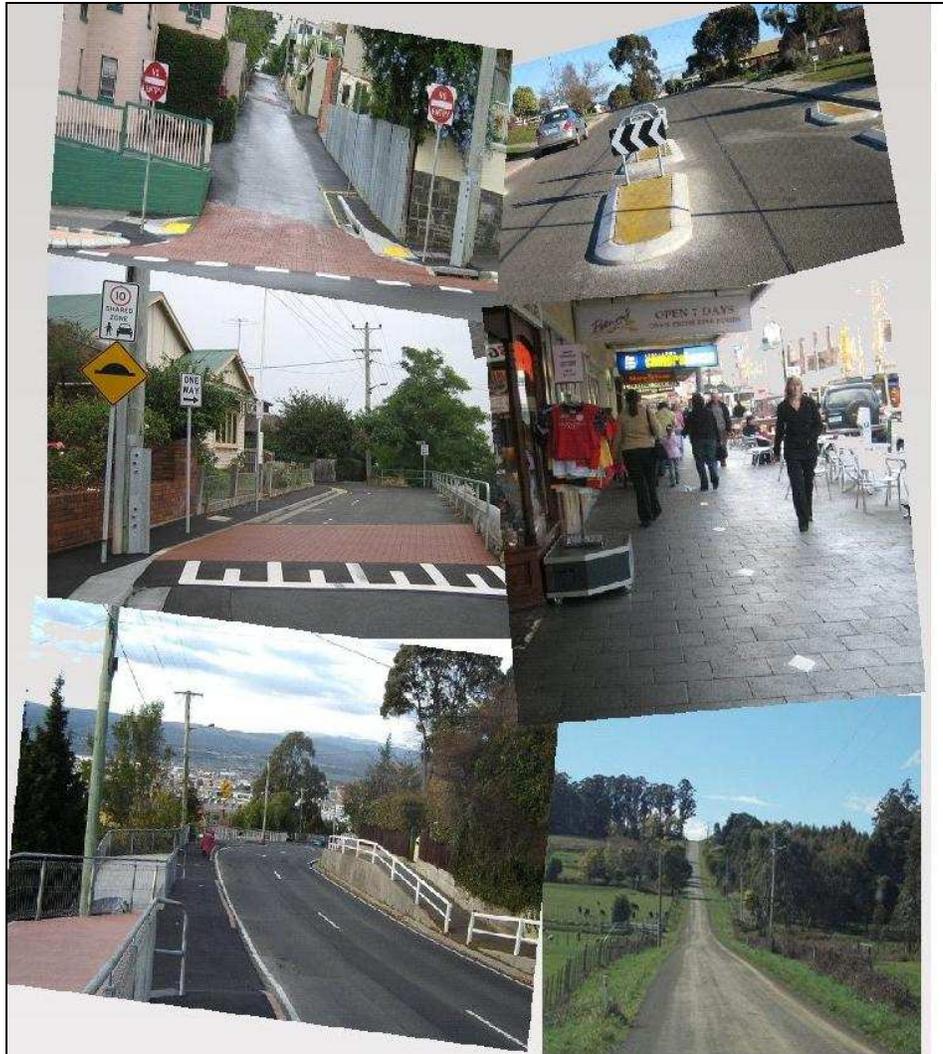


Transportation Asset Management Plan



Version 2.2
November 2012

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1. EXECUTIVE SUMMARY

Context

Launceston was proclaimed a municipality by an Act of Parliament on 30 October 1852, 47 years after it was founded.

The Launceston City Council maintains more than 739 kilometres of roads (including 370 kilometres of urban roads and 369 kilometres of rural roads). The Tasmanian Government is responsible for a further 160 kilometres of roads. The Council also maintains some 92 bridge/large culverts.

The road network provides access to individual properties and facilities and caters for the general circulation of the community. The network is structured on a hierarchical basis comprised of arterial, collector and local roads. The arterial roads allow the community to move between regions on generally high capacity roads.

The Road Service

The road network comprises:

- Urban roads
- Rural roads
- Bridges

These infrastructure assets have a replacement value of \$547,021 million.

What does it Cost?

The projected outlays necessary to provide the services covered by this Asset Management Plan (AMP); which includes operations (street sweeping, street lighting), maintenance, renewal and upgrade of existing assets over the 10 year planning period, is \$15.7 million (typical average) per year.

The 2012/2013 Roads allocated funding is \$16 million, taken as the typical average per year which is approximately 102% of the needed funds as per this AMP. This indicates that the road services area is receiving sufficient funding to maintain its existing service level as well as capacity for some growth.

What we will do?

We plan to provide road services for the following:

- Operate, maintain, renew, upgrade and provide new sealed/unsealed roads, kerb and channel, footpaths, bridges, cycle-ways and ancillary road assets to meet service levels set in annual budgets.
- Renew damaged road services beyond repair within the 10 year planning period.

What we cannot do?

Council does not have enough funding to provide all services at the desired service levels or provide all new services that are requested by the community.

Managing the Risks

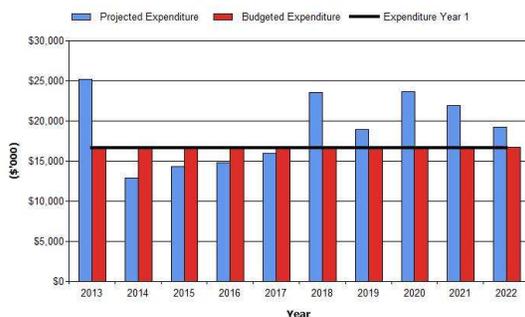
There are risks associated with providing road services and not being able to complete all identified activities and projects. We have identified major risks needing attention as:

- Travel delays due to congestion on main roads.
- Poor road surface ride quality.
- Pedestrian accidents.
- Pooling water within the road reserve.

We will endeavour to manage these risks within available funding through a multi-discipline working group by:

- Identifying and implementing road strategies resulting from completed Launceston Traffic Modelling. Supporting other authorities to implement alternative strategies to reduce congestion.
- Identifying problem areas. Prioritising projects based on road hierarchy function/safety risk. Developing long-term budgets.
- Reviewing accident statistics annually and identifying high risk pedestrian crossing points. Prioritising and developing treatment options. Developing action plans.
- Assessing the cause of the pooling water within the road reserve and the, extent of the problem. Developing an appropriate maintenance and cleansing strategy.

Launceston CC - Projected and Budget Expenditure for (Roads_S1_V4)



Confidence Levels

This Asset Management Plan (AMP) is based on medium level of confidence information.

The Next Step

The action resulting from this AMP is to;

- Collect information on all road assets still missing from the road asset register and enter it into the register.
- Develop and include a business management system to ensure asset records are modelled for future works
- Review useful life and valuation of all assets
- Implement the conditions of the revised 'Private Works on Roads By-Law'.
- All timber bridges to be replaced with concrete structures

Questions you may have

What is this plan about?

This asset management plan covers the infrastructure assets that serve the Launceston City Council community's transport needs. These assets include roads, kerb & channel, footpaths/cycleways, bridges/culverts, etc (see Table 2.1).

What is an Asset Management Plan?

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

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

Why can there be a funding shortfall?

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

If funding levels fail to keep up with growth, funds available to service assets decreases and maintenance costs increase. Hence a funding shortfall results, which will lead to a reduction in the level of service that can be provided.

Road services 2012/2013 funding level is sufficient to continue to provide existing services at current levels. This is reliant on a \$0.85 million

annual federal road to recovery grant which has a limited life.

How can fund service levels be maintained?

Resolving a funding shortfall involves several steps:

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

What happens if we don't manage the shortfall?

It is likely that we will have to reduce service levels in some areas, unless new sources of revenue are found. For roads, the service level reduction may result in poor road surface as asset lives are extend beyond their optimal, figure 1.



In addition, congestion may become more frequent and for longer durations as road capacity fails to meet demands.

What can we do?

We can develop options, costs and priorities for future road services, consult with the community to plan future services to match the community service needs with ability to pay for services and maximise community benefits against costs.

What can you do?

Community feedback on the issues raised in this asset management plan and suggestions on how we may change or reduce the roads mix of services to ensure that the appropriate level of service can be provided to the community within available funding.

2. INTRODUCTION

2.1 Background

This asset management plan is to demonstrate responsive management of assets (and services provided from assets), compliance with regulatory requirements, and to communicate funding needed to provide the required levels of service over a 20 year planning period.

The asset management plan follows the format for AM Plans recommended in Section 4.2.6 of the International Infrastructure Management Manual¹.

The asset management plan is to be read with the organisation's Asset Management Policy, Asset Management Strategy and the following associated planning documents: Fig 2.1

Fig 2.1: Organisations Road Planning Documents



This infrastructure assets covered by this asset management plan are shown in Table 2.1. These assets are used to provide transportation services to its community.

¹ IPWEA, 2011, Sec 4.2.6, *Example of an Asset Management Plan Structure*, pp 4|24 – 27.

Table 2.1: Assets covered by this Plan

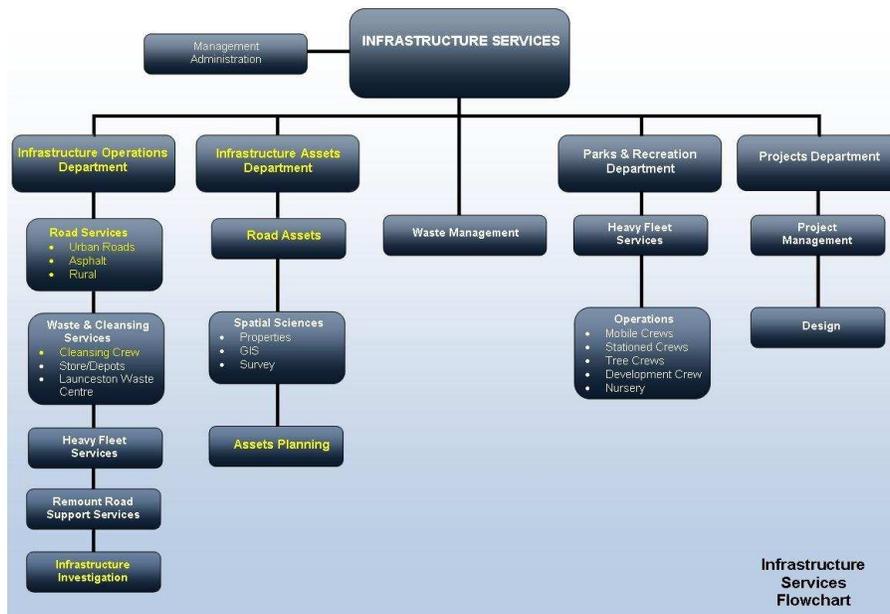
| Asset category | Dimension | Replacement Value |
|--|---|----------------------|
| Urban roads (road surface & pavement) | 370 Kms - Area = 2,995,000 m ² | \$287,232,000 |
| Rural roads (road surface & pavement) | 369 Kms - Area = 1,780,000 m ² | \$ 75,926,000 |
| Footpaths | 591 Kms - Area = 1,008,000 m ² | \$ 49,893,000 |
| Kerb and channel | 660 Kms | \$ 94,427,000 |
| Gully Pits | 9206 structures | \$ 23,428,000 |
| Bridges includes Large Culverts | 92 structures | \$ 12,951,000 |
| Others (Retaining Walls, Roundabouts...) | (NOT all assets recorded) | \$ 3,184,000 |
| TOTAL | | \$547,041,000 |

Key stakeholders in the preparation and implementation of this asset management plan are shown in Table 2.1.1.

Table 2.1.1: Key Stakeholders in the AM Plan

| Key Stakeholder | Role in Asset Management Plan |
|--|---|
| Aldermen | <ul style="list-style-type: none"> Represent needs of community/shareholders, Allocate resources to meet the organisation's objectives in providing services while managing risks, Ensure organisation is financial sustainable. |
| General Manager | To have confidence that an accurate AMP is developed and maintained. |
| Customers | Expect us to know what we have, where it is, how it works and that their service is provided at an economical rate. |
| Regulators | Require reassurance we act within all applicable statutes. |
| Strategic Managers | Require information about current services for planning purposes. |
| Operational Managers | Need to know what work is required – today and tomorrow |
| Department of Infrastructure, Energy and Resources | Need to be assured that our roads are safe and that they integrate effectively with the state road network. |

Organisational structure for Roads Service Delivery, Fig 2.1.1



2.2 Goals and Objectives of Asset Management

The organisation exists to provide services to its community. Some of these services are provided by infrastructure assets. We have acquired infrastructure assets by 'purchase', by contract, construction by our staff and by donation of assets constructed by developers and others to meet increased levels of service.

Our goal in managing infrastructure assets is to meet the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers. The key elements of infrastructure asset management are:

- Providing a defined level of service and monitoring performance,
- Managing the impact of growth through demand management and infrastructure investment,
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service,
- Identifying, assessing and appropriately controlling risks, and
- Having a long-term financial plan which identifies required, affordable expenditure and how it will be financed.²

2.3 Plan Framework

Key elements of the plan are

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

A road map for preparing an asset management plan is shown overleaf.

² Based on IPWEA, 2011, IIMM, Sec 1.2 p 1|7.

2.4 Core and Advanced Asset Management

This asset management plan is prepared as a 'core' asset management plan over a 20 year planning period in accordance with the International Infrastructure Management Manual³. It is prepared to meet minimum legislative and organisational requirements for sustainable service delivery and long term financial planning and reporting. Core asset management is a 'top down' approach where analysis is applied at the 'system' or 'network' level.

Future revisions of this asset management plan will move towards 'advanced' asset management using a 'bottom up' approach for gathering asset information for individual assets to support the optimisation of activities and programs to meet agreed service levels.

2.5 Community Consultation

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

³ IPWEA, 2011, IIMM.

3. LEVELS OF SERVICE

3.1 Customer Research and Expectations

We participate in the Local Government Customer Satisfaction survey. This telephone survey polls a sample of residents on their level of satisfaction with Council's services. The most recent customer satisfaction survey reported satisfaction levels for the following services

Table 3.1: Community Satisfaction Survey Levels (SF4516)

| Performance Measure | Satisfaction Level (Average %*) | | | | |
|---|---------------------------------|------|------|------|------|
| | 2007 | 2008 | 2009 | 2010 | 2011 |
| Safe and well maintained local roads (managed by Council) | 60 | 62 | 62 | 60 | 57.5 |
| Safe and well maintained pedestrian areas (eg. footpaths, walkways) | 64 | 64 | 66 | 64 | 61.6 |
| An efficient local road network (traffic flow) | 66 | 66 | 64 | 62 | 63.7 |
| Launceston City Council's - Average Satisfaction Score | 63 | 64 | 64 | 62 | 60.9 |
| LGAT - All Council's - Average Satisfaction Score | 60 | | 63 | | 61 |

The organisation uses this information in developing its Strategic Plan and in allocation of resources in the budget.

3.2 Strategic and Corporate Goals

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

Our vision is: ***Launceston, a thriving and sustainable municipality.***

Our mission is: ***Everyone working together as one organisation to deliver services to our community.***

Relevant organisation goals and objectives and how these are addressed in this asset management plan are:

Table 3.2: Organisation Goals and how these are addressed in this Plan

| Goal | Objective | How Goal and Objectives are addressed in AMP |
|--|---|---|
| 2 Built Environment Managing and enhancing Council and community assets, including buildings, roads and other above and below ground infrastructure | 2.1 Facilitate a sustainable approach to enhanced access to and within the municipality <ul style="list-style-type: none"> Investigate interlinked cycle ways/trails for the greater Launceston area and establish an implementation plan | Work with the Bike Committee and Parks and Recreation Department on long term management of cycle ways Apply asset management principles to ensure good management of the cycle ways, especially those on the road network |
| | 2.3 Establish a long term solution to the movement of traffic and heavy vehicles through the urban areas of Launceston to reduce congestion and accommodate growth <ul style="list-style-type: none"> Determine the need for (and if necessary identify) a short to medium-term east/west commercial/heavy vehicle route across the north of the CBD | Utilise the asset management data and planning to: <ul style="list-style-type: none"> Assist in the identification of commercial /heavy vehicle routes east/west across the city; and Minimise the need for new assets by maximising the value from the use of existing roads |

| Goal | Objective | How Goal and Objectives are addressed in AMP |
|--|--|--|
| | <ul style="list-style-type: none"> Determine a long term east/west commercial/heavy vehicle route to the north of the CBD | |
| | 2.4 Implement initiatives which recognise the importance of the municipality's built heritage to residents and visitors <ul style="list-style-type: none"> Complete the Heritage Precinct Project in conjunction with Heritage Tasmania | <ul style="list-style-type: none"> Apply asset management principles to achieve the long-term retention of existing bluestone kerbs Ensure any asset renewal design is sympathetic to the culture and environment of the street and local area |
| | 2.5 Ensure assets are adequately developed and maintained by delivering on Councils 10 Year Major Works Plan <ul style="list-style-type: none"> Undertake reviews of the 10 Year Major Works Program | Review the 20-year roads capital plan as initiated by the annual review of this AMP and provide appropriate input into Council's 10 Year Major Works Plan |
| | 2.6 Ensure Council's assets are adequately maintained and renewed by ensuring asset plans are current <ul style="list-style-type: none"> Undertake major reviews of asset management plans for Roads | Prepare and maintain this Roads Asset Management Plan |
| 3 Social and Economic Environment Promoting a healthy, prosperous and positive community | 3.4 Provide and promote safe City environments <ul style="list-style-type: none"> Support the community road safety program run in partnership with the State Road Safety Authority. Incorporate urban design principles of crime prevention by good design into the Planning Scheme | <ul style="list-style-type: none"> Utilise this Road AMP and its ongoing review to support road safety. Support crime prevention by specifying compliance and best practice with public lighting and the elimination of secluded areas in new subdivisions |
| 5 Governance Services Engaging our community and delivering responsible management | 5.4 Ensure the City is managed in a financially sustainable manner <ul style="list-style-type: none"> Prepare a new ten-year financial plan providing adequate resources for works and services; and with an appropriate rating structure Review funding sources | Utilise the 20-year capital projections from this AMP to provide more accurate data as inputs into Council's 10-year Financial Plan |
| | 5.10 Improve criteria for determining priorities for service delivery <ul style="list-style-type: none"> Agree the criteria for priority determination Apply criteria in assessing priorities | Review Levels of Service in conjunction with the preparation and ongoing maintenance of this AMP |

