Lanes	**Conargo**	Pavement	**Sub-base**	5					$140,000						$140,000
Travel Lanes	**Conargo**	Pavement	**Base-course**	1					$340,000						$340,000
Travel Lanes	**Conargo**	Pavement	**Base-course**	1					$360,000						$360,000
Travel Lanes	**Pretty Pine**	Pavement	**Base-course**	1						$305,000					$305,000
Travel Lanes	**Pretty Pine**	Pavement	**Base-course**	1						$585,000					$585,000
Travel Lanes	**Pretty Pine**	Pavement	**Base-course**	1							$225,000				$225,000
Travel Lanes	**Pretty Pine**	Pavement	**Base-course**	1							$20,000				$20,000
Travel Lanes	**Pretty Pine**	Pavement	**Base-course**	1							$545,000				$545,000
Travel Lanes	**Conargo**	Pavement	**Base-course**	1								$125,000			$125,000
Travel Lanes	**Conargo**	Pavement	**Base-course**	1								$10,000			$10,000
Travel Lanes	**Conargo**	Pavement	**Base-course**	1								$10,000			$10,000
Travel Lanes	**Conargo**	Pavement	**Base-course**	1								$430,000			$430,000
Travel Lanes	**Maude**	Pavement	**Base-course**	1									$20,000		$20,000
Travel Lanes	**Maude**	Pavement	**Base-course**	1									$330,000		$330,000
	Future Projects											$265,000	$490,000	$840,000	$1,595,000
Travel Lanes	**Conargo**	Surface	**10mm Seal**	4	$55,000										$55,000
Travel Lanes	**Pretty Pine**	Surface	**2 Coat Initial Seal**	4	$140,000										$140,000
Travel Lanes	**Pretty Pine**	Surface	**10mm Seal**	4	$115,000										$115,000
Travel Lanes	**Pretty Pine**	Surface	**7mm Seal**	4	$100,000										$100,000

Travel Lanes	**Pretty Pine**	Surface	**10mm Seal**	4	$45,000										$45,000
Travel Lanes	**Maude**	Surface	**10mm Seal**	4		$180,000									$180,000
Travel Lanes	**Maude**	Surface	**7mm Seal**	4		$35,000									$35,000
Travel Lanes	**Maude**	Surface	**7mm Seal**	4		$20,000									$20,000
Travel Lanes	**Pretty Pine**	Surface	**2 Coat Initial Seal**	4		$95,000									$95,000
Travel Lanes	**Pretty Pine**	Surface	**7mm Seal**	4		$70,000									$70,000
Travel Lanes	**Pretty Pine**	Surface	**7mm Seal**	4			$65,000								$65,000
Travel Lanes	**Pretty Pine**	Surface	**2 Coat Initial Seal**	4			$60,000								$60,000
Travel Lanes	**Barham**	Surface	**SEAL - Stone**	4			$70,000								$70,000
Travel Lanes	**Barham**	Surface	**SEAL - Stone**	3			$105,000								$105,000
Travel Lanes	**Conargo**	Surface	**10mm Seal**	4			$150,000								$150,000
Travel Lanes	**Conargo**	Surface	**10mm Seal**	4				$60,000							$60,000
Travel Lanes	**Conargo**	Surface	**7mm Seal**	4				$38,000							$38,000
Travel Lanes	**Conargo**	Surface	**SEAL - Stone**	4				$42,000							$42,000
Travel Lanes	**Conargo**	Surface	**10mm Seal**	3				$180,000							$180,000
Travel Lanes	**Conargo**	Surface	**10mm Seal**	3				$60,000							$60,000
Travel Lanes	**Conargo**	Surface	**10mm Seal**	3				$50,000							$50,000
Travel Lanes	**Pretty Pine**	Surface	**14mm Seal**	3					$30,000						$30,000
Travel Lanes	**Pretty Pine**	Surface	**2 Coat Initial Seal**	4					$60,000						$60,000
Travel Lanes	**Pretty Pine**	Surface	**10mm Seal**	4					$35,000						$35,000
Travel Lanes	**Pretty Pine**	Surface	**14mm Seal**	4					$35,000						$35,000
Travel Lanes	**Pretty Pine**	Surface	**10mm Seal**	4					$180,000						$180,000
Travel Lanes	**Conargo**	Surface	**SEAL - Stone**	3					$80,000						$80,000
Travel Lanes	**Conargo**	Surface	**14mm Seal**	3						$25,000					$25,000
Travel Lanes	**Conargo**	Surface	**7mm Seal**	3						$10,000					$10,000
Travel Lanes	**Wakool**	Surface	**SEAL - Stone**	4						$58,000					$58,000
Travel Lanes	**Conargo**	Surface	**SEAL - Stone**	3						$85,000					$85,000
Travel Lanes	**Conargo**	Surface	**7mm Seal**	3						$82,000					$82,000
Travel Lanes	**Conargo**	Surface	**14mm Seal**	3						$76,000					$76,000
Travel Lanes	**Conargo**	Surface	**10mm Seal**	3						$64,000					$64,000
Travel Lanes	**Conargo**	Surface	**10mm Seal**	3							$25,000				$25,000
Travel Lanes	**Pretty Pine**	Surface	**2 Coat Initial Seal**	3							$60,000				$60,000
Travel Lanes	**Pretty Pine**	Surface	**2 Coat Initial Seal**	3							$56,000				$56,000
Travel Lanes	**Pretty Pine**	Surface	**10mm Seal**	3							$52,000				$52,000
Travel Lanes	**Pretty Pine**	Surface	**7mm Seal**	3							$40,000				$40,000
Travel Lanes	**Pretty Pine**	Surface	**7mm Seal**	3							$22,000				$22,000
Travel Lanes	**Pretty Pine**	Surface	**2 Coat Initial Seal**	3							$95,000				$95,000
Travel Lanes	**Pretty Pine**	Surface	**2 Coat Initial Seal**	3							$58,000				$58,000
Travel Lanes	**Conargo**	Surface	**7mm Seal**	3							$42,000				$42,000
Travel Lanes	**Pretty Pine**	Surface	**14mm Seal**	3								$36,000			$36,000
Travel Lanes	**Conargo**	Surface	**14mm Seal**	3								$35,000			$35,000
Travel Lanes	**Conargo**	Surface	**14mm Seal**	3								$35,000			$35,000
Travel Lanes	**Conargo**	Surface	**SEAL - Stone**	3								$30,000			$30,000

Travel Lanes	**Conargo**	Surface	**7mm Seal**	3								$26,000			$26,000
Travel Lanes	**Conargo Truck Bay (Sth)**	Surface	**2 Coat Initial Seal**	3								$10,000			$10,000
Travel Lanes	**Conargo**	Surface	**7mm Seal**	3								$10,000			$10,000
Travel Lanes	**Conargo**	Surface	**10mm Seal**	3								$94,000			$94,000
Travel Lanes	**Conargo**	Surface	**10mm Seal**	3								$84,000			$84,000
Travel Lanes	**Conargo**	Surface	**10mm Seal**	3								$40,000			$40,000
Travel Lanes	**Conargo**	Surface	**10mm Seal**	3									$40,000		$40,000
Travel Lanes	**Conargo**	Surface	**7mm Seal**	3									$34,000		$34,000
Travel Lanes	**Conargo**	Surface	**10mm Seal**	3									$34,000		$34,000
Travel Lanes	**Maude**	Surface	**7mm Seal**	3									$48,000		$48,000
Travel Lanes	**Maude**	Surface	**10mm Seal**	3									$66,000		$66,000
Travel Lanes	**Pretty Pine**	Surface	**10mm Seal**	3									$72,000		$72,000
Travel Lanes	**Pretty Pine**	Surface	**7mm Seal**	3									$68,000		$68,000
Travel Lanes	**Pretty Pine**	Surface	**7mm Seal**	3									$12,000		$12,000
Travel Lanes	**Pretty Pine**	Surface	**0**	3									$12,000		$12,000
Travel Lanes	**Pretty Pine**	Surface	**14mm Seal**	2									$36,000		$36,000
Travel Lanes	**Pretty Pine**	Surface	**2 Coat Initial Seal**	3										$56,000	$56,000
Travel Lanes	**Barham**	Surface	**SEAL - Stone**	2										$28,000	$28,000
Travel Lanes	**Barham**	Surface	**SEAL - Stone**	2										$80,000	$80,000
Travel Lanes	**Conargo**	Surface	**14mm Seal**	2										$18,000	$18,000
Travel Lanes	**Conargo**	Surface	**Asphalt**	2										$54,000	$54,000
Travel Lanes	**Conargo**	Surface	**SEAL - Stone**	2										$64,000	$64,000
Travel Lanes	**Conargo**	Surface	**7mm Seal**	2										$70,000	$70,000
Travel Lanes	**Conargo**	Surface	**10mm Seal**	2										$70,000	$70,000
Travel Lanes	**Charlotte**				$435,000										$435,000
Travel Lanes	**Charlotte**				$435,000										$435,000
Travel Lanes	**Macauley**				$190,000										$190,000

	Future Projects					$960,000	$960,000	$960,000	$960,000	$770,000	$770,000	$770,000	$770,000	$770,000	$7,690,000
	Rice Mill Road		**Railway line to Saleyards Road**		$180,000										$180,000
	Wood Street		**Napier Street to Edwardes street**		$233,000										$233,000
	Macauley Street		**Wood Street to Henry Street**		$130,000										$130,000
	Cressy Street		**Hardinge Street top Macauley Street**		$130,000										$130,000
	Hetherington Street		**Norris Court to Hughes Street**		$22,000										$22,000
	Kelly Street		**Ochtertyre Street to 464 Kelly Street**			$280,000									$280,000
	Kelly Street		**464 Kelly Street to Steweart Street**			$100,000									$100,000
	Jane Street		**Kelly Street to Stewart Street**			$140,000									$140,000
	Stewart Street		**Ochtertyre Street to Sloane Street**				$350,000								$350,000
	Jones Street		**Davidson Street to end**				$100,000								$100,000
	George Street		**Butler Street to end**				$100,000								$100,000
Travel Lanes	**Logie Brae**	Pavement	**Sub-base and base course**	5				$520,000	$520,000						$1,040,000
Travel Lanes	**Middletons**	Pavement	**Sub-base and base course**	5						$480,000					$480,000
Travel Lanes	**Millears**	Pavement	**Sub-base and base course**	1							$210,000				$210,000
Travel Lanes	**Millears**	Pavement	**Sub-base and base course**	5							$210,000				$210,000
	Local Road Shoulder Reconstruction					$580,000	$580,000	$580,000	$580,000	$580,000	$580,000	$580,000	$580,000	$580,000	$5,220,000
	Future Projects										$150,000	$500,000	$500,000	$500,000	$1,650,000
Travel Lanes	**Booroorban - Tchelery**	Surface	**10mm Seal**	4	$70,000										$70,000
Travel Lanes	**Burton**	Surface	**SEAL - Stone**	4	$20,000										$20,000
Travel Lanes	**Cemetery Internal Road**	Surface	**SEAL - Stone**	4	$10,000										$10,000
Travel Lanes	**Cemetery Internal Road**	Surface	**SEAL - Stone**	4	$8,000										$8,000
Travel Lanes	**Crispe**	Surface	**SEAL - Stone**	4	$20,000										$20,000
Travel Lanes	**Crispe**	Surface	**SEAL - Stone**	4	$15,000										$15,000
Travel Lanes	**Dick**	Surface	**SEAL - Stone**	4	$25,000										$25,000
	George Street Carpark	Surfae	**SEAL - Stone**	4	$20,000										$20,000

	George Street (Peppin Carpark)	Surfae	**SEAL - Stone**	4	$5,000										$5,000
Travel Lanes	**Hardinge**	Surface	**SEAL - Stone**	4	$10,000										$10,000
Travel Lanes	**Harfleur**	Surface	**SEAL - Stone**	4	$30,000										$30,000
Travel Lanes	**Jefferson**	Surface	**SEAL - Stone**	4	$10,000										$10,000
Travel Lanes	**Macknight**	Surface	**SEAL - Stone**	4	$30,000										$30,000
Travel Lanes	**Millears**	Surface	**7mm Seal**	4	$120,000										$120,000
Travel Lanes	**Millears**	Surface	**7mm Seal**	4	$90,000										$90,000
Travel Lanes	**Moonee Swamp**	Surface	**2 Coat Initial Seal**	4	$65,000										$65,000
Travel Lanes	**Napier**	Surface	**SEAL - Stone**	4	$90,000										$90,000
Travel Lanes	**Napier**	Surface	**SEAL - Stone**	4	$30,000										$30,000
Travel Lanes	**Poictiers**	Surface	**SEAL - Stone**	4	$30,000										$30,000
Travel Lanes	**Ricemill**	Surface	**SEAL - Stone**	4	$40,000										$40,000
Travel Lanes	**Robertson**	Surface	**SEAL - Stone**	5	$20,000										$20,000
Travel Lanes	**Russell**	Surface	**SEAL - Stone**	4	$30,000										$30,000
Travel Lanes	**Saleyards**	Surface	**SEAL - Stone**	4	$75,000										$75,000
Travel Lanes	**Victoria**	Surface	**SEAL - Stone**	4	$22,000										$22,000
Travel Lanes	**Victoria**	Surface	**SEAL - Stone**	4	$10,000										$10,000
Travel Lanes	**Wilkinson**	Surface	**SEAL - Stone**	4	$10,000										$10,000
Travel Lanes	**Wyse**	Surface	**SEAL - Stone**	4	$5,000										$5,000
Travel Lanes	**Wyse**	Surface	**SEAL - Stone**	4	$5,000										$5,000
Travel Lanes	**Wyse**	Surface	**SEAL - Stone**	4	$3,000										$3,000
Travel Lanes	**Wyse**	Surface	**SEAL - Stone**	4	$2,000										$2,000
Travel Lanes	**Abattoir**	Surface	**SEAL - Stone**	4		$10,000									$10,000
Travel Lanes	**Aratula South**	Surface	**7mm Seal**	4		$30,000									$30,000
Travel Lanes	**Aratula South**	Surface	**7mm Seal**	4		$25,000									$25,000
Travel Lanes	**Augustus**	Surface	**SEAL - Stone**	4		$23,000									$23,000
Travel Lanes	**Blighty Hall**	Surface	**14mm Seal**	4		$5,000									$5,000
Travel Lanes	**Booroorban - Tchelery**	Surface	**5mm Seal**	4		$44,000									$44,000
Travel Lanes	**Burton**	Surface	**SEAL - Stone**	4		$17,000									$17,000
Travel Lanes	**Burton**	Surface	**SEAL - Stone**	4		$15,000									$15,000
Travel Lanes	**Crispe**	Surface	**SEAL - Stone**	4		$35,000									$35,000
Travel Lanes	**Crispe**	Surface	**SEAL - Stone**	4		$20,000									$20,000
Travel Lanes	**Crispe**	Surface	**SEAL - Stone**	4		$5,000									$5,000
Travel Lanes	**Edwardes**	Surface	**SEAL - Stone**	4		$32,000									$32,000
Travel Lanes	**Edwardes**	Surface	**SEAL - Stone**	4		$16,000									$16,000

Travel Lanes	**Edwardes**	Surface	**SEAL - Stone**	4		$14,000									$14,000
Travel Lanes	**Harfleur**	Surface	**SEAL - Stone**	4		$22,000									$22,000
Travel Lanes	**Harfleur**	Surface	**SEAL - Stone**	4		$22,000									$22,000
Travel Lanes	**Hartwood**	Surface	**7mm Seal**	4		$170,000									$170,000
Travel Lanes	**Hartwood**	Surface	**7mm Seal**	4		$50,000									$50,000
Travel Lanes	**Hartwood**	Surface	**7mm Seal**	4		$40,000									$40,000
Travel Lanes	**Hyde**	Surface	**SEAL - Stone**	4		$15,000									$15,000
Travel Lanes	**Junction**	Surface	**SEAL - Stone**	4		$32,000									$32,000
Travel Lanes	**Junction**	Surface	**SEAL - Stone**	4		$20,000									$20,000
Travel Lanes	**Junction**	Surface	**SEAL - Stone**	4		$13,000									$13,000
Travel Lanes	**Macauley**	Surface	**SEAL - Stone**	4		$30,000									$30,000
Travel Lanes	**Maher**	Surface	**SEAL - Stone**	4		$28,000									$28,000
Travel Lanes	**Mazamet**	Surface	**SEAL - Stone**	4		$10,000									$10,000
Travel Lanes	**Mitre 10 Access**	Surface	**SEAL - Stone**	4		$10,000									$10,000
Travel Lanes	**Napier**	Surface	**SEAL - Stone**	4		$20,000									$20,000
Travel Lanes	**Napier**	Surface	**SEAL - Stone**	4		$20,000									$20,000
Travel Lanes	**Nesbits**	Surface	**7mm Seal**	4		$32,000									$32,000
Travel Lanes	**Riverside**	Surface	**SEAL - Stone**	4		$15,000									$15,000
Travel Lanes	**Russell**	Surface	**SEAL - Stone**	4		$15,000									$15,000
Travel Lanes	**Victoria**	Surface	**SEAL - Stone**	4		$30,000									$30,000
Travel Lanes	**Victoria**	Surface	**SEAL - Stone**	4		$10,000									$10,000
Travel Lanes	**Wood**	Surface	**SEAL - Stone**	4		$20,000									$20,000
Travel Lanes	**Butler**	Surface	**SEAL - Stone**	4		$15,000									$15,000
Travel Lanes	**Dick**	Surface	**SEAL - 10mm**	4		$25,000									$25,000
Travel Lanes	**Dick**	Surface	**SEAL - Stone**	4		$10,000									$10,000
Travel Lanes	**Dick**	Surface	**SEAL - 10mm**	4		$25,000									$25,000
Travel Lanes	**Dick**	Surface	**SEAL - Stone**	4		$10,000									$10,000
Travel Lanes	**Fowler**	Surface	**SEAL - Stone**	4		$26,000									$26,000
Travel Lanes	**George**	Surface	**SEAL - Stone**	4		$13,000									$13,000
Travel Lanes	**Gillespie**	Surface	**SEAL - Stone**	4		$14,000									$14,000
Travel Lanes	**Golf Club**	Surface	**SEAL - Stone**	4		$30,000									$30,000
Travel Lanes	**Harfleur**	Surface	**SEAL - Stone**	4		$32,000									$32,000
Travel Lanes	**Harrison**	Surface	**SEAL - Stone**	4			$27,000								$27,000
Travel Lanes	**Henry**	Surface	**SEAL - Stone**	4			$25,000								$25,000
Travel Lanes	**Henry**	Surface	**SEAL - Stone**	4			$22,000								$22,000
Travel Lanes	**Junction**	Surface	**SEAL - Stone**	4			$30,000								$30,000
Travel Lanes	**Junction**	Surface	**SEAL - Stone**	4			$20,000								$20,000
Travel Lanes	**Junction**	Surface	**SEAL - Stone**	4			$10,000								$10,000
Travel Lanes	**Logie Brae**	Surface	**14mm Seal**	4			$170,000								$170,000
Travel Lanes	**Macauley**	Surface	**SEAL - Stone**	4			$25,000								$25,000
Travel Lanes	**Macauley**	Surface	**SEAL - Stone**	4			$25,000								$25,000
Travel Lanes	**Mayrung**	Surface	**10mm Seal**	4			$42,000								$42,000
Travel Lanes	**Mayrung**	Surface	**7mm Seal**	4			$5,000								$5,000
Travel Lanes	**Millears**	Surface	**7mm Seal**	4			$20,000								$20,000
Travel Lanes	**Norris**	Surface	**SEAL - Stone**	4			$18,000								$18,000
Travel Lanes	**Poictiers**	Surface	**SEAL - Stone**	4			$40,000								$40,000
Travel Lanes	**Poictiers**	Surface	**SEAL - Stone**	4			$25,000								$25,000
Travel Lanes	**Russell**	Surface	**SEAL - Stone**	4			$20,000								$20,000
Travel Lanes	**Russell**	Surface	**SEAL - Stone**	4			$18,000								$18,000
Travel Lanes	**Russell**	Surface	**SEAL - Stone**	4			$18,000								$18,000
Travel Lanes	**Sloane**	Surface	**SEAL - Stone**	4			$22,000								$22,000
Travel Lanes	**Sloane**	Surface	**SEAL - Stone**	4			$20,000								$20,000