The Council will exercise its duty of care to ensure public safety in accordance with the infrastructure risk management plan prepared in conjunction with this AM Plan. Management of infrastructure risks is covered in Section 5.2

3.3 Legislative Requirements

We have to meet many legislative requirements including Australian and State legislation and State regulations. These include:

Table 3.3: Legislative Requirements

| Legislation | Requirement |
|---------------------------|--|
| Local Government Act 1993 | Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery. |

| Legislation | Requirement |
|--|---|
| Financial Management and Audit Act 1990 | To provide for the management of the public finances of Tasmania in an economical, efficient and effective manner consistent with contemporary accounting standards and financial practices, for the audit of public finances |
| Workplace Health and Safety Act 1995 | Provides for the health and safety of persons employed in, engaged in or affected by industry |
| Workplace Health and Safety Regulations 1998 | Provides for the health and safety of persons employed in, engaged in or affected by industry |
| Private Works on Roads By-Law 2000 | Provides for control and management of private works on roads |
| Roads & Jetties Act 1935 | Consolidates and amends certain enactments relating to roads and jetties and to make provision for the establishment and maintenance of aerodromes |
| Local Government (Highways) Act 1982 | Consolidates with amendments certain enactments concerning the functions of the corporations of municipalities with respect to highways and certain other ways and places open to the public |
| Disability Discrimination Act 1992 | Objects are to eliminate, as far as possible, discrimination against persons on the grounds of disability |
| Emergency Management Act 2006 | Provides for the protection of life, property and the environment in the event of an emergency |
| Malls By-Law 1997 | For the regulation, control and protection of Council's malls |
| Parking By-Law 2003 | Governs parking of vehicles and other activities on land owned or controlled by the Launceston City Council |
| Telecommunications Act 1997 | Lays down the legal framework for the industry and the supply level |
| Electricity Supply Industry Act 1995 | An Act to promote efficiency and competition in the electricity supply industry, to provide for a safe and efficient system of electricity generation, transmission, distribution and supply, to provide for the safety of electrical installations, equipment and appliances, to enforce proper standards in the performance of electrical work, to protect the interests of consumers of electricity and for related purposes |
| Gas Act 2000 | An Act to regulate the distribution and retailing of gas, to provide for safety and technical standards for gas installations and gas appliances and for related purposes |
| Australian Standards | Provides guidance for road asset managers in use of transport services such as AS 1742; Manual of Uniform Traffic Control Devices |
| Australian Road Rules | The Australian Road rules are incorporated into State Traffic Regulations under the Road Traffic Act |

3.4 Current Levels of Service

We have defined service levels in two terms.

Community Levels of Service measure how the community receives the service and whether the organisation is providing community value.

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

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

Technical Levels of Service - Supporting the community service levels are operational or technical measures of performance. These technical measures relate to the allocation of resources to service activities that the 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, road sweeping frequency, street lighting coverage, etc.
- Maintenance – the activities necessary to retain an assets as near as practicable to an appropriate service condition (eg road patching, unsealed road grading, road signs maintained, bridges and guardrail repairs),
- Renewal – the activities that return the service capability of an asset up to that which it had originally (eg frequency and cost of road & footpath resurfacing, pavement reconstruction, K&C and bridge replacement),
- Upgrade – the activities to provide a higher level of service (eg widening a road, sealing an unsealed road, replacing a bridge with a larger size) or a new service that did not exist previously (eg a new footpath or K&C).

Asset managers plan, implement and control technical service levels to influence the customer service levels.⁴

Our current service levels are detailed in Table 3.4.

Table 3.4: Current and Desired Service Levels

| Key Performance Measure | Level of Service Objective | Performance Measure Process | Current Level of Service | Optimal Level of Service |
|------------------------------------|--|---|---|---|
| COMMUNITY LEVELS OF SERVICE | | | | |
| Quality | Smooth, clean, safe roads and footpaths Rural road - dust free | Annual Community Opinion Survey | 62% satisfaction score May 2010 | 75% - 4/5 community satisfaction rating |
| Function | Free flowing traffic Road wide enough for parking & footpaths | Annual Community Opinion Survey | 62% satisfaction score - May 2010 | 75% - 4/5 community satisfaction rating |
| Capacity/ Utilisation | Meet transportation needs of all road users | South - North via Hwy Time travel survey | 13 min 22 secs (actual peak times Feb 2012) | 9 min 25 secs (minimum theoretical time no stops) |
| | | South - North via City Time travel survey | 23 min 38 secs (actual peak times Feb 2012) | 16 min 11 secs (minimum theoretical time no stops) |
| | | West - East Time travel survey | 13 min 27 secs (actual peak times Feb 2012) | 7 min 33 secs (minimum theoretical time no stops) |
| TECHNICAL LEVELS OF SERVICE | | | | |
| Operations | Provide clean (swept), safe (well lit) network Respond to public request in a timely and efficient manner | Annual Community Opinion Survey | 62% Average satisfaction score - May 2010 | 75% - community satisfaction rating |
| | Work within approved funding allocations | \$5.7M (2012/2013 Budget) | \$5.4M (2011/2012 Actual) | \$5.7 M |
| Maintenance | Provide safe and well maintained local roads and pedestrian areas. | 1 V-good to 5 V-bad condition grading for the asset groups | Footpath = 2.5 K&C = 2.0 Road Surface = 1.5 | Condition Grading < 2.5 |
| | Work within approved funding allocations | \$4.1M (2012/2013 Budget) | \$3.7M (2011/2012 Actual) | \$4.1 M |
| Renewal | Refer to section 5.4.2) | 1 very good to 5 very bad condition grading for the various asset | Footpath = 2.5 K&C = 2.0 Road Surface = 1.5 | Condition Grading < 2.5 |

⁴ IPWEA, 2011, IIMM, p 2.22

| Key Performance Measure | Level of Service Objective | Performance Measure Process | Current Level of Service | Optimal Level of Service |
|-------------------------|--|---|---|---|
| | | groups | | |
| | Work within approved funding allocations | \$5.2M (2012/2013 Budget) | \$5.2M (2011/2012 Actual) | \$5.2M - Includes Roads to Recovery funding |
| | CBD-2015 revitalisation Kings Meadows - 2023 Mowbray - 2021 | Business community wants to keep business centre alive. | CBD refurbished 1995 KM refurbished 2003 Mowbray - 2001 | \$10M \$10M \$10M |
| Upgrade/New | Upgrade renewed assets to acceptable standards. Satisfying community wants | Road assets comply with current standards | Complying with current standards | Complying with current standards |
| | Work within approved funding allocations | Est - \$1.5M (2012/2013 Budget) | \$1.7M (2011/2012 Actual) | \$1.7M |
| | Pedestrian strategy | Biannual pedestrian and bike counts at 11 cordon points, 8am-9am. | 800 pedestrian trips 200 bike trips | Increase in walking & cycling |
| | Bike strategy | | | |
| Boland/Forster | Connect 2016/2018 | Traffic study findings | | (\$14M) |
| Bathurst/Wellington | improvement 2023+ | Congestion relief | | (\$0.4M) |
| Hoblers Br/Henry | Connect 2018/2019 | Traffic study findings | | (\$7.5M) |
| Camden | Logging Strategy 2020/2023 | Regional logging | | \$10M) |
| Prossers Road | Upgrade 2016/2017 | Regional logging | | \$4M |
| Forster/Remount | Connect 2016/2018 | Industrial Truck Route | | \$6M |

3.5 Desired Levels of Service

Indications of desired levels of service are obtained from community consultation/engagement. The asset management planning process includes the development of 3 scenarios to develop levels of service that are financially sustainable.

4. FUTURE DEMAND

4.1 Demand Drivers

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

4.2 Demand Forecast

The present position and projections for demand drivers that may impact future service delivery and utilisation of assets were identified and are documented in Table 4.3.

4.3 Demand Impact on Assets

The impact of demand drivers that may affect future service delivery and utilisation of assets are shown in Table 4.3.

Table 4.3: Demand Drivers, Projections and Impact on Services

| Demand drivers | Present position | Projection | Impact on services |
|---|--|--|--|
| Population | <ul style="list-style-type: none"> 67,190 (2012) | <ul style="list-style-type: none"> 0.7% pa increase since 2008 | <ul style="list-style-type: none"> Small increase in traffic |
| Ageing population | <ul style="list-style-type: none"> Median Age 37 (all Australia 37) 55 years and over 26.1% (all Aust 24.3) | <ul style="list-style-type: none"> Median age to rise Numbers over 55 to increase | <ul style="list-style-type: none"> Greater demand on leisure travel Less demand in peak hours Demand a higher standard of footway access (DDA) Greater emphasis on walking and footpaths |
| Lifestyle pattern | <ul style="list-style-type: none"> The trend towards inner city living started to gain momentum from the year 2000 | <ul style="list-style-type: none"> Increase in inner city living | <ul style="list-style-type: none"> Greater demand for inner city services Greater utilisation of inner city infrastructure |
| Community expectations | <ul style="list-style-type: none"> 50 kph urban speed limit on most urban streets 100 kph maximum open road speed limit (under review) 30% of roads are gravel | <ul style="list-style-type: none"> Greater demand for higher standards State Road Safety Authority is considering reducing rural speed limits. | <ul style="list-style-type: none"> Increased demand for improved ride ability, traffic safety and amenity |
| Heavy vehicle configuration | <ul style="list-style-type: none"> B-double trucks permitted on designated routes only | <ul style="list-style-type: none"> Greater numbers of larger commercial vehicles | <ul style="list-style-type: none"> Higher geometric standards on designated routes |
| On and off street parking 1 st July 2012 | <ul style="list-style-type: none"> On-street 1 Hr meter \$2.10 per hour Paterson St: both Car Parks \$1.00 per 0.5Hrs after \$2.00 first Hr. Can get a car park within CBD Time on-street car parking extending to residential areas adjoining the CBD | <ul style="list-style-type: none"> Unit parking price is rising Limited availability of parking at peak periods eg Christmas shopping | <ul style="list-style-type: none"> Long term parking is limited Commuters more likely to use alternative forms of transport Higher parking prices is improving the viability of off-street multistorey parking developments |
| Price of fuel | <ul style="list-style-type: none"> \$1.52 ULP 09/2012 63.7% drive car to work (2007) 6.3% walk to work (2007) 1.6% bus to work 3.1% work at home State & National push to encourage walking & cycling | <ul style="list-style-type: none"> 3% price increase since 2008 Numbers to fall Numbers to rise Numbers to rise Numbers to rise | <ul style="list-style-type: none"> Greater use of public transport Reside closer to work Greater number of small motorised and non-motorised vehicle users Increase in home offices |

| Demand drivers | Present position | Projection | Impact on services |
|---|---|--|--|
| Availability of road construction materials | <ul style="list-style-type: none"> Petroleum based products readily available and affordable Quarries located within the urban fringe or nearby | <ul style="list-style-type: none"> Materials more expensive (scarcity) Greater recycling of road materials Different construction types and methods | <ul style="list-style-type: none"> More expensive road maintenance and construction techniques |
| Environmental stewardship | <ul style="list-style-type: none"> General community awareness of the effects of global warming | <ul style="list-style-type: none"> Greater community expectations for local response to global warming Carbon Tax & cost of living | <ul style="list-style-type: none"> Use more efficient vehicles Less vehicle usage More use of public transport More walkers & cyclists |

4.4 Demand Management Plan

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices include non-asset solutions, insuring against risks and managing failures.

Non-asset solutions focus on providing the required service without the need for the organisation 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 failures⁵. Examples of non-asset solutions include providing services from existing infrastructure such as refurbish driveways or replacing a rural fence line or relocate a power pole or communication pit within a capital roads project.

Opportunities identified to date for demand management are shown in Table 4.4. Further opportunities will be developed in future revisions of this asset management plan.

Table 4.4: Demand Management Plan Summary

| Demand Driver | Impact on Services | Demand Management Plan |
|------------------------------|--|--|
| Single vehicle configuration | Higher geometric standards on designated routes | Provide designated B-double routes |
| On and off street parking | <ul style="list-style-type: none"> Long term parking is limited Commuters more likely to use alternative forms of transport Higher parking prices is improving the viability of off-street multistorey parking developments | Support the preparation of the Launceston CBD Parking and Transportation Study |
| Environmental stewardship | <ul style="list-style-type: none"> Use more efficient vehicles Less vehicle usage More use of public transport | Championing the preparation of a Transporting Children to and from School Study |
| Price of fuel | <ul style="list-style-type: none"> Greater use of public transport Reside closer to work Greater demand for bikeways | Designate parking spaces for bikes, scooters and bicycles. Adapting roads to accommodate motorised and non-motorised vehicles on major routes and competing need for limited road space. |
| Aging population | <ul style="list-style-type: none"> Greater demand on leisure travel Less demand in peak hours Demand a higher standard | Greater compliance with access standards of footpaths eg slope, width for mobility scooters Provide parking spaces for motor homes close to the CBD Monitor demand for parking spaces for motor homes eg |

⁵ IPWEA, 2011, IIMM, Table 3.4.1, p 3 | 58.

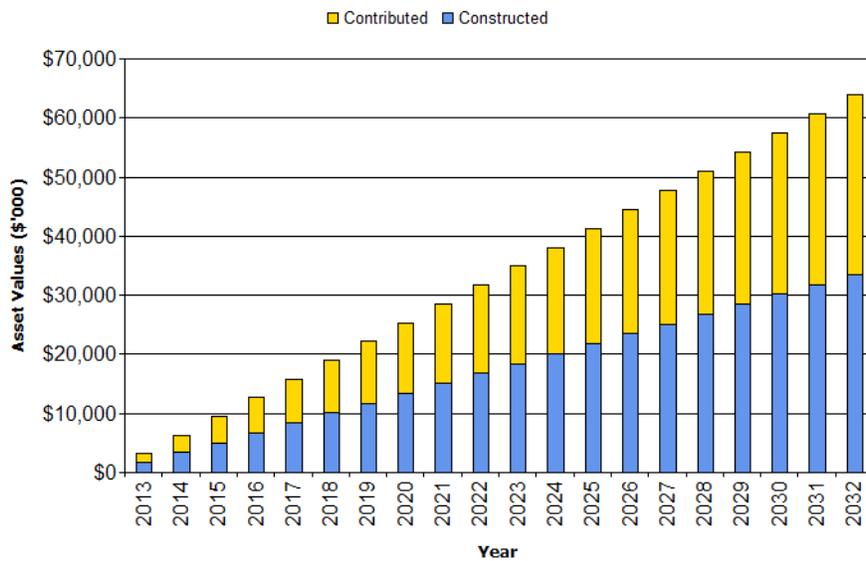
| Demand Driver | Impact on Services | Demand Management Plan |
|---------------|--|--|
| | of footway access (DDA) • Greater emphasis on walking and footpaths | consider allowing use of loading zones |

4.5 Asset Programs to meet Demand

The new assets required to meet growth will be acquired free of cost from land developments and constructed/acquired by the organisation. New assets constructed/acquired by the organisation are discussed in Section 5.5. The cumulative value of new contributed and constructed asset values are summarised in Figure 1.

Figure 1: Upgrade and New Assets to meet Demand

Launceston CC - Upgrade & New Assets to meet Demand (Roads_S1_V4)



Acquiring these new assets will commit the organisation to fund ongoing 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 in Section 5.

5. LIFECYCLE MANAGEMENT PLAN

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

5.1 Background Data

5.1.1 Physical parameters

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

The terrain in the wider municipality is typically hilly and results in winding roads with many bridges and culverts to cross the myriad of creeks and rivers. There is an equal length of urban and rural roads and most of the bridges and culverts are located on the rural roads. Travel times are typically slower than mainland travel routes. There is a trend for more rural residential living and the newer residents wanting a higher standard of roads.

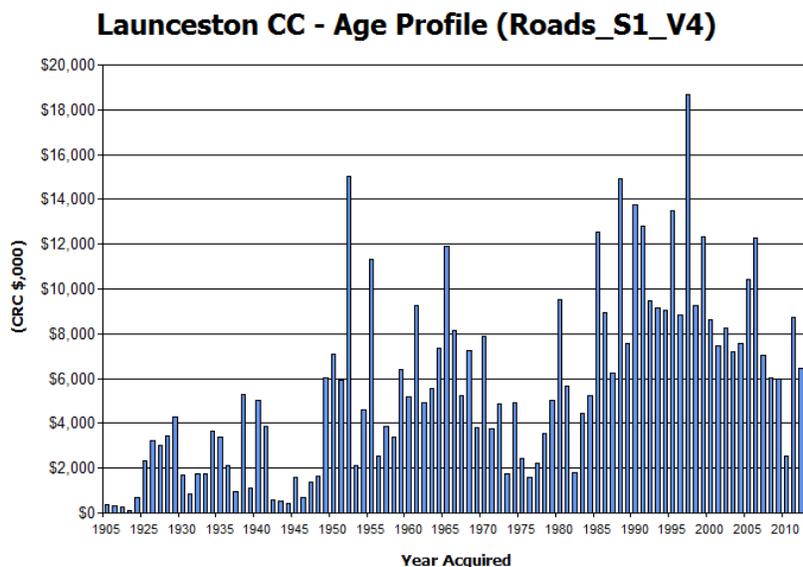
The terrain within the urban area readily defines north south corridors, but there are no natural east west linkages. There is a pressing need to find better east west links and access over the rivers to enable preferred heavy vehicles routes while protecting the river edges for pedestrian activities and reducing general traffic congestion at the major bridges.