Travel Lanes	**Wanganella-Moulamein**	Surface	**2 Coat Initial Seal**	4			$45,000								$45,000
Travel Lanes	**Wanganella-Moulamein**	Surface	**5mm Seal**	4			$8,000								$8,000
Travel Lanes	**Wanganella-Moulamein**	Surface	**5mm Seal**	4			$5,000								$5,000
Travel Lanes	**Waring**	Surface	**SEAL - Stone**	4			$15,000								$15,000
Travel Lanes	**Watson**	Surface	**SEAL - Stone**	4			$10,000								$10,000
Travel Lanes	**Wellington**	Surface	**SEAL - Stone**	4			$30,000								$30,000
Travel Lanes	**Wenburn**	Surface	**SEAL - Stone**	4			$5,000								$5,000
Travel Lanes	**Whitelock**	Surface	**SEAL - Stone**	4			$30,000								$30,000
Travel Lanes	**Butler**	Surface	**SEAL - Stone**	4			$33,000								$33,000
Travel Lanes	**Chandler**	Surface	**SEAL - 7mm**	4			$10,000								$10,000
Travel Lanes	**Charlotte**	Surface	**SEAL - Stone**	4			$33,000								$33,000
Travel Lanes	**Charlotte**	Surface	**SEAL - Stone**	4			$31,000								$31,000
Travel Lanes	**Charlotte**	Surface	**SEAL - Stone**	4			$30,000								$30,000
Travel Lanes	**Cooinda**	Surface	**SEAL - Stone**	4			$43,000								$43,000
Travel Lanes	**Cressy**	Surface	**SEAL - Stone**	4			$30,000								$30,000
Travel Lanes	**Cressy**	Surface	**SEAL - Stone**	4			$30,000								$30,000
Travel Lanes	**Abattoir**	Surface	**SEAL - Stone**	4			$10,000								$10,000
Travel Lanes	**Amy**	Surface	**SEAL - Stone**	4				$15,000							$15,000
Travel Lanes	**Blighty Hall**	Surface	**10mm Seal**	4				$65,000							$65,000
Travel Lanes	**Blighty Hall**	Surface	**7mm Seal**	4				$5,000							$5,000
Travel Lanes	**Box**	Surface	**SEAL - Stone**	4				$10,000							$10,000
Travel Lanes	**Boyd**	Surface	**SEAL - Stone**	4				$10,000							$10,000
Travel Lanes	**Edwardes**	Surface	**SEAL - Stone**	4				$15,000							$15,000
Travel Lanes	**Flanagans**	Surface	**SEAL - Stone**	4				$75,000							$75,000
Travel Lanes	**Harfleur**	Surface	**SEAL - Stone**	4				$30,000							$30,000
Travel Lanes	**Harfleur**	Surface	**SEAL - Stone**	4				$25,000							$25,000
Travel Lanes	**Hartwood**	Surface	**7mm Seal**	4				$30,000							$30,000
Travel Lanes	**Henry**	Surface	**SEAL - Stone**	4				$30,000							$30,000
Travel Lanes	**Henry**	Surface	**SEAL - Stone**	4				$20,000							$20,000
Travel Lanes	**Hughes**	Surface	**SEAL - 10mm**	4				$15,000							$15,000
Travel Lanes	**Jones**	Surface	**SEAL - Stone**	4				$8,000							$8,000
Travel Lanes	**Junction**	Surface	**SEAL - Stone**	4				$20,000							$20,000
Travel Lanes	**Macauley**	Surface	**SEAL - Stone**	4				$30,000							$30,000
Travel Lanes	**Macauley**	Surface	**SEAL - Stone**	4				$15,000							$15,000
Travel Lanes	**Macauley**	Surface	**SEAL - Stone**	4				$10,000							$10,000
Travel Lanes	**Macknight**	Surface	**SEAL - Stone**	4				$40,000							$40,000
Travel Lanes	**Maher**	Surface	**SEAL - Stone**	4				$28,000							$28,000
Travel Lanes	**Moonee Swamp**	Surface	**SEAL - Stone**	4				$76,000							$76,000
Travel Lanes	**Moonee Swamp**	Surface	**SEAL - Stone**	4				$45,000							$45,000
Travel Lanes	**Moonee Swamp**	Surface	**SEAL - Stone**	4				$22,000							$22,000
Travel Lanes	**Ochtertyre**	Surface	**SEAL - Stone**	4				$15,000							$15,000
Travel Lanes	**Poictiers**	Surface	**SEAL - Stone**	4				$15,000							$15,000
Travel Lanes	**Poictiers**	Surface	**SEAL - Stone**	4				$25,000							$25,000
Travel Lanes	**Poictiers**	Surface	**SEAL - Stone**	4				$25,000							$25,000
Travel Lanes	**Robinson**	Surface	**SEAL - Stone**	4				$10,000							$10,000
Travel Lanes	**Ross**	Surface	**SEAL - Stone**	4				$10,000							$10,000
Travel Lanes	**Saleyards**	Surface	**SEAL - Stone**	4				$80,000							$80,000
Travel Lanes	**Stratton**	Surface	**SEAL - Stone**	4				$10,000							$10,000
Travel Lanes	**Theis**	Surface	**SEAL - 10mm**	4				$10,000							$10,000
Travel Lanes	**Victoria**	Surface	**SEAL - Stone**	4				$23,000							$23,000
Travel Lanes	**Wanganella-Moulamein**	Surface	**5mm Seal**	4				$38,000							$38,000
Travel Lanes	**Whitelock**	Surface	**SEAL - Stone**	4				$35,000							$35,000

Travel Lanes	**Wirraway**	Surface	**SEAL - Stone**	4				$30,000							$30,000
Travel Lanes	**Browning**	Surface	**SEAL - Stone**	5				$12,000							$12,000
Travel Lanes	**Cemetery Internal Road**	Surface	**SEAL - Stone**	5				$8,000							$8,000
Travel Lanes	**Duncan**	Surface	**SEAL - Stone**	5				$15,000							$15,000
Travel Lanes	**Harfleur**	Surface	**SEAL - Stone**	5					$15,000						$15,000
Travel Lanes	**Harfleur**	Surface	**SEAL - Stone**	5					$12,000						$12,000
Travel Lanes	**Jane**	Surface	**SEAL - Stone**	5					$10,000						$10,000
Travel Lanes	**Kelly**	Surface	**SEAL - 14mm**	5					$32,000						$32,000
Travel Lanes	**Kelly**	Surface	**SEAL - Stone**	5					$12,000						$12,000
Travel Lanes	**Kelly**	Surface	**SEAL - Stone**	5					$5,000						$5,000
Travel Lanes	**Ricemill**	Surface	**SEAL - Stone**	5					$15,000						$15,000
Travel Lanes	**School**	Surface	**SEAL - Stone**	5					$5,000						$5,000
Travel Lanes	**Stewart**	Surface	**SEAL - Stone**	5					$40,000						$40,000
Travel Lanes	**Wood**	Surface	**SEAL - Stone**	5					$28,000						$28,000
Travel Lanes	**Cressy**	Surface	**SEAL - Stone**	3					$26,000						$26,000
Travel Lanes	**Eastmans**	Surface	**7mm Seal**	3					$30,000						$30,000
Travel Lanes	**Wellington**	Surface	**SEAL - Stone**	3					$20,000						$20,000
Travel Lanes	**Wilkinson**	Surface	**SEAL - Stone**	3					$12,000						$12,000
Travel Lanes	**Barnes**	Surface	**7mm Seal**	3					$30,000						$30,000
Travel Lanes	**Barnes**	Surface	**7mm Seal**	3					$6,000						$6,000
Travel Lanes	**Box**	Surface	**SEAL - Stone**	3					$10,000						$10,000
Travel Lanes	**Burton**	Surface	**SEAL - Stone**	3					$10,000						$10,000
Travel Lanes	**Campbell**	Surface	**SEAL - Stone**	3					$12,000						$12,000
Travel Lanes	**Carl**	Surface	**SEAL - Stone**	3					$6,000						$6,000
Travel Lanes	**Cressy**	Surface	**SEAL - Stone**	3					$22,000						$22,000
Travel Lanes	**Edwardes**	Surface	**SEAL - Stone**	3					$8,000						$8,000
Travel Lanes	**George**	Surface	**SEAL - 7mm**	3					$30,000						$30,000
Travel Lanes	**Harfleur**	Surface	**SEAL - Stone**	3					$22,000						$22,000
Travel Lanes	**George**	Surface	**SEAL - 7mm**	3					$30,000						$30,000
Travel Lanes	**Harfleur**	Surface	**SEAL - Stone**	3					$22,000						$22,000
Travel Lanes	**Hebbard**	Surface	**SEAL - Stone**	3					$10,000						$10,000
Travel Lanes	**Henry**	Surface	**SEAL - Stone**	3					$28,000						$28,000
Travel Lanes	**Lindifferon**	Surface	**7mm Seal**	3					$58,000						$58,000
Travel Lanes	**Macauley**	Surface	**SEAL - Stone**	3					$15,000						$15,000
Travel Lanes	**Macauley**	Surface	**SEAL - Stone**	3					$15,000						$15,000
Travel Lanes	**Mayrung**	Surface	**14mm Seal**	3					$55,000						$55,000
Travel Lanes	**Mayrung**	Surface	**14mm PMB Seal**	3					$25,000						$25,000
Travel Lanes	**Mayrung**	Surface	**10mm Seal**	3					$10,000						$10,000
Travel Lanes	**Mayrung**	Surface	**14mm PMB Seal**	3					$3,000						$3,000
Travel Lanes	**Ballantyne**	Surface	**SEAL - Stone**	3					$18,000						$18,000
Travel Lanes	**Memorial**	Surface	**SEAL - Stone**	3					$5,000						$5,000
Travel Lanes	**Middletons**	Surface	**10mm PMB Seal**	3					$80,000						$80,000
Travel Lanes	**Middletons**	Surface	**14mm Seal**	3					$5,000						$5,000
Travel Lanes	**Millears**	Surface	**7mm Seal**	3					$98,000						$98,000
Travel Lanes	**Mokanger**	Surface	**7mm Seal**	3					$58,000						$58,000
Travel Lanes	**Mokanger**	Surface	**7mm Seal**	3					$6,000						$6,000
Travel Lanes	**Moonee Swamp**	Surface	**10mm Seal**	3					$42,000						$42,000
Travel Lanes	**Noyes**	Surface	**SEAL - Stone**	3					$10,000						$10,000
Travel Lanes	**Ochtertyre**	Surface	**SEAL - Stone**	3					$15,000						$15,000
Travel Lanes	**Ochtertyre**	Surface	**SEAL - Stone**	3					$12,000						$12,000
Travel Lanes	**Ochtertyre**	Surface	**SEAL - Stone**	3					$8,000						$8,000
Travel Lanes	**Ochtertyre**	Surface	**SEAL - Stone**	3					$6,000						$6,000
Travel Lanes	**Russell**	Surface	**SEAL - 10mm**	3						$28,000					$28,000
Travel Lanes	**Tocumwal**	Surface	**10mm Seal**	3						$18,000					$18,000

Travel Lanes	**Wandook**	Surface	**10mm Seal**	3						$38,000					$38,000
Travel Lanes	**Warragoon**	Surface	**7mm Seal**	3						$88,000					$88,000
Travel Lanes	**Whitelock**	Surface	**SEAL - 10mm**	3						$26,000					$26,000
Travel Lanes	**Aratula South**	Surface	**7mm Seal**	3						$18,000					$18,000
Travel Lanes	**Aratula South**	Surface	**14mm Seal**	3						$2,000					$2,000
Travel Lanes	**Bond**	Surface	**SEAL - Asphalt 30mm**	3						$30,000					$30,000
Travel Lanes	**Booroorban - Tchelery**	Surface	**10mm Seal**	3						$18,000					$18,000
Travel Lanes	**Booroorban - Tchelery**	Surface	**10mm Seal**	3						$2,000					$2,000
Travel Lanes	**Campbells**	Surface	**14mm PMB Seal**	3						$68,000					$68,000
Travel Lanes	**Coree**	Surface	**7mm Seal**	3						$110,000					$110,000
Travel Lanes	**Coree**	Surface	**10mm Seal**	3						$26,000					$26,000
Travel Lanes	**Coree**	Surface	**10mm Seal**	3						$5,000					$5,000
Travel Lanes	**Decimus**	Surface	**SEAL - 10mm**	3						$15,000					$15,000
Travel Lanes	**Devon**	Surface	**7mm Seal**	3						$5,000					$5,000
Travel Lanes	**Edwardes**	Surface	**SEAL - Stone**	3						$16,000					$16,000
Travel Lanes	**Harfleur**	Surface	**SEAL - Stone**	3						$26,000					$26,000
Travel Lanes	**Harfleur**	Surface	**SEAL - 10mm**	3						$20,000					$20,000
Travel Lanes	**Harfleur**	Surface	**SEAL - Stone**	3						$14,000					$14,000
Travel Lanes	**Lindifferon**	Surface	**7mm Seal**	3						$57,000					$57,000
Travel Lanes	**Maher**	Surface	**SEAL - Stone**	3						$28,000					$28,000
Travel Lanes	**Mccrabb**	Surface	**SEAL - Stone**	3						$38,000					$38,000
Travel Lanes	**Mccrabb**	Surface	**SEAL - Stone**	3						$8,000					$8,000
Travel Lanes	**Mokanger**	Surface	**7mm Seal**	3						$40,000					$40,000
Travel Lanes	**Morrisreet**	Surface	**14mm Seal**	3						$5,000					$5,000
Travel Lanes	**North Boundary**	Surface	**7mm Seal**	3						$5,000					$5,000
Travel Lanes	**Pyles**	Surface	**7mm Seal**	3						$54,000					$54,000
Travel Lanes	**Pyles**	Surface	**7mm Seal**	3						$34,000					$34,000
Travel Lanes	**Ross**	Surface	**SEAL - Stone**	3						$12,000					$12,000
Travel Lanes	**Salvation**	Surface	**SEAL - Stone**	3						$5,000					$5,000
Travel Lanes	**Sloane**	Surface	**SEAL - Stone**	3						$20,000					$20,000
Travel Lanes	**Sloane**	Surface	**SEAL - 10mm**	3						$20,000					$20,000
Travel Lanes	**Sloane**	Surface	**SEAL - Stone**	3						$20,000					$20,000
Travel Lanes	**Sloane**	Surface	**SEAL - Stone**	3						$5,000					$5,000
Travel Lanes	**Stud Park**	Surface	**7mm Seal**	3						$52,000					$52,000
Travel Lanes	**Stud Park**	Surface	**7mm Seal**	3						$24,000					$24,000
Travel Lanes	**Tip**	Surface	**SEAL - Stone**	3							$18,000				$18,000
Travel Lanes	**Tuppal**	Surface	**7mm Seal**	3							$77,000				$77,000
Travel Lanes	**Tuppal**	Surface	**7mm Seal**	3							$48,000				$48,000
Travel Lanes	**Wanganella-Moulamein**	Surface	**2 Coat Initial Seal**	3							$45,000				$45,000
Travel Lanes	**Wanganella-Moulamein**	Surface	**Primerseal**	3							$30,000				$30,000
Travel Lanes	**Wanganella-Moulamein**	Surface	**10mm Seal**	3							$18,000				$18,000
Travel Lanes	**Wellington**	Surface	**SEAL - Stone**	3							$16,000				$16,000
Travel Lanes	**Willurah**	Surface	**7mm Seal**	3							$5,000				$5,000
Travel Lanes	**Woodbury**	Surface	**2 Coat Initial Seal**	3							$18,000				$18,000
Travel Lanes	**Aratula North**	Surface	**14mm Seal**	2							$5,000				$5,000
Travel Lanes	**Aratula South**	Surface	**7mm Seal**	3							$15,000				$15,000
Travel Lanes	**Carrathool**	Surface	**Asphalt**	2							$10,000				$10,000
Travel Lanes	**Charlotte**	Surface	**SEAL - Stone**	2							$10,000				$10,000
Travel Lanes	**Charlotte**	Surface	**SEAL - Stone**	2							$8,000				$8,000
Travel Lanes	**Edwardes**	Surface	**SEAL - Stone**	2							$5,000				$5,000
Travel Lanes	**Fowler**	Surface	**SEAL - Stone**	3							$10,000				$10,000

Travel Lanes	**Macauley**	Surface	**SEAL - Stone**	2							$8,000				$8,000
Travel Lanes	**Macauley**	Surface	**SEAL - Stone**	3							$10,000				$10,000
Travel Lanes	**Middletons**	Surface	**10mm PMB Seal**	3							$102,000				$102,000
Travel Lanes	**Wandook**	Surface	**10mm Seal**	3							$52,000				$52,000
Travel Lanes	**Dahwilly**	Surface	**SEAL - 7mm**	3							$90,000				$90,000
Travel Lanes	**Coree**	Surface	**10mm Seal**	3							$80,000				$80,000
Travel Lanes	**Riverview**	Surface	**SEAL - 14mm**	3							$58,000				$58,000
Travel Lanes	**Lindifferon**	Surface	**10mm Seal**	3							$52,000				$52,000
Travel Lanes	**Nesbits**	Surface	**7mm Seal**	3							$48,000				$48,000
Travel Lanes	**Nesbits**	Surface	**7mm Seal**	3							$42,000				$42,000
Travel Lanes	**Moonee Swamp**	Surface	**SEAL - 7mm**	3							$40,000				$40,000
Travel Lanes	**Moonee Swamp**	Surface	**7mm Seal**	3							$40,000				$40,000
Travel Lanes	**Cressy**	Surface	**SEAL - Stone**	3							$40,000				$40,000
Travel Lanes	**Booroorban - Tchelery**	Surface	**10mm Seal**	3								$40,000			$40,000
Travel Lanes	**Nesbits**	Surface	**7mm Seal**	3								$38,000			$38,000
Travel Lanes	**Nesbits**	Surface	**7mm Seal**	3								$35,000			$35,000
Travel Lanes	**Moonee Swamp**	Surface	**SEAL - Stone**	3								$25,000			$25,000
Travel Lanes	**Wirraway**	Surface	**SEAL - 14mm**	3								$25,000			$25,000
Travel Lanes	**George**	Surface	**SEAL - 7mm**	3								$22,000			$22,000
Travel Lanes	**Riverview**	Surface	**SEAL - 14mm**	3								$20,000			$20,000
Travel Lanes	**James**	Surface	**7mm Seal**	3								$20,000			$20,000
Travel Lanes	**James**	Surface	**7mm Seal**	3								$20,000			$20,000
Travel Lanes	**George**	Surface	**SEAL - Stone**	3								$20,000			$20,000
Travel Lanes	**Decimus**	Surface	**SEAL - 10mm**	3								$15,000			$15,000
Travel Lanes	**River**	Surface	**SEAL - Stone**	3								$14,000			$14,000
Travel Lanes	**Edwardes**	Surface	**SEAL - Stone**	3								$12,000			$12,000
Travel Lanes	**Hodgkins**	Surface	**SEAL - Stone**	3								$12,000			$12,000
Travel Lanes	**Coree**	Surface	**10mm Seal**	3								$12,000			$12,000
Travel Lanes	**Blake**	Surface	**SEAL - Stone**	3								$12,000			$12,000
Travel Lanes	**Browning**	Surface	**SEAL - 10mm**	3								$10,000			$10,000
Travel Lanes	**Carol**	Surface	**SEAL - Stone**	3								$8,000			$8,000
Travel Lanes	**Poictiers**	Surface	**SEAL - Stone**	3								$5,000			$5,000
Travel Lanes	**Decimus**	Surface	**SEAL - Stone**	3								$5,000			$5,000
Travel Lanes	**Billabong Pl**	Surface	**SEAL - 10mm**	3								$14,000			$14,000

Travel Lanes	**Booroorban - Tchelery**	Surface	**Enrich 10mm Seal**	3								$30,000			$30,000
Travel Lanes	**Burton**	Surface	**SEAL - Stone**	3								$14,000			$14,000
Travel Lanes	**Burton**	Surface	**SEAL - 10mm**	3								$10,000			$10,000
Travel Lanes	**Burton**	Surface	**SEAL - Stone**	3								$10,000			$10,000
Travel Lanes	**Butler**	Surface	**SEAL - Stone**	3								$14,000			$14,000
Travel Lanes	**Butler**	Surface	**SEAL - Stone**	3								$14,000			$14,000
Travel Lanes	**Carrathool**	Surface	**7mm Seal**	3								$75,000			$75,000
Travel Lanes	**Charles**	Surface	**SEAL - Stone**	3								$18,000			$18,000
Travel Lanes	**Conargo Pub**	Surface	**10mm Seal**	3								$7,000			$7,000
Travel Lanes	**Conargo Pub**	Surface	**10mm Seal**	3								$5,000			$5,000
Travel Lanes	**Coree**	Surface	**10mm Seal**	3								$3,000			$3,000
Travel Lanes	**Cressy**	Surface	**SEAL - 10mm**	3								$30,000			$30,000
Travel Lanes	**Devon**	Surface	**7mm Seal**	3								$6,000			$6,000
Travel Lanes	**Dick**	Surface	**SEAL - 10mm**	2								$15,000			$15,000
Travel Lanes	**Eastmans**	Surface	**7mm Seal**	3								$22,000			$22,000
Travel Lanes	**Fowler**	Surface	**SEAL - Stone**	3								$8,000			$8,000
Travel Lanes	**Harfleur**	Surface	**SEAL - Stone**	3								$25,000			$25,000
Travel Lanes	**Henry**	Surface	**SEAL - Stone**	3								$35,000			$35,000
Travel Lanes	**Henry**	Surface	**SEAL - Stone**	3								$30,000			$30,000
Travel Lanes	**Henry**	Surface	**SEAL - 10mm**	3								$18,000			$18,000
Travel Lanes	**Johnston**	Surface	**SEAL - 10mm**	3								$14,000			$14,000
Travel Lanes	**Lakeview**	Surface	**SEAL - Stone**	3								$18,000			$18,000
Travel Lanes	**Laman**	Surface	**SEAL - 10mm**	3								$10,000			$10,000
Travel Lanes	**Lindifferon**	Surface	**10mm Seal**	3								$45,000			$45,000
Travel Lanes	**Mayrung**	Surface	**10mm Seal**	3								$22,000			$22,000
Travel Lanes	**Mayrung**	Surface	**10mm Seal**	3								$20,000			$20,000
Travel Lanes	**Mayrung**	Surface	**10mm Seal**	3								$3,000			$3,000
Travel Lanes	**Moonee Swamp**	Surface	**14mm Seal**	3								$115,000			$115,000
Travel Lanes	**Moonee Swamp**	Surface	**10mm Seal**	3									$88,000		$88,000