There is greater expectation from the community to be consulted on the design aspects of new roadworks. In the urban area, they also expect that the reconstruction of road assets will involve urban design components. There is also an increased demand for traffic calming devices/technology in the local road network.

Inner city residents are becoming less tolerant with not being able to park in front of their properties. The parking close to the CBD and major shopping centres is being taken up by all day parking for commuters.

The age profile of the assets include in this AM Plan is shown in Figure 2.

Figure 2: Asset Age Profile



Plans showing the road assets are held in a GIS database.

5.1.2 Asset capacity and performance

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

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

Table 5.1.2: Known Service Performance Deficiencies

| Location | Service Deficiency |
|---|---|
| Throughout the municipality | A number of road assets are considered to be underperforming or not suitable given: <ul style="list-style-type: none"> • The existing class or volume of traffic • The adjacent land uses • The lack of network connectivity |
| CBD - access to, around and through traffic | Traffic congestion |
| Invermay and Kings Meadows strip shopping centres | Traffic congestion |
| Charles Street and Tamar Street bridge crossings over the North Esk River | Near maximum traffic saturation |
| Access routes between West Tamar and East Tamar northern suburbs | Inefficient and congested |
| Access routes between Kings Meadows/Youngtown and Prospect area | Inefficient and congested |
| Remount Road area - industrial area and waste disposal facility. | Lack of appropriate heavy vehicle access route. |

The above service deficiencies were identified from historical documents and experienced staff.

5.1.3 Asset condition

Asset condition is assessed in accordance with Table 5.1.3 below. Intervention starts occurring at condition grading 3 and can result in the requirement for a capital project if a safety issue is creating community concerns. At condition grading 4 the extent of maintenance work necessary will govern whether the faults are fixed by maintenance or go to create a capital project. At condition grading 5 the work is considered needing major work and it becomes a capital project. Depending on what asset category being assessed the condition grading is viewed differently:

- **Footpath** - faults include trip hazards, general appearance or the absence of a footpath. Footpaths are assessed separately from the road surface.
- **Kerb & Channel** - faults include pooling water in channel, K&C is rolling over, deep channels or high kerbs, no K&C . K&C is generally considered with the road surface assessment condition gradings.
- **Road Surface** - faults include reflection of underlying concrete joints, shrinkage/fatigue cracks in a rigid pavement or aged asphalt surface, poor surface bonding, surface thickness, tree roots, trenches, groundwater, rutting, depressions, shoving, corrugating, delamination, polishing, flushing, stripping, ravelling.

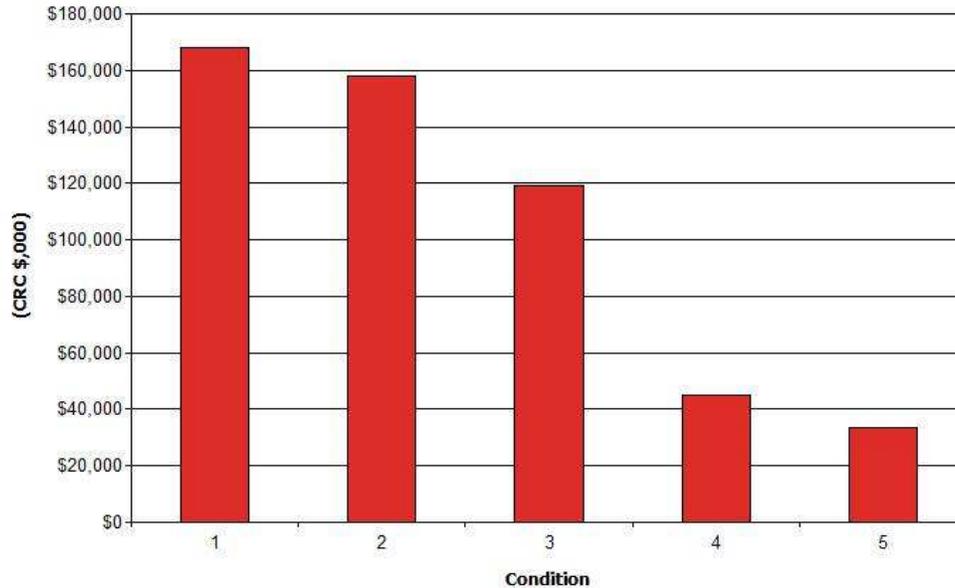
Intervention (renewal projects) are prioritised on a ranking basis, based on each of the assets making up that project. The overall ranking of the assets drives the project. A surface road condition is assessed on a 1 (Good) to 5 (Bad) grading, considering; Cracking (waterproof), Shape (depressions etc), Wearing (polishing etc), Defects (shoving etc) Each is given a condition grading and is weighted on it's overall effect on the deterioration of the road. An overall condition score results. A community usage factor based on annual average daily traffic (AADT) is added to the condition score to prioritise the high usage assets. A K&C rating (1 to 5) is also added to the score for efficiency in order to align needed K&C work with needed road surface projects.

Rural roads are assessed separately from urban roads. This is to ensure rural roads are not given a lower priority due to their low usage (AADT's) compared to urban road usage.

The condition profile of our assets is shown in Figure 3.

Fig 3: Asset Condition Profile

Launceston CC - Asset Condition Profile (Roads_S1_V4)



Condition is measured using a 1 – 5 grading system⁶ as detailed in Table 5.1.3.

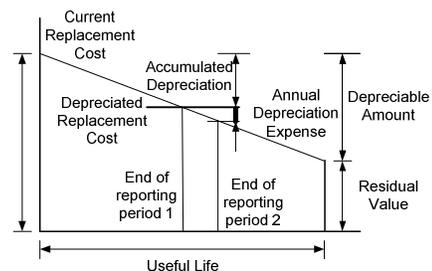
Table 5.1.3: Simple Condition Grading Model

| Condition Grading | Description of Condition |
|-------------------|---|
| 1 | Very Good: any faults are assessed as insignificant |
| 2 | Good: minor faults without any safety implications |
| 3 | Fair: faults have; condition or safety implication and needs to be listed for maintenance or monitored |
| 4 | Poor: faults are major and need quick response |
| 5 | Very Poor: faults are major or have serious safety implications and need immediate attention |

5.1.4 Asset valuations

The value of assets recorded in the asset register as at 30 June 2012 covered by this asset management plan is shown below. Assets were last revalued at 30 June 2011. Assets are valued at replacement cost

| | |
|---|---------------|
| Current Replacement Cost | \$547,041,000 |
| Depreciable Amount | \$547,041,000 |
| Depreciated Replacement Cost ⁷ | \$327,506,000 |



⁶ IPWEA, 2011, IIMM, Sec 2.5.4, p 2 | 79.

⁷ Also reported as Written Down Current Replacement Cost (WDCRC).

Annual Depreciation Expense \$8,100,000

Useful lives were reviewed in July 2012 by the Asset management Plan Working Group.

Key assumptions made in preparing the valuations were:

- To include traffic management costs.
- To include all associate activities involved in constructing a particular asset.
- To use current market rates.

Major changes from previous valuations are due to a 30% plus increase in road surfacing costs.

Various ratios of asset consumption and expenditure have been prepared to help guide and gauge asset management performance and trends over time.

| | |
|--|-------|
| Rate of Annual Asset Consumption (Depreciation/Depreciable Amount) | 1.50% |
| Rate of Annual Asset Renewal (Capital renewal exp/Depreciable amount) | 1.00% |
| Rate of Annual Asset Upgrade/New (Capital upgrade exp/Depreciable amount) | 0.30% |
| Rate of Annual Asset Upgrade/New (including contributed assets) | 0.60% |

In 2012 - 2013 the organisation plans to renew assets at 64.3% of the rate they are being consumed and will be increasing its asset stock by 0.6% in the year.

5.1.5 Historical Data

Historical data can be found in Appendix G

5.2 Infrastructure Risk Management Plan

An assessment of risks⁸ associated with service delivery from infrastructure assets has identified critical risks that will result in loss or reduction in service from infrastructure assets or a 'financial shock' to the organisation. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

Critical risks, being those assessed as 'Very High' - requiring immediate corrective action and 'High' - requiring prioritised corrective action identified in the Infrastructure Risk Management Plan, together with the estimated residual risk after the selected treatment plan is operational are summarised in Table 5.2. These risks are reported to management and Council.

Table 5.2: Critical Risks and Treatment Plans

| Service or Asset at Risk | What can Happen | Risk Rating (VH, H) | Risk Treatment Plan | Residual Risk * | Treatment Costs |
|--------------------------|--|---------------------|--|-----------------|---|
| Road Network [2] | Parts of the network impassable due to major river flood | H | Municipal Emergency Response Management Plan Launceston Flood Protection scheme | | As required Refer to Flood Levee AMP |

⁸ Core Infrastructure Risk Management Plan - Road Assets

| Service or Asset at Risk | What can Happen | Risk Rating (VH, H) | Risk Treatment Plan | Residual Risk * | Treatment Costs |
|--|---|---------------------|--|-----------------|--|
| Road Network [9] | Parts of the network traffic movement very slow due to traffic congestion | H | Analyse the road network to identify priority works which reduce congestion; and develop implementation programme and funding partners | | Amy/Penquite junction \$0.15M. Elphin/Hobblers alternate routes \$17.5M Wellington/Bathurst couplet \$0.4m Remount Industrial Area alternative Route \$5M |
| Urban roads and rural roads sealed and unsealed [15] | Poor ride quality due to excessive crossfall | H | Identify and prioritise within budget | | Less than 5% of existing budget |
| Unsealed rural roads [23] | Poor ride quality due to corrugations | H | Compare existing intervention and work processes with alternative methods to compare cost efficiency and effectiveness of treatments | | Less than 5% of existing budget |
| Sealed and unsealed rural roads [41] | Vehicle accident due to inappropriate sight distance | H | Identify sites, initiate safety audit inspections and programme treatment | | Less than 5% of existing budget |
| Urban roads [47] | Pedestrian accident due to road being too busy | H | Accident statistics reviewed annually to identify high risk pedestrian crossing points. Prioritise and develop treatment options and develop an action plan | | Less than 5% of existing budget |
| Urban roads and rural roads sealed and unsealed [49] | Pedestrian accident due to speeding vehicles | H | Accident statistics and traffic speeds reviewed annually to identify inappropriate speed environments Prioritise and develop treatment options and develop an action plan | | Less than 5% of existing budget |
| Kerb & channel [75] | Water pooling due to blocked grates | H | Review cleansing strategy versus areas of public concern | | Less than 1% of existing budget |

Note * The residual risk is the risk remaining after the selected risk treatment plan is operational.

5.3 Routine Operations and Maintenance Plan

Operations include regular activities to provide services such as public health, safety and amenity, eg street sweeping, grass mowing and street lighting.

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

5.3.1 Operations and Maintenance Plan

Operations activities affect service levels including quality and function through street sweeping and grass mowing frequency, intensity and spacing of street lights and cleaning frequency and opening hours of building and other facilities.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating, eg road patching but excluding rehabilitation or renewal. Maintenance may be classified into reactive, planned and specific maintenance work activities.

Reactive maintenance is unplanned repair work carried out in response to service requests and management/supervisory directions.

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

Specific maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, replacing air conditioning units, etc. This work falls below the capital/maintenance threshold but may require a specific budget allocation.

Actual past maintenance expenditure is shown in Table 5.3.1.

Table 5.3.1: Maintenance Expenditure Trends

| Year | Maintenance Expenditure | |
|------------|-------------------------|-----------|
| | Planned and Specific | Unplanned |
| 2011-04-30 | \$3,414,000 | \$563,000 |
| 2012-04-30 | \$3,503,000 | \$588,000 |

Planned maintenance work is currently 85.6% of total maintenance expenditure.

Maintenance expenditure levels are considered to be adequate to meet projected service levels, which may be less than or equal to current service levels. Where maintenance expenditure levels are such that will result in a lesser level of service, the service consequences and service risks have been identified and service consequences highlighted in this AM Plan and service risks considered in the Infrastructure Risk Management Plan.

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

5.3.2 Operations and Maintenance Strategies

The organisation will operate and maintain assets to provide the defined level of service to approved budgets in the most cost-efficient manner. The operation and maintenance activities include:

- Scheduling operations activities to deliver the defined level of service in the most efficient manner,
- Undertaking maintenance activities through a planned maintenance system to reduce maintenance costs and improve maintenance outcomes. Undertake cost-benefit analysis to determine the most cost-effective split between planned and unplanned maintenance activities (50 – 70% planned desirable as measured by cost),
- Maintain a current infrastructure risk register for assets and present service risks associated with providing services from infrastructure assets and reporting Very High and High risks and residual risks after treatment to management and Council/Board,
- Review current and required skills base and implement workforce training and development to meet required operations and maintenance needs,
- Review asset utilisation to identify underutilised assets and appropriate remedies, and over utilised assets and customer demand management options,
- Maintain a current hierarchy of critical assets and required operations and maintenance activities,
- Develop and regularly review appropriate emergency response capability,
- Review management of operations and maintenance activities to ensure Council is obtaining best value for resources used.

Asset Hierarchy

An asset hierarchy provides a framework for structuring data in an information system to assist in collection of data, reporting information and making decisions. The hierarchy includes the asset class and component used for asset planning and financial reporting and service level hierarchy used for service planning and delivery. The organisation's service hierarchy is shown in Table 5.3.2.

Table 5.3.2: Asset Service Hierarchy

| Service Hierarchy | Service Level Objective |
|---|---|
| Sealed Roads: <ul style="list-style-type: none"> • Arterial - part of the State Highway • Sub-Arterial - roads connecting State Highways • Collector - local main roads • Local Through - local road used as a collector • Local - roads servicing residential areas. • No Through - dead end road • Service - laneway servicing only a few properties | <p>To provide a fit for purpose road carriage; sound and relatively smooth and free of loose debris. Traffic controls maintained and safety deficiencies addressed.</p> <p>Road projects are prioritised on a 1-5 condition rating of the road pavement for each of; Cracking (waterproof), Shape (depressions etc), Wearing (polishing etc), Defects (shoving etc). Each are weighted and scored. A community usage factor (based on AADT) is added to the condition score to give priority to the high usage roads.</p> |
| Unsealed Roads | <p>To provide a fit for purpose gravel road carriage; sound and relatively; firm, free of potholes and corrugations and free draining. Traffic controls maintained and safety deficiencies addressed.</p> <p>Roads are covered by an annual operational grading and gravelling program prioritised annually.</p> |
| Road Drainage | To provide road drainage relatively free of the faults, eg channel is pooling water, K&C is rolling over or significantly out of vertical or horizontal alignment, deep channels or high kerbs causing an access problem to a residence, localised flooding or drainage issues. |
| Footpath | To provide pedestrian access that is relatively free of trip hazards, Disability Discrimination Act compliant and continuous where practical and warranted. |
| Bridges | To maintain bridge structural integrity and program replacement of all standard structures. Traffic controls maintained and safety deficiencies addressed |

Critical Assets

Critical assets are those assets which have a high consequence of failure but not necessarily a high likelihood of failure. By identifying critical assets and critical failure modes, organisations can target and refine investigative activities, maintenance plans and capital expenditure plans at the appropriate time.

Operations and maintenance activities may be targeted to mitigate critical assets failure and maintain service levels. These activities may include increased inspection frequency, higher maintenance intervention levels, etc. Critical assets failure modes and required operations and maintenance activities are detailed in Table 5.3.2.1.

Table 5.3.2.1: Critical Assets and Service Level Objectives

| Critical Assets | Critical Failure Mode | Operations and Maintenance Activities |
|-----------------|--------------------------|---------------------------------------|
| Victoria Bridge | Channel for flood waters | Municipal EMP will be activated |

Standards and specifications

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

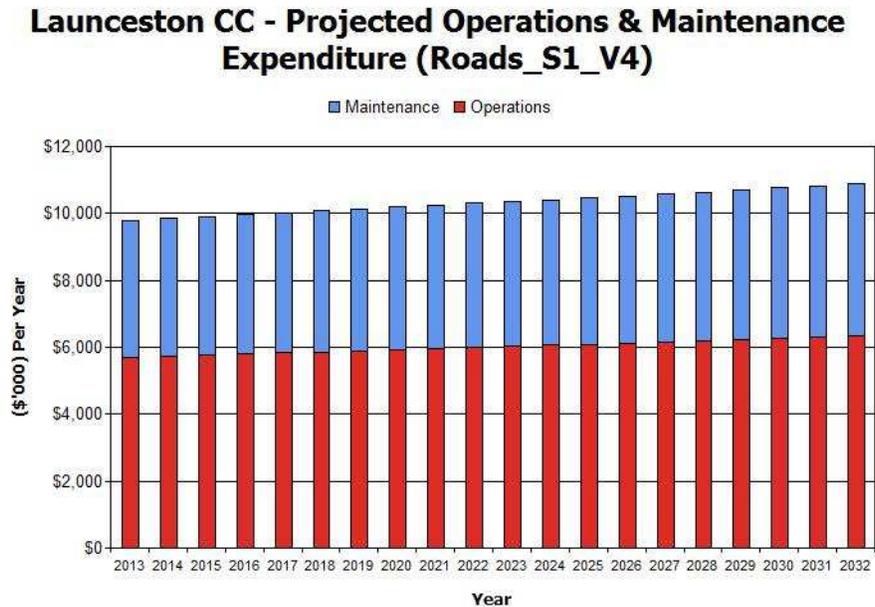
- General Specifications and Standard Drawings – Launceston City Council
- Work Orders with accompanying Job Plans scheduled as preventative maintenance in Technology One.