Travel Lanes	**Moonee Swamp**	Surface	**14mm Seal**	3									$44,000		$44,000
Travel Lanes	**Ochtertyre**	Surface	**SEAL - 7mm**	3									$65,000		$65,000
Travel Lanes	**Ochtertyre**	Surface	**SEAL - 7/14mm**	3									$26,000		$26,000
Travel Lanes	**Pyles**	Surface	**7mm Seal**	3									$48,000		$48,000
Travel Lanes	**Renwick**	Surface	**SEAL - 10mm**	3									$6,000		$6,000
Travel Lanes	**Saleyards**	Surface	**SEAL - Stone**	3									$22,000		$22,000
Travel Lanes	**Saleyards**	Surface	**SEAL - Stone**	3									$12,000		$12,000
Travel Lanes	**Sloane**	Surface	**SEAL - Stone**	3									$5,000		$5,000
Travel Lanes	**Tocumwal**	Surface	**14mm Seal**	3									$10,000		$10,000
Travel Lanes	**Vaughan Pl**	Surface	**SEAL - Stone**	3									$8,000		$8,000
Travel Lanes	**Victoria**	Surface	**SEAL - Asphalt 40mm**	3									$130,000		$130,000
Travel Lanes	**Wanganella-Moulamein**	Surface	**10mm Seal**	3									$28,000		$28,000
Travel Lanes	**Wellington**	Surface	**SEAL - Stone**	3									$5,000		$5,000
Travel Lanes	**Wick**	Surface	**SEAL - Asphalt 40mm**	3									$92,000		$92,000
Travel Lanes	**Boxwood**	Surface	**SEAL - Stone**	2									$22,000		$22,000
Travel Lanes	**Conargoore**	Surface	**2 Coat Seal**	2									$8,000		$8,000
Travel Lanes	**Duncan**	Surface	**SEAL - Stone**	2									$25,000		$25,000
Travel Lanes	**Fowler**	Surface	**SEAL - 10mm**	2									$12,000		$12,000
Travel Lanes	**George**	Surface	**SEAL - 10mm**	2									$28,000		$28,000
Travel Lanes	**Greaves**	Surface	**SEAL - 10mm**	2									$10,000		$10,000
Travel Lanes	**Holden**	Surface	**SEAL - Stone**	2									$10,000		$10,000
Travel Lanes	**Mayrung**	Surface	**14mm Seal**	2									$10,000		$10,000
Travel Lanes	**Mayrung**	Surface	**14mm Seal**	2									$8,000		$8,000
Travel Lanes	**Memorial**	Surface	**SEAL - 7/10mm**	2									$25,000		$25,000
Travel Lanes	**Old Morago**	Surface	**14mm PMB Seal**	2									$28,000		$28,000
Travel Lanes	**Russell**	Surface	**SEAL - 10mm**	2									$15,000		$15,000
Travel Lanes	**Sloane**	Surface	**SEAL - Stone**	2									$25,000		$25,000
Travel Lanes	**Tuppal**	Surface	**14mm PMB Seal**	2									$55,000		$55,000
Travel Lanes	**Tuppal**	Surface	**14mm Initial Seal**	2									$28,000		$28,000

Travel Lanes	**Wick**	Surface	**SEAL - 10mm**	2									$18,000		$18,000
Travel Lanes	**Aratula North**	Surface	**14mm PMB Seal**	2									$5,000		$5,000
Travel Lanes	**Aratula South**	Surface	**14mm PMB Seal**	2									$35,000		$35,000
Travel Lanes	**Blackett**	Surface	**SEAL - Stone**	2									$14,000		$14,000
Travel Lanes	**Blighty Hall**	Surface	**14mm Seal**	2									$5,000		$5,000
Travel Lanes	**Blighty Hall**	Surface	**14mm Seal**	2									$10,000		$10,000
Travel Lanes	**Blighty Hall**	Surface	**14mm Seal**	2									$15,000		$15,000
Travel Lanes	**Blighty Hall**	Surface	**14mm PMB Seal**	2										$20,000	$20,000
Travel Lanes	**Blighty Hall**	Surface	**14mm Seal**	2										$32,000	$32,000
Travel Lanes	**Blighty Service**	Surface	**10mm PMB Seal**	2										$5,000	$5,000
Travel Lanes	**Blighty Service**	Surface	**10mm PMB Seal**	2										$5,000	$5,000
Travel Lanes	**Blighty Service**	Surface	**10mm PMB Seal**	2										$5,000	$5,000
Travel Lanes	**Booroorban - Tchelery**	Surface	**Enrich 10mm Seal**	2										$62,000	$62,000
Travel Lanes	**Booroorban - Tchelery**	Surface	**10mm Seal**	2										$82,000	$82,000
Travel Lanes	**Butler**	Surface	**SEAL - 10mm**	2										$13,000	$13,000
Travel Lanes	**Butler**	Surface	**SEAL - 10mm**	2										$18,000	$18,000
Travel Lanes	**Butler**	Surface	**SEAL - 10mm**	2										$26,000	$18,000
Travel Lanes	**Campbells**	Surface	**14mm PMB Seal**	2										$26,000	$26,000
Travel Lanes	**Carrathool**	Surface	**7mm Seal**	2										$20,000	$20,000
Travel Lanes	**Carrathool**	Surface	**10mm Seal**	2										$33,000	$33,000
Travel Lanes	**Chamberlain**	Surface	**SEAL - 10mm**	2										$8,000	$8,000
Travel Lanes	**Connection**	Surface	**SEAL - Stone**	2										$5,000	$5,000
Travel Lanes	**Corbett**	Surface	**SEAL - 10mm**	2										$10,000	$10,000
Travel Lanes	**Coree**	Surface	**10mm Seal**	2										$12,000	$12,000
Travel Lanes	**Dahwilly**	Surface	**SEAL - Stone**	2										$18,000	$18,000
Travel Lanes	**Davies**	Surface	**SEAL - Stone**	2										$10,000	$10,000
Travel Lanes	**Evans**	Surface	**SEAL - Stone**	2										$10,000	$10,000
Travel Lanes	**Fitzroy**	Surface	**SEAL - Stone**	2										$5,000	$5,000
Travel Lanes	**Fitzroy**	Surface	**SEAL - Stone**	2										$5,000	$5,000
Travel Lanes	**Fitzroy**	Surface	**SEAL - Stone**	2										$12,000	$12,000
Travel Lanes	**Fitzroy**	Surface	**SEAL - Stone**	2										$12,000	$12,000
Travel Lanes	**Fitzroy**	Surface	**SEAL - Stone**	2										$15,000	$15,000

Travel Lanes	**Fitzroy**	Surface	**SEAL - 7mm**	2										$15,000	$15,000
Travel Lanes	**Flanagans**	Surface	**SEAL - 10mm**	2										$48,000	$48,000
Travel Lanes	**Flanagans**	Surface	**SEAL - 10mm**	2										$75,000	$75,000
Travel Lanes	**Fowler**	Surface	**SEAL - 10mm**	2										$10,000	$10,000
Travel Lanes	**Fowler**	Surface	**SEAL - 10mm**	2										$12,000	$12,000
Travel Lanes	**Fowler**	Surface	**SEAL - 10mm**	2										$18,000	$18,000
Travel Lanes	**Fowler**	Surface	**SEAL - 10mm**	2										$18,000	$18,000
Travel Lanes	**Hatch**	Surface	**SEAL - 10mm**	2										$10,000	$10,000
Travel Lanes	**Henry**	Surface	**SEAL - 10mm**	2										$25,000	$25,000
Travel Lanes	**Henry**	Surface	**SEAL - 10mm**	2										$25,000	$25,000
Travel Lanes	**Henry**	Surface	**SEAL - Stone**	2										$25,000	$25,000
Travel Lanes	**Hetherington**	Surface	**SEAL - 7mm**	2										$18,000	$18,000
Travel Lanes	**Hughes**	Surface	**SEAL - 10mm**	2										$10,000	$10,000
Travel Lanes	**Hughes**	Surface	**SEAL - Stone**	2										$22,000	$22,000
Travel Lanes	**Hyde**	Surface	**SEAL - Stone**	2										$12,000	$12,000
Travel Lanes	**Langreet**	Surface	**7mm Seal**	2										$5,000	$5,000
Travel Lanes	**Langreet**	Surface	**7mm Seal**	2										$10,000	$10,000
Travel Lanes	**Maher**	Surface	**SEAL - 10mm**	2										$25,000	$25,000
Travel Lanes	**Malones**	Surface	**14mm Initial Seal**	2										$32,000	$32,000
Travel Lanes	**Malones**	Surface	**14mm Initial Seal**	2										$48,000	$48,000
Travel Lanes	**Mayrung**	Surface	**7mm Seal**	2										$32,000	$32,000
Travel Lanes	**Mayrung**	Surface	**14mm PMB Seal**	2										$43,000	$43,000
Travel Lanes	**Noyes**	Surface	**SEAL - 10mm**	2										$19,000	$19,000
	Lawrence Road		**Conargo Road to Mavers Road**		$50,000										$50,000
	Augustus Street		**Yarra Street to Wanderer Street**		$16,000										$16,000
	Coborro Street		**Finley Rd to Augustus Street**		$14,000										$14,000

	Scott Rogers lane		**Cobb Highway to Four Post Lane**		$50,000										$50,000
	Aratula North Rd		**3.831 to 7.515**		$70,000										$70,000
	McEwans Lane		**Moonee Swamp Rd Moonee Swamp Road + 28600**		$50,000										$50,000
	Willurah Rd		**20.971 to 40.511**		$390,000										$390,000
	Cowies Rd		**2.64 to 6.83**		$80,000										$80,000
	Future Projects					$800,000	$800,000	$800,000	$800,000	$800,000	$800,000	$800,000	$800,000	$800,000	$7,200,000
Kerb and Gutter	**Macauley**	Barrier	**K&C Barrier**	3	$3,000										$3,000
Kerb and Gutter	**Macauley**	Barrier	**K&C Barrier**	5	$13,200										$13,200
Kerb and Gutter	**Macauley**	Barrier	**K&C Barrier**	3	$28,800										$28,800
Kerb and Gutter	**Macauley**	Barrier	**K&C Barrier**	4	$22,300										$22,300
Kerb and Gutter	**Macauley**	Barrier	**K&C Barrier**	2	$21,500										$21,500
Kerb and Gutter	**Macauley**	Barrier	**K&C Barrier**	4	$10,800										$10,800
Kerb and Gutter	**Macauley**	Barrier	**K&C Barrier**	4	$10,200										$10,200
Kerb and Gutter	**Macauley**	Barrier	**K&C Barrier**	4	$4,500										$4,500
Kerb and Gutter	**Macauley**	Barrier	**K&C Barrier**	2	$27,000										$27,000
Kerb and Gutter	**Cressy**	Barrier	**K&C Barrier**	3	$10,500										$10,500
Kerb and Gutter	**Cressy**	Barrier	**K&C Barrier**	3	$4,300										$4,300
Kerb and Gutter	**Cressy**	Barrier	**K&C Barrier**	4	$20,500										$20,500
Kerb and Gutter	**Cressy**	Barrier	**K&C Barrier**	4	$41,000										$41,000
Kerb and Gutter	**Wood**	Barrier	**K&C Barrier**	3	$2,000										$2,000
Kerb and Gutter	**Wood**	Barrier	**K&C Barrier**	3	$34,500										$34,500
Kerb and Gutter	**Wood**	Barrier	**K&C Barrier**	3	$9,500										$9,500
Kerb and Gutter	**Wood**	Barrier	**K&C Barrier**	3	$14,000										$14,000
Kerb and Gutter	**Wood**	Barrier	**K&C Barrier**	3	$9,300										$9,300
Kerb and Gutter	**Wood**	Barrier	**K&C Barrier**	3	$23,500										$23,500
Kerb and Gutter	**Hetherington**	Barrier	**K&C Barrier**	5	$19,600										$19,600