- Australian Standards
- Standard Contract Documentation and Specifications – Department of Infrastructure, Energy and Resources

5.3.3 Summary of future operations and maintenance expenditures

Future operations and maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Figure 4. Note that all costs are shown in current 2012 dollar values (ie real values).

Figure 4: Projected Operations and Maintenance Expenditure



Deferred maintenance, ie works that are identified for maintenance and unable to be funded are to be included in the risk assessment and analysis in the infrastructure risk management plan.

Maintenance is funded from the operating budget where available. This is further discussed in Section 6.2.

5.4 Renewal/Replacement Plan

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

5.4.1 Renewal plan

Assets requiring capital renewal/replacement for footpaths and kerb & channel identified in this asset management plan use the Roads Asset Register data to project the renewal costs using acquisition year and useful life to determine the renewal year. Whereas for the road surface/pavement assets, capital renewal/replacements projects are identified using a condition modelling system.

The useful lives of assets and asset valuations used to develop projected asset renewal expenditures are shown in Table 5.4.1. Asset useful lives and asset valuation were last reviewed on June 2012.

Table 5.4.1: Useful Lives of Assets

| Asset (Sub)Category | Useful Life (years) | Asset Valuation (unit rate) |
|---|---------------------|-------------------------------|
| ROAD SURFACE: | | |
| ASPHALT | | |
| - Arterial Road | 20 | \$50/m ² |
| - Sub Arterial & Industrial Roads | 25 | \$50/m ² |
| - Collector, Local Through , Local Roads | 30 | \$32/m ² |
| - No Through, Service Roads | 35 | \$32/m ² |
| SPRAY EMUSION SURFACE (Flushseal, Slurry Seal) | 20 | \$9/m ² (Two coat) |
| - Rural Service Roads | 25 | \$9/m ² (Two coat) |
| CONCRETE (will be replaced with asphalt overlay) | 60 | \$50/m ² |
| PAVED | 50 | \$130/m ² |
| GRAVEL (Maintenance Cost) | 10 | |
| FOOTPATH - Asphalt | 30 | \$34/m ² |
| - Concrete | 50 | \$130/m ² |
| - Pavers | 50 | \$130/m ² |
| KERB & CHANNEL - Concrete (includes base) | 100 | \$143/m ² |
| - Bluestone (includes base) | 100 | \$179/m ² |
| PAVEMENT (Road base) | | |
| - Arterial Road | 100 | \$100/m ² |
| - Urban Road | 150 | \$55/m ² |
| - Rural Sealed Road | 150 | \$40/m ² |
| - Rural Unsealed Road | 150 | \$26/m ² |
| GULLY PITS & CULVERTS | 100 | \$2561/Unit |
| BRIDGES DECK - Timber deck (12.5 years life) & Beam | 25 | \$1265/m ² |
| (width X length) - Timber deck (12.5 years life) & Steel beam | 100 | \$1785/m ² |
| unit - Pre cast Concrete deck & beam | 100 | \$1785/m ² |
| - Reinforced Concrete Box Culvert | 100 | \$2925/m ² |
| - Reinforced Concrete Pipe Culvert | 100 | \$1950/m ² |
| - Concrete deck & Timber beams | 50 | \$1300/m ² |
| - Concrete deck & Steel beams | 100 | \$2110/m ² |
| - Steel deck & Steel beams | 100 | \$2110/m ² |
| BRIDGE ABUTMENT - Timber- | 25 | \$600/m ² |
| (includes wing-walls) - Concrete | 100 | \$2600/m ² |
| (width X Invert depth)*2 - Timber Piles | 25 | \$2240/m ² |
| BRIDGE PIERS - Timber Piles | 25 | \$1045/m ² |
| (width X Invert depth)*2 | | |

5.4.2 Renewal and Replacement Strategies

The organisation will plan capital renewal and replacement projects to meet level of service objectives and minimise infrastructure service risks by:

- Planning and scheduling renewal projects to deliver the defined level of service in the most efficient manner,
- Undertaking project scoping for all capital renewal and replacement projects to identify:
 - the service delivery 'deficiency', present risk and optimum time for renewal/replacement,
 - the project objectives to rectify the deficiency,
 - the range of options, estimated capital and life cycle costs for each options that could address the service deficiency,
 - and evaluate the options against evaluation criteria adopted by Council, and
 - select the best option to be included in capital renewal programs,
- Using 'low cost' renewal methods (cost of renewal is less than replacement) wherever possible,

- Maintain a current infrastructure risk register for assets and service risks associated with providing services from infrastructure assets and reporting Very High and High risks and residual risks after treatment to management and Council,
- Review current and required skills base and implement workforce training and development to meet required construction and renewal needs,
- Maintain a current hierarchy of critical assets and capital renewal treatments and timings required ,
- Review management of capital renewal and replacement activities to ensure Council is obtaining best value for resources used.

Renewal ranking criteria

Asset renewal and replacement is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (eg replacing a bridge that has a 5 t load limit), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (eg roughness of a road).⁹

It is possible to get some indication of capital renewal and replacement priorities by identifying assets or asset groups that:

- Have a high consequence of failure,
- Have a high utilisation and subsequent impact on users would be greatest,
- The total value represents the greatest net value to the organisation,
- Have the highest average age relative to their expected lives,
- Are identified in the AM Plan as key cost factors,
- Have high operational or maintenance costs, and
- Where replacement with modern equivalent assets would yield material savings.¹⁰

The ranking criteria used to determine priority of identified renewal and replacement proposals is detailed in Table 5.4.2.

Table 5.4.2: Renewal and Replacement Priority Ranking Criteria

| Criteria | Weighting |
|--|-------------|
| Safety – number and severity of accidents | 30% |
| Vehicle usage | 20% |
| Condition – extent of deterioration of pavement, seal, footpath and kerb and channel | 40% |
| Amenity – satisfaction level of local community with road assets | 10% |
| Total | 100% |

Renewal and replacement standards

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

- General Specifications and Standard Drawings – Launceston City Council
- Design Manual (Draft) – Launceston City Council
- Australian Standards
- Subdivision – Audit and Construction Guidelines – Launceston City Council, August 2006

⁹ IPWEA, 2011, IIMM, Sec 3.4.4, p 3 | 60.

¹⁰ Based on IPWEA, 2011, IIMM, Sec 3.4.5, p 3 | 66.

- Subdivision – Design & Administration Guidelines – Launceston City Council, May 2005
- Tasmanian Councils’ Standards for Subdivision - Institute of Public Works Engineering Australia (Tas)
- Standard Contract Documentation and Specifications – Department of Infrastructure, Energy and Resources

5.4.3 Summary of future renewal and replacement expenditure

Projected future renewal and replacement expenditures are forecast to increase over time as the asset stock increases from growth. The expenditure is summarised in Figs 5a and 5b. Note that all amounts are shown in real values. The projected capital renewal and replacement program is available from Technology One, works and assets.

Fig 5a: Projected Capital Renewal and Replacement Expenditure

Launceston CC - Projected Capital Renewal Expenditure (Roads_S1_V4)

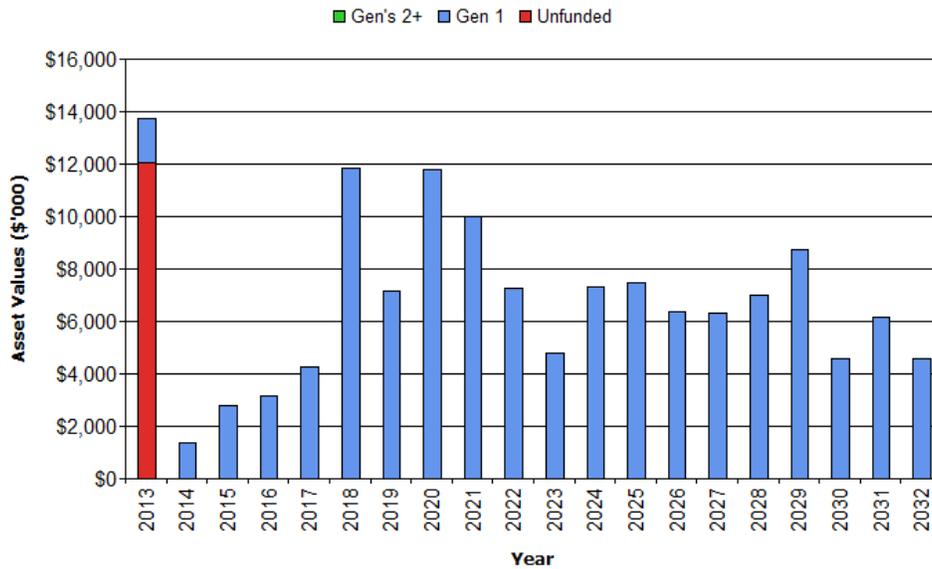


Figure 5a provides renewal projects based on the asset register. This shows a variable renewal program, which in reality do not represent how the work will be undertaken. Fig. 5b attempts to balance renewal with the long term financial plan.

Figure 5a shows around \$12m of unfunded renewals, which have been reviewed and will be undertaken over the next 5-7 years (this is represented in figure 5b).

Fig 5b: Projected Capital Renewal and Replacement Expenditure

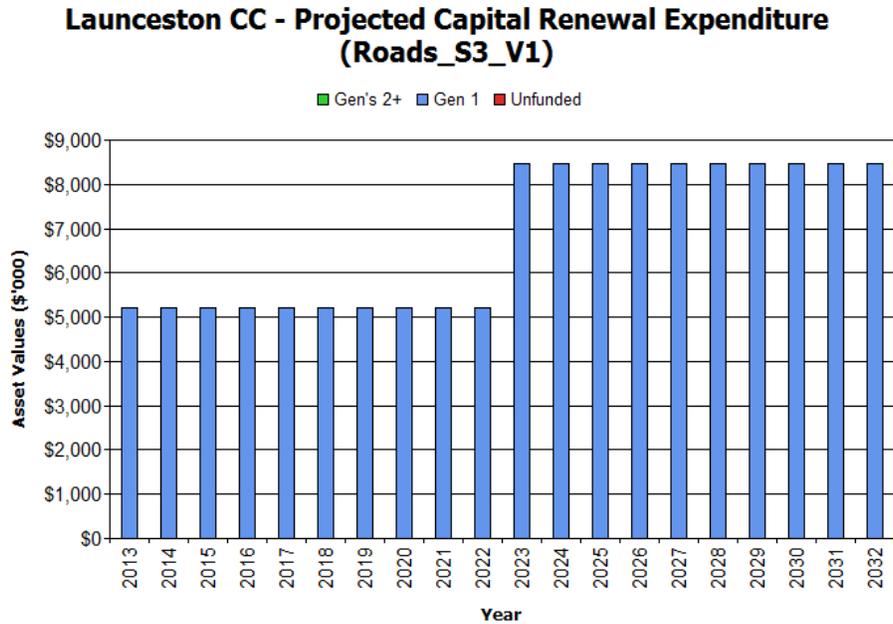


Figure 5b represents the Long Term Financial Plan and balances the renewals identified in Figure 5a for the asset register.

Deferred renewal and replacement, ie those assets identified for renewal and/or replacement and not scheduled in capital works programs are to be included in the risk analysis process in the risk management plan.

Renewals and replacement expenditure in the organisation’s capital works program will be accommodated in the long term financial plan. This is further discussed in Section 6.2.

5.5 Creation/Acquisition/Upgrade Plan

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

5.5.1 Selection criteria

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

Table 5.5.1: New Assets Priority Ranking Criteria

| Criteria | Weighting |
|--------------------------------------|------------------|
| Identified commercial freight routes | 10% |
| To reduce traffic congestion | 20% |
| Fits Council Transport Strategy | 30% |
| Improve safety for road users | 40% |
| Total | 100% |

5.5.2 Capital Investment Strategies

The organisation will plan capital upgrade and new projects to meet level of service objectives by:

- Planning and scheduling capital upgrade and new projects to deliver the defined level of service in the most efficient manner,
- Undertake project scoping for all capital upgrade/new projects to identify:
 - the service delivery 'deficiency', present risk and required timeline for delivery of the upgrade/new asset,
 - the project objectives to rectify the deficiency including value management for major projects,
 - the range of options, estimated capital and life cycle costs for each options that could address the service deficiency,
 - management of risks associated with alternative options,
 - and evaluate the options against evaluation criteria adopted by Council/Board, and
 - select the best option to be included in capital upgrade/new programs,
- Review current and required skills base and implement training and development to meet required construction and project management needs,
- Review management of capital project management activities to ensure Council is obtaining best value for resources used.

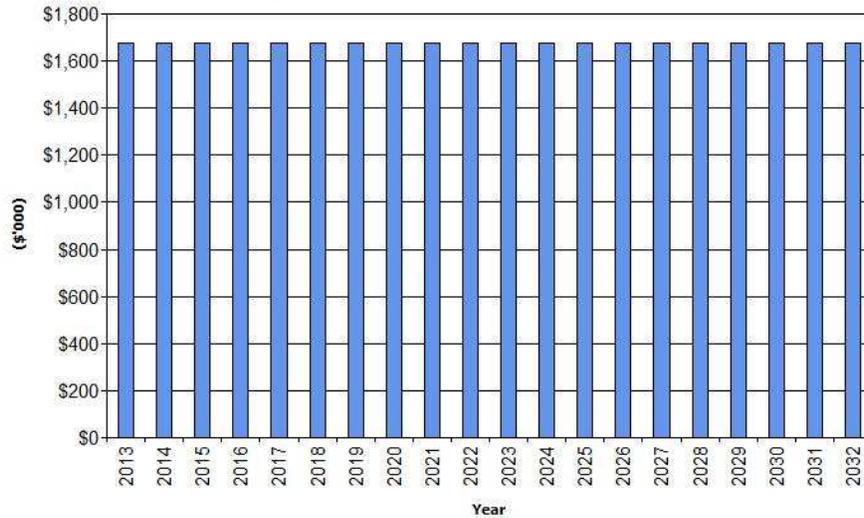
Standards and specifications for new assets and for upgrade/expansion of existing assets are the same as those for renewal shown in Section 5.4.2.

5.5.3 Summary of future upgrade/new assets expenditure

Projected upgrade/new asset expenditures are summarised in Fig 6. The projected upgrade/new capital works program is shown in Appendix C. All amounts are shown in real values.

Fig 6: Projected Capital Upgrade/New Asset Expenditure

Launceston CC - Projected Capital Upgrade/New Expenditure (Roads_S1_V4)



Expenditure on new assets and services in the organisation’s capital works program will be accommodated in the long term financial plan. This is further discussed in Section 6.2.

5.6 Disposal Plan

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

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

Table 5.6: Assets Identified for Disposal

| Asset | Reason for Disposal | Timing | Disposal Expenditure | Operations and Maintenance Annual Savings |
|--|---------------------|--------|----------------------|---|
| No road assets identified for disposal | | | | |

6. FINANCIAL SUMMARY

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

6.1 Financial Statements and Projections

The financial projections are shown in Fig 7 for projected operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets). Note that all costs are shown in real values.

Fig 7: Projected Operating and Capital Expenditure

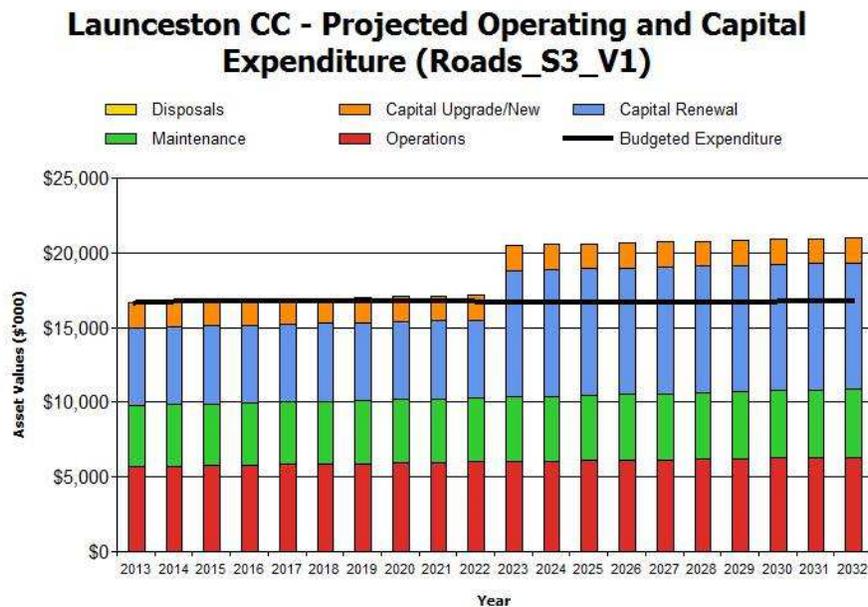


Figure 7 Shows that the projected operational and capital expenditure is balanced from 2013 to 2022. Renewals identified from the asset register that can't be undertaken in the 2013 to 2022 period have been deferred until after 2022. Generally, Council asset engineers and qualified staff believe the condition of our roads is not deteriorating, and therefore current spending is appropriate. The asset register and valuations need to be reviewed on the following points:

- Useful lives may not be reflecting actual condition of the assets.
- Valuation on the roads may be overly conservative.
- The attribute breakdown of assets for valuations needs to be renewed to consider variants in the natural environment and usage.