Kerb and Gutter	**Edwardes**	Barrier	**K&C Barrier**	5		$9,700									$9,620
Kerb and Gutter	**Edwardes/Harfleur**	Barrier	**K&C Barrier**	5		$3,400									$3,347
Kerb and Gutter	**Edwardes**	Barrier	**K&C Barrier**	5		$4,900									$4,892
Kerb and Gutter	**Edwardes**	Barrier	**K&C Barrier**	5		$12,000									$12,007
Kerb and Gutter	**Napier**	Barrier	**K&C Barrier**	5		$15,300									$15,243
Kerb and Gutter	**Cressy**	Barrier	**K&C Barrier**	5		$14,500									$14,439
Kerb and Gutter	**Cressy**	Barrier	**K&C Barrier**	5		$27,900									$27,862
Kerb and Gutter	**Macauley**	Barrier	**K&C Barrier**	5		$20,700									$20,616
Kerb and Gutter	**Russell**	Barrier	**K&C Barrier**	5		$10,300									$10,217
Kerb and Gutter	**Cressy**	Barrier	**K&C Barrier**	5		$40,000									$40,019
Kerb and Gutter	**George**	Barrier	**K&C Barrier**	5		$13,800									$13,792
Kerb and Gutter	**Henry**	Barrier	**K&C Barrier**	5		$31,800									$31,775
Kerb and Gutter	**Cressy**	Barrier	**K&C Barrier**	5		$8,600									$8,512
Kerb and Gutter	**Harfleur**	Barrier	**K&C Barrier**	5		$43,500									$43,438
Kerb and Gutter	**Maher**	Barrier	**K&C Barrier**	5		$26,100									$26,087
Kerb and Gutter	**Maher**	Barrier	**K&C Barrier**	5		$26,500									$26,462
Kerb and Gutter	**Maher**	Barrier	**K&C Barrier**	5		$17,700									$17,665
Kerb and Gutter	**Maher**	Barrier	**K&C Barrier**	5		$7,300									$7,218
Kerb and Gutter	**Maher**	Barrier	**K&C Barrier**	5		$13,200									$13,189
Kerb and Gutter	**Poictiers**	Barrier	**K&C Barrier**	5		$42,300									$42,303
Kerb and Gutter	**Poictiers**	Barrier	**K&C Barrier**	5			$7,303								$7,303
Kerb and Gutter	**Poictiers**	Barrier	**K&C Barrier**	5			$8,349								$8,349
Kerb and Gutter	**Poictiers**	Barrier	**K&C Barrier**	5			$7,967								$7,967
Kerb and Gutter	**Poictiers**	Barrier	**K&C Barrier**	5			$7,669								$7,669
Kerb and Gutter	**Poictiers**	Barrier	**K&C Barrier**	5			$6,846								$6,846
Kerb and Gutter	**Decimus**	Barrier	**K&C Barrier**	5			$15,350								$15,350

Kerb and Gutter	**Laman**	Barrier	**K&C Barrier**	5			$7,860								$7,860
Kerb and Gutter	**Decimus**	Mountable	**K&C Mountable**	5			$15,236								$15,236
Kerb and Gutter	**Decimus**	Mountable	**K&C Mountable**	5			$8,985								$8,985
Kerb and Gutter	**Maher**	Barrier	**K&C Barrier**	5			$8,724								$8,724
Kerb and Gutter	**Stewart**	Barrier	**K&C Barrier**	5			$25,967								$25,967
Kerb and Gutter	**Kelly**	Barrier	**K&C Barrier**	5			$15,448								$15,448
Kerb and Gutter	**Kelly**	Barrier	**K&C Barrier**	5			$9,914								$9,914
Kerb and Gutter	**Kelly**	Barrier	**K&C Barrier**	5			$7,517								$7,517
Kerb and Gutter	**Kelly**	Barrier	**K&C Barrier**	5			$13,403								$13,403
Kerb and Gutter	**Kelly**	Barrier	**K&C Barrier**	5			$7,828								$7,828
Kerb and Gutter	**Kelly**	Barrier	**K&C Barrier**	5			$60,083								$60,083
Kerb and Gutter	**Edwardes**	Barrier	**K&C Barrier**	5			$23,175								$23,175
Kerb and Gutter	**Henry**	Barrier	**K&C Barrier**	5			$7,668								$7,668
Kerb and Gutter	**Henry**	Barrier	**K&C Barrier**	5			$7,668								$7,668
Kerb and Gutter	**Henry**	Barrier	**K&C Barrier**	5			$8,369								$8,369
Kerb and Gutter	**Henry**	Barrier	**K&C Barrier**	5			$5,156								$5,156
Kerb and Gutter	**Henry**	Barrier	**K&C Barrier**	5			$15,715								$15,715
Kerb and Gutter	**Napier**	Barrier	**K&C Barrier**	5			$78,001								$78,001
Kerb and Gutter	**Woos**	Barrier	**K&C Barrier**	5			$6,070								$6,070
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	5			$5,506								$5,506
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	5			$4,651								$4,651
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	5				$5,325							$5,325
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	5				$5,429							$5,429
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	5				$4,054							$4,054
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	5				$19,261							$19,261
Kerb and Gutter	**Henry**	Barrier	**K&C Barrier**	5				$11,911							$11,911
Kerb and Gutter	**Wood**	Barrier	**K&C Barrier**	5				$9,177							$9,177

Kerb and Gutter	**Wood**	Barrier	**K&C Barrier**	5				$7,474							$7,474
Kerb and Gutter	**Wood**	Barrier	**K&C Barrier**	5				$8,948							$8,948
Kerb and Gutter	**Corbett**	Barrier	**K&C Barrier**	4				$6,883							$6,883
Kerb and Gutter	**Napier**	Barrier	**K&C Barrier**	4				$4,791							$4,791
Kerb and Gutter	**Poictiers**	Barrier	**K&C Barrier**	4				$7,359							$7,359
Kerb and Gutter	**Poictiers**	Barrier	**K&C Barrier**	4				$11,419							$11,419
Kerb and Gutter	**Poictiers**	Barrier	**K&C Barrier**	4				$10,475							$10,475
Kerb and Gutter	**Poictiers**	Barrier	**K&C Barrier**	4				$13,484							$13,484
Kerb and Gutter	**Napier**	Barrier	**K&C Barrier**	4				$43,094							$43,094
Kerb and Gutter	**Poictiers**	Barrier	**K&C Barrier**	4				$3,091							$3,091
Kerb and Gutter	**Macauley/Campbell**	Barrier	**K&C Barrier**	4				$506							$506
Kerb and Gutter	**Harfleur**	Barrier	**K&C Barrier**	4				$10,470							$10,470
Kerb and Gutter	**Macauley**	Barrier	**K&C Barrier**	4				$40,894							$40,894
Kerb and Gutter	**Macauley**	Barrier	**K&C Barrier**	4				$40,894							$40,894
Kerb and Gutter	**Poictiers**	Mountable	**K&C Mountable**	4				$41,890							$41,890
Kerb and Gutter	**Russell**	Barrier	**K&C Barrier**	4				$11,971							$11,971
Kerb and Gutter	**Cressy/Russell**	Barrier	**K&C Barrier**	4				$4,500							$4,500
Kerb and Gutter	**George**	Barrier	**K&C Barrier**	4				$28,673							$28,673
Kerb and Gutter	**Macauley/George**	Barrier	**K&C Barrier**	4				$1,699							$1,699
Kerb and Gutter	**Wood**	Barrier	**K&C Barrier**	5				$6,271							$6,271
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	5				$2,619							$2,619
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	5				$3,123							$3,123
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	5				$3,260							$3,260
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	5				$3,586							$3,586
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	5				$6,514							$6,514
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	5				$2,898							$2,898
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	5				$7,043							$7,043

Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	5				$8,635							$8,635
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	5				$4,319							$4,319
Kerb and Gutter	**Harfleur**	Barrier	**K&C Barrier**	5				$22,101							$22,101
Kerb and Gutter	**Crispe**	Barrier	**K&C Barrier**	5					$20,616						$20,616
Kerb and Gutter	**Dick**	Barrier	**K&C Barrier**	5					$21,899						$21,899
Kerb and Gutter	**Hetherington**	Barrier	**K&C Barrier**	5					$16,522						$16,522
Kerb and Gutter	**Faulkner**	Mountable	**K&C Mountable**	5					$49,156						$49,156
Kerb and Gutter	**Davidson**	Barrier	**K&C Barrier**	5					$13,355						$13,355
Kerb and Gutter	**Fitzroy**	Barrier	**K&C Barrier**	5					$14,148						$14,148
Kerb and Gutter	**Hyde**	Barrier	**K&C Barrier**	5					$22,086						$22,086
Kerb and Gutter	**Fitzroy**	Barrier	**K&C Barrier**	5					$13,181						$13,181
Kerb and Gutter	**Fitzroy**	Barrier	**K&C Barrier**	5					$14,761						$14,761
Kerb and Gutter	**Fitzroy**	Barrier	**K&C Barrier**	5					$13,293						$13,293
Kerb and Gutter	**Fitzroy**	Barrier	**K&C Barrier**	5					$13,293						$13,293
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	5					$25,081						$25,081
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	5					$7,712						$7,712
Kerb and Gutter	**Ochtertyre**	Barrier	**K&C Barrier**	5					$24,655						$24,655
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	5					$10,278						$10,278
Kerb and Gutter	**Cressy**	Barrier	**K&C Barrier**	4					$39,504						$39,504
Kerb and Gutter	**Whitelock**	Barrier	**K&C Barrier**	4					$15,253						$15,253
Kerb and Gutter	**Poictiers/ Macauley**	Barrier	**K&C Barrier**	4					$3,996						$3,996
Kerb and Gutter	**Poictiers**	Barrier	**K&C Barrier**	4					$33,852						$33,852
Kerb and Gutter	**Poictiers**	Barrier	**K&C Barrier**	4					$5,020						$5,020
Kerb and Gutter	**Hardinge**	Barrier	**K&C Barrier**	4					$7,993						$7,993
Kerb and Gutter	**Hardinge**	Barrier	**K&C Barrier**	4					$7,497						$7,497
Kerb and Gutter	**Hardinge**	Barrier	**K&C Barrier**	4						$22,897					$22,897
Kerb and Gutter	**Macauley**	Barrier	**K&C Barrier**	4						$10,910					$10,910