6.1.1 Sustainability of service delivery

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

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio¹¹ 100%

The Asset Renewal Funding Ratio is the most important indicator and reveals that over the next 10 years, the organisation is forecasting that it will have 100% of the funds required for the optimal renewal and replacement of its assets.

Long term - Life Cycle Cost

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the asset life cycle. Life cycle costs include operations and maintenance expenditure and asset consumption (depreciation expense). The life cycle cost for the services covered in this asset management plan is \$17,889,000 per year (average operations and maintenance expenditure plus depreciation expense projected over 10 years).

Life cycle costs can be compared to life cycle expenditure to give an initial indicator of affordability of projected service levels when considered with age profiles. Life cycle expenditure includes operations, maintenance and capital renewal expenditure. Life cycle expenditure will vary depending on the timing of asset renewals. The life cycle expenditure over the 10 year planning period \$15,000,000 per year (average operations and maintenance plus capital renewal budgeted expenditure in LTFP over 10 years).

A shortfall between life cycle cost and life cycle expenditure is the life cycle gap. The life cycle gap for services covered by this asset management plan is -\$2,889,000 per year (-ve = gap, +ve = surplus).

Life cycle expenditure is 84% of life cycle costs.

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

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

Medium term – 10 year financial planning period

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

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

The projected operations, maintenance and capital renewal expenditure required over the 10 year planning period is \$15,255,000 on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$15,072,000 on average per year giving a 10 year funding shortfall of -\$183,000 per year. This indicates that Council expects to have 99% of the projected expenditures needed to provide the services documented in the asset management plan.

¹¹ AIFMG, 2009, Financial Sustainability Indicator 8, Sec 2.6, p 2.18

Medium Term – 5 year financial planning period

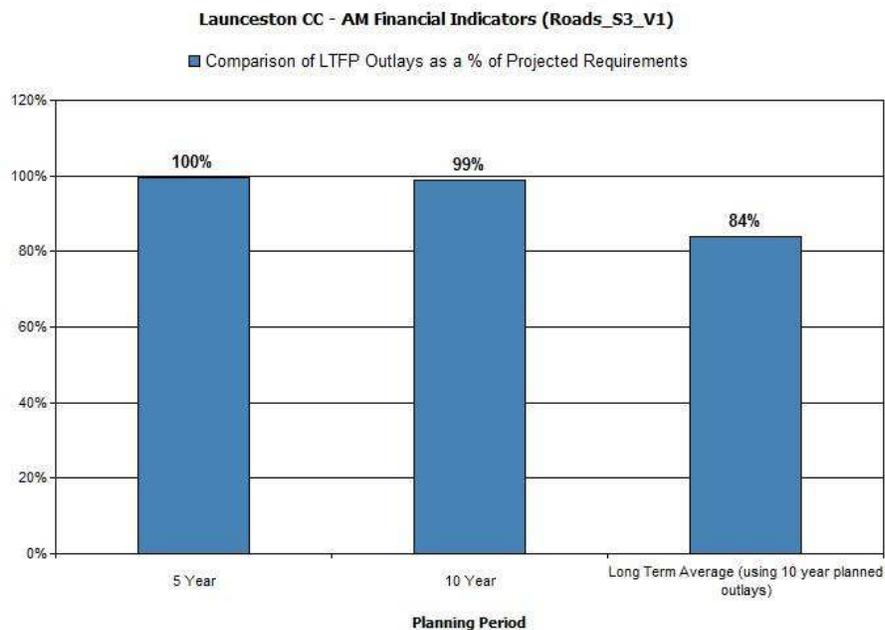
The projected operations, maintenance and capital renewal expenditure required over the first 5 years of the planning period is \$15,113,000 on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$15,064,000 on average per year giving a 5 year funding shortfall of -\$49,000. This indicates that Council expects to have 100% of projected expenditures required to provide the services shown in this asset management plan.

Asset management financial indicators

Figure 8 shows the asset management financial indicators over the 10 year planning period and for the long term life cycle.

Figure 8: Asset Management Financial Indicators



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

Council are currently funding 84% of the lifecycle costs which is considered appropriate when considering network renewals over a 150 year horizon as presented in Figure 9. Figure 9 shows that renewals are a trough for the next 20 to 30 years. In reality renewal spending won't be as variable as presented in the figures but further asset modelling is required improve confidence of future capital requirements beyond 10 years.

Figure 9: Projected Renewal Expenditure to 2160

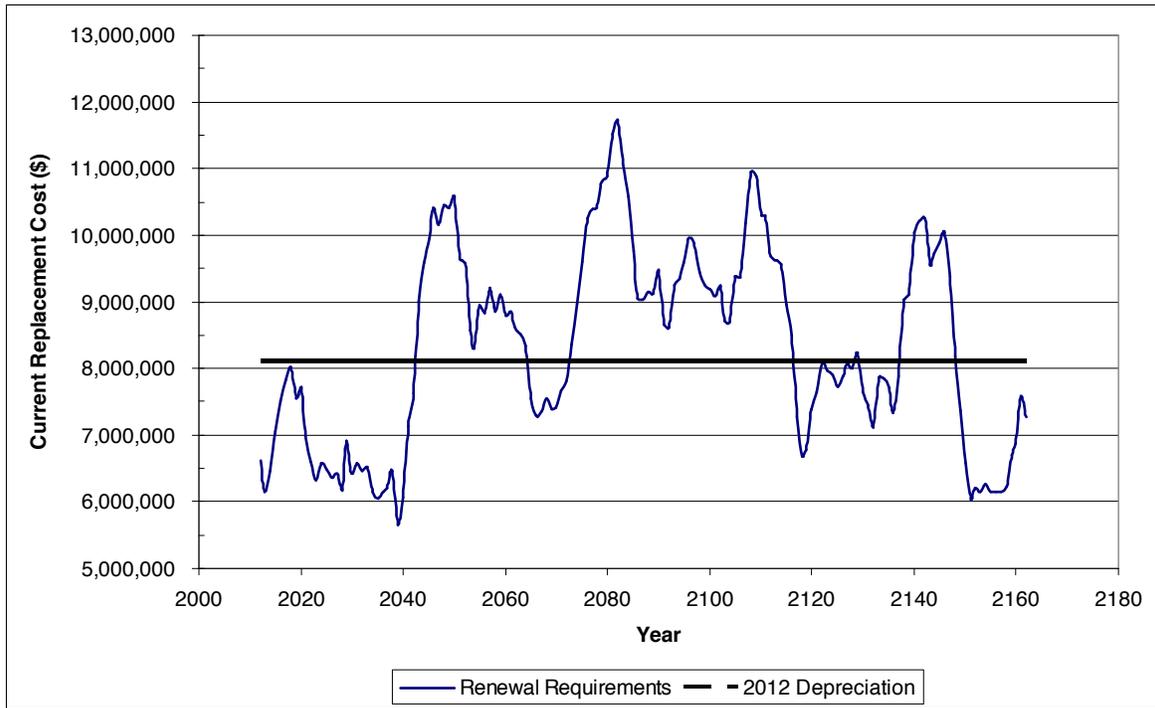


Figure 10 shows the projected asset renewal and replacement expenditure over the 20 years of the AM Plan. The projected asset renewal and replacement expenditure is compared to renewal and replacement expenditure in the capital works program, which is accommodated in the long term financial plan.

Figure 10: Projected and LTFP Budgeted Renewal Expenditure

Launceston CC - Projected & LTFP Budgeted Renewal Expenditure (Roads_S3_V1)

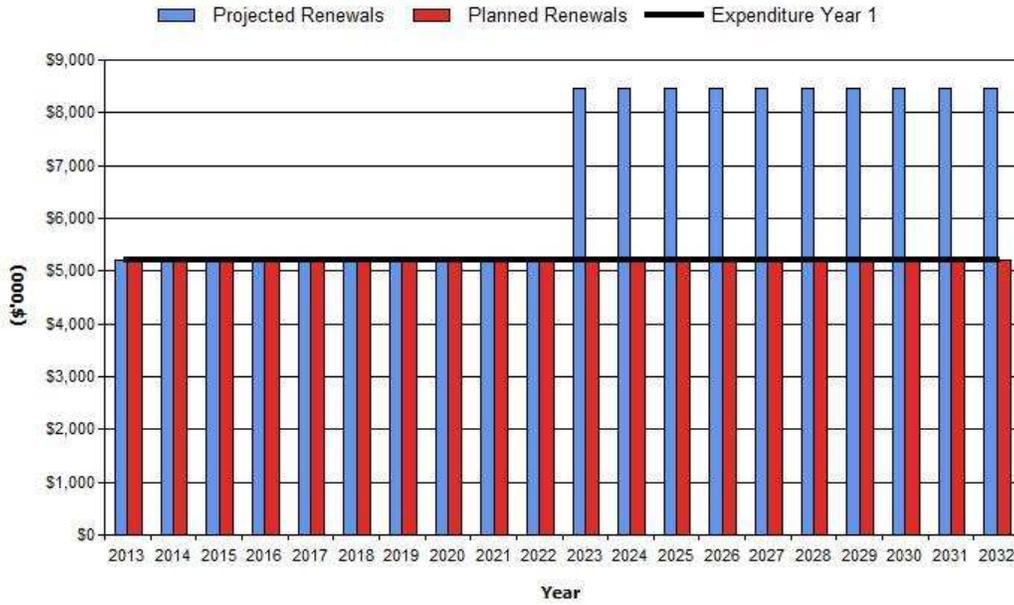


Table 6.1.1 shows the shortfall between projected renewal and replacement expenditures and expenditure accommodated in long term financial plan. Budget expenditures accommodated in the long term financial plan or extrapolated from current budgets are shown in Appendix D.

Table 6.1.1: Projected and LTFP Budgeted Renewals and Financing Shortfall

| Year | Projected Renewals (\$000) | LTFP Renewal Budget (\$000) | Renewal Financing Shortfall (\$000) (-ve Gap, +ve Surplus) | Cumulative Shortfall (\$000) (-ve Gap, +ve Surplus) |
|------|----------------------------|-----------------------------|--|---|
| 2013 | \$5,211 | \$5,211 | \$0 | \$0 |
| 2014 | \$5,211 | \$5,211 | \$0 | \$0 |
| 2015 | \$5,211 | \$5,211 | \$0 | \$0 |
| 2016 | \$5,211 | \$5,211 | \$0 | \$0 |
| 2017 | \$5,211 | \$5,211 | \$0 | \$0 |
| 2018 | \$5,211 | \$5,211 | \$0 | \$0 |
| 2019 | \$5,211 | \$5,211 | \$0 | \$0 |
| 2020 | \$5,211 | \$5,211 | \$0 | \$0 |
| 2021 | \$5,211 | \$5,211 | \$0 | \$0 |
| 2022 | \$5,211 | \$5,211 | \$0 | \$0 |
| 2023 | \$8,647 | \$5,211 | -\$3,256 | -\$3,256 |

| Year | Projected Renewals (\$000) | LTFP Renewal Budget (\$000) | Renewal Financing Shortfall (\$000) (-ve Gap, +ve Surplus) | Cumulative Shortfall (\$000) (-ve Gap, +ve Surplus) |
|------|----------------------------|-----------------------------|---|--|
| 2024 | \$8,647 | \$5,211 | -\$3,256 | -\$6,512 |
| 2025 | \$8,647 | \$5,211 | -\$3,256 | -\$9,768 |
| 2026 | \$8,647 | \$5,211 | -\$3,256 | -\$13,024 |
| 2027 | \$8,647 | \$5,211 | -\$3,256 | -\$16,280 |
| 2028 | \$8,647 | \$5,211 | -\$3,256 | -\$19,536 |
| 2029 | \$8,647 | \$5,211 | -\$3,256 | -\$22,792 |
| 2030 | \$8,647 | \$5,211 | -\$3,256 | -\$26,048 |
| 2031 | \$8,647 | \$5,211 | -\$3,256 | -\$29,304 |
| 2032 | \$8,647 | \$5,211 | -\$3,256 | -\$32,560 |

Note: A negative shortfall indicates a financing gap, a positive shortfall indicates a surplus for that year.

Providing services in a sustainable manner will require matching of projected asset renewal and replacement expenditure to meet agreed service levels with the corresponding capital works program accommodated in the long term financial plan.

A gap between projected asset renewal/replacement expenditure and amounts accommodated in the LTFP indicates that further work is required on reviewing service levels in the AM Plan (including possibly revising the LTFP) before finalising the asset management plan to manage required service levels and funding to eliminate any funding gap.

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

6.1.2 Projected expenditures for long term financial plan

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

Expenditure projections are in 2012 real values.

Table 6.1.2: Projected Expenditures for Long Term Financial Plan (\$000)

| Year | Operations (\$000) | Maintenance (\$000) | Projected Capital Renewal (\$000) | Capital Upgrade/ New (\$000) | Disposals (\$000) |
|------|--------------------|---------------------|-----------------------------------|------------------------------|-------------------|
| 2013 | \$5,698.00 | \$4,091.00 | \$5,211.00 | \$1,677.00 | \$0.00 |
| 2014 | \$5,730.85 | \$4,114.59 | \$5,211.00 | \$1,677.00 | \$0.00 |
| 2015 | \$5,763.75 | \$4,138.20 | \$5,211.00 | \$1,677.00 | \$0.00 |
| 2016 | \$5,796.68 | \$4,161.85 | \$5,211.00 | \$1,677.00 | \$0.00 |
| 2017 | \$5,829.66 | \$4,185.53 | \$5,211.00 | \$1,677.00 | \$0.00 |
| 2018 | \$5,862.68 | \$4,209.23 | \$5,211.00 | \$1,677.00 | \$0.00 |
| 2019 | \$5,895.74 | \$4,232.97 | \$5,211.00 | \$1,677.00 | \$0.00 |

| Year | Operations (\$000) | Maintenance (\$000) | Projected Capital Renewal (\$000) | Capital Upgrade/ New (\$000) | Disposals (\$000) |
|------|--------------------|---------------------|-----------------------------------|------------------------------|-------------------|
| 2020 | \$5,928.84 | \$4,256.74 | \$5,211.00 | \$1,677.00 | \$0.00 |
| 2021 | \$5,961.99 | \$4,280.54 | \$5,211.00 | \$1,677.00 | \$0.00 |
| 2022 | \$5,995.18 | \$4,304.36 | \$5,211.00 | \$1,677.00 | \$0.00 |
| 2023 | \$6,028.41 | \$4,328.22 | \$8,467.00 | \$1,677.00 | \$0.00 |
| 2024 | \$6,061.68 | \$4,352.11 | \$8,467.00 | \$1,677.00 | \$0.00 |
| 2025 | \$6,094.99 | \$4,376.03 | \$8,467.00 | \$1,677.00 | \$0.00 |
| 2026 | \$6,128.35 | \$4,399.98 | \$8,467.00 | \$1,677.00 | \$0.00 |
| 2027 | \$6,161.75 | \$4,423.96 | \$8,467.00 | \$1,677.00 | \$0.00 |
| 2028 | \$6,195.20 | \$4,447.97 | \$8,467.00 | \$1,677.00 | \$0.00 |
| 2029 | \$6,228.68 | \$4,472.02 | \$8,467.00 | \$1,677.00 | \$0.00 |
| 2030 | \$6,262.22 | \$4,496.09 | \$8,467.00 | \$1,677.00 | \$0.00 |
| 2031 | \$6,295.79 | \$4,520.20 | \$8,467.00 | \$1,677.00 | \$0.00 |
| 2032 | \$6,329.41 | \$4,544.33 | \$8,467.00 | \$1,677.00 | \$0.00 |

6.2 Funding Strategy

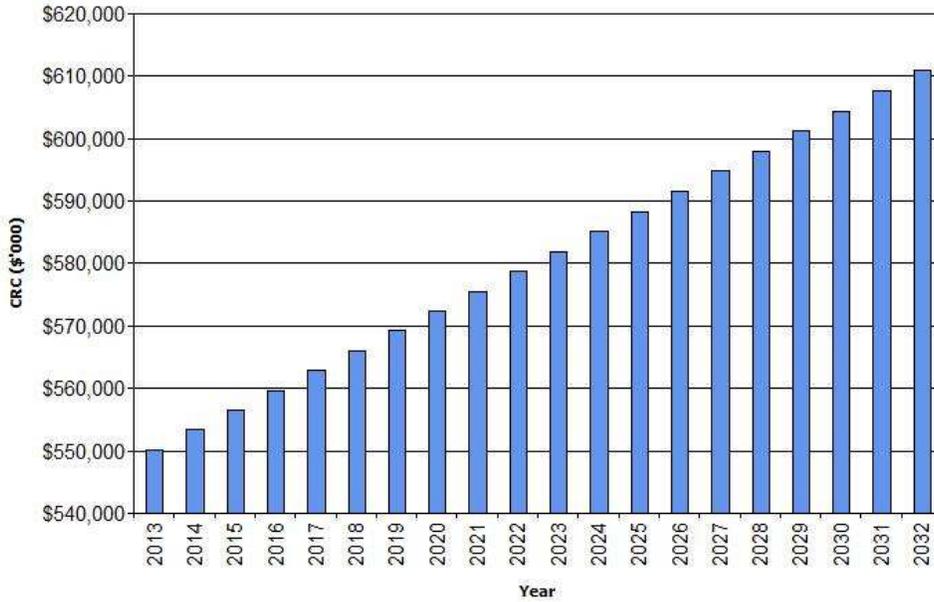
After reviewing service levels, as appropriate to ensure ongoing financial sustainability projected expenditures identified in Section 6.1.2 will be accommodated in the organisation's 10 year long term financial plan.

6.3 Valuation Forecasts

Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by the organisation and from assets constructed by land developers and others and donated to the organisation. Figure 11 shows the projected replacement cost asset values over the planning period in real values.

Figure 11: Projected Asset Values

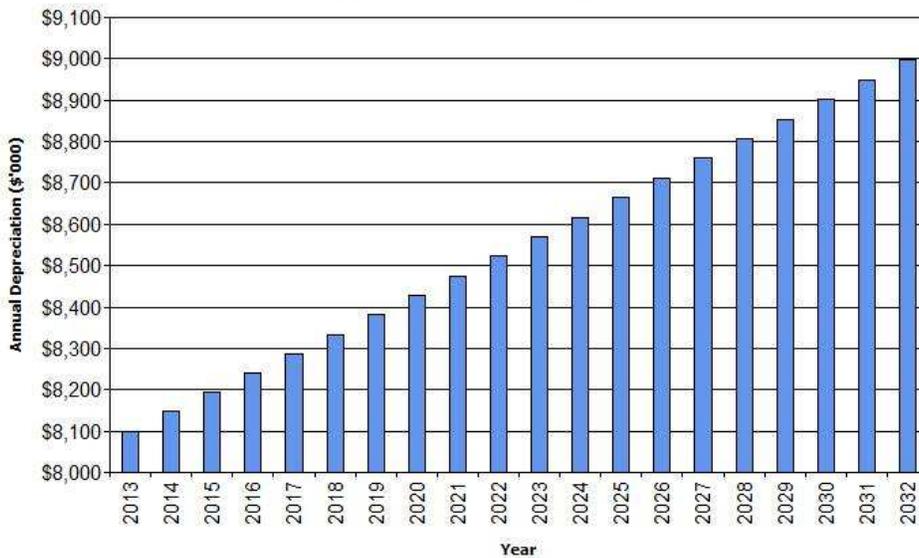
Launceston CC - Projected Asset Values (Roads_S3_V1)



Depreciation expense values are forecast in line with asset values as shown in Figure 12.

Figure 12: Projected Depreciation Expense

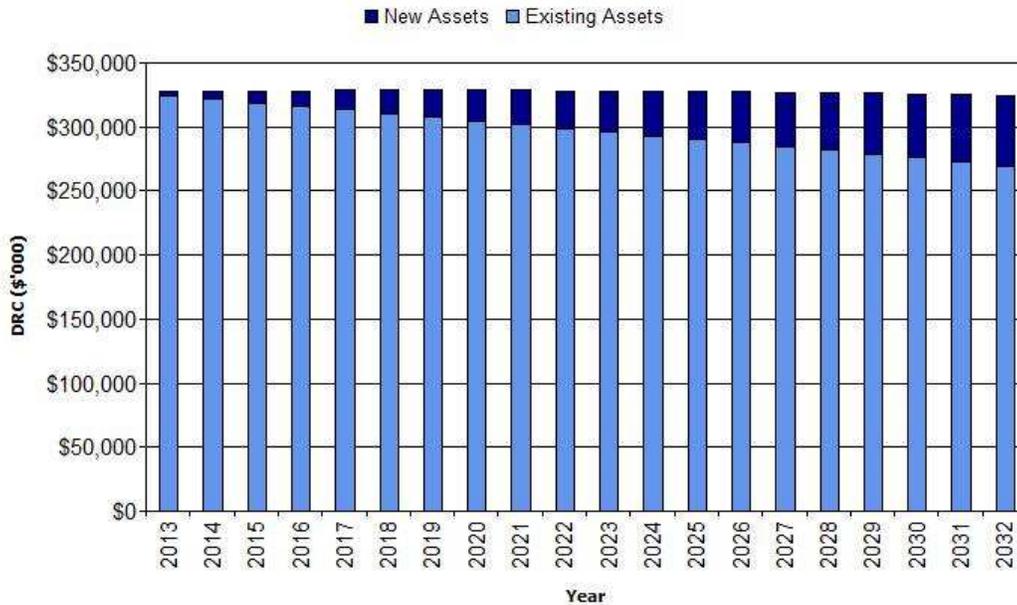
Launceston CC - Projected Depreciation Expense (Roads_S3_V1)



The depreciated replacement cost will vary over the forecast period depending on the rates of addition of new assets, disposal of old assets and consumption and renewal of existing assets. Forecast of the assets' depreciated replacement cost is shown in Figure 13. The depreciated replacement cost of contributed and new assets is shown in the darker colour and in the lighter colour for existing assets.

Figure 13: Projected Depreciated Replacement Cost

Launceston CC - Projected Depreciated Replacement Cost (Roads_S3_V1)



As explained in section 6.1.1, renewal expenditure is expected to be below depreciation for the next 20-30 years. After this period, renewal expenditure will likely exceed depreciation.

6.4 Key Assumptions made in Financial Forecasts

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

Key assumptions made in this asset management plan and risks that these may change are shown in Table 6.4.

Table 6.4: Key Assumptions made in AM Plan and Risks of Change

| Key Assumptions | Risks of Change to Assumptions |
|--|--|
| Straight line depreciation | No risk due to Australian Standards Does not reflect actual degradation of assets |
| Valuations based on average replacement cost with like for like | Increased costs due to changed standards |
| Asset lives are based on judgements made by engineers who have a long experience of operating and maintaining the assets in local conditions | Depreciation changes |

| | |
|--|--|
| | |
|--|--|

6.5 Forecast Reliability and Confidence

The expenditure and valuations projections in this AM Plan are based on best available data. Currency and accuracy of data is critical to effective asset and financial management. Data confidence is classified on a 5 level scale¹² in accordance with Table 6.5.

Table 6.5: Data Confidence Grading System

| Confidence Grade | Description |
|-------------------|--|
| A Highly reliable | Data based on sound records, procedures, investigations and analysis, documented properly and recognised as the best method of assessment. Dataset is complete and estimated to be accurate $\pm 2\%$ |
| B Reliable | Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example some of the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation. Dataset is complete and estimated to be accurate $\pm 10\%$ |
| C Uncertain | Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated $\pm 25\%$ |
| D Very Uncertain | Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. Dataset may not be fully complete and most data is estimated or extrapolated. Accuracy $\pm 40\%$ |
| E Unknown | None or very little data held. |

The estimated confidence level for and reliability of data used in this AM Plan is shown in Table 6.5.1.

Table 6.5.1: Data Confidence Assessment for Data used in AM Plan

| Data | Confidence Assessment | Comment |
|--------------------------|-----------------------|---|
| Demand drivers | B | Based on experienced organisational staff |
| Growth projections | B | Australian Bureau of Statistics |
| Operations expenditures | A | The understanding of split between operations and maintenance is uncertain; however the total of operations and maintenance is reliable |
| Maintenance expenditures | A | As above |
| Projected Renewal exps. | B | Valuations undertaken every 2 yearly by council staff |
| - Asset values | NA | No residual values |
| - Asset residual values | NA | No residual values |
| - Asset useful lives | C | Useful lives are reliable; however there is little supporting documentation |
| - Condition modelling | C | Currently under review |
| - Network renewals | C | Process of identifying renewals if currently under review |
| - Defect repairs | B | Based on customer request system. Includes internal requests |
| Upgrade/New expenditures | C | Traffic study and safety strategy are currently in development |
| Disposal expenditures | NA | |

Over all data sources, the data confidence is assessed as Medium confidence level for data used in the preparation of this AM Plan.

¹² IPWEA, 2011, IIMM, Table 2.4.6, p 2|59.

7. PLAN IMPROVEMENT AND MONITORING

7.1 Status of Asset Management Practices

7.1.1 Accounting and financial systems

The primary financial systems are in the Finance One product supplied by Technology One. The application is used in commercial as well as government accounting and includes the functionality required to support accrual based accounting systems.

Specific asset accounting tasks (such as depreciation and revaluation calculations) are also managed within Technology One. This application holds detailed asset records for all types of Council assets.

Accountabilities for financial systems

Responsibilities for financial systems are within the Corporate Services Directorate of the Council. The responsibility for the asset software is shared between the directorates based on the asset group and functionality. For example, Corporate Services is responsible for the asset accounting.

Accounting standards and regulations

The legislative framework under which Local Government operates is provided by the Local Government Act and the Financial Management and Audit Act. These Acts, especially the Local Government Act, have been drafted so as they link with accounting standards rather than provide their own guidelines or standards. Council must comply with all applicable accounting standards and rulings.

Capital/maintenance threshold

Council's policy for the capital and maintenance threshold has used dollar limits as guides but has been primarily based on the basic principle of the nature of the work. The variety of asset groups in Council makes it difficult to provide general dollar limits.

Required changes to accounting financial systems arising from this AM Plan

The Infrastructure Asset Management Project is unlikely to result in any fundamental changes in the accounting/financial systems. It may have an impact on the frequency of some tasks such as asset revaluation and the validation of depreciation calculations through condition base modelling but these are seen as part of our system improvement process rather than fundamental changes.

7.2.1 Asset management system

Council uses two primary systems to support its asset management. Textual data is held within the Technology One software; the application holds all the descriptive and attributes information about all Council assets. The attribute data is held in both numeric and text fields and ranges from condition, materials to metering etc. Spatial data is stored in ESRI ArcGIS software. Spatial data is integrated with the textual data held in Technology One to produce maps.

Asset registers

The primary systems are complemented by analysis of data extracts into other products. The asset management system is the store of all asset registers. A financial module was specifically written so that the one data set can provide a common base for both purposes.

Linkage from asset management to financial system

As our asset management and financial systems operate from one database some of the information flows that would occur between separate systems don't occur. In fact the concept underlying our approach is a hierarchy of information and detail – detail within the asset management system that is summarised within the financial system. There are various transaction flows that support this approach. The key financial information flows related to revaluation and depreciation from the asset management financial module to the

financial system. Part of our development is also to use the data built up in the asset management system such as condition and age to more readily support our long term maintenance and renewal programs

Accountabilities for asset management system and data maintenance

In principle the asset owners/managers are responsible for the asset management systems; for example, Parks Manager for park assets and Roads Manager for roads assets etc. However, there has been a lot of system responsibility within the Corporate Services Directorate (Information Technology and Finance Departments). The handover of responsibility is part of our asset management project.

Required changes to asset management system arising from this AM Plan

The required changes identified from this AMP are listed in table 7.2: improvement plan.

7.2 Improvement Program

The asset management improvement plan generated from this asset management plan is shown in Table 7.2.

Table 7.2: Improvement Plan

| Task No | Task | Responsibility | Resources Required | Timeline |
|---------|---|-----------------------------------|--------------------|---------------|
| 1 | Culvert data needs to be entered into Tech One. | Road Assets | Staff | December 2013 |
| 2 | Review available resources for developing or expanding procedures (WIs), specifications, service agreements, response times (Appendix A) and associated reporting for road operations activities. | Infrastructure Operations Manager | Staff | June 2013 |
| 3 | Asset valuation for bridges currently separated as abutments and remainder (deck). Needs updating to enable improved valuations and capitalisation. | Road Assets | Staff | December 2014 |
| 4 | Regulatory and Traffic Advisory Signs: Add to Technology One, define responsibilities and field audit. | Road Assets | Staff | December 2013 |
| 5 | Need to define LCC's assets in the road "verge" and the associated departmental responsibilities with the intent that road verge assets are included in the valuation. | Road Assets | Staff | June 2014 |
| 6 | Review LCC Standard Drawings to move towards a state-wide construction standard to be adopted by LGAT | Road Assets | Staff | June 2013 |
| 7 | Review and document for depreciating valuation rates including consideration of historical costs | Road Assets | Staff | February 2013 |
| 8 | Review and document useful lives and residuals to reflect actual management/treatment of the asset | Road Assets | Staff | June 2013 |
| 9 | Develop and include a business management system to ensure asset records are modelled for future works | Road Assets | Staff | June 2013 |

7.3 Monitoring and Review Procedures

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

The AM Plan will be updated annually to ensure it represents the current service level, asset values, projected operations, maintenance, capital renewal and replacement, capital upgrade/new and asset disposal expenditures and projected expenditure values incorporated into the Council's long term financial plan.

The AM Plan has a life of 4 years (Council election cycle) and is due for complete revision and updating within 2 years of each Council election.

7.4 Performance Measures

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

- The degree to which the required projected expenditures identified in this asset management plan are incorporated into the organisation's long term financial plan,
- 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 organisation's Strategic Plan and associated plans,
- The Asset Renewal Funding Ratio achieving the target of 1.0.

8. REFERENCES

- IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au/IIMM
- IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au/namsplus.
- IPWEA, 2009, 'Australian Infrastructure Financial Management Guidelines', Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au/AIFMG.
- IPWEA, 2011, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au/IIMM
- Organisation, 'Strategic Plan 2008 – 2013'
- Organisation, 'Annual Plan and Budget'
- Launceston City Council, Launceston Vision 2020
- Launceston City Council, 10 Year Financial Plan 2007 - 2017
- Launceston City Council 'Core' Infrastructure Risk Management Plan Road Assets
- Launceston City Council, Annual Community Opinion Survey
- DVC, 2006, 'Asset Investment Guidelines', 'Glossary', Department for Victorian Communities, Local Government Victoria, Melbourne, <http://www.dvc.vic.gov.au/web20/dvclgv.nsf/allDocs/RWP1C79EC4A7225CD2FCA257170003259F6?OpenDocument>
- Launceston City Council's Bridge Maintenance Program (A Catalogue of Urban and Rural Bridges) December 2001

9. APPENDICES

- Appendix A Maintenance Response Levels of Service
- Appendix B Projected 10 year Capital Renewal and Replacement Works Program
- Appendix C Projected 10 year Capital Upgrade/New Works Program
- Appendix D Budgeted Expenditures Accommodated in LTFP
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- Appendix F Glossary
- Appendix G Historical data

Appendix A Maintenance Response Levels of Service

| Level of Service | Maintenance Response |
|---|--|
| Service requests, after hours, on the LCC road network including verges | On-site attendance response time from notification: <ul style="list-style-type: none">• Urban Launceston sites within 30 minutes;• Rural Launceston Municipality sites within 45 minutes. |
| Service requests, working hours, on the LCC road network including verges | Response initiated and closed –out after an initial assessment of priority by Customer Services Centre and/or Remount Road Support Services: |
| | <ol style="list-style-type: none">1) Critical 1-2 Hours2) High 1 Day3) Medium 7 Days4) Scheduled 30 Days5) Scheduled 90 Days |
| Service requests, all hours, on the LCC road network including verges | Inspect, assess and decide on the course of action |

Appendix B Projected Upgrade/Exp/New 10 year Capital Works Program

**Launceston CC
Projected Capital Upgrade/New Works Program - Roads_S1_V4**

(\$000)

| Year | Item | Description | Estimate |
|------|------|-------------------------|----------|
| 2013 | 1 | New and upgraded assets | \$1,282 |
| 2013 | | Total | \$1,282 |

(\$000)

| Year | Item | Description | Estimate |
|------|------|-------------------------|----------|
| 2014 | 1 | New and upgraded assets | \$1,282 |
| 2014 | | Total | \$1,282 |

(\$000)

| Year | Item | Description | Estimate |
|------|------|-------------------------|----------|
| 2015 | 1 | New and upgraded assets | \$1,282 |
| 2015 | | Total | \$1,282 |

(\$000)

| Year | Item | Description | Estimate |
|------|------|-------------------------|----------|
| 2016 | 1 | New and upgraded assets | \$1,282 |
| 2016 | | Total | \$1,282 |

(\$000)

| Year | Item | Description | Estimate |
|------|------|-------------------------|----------|
| 2017 | 1 | New and upgraded assets | \$1,282 |
| 2017 | | Total | \$1,282 |

(\$000)

| Year | Item | Description | Estimate |
|------|------|-------------------------|----------|
| 2018 | 1 | New and upgraded assets | \$1,282 |
| 2018 | | Total | \$1,282 |

(\$000)

| Year | Item | Description | Estimate |
|------|------|-------------------------|----------|
| 2019 | 1 | New and upgraded assets | \$1,282 |
| 2019 | | Total | \$1,282 |

(\$000)

| Year | Item | Description | Estimate |
|------|------|-------------------------|----------|
| 2020 | 1 | New and upgraded assets | \$1,282 |
| 2020 | | Total | \$1,282 |

(\$000)

| Year | Item | Description | Estimate |
|------|------|-------------------------|----------|
| 2021 | 1 | New and upgraded assets | \$1,282 |
| 2021 | | Total | \$1,282 |

(\$000)

| Year | Item | Description | Estimate |
|------|------|-------------------------|----------|
| 2022 | 1 | New and upgraded assets | \$1,282 |
| 2022 | | Total | \$1,282 |

Appendix C Budgeted Expenditures Accommodated in LTFP

NAMS.PLUS2 Asset Management Launceston CC

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Roads_S1_V4 Asset Management Plan



First year of expenditure projections 2013 (yr ending 30 June)