Kerb and Gutter	**Hardinge**	Barrier	**K&C Barrier**	4						$4,931					$4,931
Kerb and Gutter	**Wood**	Barrier	**K&C Barrier**	4						$4,724					$4,724
Kerb and Gutter	**Wood**	Barrier	**K&C Barrier**	4						$8,041					$8,041
Kerb and Gutter	**Wood**	Barrier	**K&C Barrier**	4						$6,234					$6,234
Kerb and Gutter	**Wood**	Barrier	**K&C Barrier**	4						$11,580					$11,580
Kerb and Gutter	**Wood**	Barrier	**K&C Barrier**	4						$12,741					$12,741
Kerb and Gutter	**Macauley**	Barrier	**K&C Barrier**	4						$12,163					$12,163
Kerb and Gutter	**Macauley**	Barrier	**K&C Barrier**	4						$10,516					$10,516
Kerb and Gutter	**Wood**	Barrier	**K&C Barrier**	4						$25,849					$25,849
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	4						$24,338					$24,338
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	4						$19,761					$19,761
Kerb and Gutter	**Wood**	Barrier	**K&C Barrier**	4						$12,635					$12,635
Kerb and Gutter	**Wood**	Barrier	**K&C Barrier**	4						$31,656					$31,656
Kerb and Gutter	**Wood**	Barrier	**K&C Barrier**	4						$31,656					$31,656
Kerb and Gutter	**Wilkinson**	Barrier	**K&C Barrier**	4						$42,987					$42,987
Kerb and Gutter	**Henry**	Barrier	**K&C Barrier**	4						$19,415					$19,415
Kerb and Gutter	**Russell**	Barrier	**K&C Barrier**	4						$17,186					$17,186
Kerb and Gutter	**Charlotte**	Barrier	**K&C Barrier**	4						$43,463					$43,463
Kerb and Gutter	**George**	Barrier	**K&C Barrier**	4						$20,426					$20,426
Kerb and Gutter	**George**	Barrier	**K&C Barrier**	4						$22,444					$22,444
Kerb and Gutter	**George**	Barrier	**K&C Barrier**	4							$12,061				$12,061
Kerb and Gutter	**Macauley**	Barrier	**K&C Barrier**	4							$10,708				$10,708
Kerb and Gutter	**Macauley/Charlotte**	Barrier	**K&C Barrier**	4							$2,173				$2,173
Kerb and Gutter	**Charlotte**	Barrier	**K&C Barrier**	4							$28,370				$28,370
Kerb and Gutter	**Charlotte**	Barrier	**K&C Barrier**	4							$13,537				$13,537
Kerb and Gutter	**George**	Barrier	**K&C Barrier**	4							$37,188				$37,188
Kerb and Gutter	**George**	Barrier	**K&C Barrier**	4							$4,552				$4,552

Kerb and Gutter	**Maher**	Barrier	**K&C Barrier**	4							$26,766				$26,766
Kerb and Gutter	**Maher**	Barrier	**K&C Barrier**	4							$13,923				$13,923
Kerb and Gutter	**Maher/Russell**	Barrier	**K&C Barrier**	4							$981				$981
Kerb and Gutter	**Butler**	Barrier	**K&C Barrier**	4							$6,336				$6,336
Kerb and Gutter	**Russell**	Barrier	**K&C Barrier**	4							$42,761				$42,761
Kerb and Gutter	**Wilkinson**	Barrier	**K&C Barrier**	4							$4,193				$4,193
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	4							$49,065				$49,065
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	4							$16,232				$16,232
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	4							$39,442				$39,442
Kerb and Gutter	**Butler**	Barrier	**K&C Barrier**	4							$10,043				$10,043
Kerb and Gutter	**Butler**	Barrier	**K&C Barrier**	4							$21,687				$21,687
Kerb and Gutter	**Henry**	Barrier	**K&C Barrier**	4							$38,575				$38,575
Kerb and Gutter	**Henry/Butler**	Barrier	**K&C Barrier**	4							$3,396				$3,396
Kerb and Gutter	**Poictiers**	Barrier	**K&C Barrier**	4							$7,873				$7,873
Kerb and Gutter	**George**	Barrier	**K&C Barrier**	4								$32,717			$32,717
Kerb and Gutter	**Decimus/St Michael**	Barrier	**K&C Barrier**	4								$4,698			$4,698
Kerb and Gutter	**Fowler**	Barrier	**K&C Barrier**	4								$7,829			$7,829
Kerb and Gutter	**Davies**	Barrier	**K&C Barrier**	4								$5,896			$5,896
Kerb and Gutter	**Davies**	Barrier	**K&C Barrier**	4								$13,489			$13,489
Kerb and Gutter	**Fowler**	Barrier	**K&C Barrier**	4								$15,961			$15,961
Kerb and Gutter	**Laman**	Barrier	**K&C Barrier**	4								$18,867			$18,867
Kerb and Gutter	**Laman**	Barrier	**K&C Barrier**	4								$6,505			$6,505
Kerb and Gutter	**Laman**	Barrier	**K&C Barrier**	4								$10,634			$10,634
Kerb and Gutter	**Laman**	Barrier	**K&C Barrier**	4								$13,985			$13,985
Kerb and Gutter	**Decimus**	Barrier	**K&C Barrier**	4								$12,614			$12,614
Kerb and Gutter	**Decimus**	Barrier	**K&C Barrier**	4								$9,383			$9,383

Kerb and Gutter	**Fowler**	Barrier	**K&C Barrier**	4								$4,578			$4,578
Kerb and Gutter	**Johnston**	Mountable	**K&C Mountable**	4								$19,682			$19,682
Kerb and Gutter	**Johnston**	Mountable	**K&C Mountable**	4								$18,921			$18,921
Kerb and Gutter	**Renwick**	Mountable	**K&C Mountable**	4								$6,504			$6,504
Kerb and Gutter	**Renwick**	Mountable	**K&C Mountable**	4								$14,592			$14,592
Kerb and Gutter	**Renwick**	Mountable	**K&C Mountable**	4								$3,695			$3,695
Kerb and Gutter	**Johnston**	Mountable	**K&C Mountable**	4								$12,186			$12,186
Kerb and Gutter	**Johnston**	Mountable	**K&C Mountable**	4								$24,275			$24,275
Kerb and Gutter	**Decimus**	Barrier	**K&C Barrier**	4								$15,718			$15,718
Kerb and Gutter	**Maher**	Barrier	**K&C Barrier**	4								$10,636			$10,636
Kerb and Gutter	**Warren**	Mountable	**K&C Mountable**	4								$51,133			$51,133
Kerb and Gutter	**Burton**	Mountable	**K&C Mountable**	4								$20,020			$20,020
Kerb and Gutter	**Stewart**	Barrier	**K&C Barrier**	4								$24,573			$24,573
Kerb and Gutter	**Stewart**	Barrier	**K&C Barrier**	4								$20,366			$20,366
Kerb and Gutter	**Stewart**	Barrier	**K&C Barrier**	4									$20,550		$20,550
Kerb and Gutter	**Stewart**	Barrier	**K&C Barrier**	4									$12,554		$12,554
Kerb and Gutter	**Kelly**	Barrier	**K&C Barrier**	4									$6,709		$6,709
Kerb and Gutter	**Kelly**	Barrier	**K&C Barrier**	4									$15,724		$15,724
Kerb and Gutter	**Kelly**	Barrier	**K&C Barrier**	4									$24,795		$24,795
Kerb and Gutter	**Kelly**	Barrier	**K&C Barrier**	4									$14,363		$14,363
Kerb and Gutter	**Jane**	Barrier	**K&C Barrier**	4									$40,716		$40,716
Kerb and Gutter	**Jane**	Barrier	**K&C Barrier**	4									$22,356		$22,356
Kerb and Gutter	**Jane**	Barrier	**K&C Barrier**	4									$16,019		$16,019
Kerb and Gutter	**Jane**	Barrier	**K&C Barrier**	4									$7,988		$7,988
Kerb and Gutter	**Jane**	Barrier	**K&C Barrier**	4									$24,472		$24,472
Kerb and Gutter	**Jane**	Barrier	**K&C Barrier**	4									$14,451		$14,451

Kerb and Gutter	**Jane/Stewart**	Barrier	**K&C Barrier**	4									$3,213		$3,213
Kerb and Gutter	**Octertyre**	Barrier	**K&C Barrier**	4									$13,709		$13,709
Kerb and Gutter	**Octertyre**	Barrier	**K&C Barrier**	4									$20,596		$20,596
Kerb and Gutter	**Macauley**	Barrier	**K&C Barrier**	4									$39,570		$39,570
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	4									$44,865		$44,865
Kerb and Gutter	**Hardinge**	Barrier	**K&C Barrier**	4									$22,463		$22,463
Kerb and Gutter	**Hardinge**	Barrier	**K&C Barrier**	4										$78,853	$78,853
Kerb and Gutter	**Harfleur**	Barrier	**K&C Barrier**	4										$13,031	$13,031
Kerb and Gutter	**Harfleur**	Barrier	**K&C Barrier**	4										$7,574	$7,574
Kerb and Gutter	**Hefleur/Hardinge**	Barrier	**K&C Barrier**	4										$4,282	$4,282
Kerb and Gutter	**Edwardes**	Barrier	**K&C Barrier**	4										$10,147	$10,147
Kerb and Gutter	**Edwardes**	Barrier	**K&C Barrier**	4										$5,542	$5,542
Kerb and Gutter	**Harfleur**	Barrier	**K&C Barrier**	4										$4,701	$4,701
Kerb and Gutter	**Harfleur**	Barrier	**K&C Barrier**	4										$4,701	$4,701
Kerb and Gutter	**Harfleur**	Barrier	**K&C Barrier**	4										$5,376	$5,376
Kerb and Gutter	**Harfleur**	Barrier	**K&C Barrier**	4										$9,500	$9,500
Kerb and Gutter	**Napier**	Barrier	**K&C Barrier**	4										$12,548	$12,548
Kerb and Gutter	**Napier**	Barrier	**K&C Barrier**	4										$6,430	$6,430
Kerb and Gutter	**Edwardes/Henry**	Barrier	**K&C Barrier**	4										$2,404	$2,404
Kerb and Gutter	**Henry**	Barrier	**K&C Barrier**	4										$6,607	$6,607
Kerb and Gutter	**Edwardes**	Barrier	**K&C Barrier**	4										$22,488	$22,488
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	4										$9,518	$9,518
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	4										$5,313	$5,313
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	4										$5,336	$5,336
Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	4										$17,116	$17,116
Kerb and Gutter	**Sloane/Napier**	Barrier	**K&C Barrier**	4										$2,267	$2,267
Kerb and Gutter	**Wirraway**	Barrier	**K&C Barrier**	4										$21,445	$21,445