Roads

Asset values as at 30 June 2012

| | | | |
|------------------------------|-----------------|------------------------------|-----------------|
| Current replacement cost | \$547,041 (000) | Calc CRC from Asset Register | \$523,613 (000) |
| Depreciable amount | \$547,041 (000) | This is a check for you. | |
| Depreciated replacement cost | \$327,506 (000) | | |
| Annual depreciation expense | \$8,100.0 (000) | | |

Planned Expenditures from LTFP

Please enter depreciation in \$000

20 Year Expenditure Projections Note: Enter all values in current 2013 values

Operations and Maintenance Costs from New Assets

| | |
|---|-------|
| Additional operations costs | 1.04% |
| Additional maintenance | 0.75% |
| Additional depreciation | 1.48% |
| Planned renewal budget (information only) | |

You may use these values calculated from your data or overwrite the links.

| Year ending June | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | \$000 | \$000 | \$000 | \$000 | \$000 | \$000 | \$000 | \$000 | \$000 | \$000 |
| Expenditure Outlays included in Long Term Financial Plan (in current \$ values) | | | | | | | | | | |
| Operations | To LTFP | | | | | | | | | |
| Operations | \$4,174 | \$4,174 | \$4,174 | \$4,174 | \$4,174 | \$4,174 | \$4,174 | \$4,174 | \$4,174 | \$4,174 |
| Management | \$649 | \$649 | \$649 | \$649 | \$649 | \$649 | \$649 | \$649 | \$649 | \$649 |
| AM systems | \$875 | \$875 | \$875 | \$875 | \$875 | \$875 | \$875 | \$875 | \$875 | \$875 |
| Total operations | \$5,698 | \$5,698 | \$5,698 | \$5,698 | \$5,698 | \$5,698 | \$5,698 | \$5,698 | \$5,698 | \$5,698 |
| Maintenance | | | | | | | | | | |
| Reactive maintenance | \$588 | \$588 | \$588 | \$588 | \$588 | \$588 | \$588 | \$588 | \$588 | \$588 |
| Planned maintenance | \$3,503 | \$3,503 | \$3,503 | \$3,503 | \$3,503 | \$3,503 | \$3,503 | \$3,503 | \$3,503 | \$3,503 |
| Specific maintenance items | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Total maintenance | \$4,091 | \$4,171 | \$4,171 | \$4,171 | \$4,171 | \$4,171 | \$4,171 | \$4,171 | \$4,171 | \$4,171 |

asset management plan

Capital

| | | | | | | | | | | |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Planned renewal budget | \$5,211 | \$5,211 | \$5,211 | \$5,211 | \$5,211 | \$5,211 | \$5,211 | \$5,211 | \$5,211 | \$5,211 |
| Planned upgrade/new budget | \$1,677 | \$1,677 | \$1,677 | \$1,677 | \$1,677 | \$1,677 | \$1,677 | \$1,677 | \$1,677 | \$1,677 |
| Non-growth contributed asset value | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Asset Disposals | | | | | | | | | | |
| Est Cost to dispose of assets | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Carrying value (DRC) of disposed assets | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |

Expenditure Outlays required from Infrastructure Risk Management Plan

| From Infrastructure Risk Management Plan and where not included above | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | \$000 | \$000 | \$000 | \$000 | \$000 | \$000 | \$000 | \$000 | \$000 | \$000 |
| Operations | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Maintenance | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Capital Renewal | to be incorporated into Forms 2 & 2.1 (where Method 1 is used) OR Form 2B Defect Repairs (where Method 2 or 3 is used) | | | | | | | | | |
| Capital Upgrade | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| User Comments #2 | | | | | | | | | | |

Forecasts for Capital Renewal using Methods 2 & 3 (Form 2A & 2B) & Capital Upgrade (Form 2C)

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | \$000 | \$000 | \$000 | \$000 | \$000 | \$000 | \$000 | \$000 | \$000 | \$000 |
| Forecast Capital Renewal from Forms 2A & 2B | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Forecast Capital Upgrade from Form 2C | \$1,677 | \$1,677 | \$1,677 | \$1,677 | \$1,677 | \$1,677 | \$1,677 | \$1,677 | \$1,677 | \$1,677 |

Appendix D Abbreviations

| | |
|----------------|---|
| AAAC | Average annual asset consumption |
| AM | Asset management |
| AM Plan | Asset management plan |
| ARI | Average recurrence interval |
| ASC | Annual service cost |
| BOD | Biochemical (biological) oxygen demand |
| CRC | Current replacement cost |
| CWMS | Community wastewater management systems |
| DA | Depreciable amount |
| DRC | Depreciated replacement cost |
| EF | Earthworks/formation |
| IRMP | Infrastructure risk management plan |
| LCC | Life Cycle cost |
| LCE | Life cycle expenditure |
| LTFP | Long term financial plan |
| MMS | Maintenance management system |
| PCI | Pavement condition index |
| RV | Residual value |
| SoA | State of the Assets |
| SS | Suspended solids |
| vph | Vehicles per hour |
| WDCRD | Written down current replacement cost |

Appendix E Glossary

Annual service cost (ASC)

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

Asset

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

Asset category

Sub-group of assets within a class hierarchy for financial reporting and management purposes.

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 hierarchy

A framework for segmenting an asset base into appropriate classifications. The asset hierarchy can be based on asset function or asset type or a combination of the two.

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.

Asset renewal funding ratio

The ratio of the net present value of asset renewal funding accommodated over a 10 year period in a long term financial plan relative to the net present value of projected capital renewal expenditures identified in an asset management plan for the same period [AIFMG Financial Sustainability Indicator No 8].

Average annual asset consumption (AAAC)*

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

Borrowings

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

Capital expenditure

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

Capital expenditure - expansion

Expenditure that extends the capacity of an existing asset to provide benefits, at the same standard as is currently enjoyed by existing beneficiaries, to a new group of users. It is discretionary expenditure, which increases future operations and maintenance costs, because it increases the organisation's asset base, but may be associated with additional revenue from the new user group, 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 organisation'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.

Class of assets

See asset class definition

Component

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

Core asset management

Asset management which relies primarily on the use of an asset register, maintenance management systems, job resource management, inventory control, condition assessment, simple risk assessment and defined levels of service, in order to establish alternative treatment options and long-term cashflow predictions. Priorities are usually established on the basis of financial return gained by carrying out the work (rather than detailed risk analysis and optimised decision-making).

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.

Critical assets

Assets 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 noncritical assets.

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.

Deferred maintenance

The shortfall in rehabilitation work undertaken relative to that required to maintain the service potential of an asset.

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 outlays.

Fair value

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

Financing gap

A financing gap exists whenever an entity has insufficient capacity to finance 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 financing gap means service levels have already or are currently falling. A projected financing gap if not addressed will result in a future diminution of existing service levels.

Heritage asset

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

Impairment Loss

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

Infrastructure assets

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

Investment property

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

- (a) use in the production or supply of goods or services or for administrative purposes; or
- (b) sale in the ordinary course of business.

Key performance indicator

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

Level of service

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

Life Cycle Cost *

1. **Total LCC** The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, rehabilitation and disposal costs.
2. **Average LCC** The life cycle cost (LCC) is average cost to provide the service over the longest asset life cycle. It comprises average operations, maintenance expenditure plus asset consumption expense, represented by depreciation expense projected over 10 years. 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 average operations, maintenance and capital renewal expenditure accommodated in the long term financial plan over 10 years. Life Cycle Expenditure may be compared to average Life Cycle Cost to give an initial indicator of affordability of projected service levels when considered with asset age profiles.

Loans / borrowings

See borrowings.

Maintenance

All actions necessary for retaining an asset as near as practicable to an appropriate service 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.

- **Specific 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 expenditure *

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

Materiality

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

Modern equivalent asset

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

Net present value (NPV)

The value to the organisation of the cash flows associated with an asset, liability, activity or event calculated using a discount rate to reflect the time value of money. It is the net amount of discounted total cash inflows after deducting the value of the discounted total cash outflows arising from 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 the Council, eg. parks and playgrounds, footpaths, roads and bridges, libraries, etc.

Operations

Regular activities to provide services such as public health, safety and amenity, eg street sweeping, grass mowing and street lighting.

Operating 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.

Operating expenses

Recurrent expenses continuously required to provide a service, including power, fuel, staff, plant equipment, maintenance, depreciation, on-costs and overheads.

Operations, maintenance and renewal financing ratio

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

Operations, maintenance and renewal gap

Difference between budgeted expenditures in a long term financial plan (or estimated future budgets in absence of a long term financial plan) and projected expenditures for operations, maintenance and renewal of assets to achieve/maintain specified service levels, totalled over a defined time (e.g. 5, 10 and 15 years).

Pavement management system (PMS)

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 *

The ratio of annual asset consumption relative to the depreciable amount of the assets. It measures the amount of the consumable parts of assets that are consumed in a period (depreciation) expressed as a percentage of the depreciable amount.

Rate of annual asset renewal *

The ratio of asset renewal and replacement expenditure relative to depreciable amount for a period. It measures whether assets are being replaced at the rate they are wearing out with capital renewal expenditure expressed as a percentage of depreciable amount (capital renewal expenditure/DA).

Rate of annual asset upgrade/new *

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

Recoverable amount

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

Recurrent expenditure

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

Recurrent funding

Funding to pay for recurrent expenditure.

Rehabilitation

See capital renewal expenditure definition above.

Remaining useful life

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

Renewal

See capital renewal expenditure definition above.

Residual value

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

Revenue generating investments

Investments for the provision of goods and services to sustain or improve services to the community that are expected to generate some savings or revenue to offset operating costs, 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).

Specific Maintenance

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

Strategic Longer-Term Plan

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

Sub-component

Smaller individual parts that make up a component part.

Useful life

Either:

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

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

Value in Use

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

Source: IPWEA, 2009, Glossary

Additional and modified glossary items shown *

Appendix F Historical Data

Completed Capital Roadworks (2006 to 2012)

| Project No: | Location Description | Project Cost | Work Description | Renewal | New / Upgrade | Sub Divisions |
|-------------|------------------------------------|--------------|--|---------|---------------|---------------|
| | | \$ | | \$ | \$ | \$ |
| 48232 | ABBOTT_Arthur - Mary | 198,677 | Refurbishment of streetscape | 178,810 | 19,868 | |
| 55226 | ABELSHILL_#99-Tasman | 120,134 | Resurfacing | 120,134 | | |
| 55218 | ALANVALE_MtStuart-Tompsons | 151,207 | Pavement strengthening - resurface, subsoil drain, geofabric | 151,207 | | |
| 55322 | AMY_Penquite - Strahan | 35,151 | Resurfacing | 35,151 | | |
| 55227 | BABINGTON_York-Middle | 42,783 | Resurfacing | 42,783 | | |
| 46039 | BALFOUR_George-High | 149,118 | Refurbishment of streetscape | 149,118 | | |
| 55228 | BASIN_UpperYork-Denison | 26,374 | Resurfacing | 26,374 | | |
| 55230 | BIBRA_Regent-End | 10,757 | Resurfacing | 10,757 | | |
| 55232 | BRISBANE_Margaret-Bathurst | 40,550 | Resurfacing | 40,550 | | |
| 55329 | CARINS_Fryett-Hogarth/Eldon | 35,311 | Pavement stabilisation | 35,311 | | |
| 55054 | CARINS_Fryett-Hogarth/Eldon | 28,627 | Holding seal | 28,627 | | |
| 55173 | CIMITIERE_Lawrence-Innes | 57,145 | Resurfacing | 57,145 | | |
| 46974 | CLARENCE_High St - Lyttleton | 270,499 | Refurbishment of streetscape; new K&C left side | 216,399 | 54,100 | |
| 55243 | CLOVERHILL_Segment 0-340 | 32,563 | Dustseal | | 32,563 | |
| 55238 | COLLEGE_Landsborough | 5,625 | New footpath connection | | 5,625 | |
| 55240 | DENISON_Cambridge-Corin | 35,441 | Resurfacing | 35,441 | | |
| 42770 | DRY_Holbrook Invermay | 148,341 | K&C + footpaths + tree outstands | 118,673 | 29,668 | |
| 55242 | DRY_Holbrook Invermay | 90,576 | Resurfacing + parking bays | 81,518 | 9,058 | |
| 55374 | EDDINGTON_Kinross-Roslyn | 17,505 | Resurfacing | 17,505 | | |
| 55060 | ELDON_Hogarth/Carins-Renfern | 6,749 | Resurfacing | 6,749 | | |
| 55061 | ELPHIN_David-Kenyon | 74,521 | Resurfacing | 74,521 | | |
| 55147 | ESK_Dry - Lindsay | 173,255 | Refurbishment of streetscape | 173,255 | | |
| 55044 | ESPLANADE_Tamar - St John | 202,849 | Refurbishment of streetscape; new K&C right side | 162,279 | 40,570 | |
| 49721 | FORSTER_Herbert - Invermay | 176,646 | Refurbishment of streetscape; new K&C and footpath left side | 105,988 | 70,658 | |
| 55148 | FORSTER_Invermay - Ray | 176,908 | Refurbishment of streetscape | 176,908 | | |
| 55245 | FRASER_Brougham-End | 10,374 | Resurfacing | 10,374 | | |
| 55246 | FREDERICK_Margaret - Bourke | 25,413 | Resurfacing | 25,413 | | |
| 55062 | FRYETT_Cairnes - Pritchard | 41,342 | Holding seal | 41,342 | | |
| 55323 | FRYETT_Pritchard-Carins | 89,089 | Pavement stabilisation | 89,089 | | |
| 55063 | GEE_Leonard - Mulgrave | 25,803 | K&C left side | 25,803 | | |
| 55248 | GLEADOW_Goderich - Holbrook | 67,611 | K&C both side | 67,611 | | |
| 55207 | Hillside / Bourke | 45,023 | Skid resistance - resurfacing | 45,023 | | |
| 55272 | HOBART_Merino - Tulune | 251,484 | Treat concrete joint + asphalt seal | 251,484 | | |
| 55067 | HOGARTH_Pritchard - End | 25,561 | Resurfacing | 25,561 | | |
| 55197 | JELLICO_Beatty - Janefield | 72,377 | Safety - road humps | | 72,377 | |
| 55326 | Lees_Third River Flood Opening 641 | 75,166 | Replaced with concrete structure - new guardrail | 45,100 | 30,066 | |
| 55122 | LITTLE RAY_Ray - South | 17,581 | Resurfacing | 17,581 | | |
| 55260 | NAROO_Bunbury - Carlisle | 6,492 | Resurfacing | 6,492 | | |
| 55262 | Opossum/Poplar | 107,985 | Realign junction | 107,985 | | |
| 55263 | OXFORD_Ann - Tasma) | 10,385 | Resurfacing | 10,385 | | |
| 55264 | PANUBRA_Chifley - Maroney | 12,378 | Both Footpaths | 12,378 | | |
| 55265 | PATERSON_Charles - George | 85,410 | Resurfacing | 85,410 | | |
| 55327 | Patersonia_Patersonia Riv Br 649 | 123,535 | Replaced with concrete structure - new guardrail | 61,768 | 61,768 | |
| 55266 | PAYNE_Janefield - End) | 16,229 | Resurfacing | 16,229 | | |
| 55267 | Peel West _Prospect - Cambridge | 34,004 | Resurfacing | 34,004 | | |
| 55075 | PRITCHARD_Fryett - Hogarth | 15,686 | Holding seal | 15,686 | | |
| 55324 | PRITCHARD_Fryett-Hogarth | 39,418 | Pavement stabilisation | 39,418 | | |
| 55270 | REDWOOD_Poplar - End | 30,733 | Resurfacing | 30,733 | | |