Kerb and Gutter	**Sloane**	Barrier	**K&C Barrier**	4										$14,564	$14,564
Kerb and Gutter	**Edwardes**	Barrier	**K&C Barrier**	4										$3,284	$3,284
Kerb and Gutter	**Edwardes**	Barrier	**K&C Barrier**	4										$3,902	$3,902
Kerb and Gutter	**Edwardes**	Barrier	**K&C Barrier**	4										$3,732	$3,732
Kerb and Gutter	**Edwardes**	Barrier	**K&C Barrier**	4										$4,038	$4,038
Kerb and Gutter	**Edwardes**	Barrier	**K&C Barrier**	4										$5,790	$5,790
Kerb and Gutter	**Harfleur/Wellington**	Mountable	**K&C Mountable**	4										$3,099	$3,099
Kerb and Gutter	**Harfleur**	Mountable	**K&C Mountable**	4										$9,720	$9,720
Kerb and Gutter	**Harfleur**	Mountable	**K&C Mountable**	4										$7,094	$7,094
Kerb and Gutter	**Harfleur**	Mountable	**K&C Mountable**	4										$7,162	$7,162
Kerb and Gutter	**Harfleur**	Mountable	**K&C Mountable**	4										$8,807	$8,807
Kerb and Gutter	**Harfleur**	Mountable	**K&C Mountable**	4										$8,517	$8,517
Kerb and Gutter	**Wellington**	Barrier	**K&C Barrier**	4										$24,368	$24,368
Kerb and Gutter	**Junction**	Barrier	**K&C Barrier**	4										$5,594	$5,594
Kerb and Gutter	**Junction**	Barrier	**K&C Barrier**	4										$5,854	$5,854
Kerb and Gutter	**Junction**	Barrier	**K&C Barrier**	4										$7,891	$7,891
Kerb and Gutter	**Wood**	Barrier	**K&C Barrier**	4										$10,680	$10,680
Footpath	**Henry**	Complete	**Footpath**	4	$40,000										$40,000
Footpath	**Russell**	Complete	**Footpath**	4	$20,600										$20,600
Footpath	**Poictiers**	Complete	**Footpath**	4	$4,800										$4,800
Footpath	**Crispe**	Complete	**Footpath**	3	$33,900										$33,900
Footpath	**Wick**	Complete	**Footpath**	4	$36,300										$36,300
Footpath	**Victoria**	Complete	**Footpath**	3	$14,500										$14,500
Footpath	**Victoria**	Complete	**Footpath**	3	$10,900										$10,900
Footpath	**Davidson**	Complete	**Footpath**	5		$1,700.00									$1,700
Footpath	**Macauley**	Complete	**Footpath**	5		$1,000.00									$1,000

Footpath	**Macauley**	Complete	**Footpath**	5		$54,300.00									$54,300
Footpath	**Beach**	Complete	**Footpath**	3		$5,000.00									$5,000
Footpath	**Peppin Heritage**	Complete	**Footpath**	3		$1,300.00									$1,300
Footpath	**Butler**	Complete	**Footpath**	4		$24,200.00									$24,200
Footpath	**Harfleur**	Complete	**Footpath**	4		$39,300.00									$39,300
Footpath	**Edwardes**	Complete	**Footpath**	4		$19,200.00									$19,200
Footpath	**Sloane**	Complete	**Footpath**	4			$16,400.00								$16,400
Footpath	**Sloane**	Complete	**Footpath**	4			$17,400.00								$17,400
Footpath	**Sloane**	Complete	**Footpath**	4			$21,000.00								$21,000
Footpath	**Wood**	Complete	**Footpath**	4			$29,500.00								$29,500
Footpath	**Russell**	Complete	**Footpath**	4			$21,300.00								$21,300
Footpath	**Maher**	Complete	**Footpath**	4			$38,100.00								$38,100
Footpath	**Macauley**	Complete	**Footpath**	4			$19,800.00								$19,800
Footpath	**Sloane**	Complete	**Footpath**	4				$178,800.00							$178,800
Footpath	**Edwardes**	Complete	**Footpath**	4					$11,000.00						$11,000
Footpath	**Hardinge**	Complete	**Footpath**	4					$3,900.00						$3,900
Footpath	**Hardinge**	Complete	**Footpath**	4					$21,100.00						$21,100
Footpath	**Edwardes**	Complete	**Footpath**	4					$11,700.00						$11,700
Footpath	**Charlotte**	Complete	**Footpath**	4					$3,200.00						$3,200
Footpath	**George**	Complete	**Footpath**	4					$17,500.00						$17,500
Footpath	**George**	Complete	**Footpath**	4					$27,400.00						$27,400
Footpath	**Poictiers**	Complete	**Footpath**	4					$10,700.00						$10,700
Footpath	**Edwardes**	Complete	**Footpath**	4					$17,900.00						$17,900
Footpath	**Beach**	Complete	**Footpath**	3					$7,200.00						$7,200
Footpath	**Sanctuary**	Complete	**Footpath**	4					$6,700.00						$6,700
Footpath	**Laman**	Complete	**Footpath**	4					$9,200.00						$9,200

Footpath	**Davidson**	Complete	**Footpath**	4						$17,800.00					$17,800
Footpath	**Hatch**	Complete	**Footpath**	4						$15,700.00					$15,700
Footpath	**Corbett**	Complete	**Footpath**	4						$4,000.00					$4,000
Footpath	**Beach**	Complete	**Footpath**	2						$10,100.00					$10,100
Footpath	**Peppin Heritage Levee**	Complete	**Footpath**	2						$8,400.00					$8,400
Footpath	**George**	Complete	**Footpath**	3						$23,500.00					$23,500
Footpath	**Charlotte**	Complete	**Footpath**	3						$23,700.00					$23,700
Footpath	**Russell**	Complete	**Footpath**	3						$14,000.00					$14,000
Footpath	**Henry**	Complete	**Footpath**	3						$24,200.00					$24,200
Footpath	**Sloane**	Complete	**Footpath**	3							$23,900.00				$23,900
Footpath	**Junction**	Complete	**Footpath**	3							$13,100.00				$13,100
Footpath	**Charlotte**	Complete	**Footpath**	3							$4,000.00				$4,000
Footpath	**Hardinge**	Complete	**Footpath**	3							$26,600.00				$26,600
Footpath	**Sloane**	Complete	**Footpath**	3							$23,900.00				$23,900
	Future Projects										$48,500.00	$140,000	$140,000	$140,000	$468,500
	Future Bridge Refurbishment Works				$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$1,500,000
	Future Sign Replacement Programme				$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$500,000
	Install ULP tanks				$150,000										$150,000
	Refurbish drainage around Belman hangars				$20,000	$20,000	$20,000								$60,000
	Refurbish Belman hangar doors				$30,000	$30,000	$30,000	$30,000	$30,000						$150,000
	Taxiway Reconstruction					$100,000									$100,000
	Main Runway Reconstruction								$5,000,000						$5,000,000
	Airport Facilities								$3,000,000						$3,000,000
	Future Projects							$30,000		$100,000	$100,000	$100,000	$100,000	$100,000	$530,000
Car Park	**Future Carpark Renewals**					$50,000	$50,000	$50,000	$50,000	$50,000	$50,000				$300,000

Appendix E - Abbreviations

AAAC	Average annual asset consumption
AMP	Asset Management Plan
ARI	Average Recurrence Interval
CRC	Current Replacement Cost
CWMS	Community Wastewater Management Systems
DA	Depreciable Amount
EF	Earthworks/Formation
IRMP	Infrastructure Risk Management Plan
LCC	Life Cycle Cost
LCE	Life Cycle Expenditure
LGIS	Local Government Infrastructure Services
MMS	Maintenance Management System
PCI	Pavement Condition Index
RV	Residual Value
Vph	Vehicles per hour

Appendix F – Glossary

Annual Service Cost (ASC)

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

Asset

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

Asset class

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

Asset condition assessment

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

Asset management (AM)

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

Average annual asset consumption (AAAC)*

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

Borrowings

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

Capital expenditure

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

Capital expenditure - expansion

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

Capital expenditure - new

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

Capital expenditure - renewal

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

a road network, replacing a material section of a drainage network with pipes of the same capacity, resurfacing an oval.

Capital expenditure - upgrade

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

Capital funding

Funding to pay for capital expenditure.

Capital grants

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

Capital investment expenditure

See capital expenditure definition

Capitalisation threshold

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

Carrying amount

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

Component

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

Cost of an asset

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

Current replacement cost (CRC)

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

Depreciable amount

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

Depreciated replacement cost (DRC)

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

Depreciation / amortisation

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

Economic life

See useful life definition.

Expenditure

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

Fair value

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

Funding gap

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

Heritage asset

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

Impairment Loss

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

Investment Property

Property held to earn rentals or for capital appreciation or both, rather than for:

a) Use in the production or supply of goods or services or for administrative purposes; or
b) Sale in the ordinary course of business.

Key performance indicator

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

Level of service

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

Life Cycle Cost

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

Life Cycle Expenditure

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

Maintenance

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

Planned maintenance

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

Reactive maintenance

Unplanned repair work that is carried out in response to service requests and management/supervisory directions.

Significant maintenance

Maintenance work to repair components or replace sub-components that needs to be identified as a specific maintenance item in the maintenance budget.

Unplanned maintenance

Corrective work required in the short-term to restore an asset to working condition so it can continue to deliver the required service or to maintain its level of security and integrity.

Maintenance and renewal gap

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

Maintenance and renewal sustainability index

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

Maintenance expenditure

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

Materiality

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

Modern equivalent asset

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

Net present value (NPV)

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

Non-revenue generating investments

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

Operations expenditure

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

Operating expense

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

Pavement management system

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

PMS Score

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

Rate of annual asset consumption

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

Rate of annual asset renewal

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

Rate of annual asset upgrade

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

Recoverable amount

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

Recurrent expenditure

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

Recurrent funding

Funding to pay for recurrent expenditure.

Remaining useful life

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

Residual value

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

Revenue generating investments

Investments for the provision of goods and services to sustain or improve services to the community that are expected to generate

some savings or revenue to offset operating costs, eg public halls and theatres, childcare centres, sporting and recreation facilities, tourist information centres, etc.

Risk management

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

Section or segment

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

Service potential

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

Service potential remaining

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

Strategic Longer-Term Plan

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

Specific Maintenance

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

Sub-component

Smaller individual parts that make up a component part.

Useful life

Either:

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

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

Value in Use

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

Source: IPWEA, 2009, Glossary