| Project No: | Location Description | Project Cost | Work Description | Renewal | New / Upgrade | Sub Divisions |
|-------------|--------------------------------------|------------------|--|------------------|----------------|------------------|
| | | \$ | | \$ | \$ | \$ |
| 55274 | ROBERSTON_Invermay - Holbrook | 12,292 | Resurfacing | 12,292 | | |
| 55231 | Rosestier_Ford River Trib Bridge 655 | 75,160 | Replaced with concrete structure - new guardrail | 37,580 | 37,580 | |
| 55275 | RURAL ROADS | 202,590 | Safety improvements | 101,295 | 101,295 | |
| 55276 | SKEMP_Hogarth - Fryett | 21,427 | Resurfacing | 21,427 | | |
| 55127 | TAMAR_Cimitiere-Esplanade | 53,194 | Left K&C renewed | 53,194 | | |
| 48399 | TATTERSAL_Hogarth - Fryett | 15,813 | Resurfacing | 15,813 | | |
| 55006 | TREVALLYN_Forest-Gorge | 66,839 | Resurfacing | 66,839 | | |
| 55179 | TREVALLYN_SouthEsk-Gorge | 202,609 | Resurfacing - K&C repairs | 202,609 | | |
| 55278 | ULTIMA_Charlton - End | 4,760 | Resurfacing | 4,760 | | |
| 55083 | Warring_Prossers Forest - Rosetta | 99,800 | Millout & Resurfacing | 99,800 | | |
| 55280 | Wellington_Balfour -Southern Outlet | 83,800 | Resurfacing | 83,800 | | |
| 55283 | WESTBURY_Trotters - Stanley | 38,853 | Resurfacing | 38,853 | | |
| 55288 | WILLIAM_George-Shields | 30,400 | Right K&C | 30,400 | | |
| 55181 | YORK_Bathurst - Margaret | 56,090 | Resurfacing | 56,090 | | |
| | BROWNRIIGG_Richings-End | | New Development | | | 38,753 |
| | COMICE_Statesman-MtStuart | | New Development | | | 259,014 |
| | DOROTHY_Poplar-End | | New Development | | | 101,486 |
| | GRIMES_Richings-End | | New Development | | | 46,888 |
| | Integrity_#17Richings-#43Richings | | New Development | | | 353,787 |
| | JASMINE_Lila-End | | New Development | | | 172,480 |
| | KARLA_Meredith-End | | New Development | | | 152,784 |
| | MANTA_Comice-End | | New Development | | | 59,950 |
| | PIPER_Baulis-Richings | | New Development | | | 89,452 |
| | 2006 Total | 4,500,017 | | 3,934,821 | 565,196 | 1,274,595 |
| | 2007 | | | | | |
| 55194 | ALMA_Hobart - Jubilee | 71,383 | Resurfacing + right K&C | 71,383 | | |
| 55442 | Aplico Rd Bridge #602 | 23,605 | Refurbishment of timber structure | 23,605 | | |
| 55450 | ATLAS_Junction - McKellar | 7,807 | Resurfacing | 7,807 | | |
| 55441 | Bangor Rd Bridge #605 | 253,787 | Replaced with concrete structure - new guardrail | 203,029 | 50,757 | |
| 55271 | Bathurst/Balfour & Eliz/St John | 2,591 | Safety | | | 2,591 |
| 55451 | BATHURST_Balfour - Canning | 143,571 | Resurfacing | 143,571 | | |
| 55452 | BATHURST_Brisbane - William | 119,540 | Resurfacing | 119,540 | | |
| 55313 | BEATTY_Invermay - Jutland | 40,418 | Resurfacing | 40,418 | | |
| 55485 | Blackball Line Road | 4,526 | Gravel resurfacing | 4,526 | | |
| 55453 | BOOTH_Faraday - Bonella | 9,023 | Resurfacing | 9,023 | | |
| 55216 | BOURKE_York - Brisbane | 176,525 | Refurbishment of streetscape | 141,220 | 35,305 | |
| 55360 | BRISBANE / WELLINGTON | 19,045 | Intersection resurfacing | 19,045 | | |
| 55440 | Camden Rd Bridge #617 | 73,097 | Replaced with culvert | 58,478 | 14,619 | |
| 55235 | CANNING_Charles - George | 309,969 | Refurbishment of streetscape | 247,975 | 61,994 | |
| 49720 | CHARLES / FRANKLAND | 173,805 | New Roundabout | 34,761 | 139,044 | |
| 55133 | CIMITERE_George - Tamar | 72,667 | Left K&C & footpath + resurfacing | 72,667 | | |
| 55469 | CLOVERHILL_Segment 0-340 | 21,555 | Dustseal | 10,778 | 10,778 | |
| 55456 | CURRIE_Warring St - End | 12,879 | Resurfacing | 12,879 | | |
| 55436 | Doaks_Golconda-Sports area | 97,693 | Section new K&C + reseal | 48,846 | 48,846 | |
| 55502 | Egerton Road | 20,657 | Gravel resurfacing | 20,657 | | |
| 55303 | ELPHIN_Dowling - Lawrence | 141,918 | Resurfacing | 141,918 | | |
| 55457 | ELPHIN_Dowling - Olive | 225,317 | Resurfacing | 225,317 | | |
| 55503 | Everton Road | 3,220 | Gravel resurfacing | 3,220 | | |
| 55244 | FRANKLAND_James - St John | 31,197 | Resurfacing | 31,197 | | |
| 55459 | GARNET_York - End | 30,867 | Resurfacing +fencing | 24,694 | 6,173 | |
| 55027 | GLEADOW_Kings Wharf - Northcote | 194,798 | Refurbishment of streetscape | 155,838 | 38,960 | |
| 55309 | HIGH_Ann - Arthur | 91,899 | Left K&C & footpath | 91,899 | | |
| 55460 | HILL_Batman - Hillside | 33,614 | Resurfacing | 33,614 | | |
| 55346 | HOBART_#210 - Merino | 24,062 | Section of K&C + footpath | 24,062 | | |

| Project No: | Location Description | Project Cost | Work Description | Renewal | New / Upgrade | Sub Divisions |
|-------------|----------------------------------|------------------|--|------------------|----------------|----------------|
| | | \$ | | \$ | \$ | \$ |
| 42986 | HOBART_Punchbowl - Opossum | 224,258 | Resurfacing | 224,258 | | |
| 55261 | KING_Charles-Ethel | 64,704 | Refurbishment of streetscape | 64,704 | | |
| 55462 | LANTANA_Helen - Penquite | 17,485 | Resurfacing | 17,485 | | |
| 55020 | Law St / Avalon Pl / Tarleton Pl | 186,324 | Trial pedestrian/vehicle shareway | 186,324 | | |
| 55139 | Lawrence Vale_Powena -Talbot | 36,930 | Footpath - handrail + realignment + retaining wall | 22,158 | 14,772 | |
| 55463 | LENNOX_Booth - Lambert | 27,661 | Resurfacing | 27,661 | | |
| 55486 | Lockharts Road | 6,657 | Gravel resurfacing | 6,657 | | |
| 55464 | MALUNGA_Chifley - Panubra | 21,531 | Resurfacing | 21,531 | | |
| 55424 | MONTAGU-Darwin - Gleadow | 89,775 | Refurbishment of sections | 89,775 | | |
| 55258 | MULGRAVE_Gee - Howick | 280,587 | Refurbishment of streetscape | 280,587 | | |
| 55483 | Myrtle Bank Road | 21,398 | Gravel resurfacing | 21,398 | | |
| 55465 | Normanstone_Ainslie - Wellington | 115,444 | Resurfacing | 115,444 | | |
| 55470 | North Lilydale Road | 8,142 | Gravel resurfacing | 8,142 | | |
| 55481 | Paling Track | 5,025 | Gravel resurfacing | 5,025 | | |
| 55515 | Intersections - shape correcting | 109,232 | Resurfacing | 109,232 | | |
| 55359 | PEDESTRIAN SAFETY | 44,107 | School crossings | | 44,107 | |
| 55466 | PENQUITE/Queechy | 35,352 | Junction resurfacing | 35,352 | | |
| 55471 | Prossers Road | 60,516 | Gravel resurfacing | 60,516 | | |
| 55268 | Quarantine_Hobart-Edinburgh | 27,438 | Resurfacing | 27,438 | | |
| 55468 | REMOUNT RD | 100,519 | Resurfacing | 100,519 | | |
| 55480 | Roses Tier Road | 8,423 | Gravel resurfacing | 8,423 | | |
| 55126 | SALISBURY_Ashleigh - Granville | 287,899 | K&C + footpath + resurfacing | 287,899 | | |
| 55482 | Saw Pit Hill Road | 26,458 | Gravel resurfacing | 26,458 | | |
| 55474 | STANLEY_Hall - Outram | 56,924 | Resurfacing | 56,924 | | |
| 55518 | Thistle St West to Granville St | 43,284 | STAIRWAY | | 43,284 | |
| 48400 | Trevallyn_Gorge - Kings Bridge | 516,202 | Platform footpath+stairs+handrail | 103,240 | 412,961 | |
| 55501 | Tunnel / Bacala | 38,278 | Gravel resurfacing | 38,278 | | |
| 55367 | UPTON_Canning - Hillside | 10,122 | Resurfacing | 10,122 | | |
| 55475 | VERMONT_Murray - Remount | 70,396 | Resurfacing | 70,396 | | |
| 55299 | WAROONA / HIGHGATE | 101,432 | Shape correction of intersection | 101,432 | | |
| 55476 | WARRING_Rosetta - End | 43,615 | Resurfacing | 43,615 | | |
| 55477 | WAYNE_Woolven - End) | 7,906 | Resurfacing | 7,906 | | |
| 55472 | Windermere Road | 24,363 | Gravel resurfacing | 24,363 | | |
| 55284 | WOOLVEN_Hobart - End | 46,085 | Resurfacing | 46,085 | | |
| 55091 | YOUNGTOWN_Hobart - End | 53,268 | Realignment of Hobart junction | 53,268 | | |
| | ADINA_Eurella-End | | New Development | | | 83,390 |
| | BASINVIEW_Basin47-End | | New Development | | | 76,009 |
| | CAPRICE_Comice-End | | New Development | | | 66,785 |
| | CARILLION_Alarnvale-End | | New Development | | | 389,430 |
| | DAVISTA_Opossum-EndStage1 | | New Development | | | 114,641 |
| | ESSENDON_Pearce-End | | New Development | | | 22,917 |
| | 2007 Total | 5,248,776 | | 4,327,175 | 921,601 | 753,172 |
| | 2008 | | | | | |
| 55402 | BALFOUR PL_Balfour-End | 83,535 | Refurbishment of streetscape | 75,182 | 8,354 | |
| 55294 | BASIN_Granville- Denison | 96,603 | Safety - school crossings | 77,282 | 19,321 | |
| 55547 | Bathurset/Canning | 82,428 | Traffic lights | 16,486 | 65,943 | |
| 55297 | BELHAVEN / ROWAN | 78,911 | Realign K&C heights to drain pooling rainwater | 78,911 | | |
| 55614 | BOX ST / TREHERNE ST | 45,884 | Roundabout | 9,177 | 36,708 | |
| 55563 | BRIDGE_Vicinity Penny Royal | 33,012 | New footpath | 6,602 | 26,410 | |
| 42985 | Brisbane/Elphin/Lawrence/High | 420,125 | Roundabout | 84,025 | 336,100 | |
| 55292 | Brougham_Cambridge - Whielmina | 154,149 | Safety traffic calming road humps | 123,319 | 30,830 | |
| 55546 | CANNING ST / WELLINGTON | 86,413 | Traffic lights | 17,283 | 69,131 | |
| 55406 | CHARLES / HOWICK | 198,717 | Roundabout | 39,743 | 158,973 | |

| Project No: | Location Description | Project Cost | Work Description | Renewal | New / Upgrade | Sub Divisions |
|-------------------|-----------------------------------|------------------|--|------------------|------------------|----------------|
| | | \$ | | \$ | \$ | \$ |
| 55507 | CHERRY-#6 Cherry - Forest | 129,066 | Left K&C + footpath | 25,813 | 103,253 | |
| 55136 | EARL-Brisbane - York | 164,620 | Refurbishment of streetscape | 164,620 | | |
| 55613 | EGAN / HARGRAVE | 45,145 | Roundabout | 9,029 | 36,116 | |
| 55496 | ESPLANADE_Shield - St John St | 89,916 | Reseal | 89,916 | | |
| 46980 | FORSTER-Goderich- Invermay | 460,089 | Reseal | 460,089 | | |
| 55559 | FREDERICK / WELLINGTON | 9,117 | Safety - kerb outstands - sight distance | 9,117 | | |
| 55302 | FRENCH_Lord - End | 140,796 | Refurbishment of streetscape | 140,796 | | |
| 55375 | GEORGE-#213/215 Retaining Wall | 268,442 | Reconstruct retaining wall | 268,442 | | |
| 55655 | Kennedy_ #12 - #20 | 2,473 | Traffic calming - road humps | | 2,473 | |
| 55371 | PATERSON / MARGARET | 165,816 | Traffic lights | | 165,816 | |
| 55610 | Trevallyn_North Bank / South Esk | 41,359 | Footpath | 41,359 | | |
| 55566 | Boomers_Distillery Crk Br#611 | 126,263 | Replace with concrete structure | 101,011 | 25,253 | |
| 55564 | Disputed_Woolshed Crk Br#627 | 150,160 | Replace with concrete structure | 120,128 | 30,032 | |
| 55565 | Golconda_Doaks - Falls Br#634 | 54,599 | Road widening to new bridge | 43,679 | 10,920 | |
| 55443 | Musselboro_North Esk River Br#646 | 100,446 | Replaced bridge Deck | 100,446 | | |
| 55603 | Camden_Beckett Crk Culvert 671 | 33,334 | Replace with box culvert | 33,334 | | |
| 55552 | Camden Hill Road | 429,661 | Placing gravel wearing surface | 429,661 | | |
| 55553 | Diddleum & Camden Rds | 50,417 | Placing gravel wearing surface | 50,417 | | |
| 55058 | DOAKS_Rocky Crk Br#625 | 391,347 | Widening to alleviate flooding | 313,077 | 78,269 | |
| 55273 | PROSSERS_Patersonia - Lilydale | 93,361 | Placing gravel wearing surface | 93,361 | | |
| 55560 | BELHAVEN_Hoblers Bridge - Olive | 27,503 | Reseal | 27,503 | | |
| 55561 | BIRCH_Olive - Tudor | 15,224 | Reseal | 15,224 | | |
| 55568 | CHIFLEY_Maroney - Panubra | 30,782 | Reseal | 30,782 | | |
| 55569 | CONWAY_Murray - Wood | 109,216 | K&C + footpath + Reseal | 109,216 | | |
| 55570 | CRANDON_#1 Arnold - #25 Arnold | 13,272 | Reseal | 13,272 | | |
| 55572 | DOWLING_Henry - Racecourse | 88,442 | Reseal | 88,442 | | |
| 55573 | ELPHIN_Belhaven - Richards | 75,533 | Reseal | 75,533 | | |
| 55574 | FARADAY_Faulkner - Magnet | 32,040 | Reseal | 32,040 | | |
| 55579 | GORGE_Bain - Trevallyn | 48,177 | Reseal | 48,177 | | |
| 55580 | GORGE_Trevallyn - South Esk | 61,831 | Reseal | 61,831 | | |
| 55582 | JOHNSTON_St Leonards - Village | 58,261 | Reseal | 58,261 | | |
| 55584 | MARONEY_Panubra - End | 15,544 | Reseal | 15,544 | | |
| 55466 | PENQUITE_Queechy junction | 95,402 | Reseal | 95,402 | | |
| 55585 | POPLAR_Bluegum - Redwood | 42,023 | Reseal | 42,023 | | |
| 55589 | Wellington-Howick - Melbourne | 164,432 | Reseal | 164,432 | | |
| 55676 | Wellington_Melbourne - Westbury | 3,680 | Reseal | 3,680 | | |
| 55590 | Westbury_Normanstone - Wellington | 112,133 | Reseal | 112,133 | | |
| | MTSTUART_Packham_Comice | | New Development | | | 638,968 |
| | PENICOLA_MtStuartDriveToEnd | | New Development | | | 110,658 |
| | ROBKA_Davista-EndStage1 | | New Development | | | 33,714 |
| | STATESMAN_Statesman Sideshoot | | New Development | | | 26,103 |
| 2008 Total | | 5,219,697 | | 4,015,798 | 1,203,900 | 809,444 |
| 2009 | | | | | | |
| 55780 | Bangor_Second River Flood Op#607 | 82,191 | Bridge 606&607 replaced with one multi-piped culvert | 82,191 | | |
| 55702 | BELMONT_Commodore - End | 31,859 | Reseal | 31,859 | | |
| 55703 | BETTINA_Beech - End | 24,544 | Reseal | 24,544 | | |
| 55704 | BLAMEY_Punchbowl - Vasey | 40,395 | Reseal | 40,395 | | |
| 55556 | BLAMEY_KM Rivulet Bridge 610 | 132,047 | Replace with concrete structure | 105,637 | 26,409 | |
| 55796 | CAMDEN_North Esk Bridge 619 | 132,238 | Replace with concrete structure | 105,790 | 26,448 | |
| 55429 | CAMPBELL_Abbott - Douglas | 49,500 | Reseal | 49,500 | | |
| 55545 | CANNING / MARGARET | 130,864 | New Roundabout | 26,173 | 104,691 | |
| 55666 | CURENA_Legana - Powena | 28,958 | Reseal | 28,958 | | |
| 55766 | DAVID_Elphin - Clementina | 62,973 | Reseal | 62,973 | | |
| 55713 | DENISON_Cambridge - Denison | 43,318 | Reseal | 43,318 | | |

| Project No: | Location Description | Project Cost | Work Description | Renewal | New / Upgrade | Sub Divisions |
|-------------|---------------------------------------|------------------|--|------------------|----------------|----------------|
| | | \$ | | \$ | \$ | \$ |
| 55408 | DOCKING_Penquite - End | 43,546 | Reseal + K&C | 43,546 | | |
| 55656 | EastDiddleum_St Patricks River Br#661 | 402,143 | Replace with larger concrete structure | 201,071 | 201,071 | |
| 55719 | FLOWERS_Ashlar - Amy | 22,959 | Reseal | 22,959 | | |
| 20342 | Footpath 08/09 Program | 147,989 | Reseal | 147,989 | | |
| 55720 | FRANMAREE_Helenwood-Tompsons | 21,090 | Reseal | 21,090 | | |
| 55293 | GLOUCESTER_Kent - End | 149,981 | Refurbishment of streetscape | 149,981 | | |
| 55658 | Hargrave/Hume/Treherne | 129,055 | Safety - traffic calming | 25,811 | 103,244 | |
| 55724 | HAWLEY_Olive - End | 20,319 | Reseal | 20,319 | | |
| 55538 | HENRY_Service Rd - Wildor | 30,632 | Reseal | 30,632 | | |
| 55725 | HIAWATHA_Lenstan - End | 20,280 | Reseal | 20,280 | | |
| 55504 | HIGH_Arthur- York St | 265,793 | Refurbishment of streetscape | 265,793 | | |
| 55548 | HOBART_Highgat -Talune | 90,306 | Left - K&C | 90,306 | | |
| 55771 | INVERMAY_Foch - Georgetown | 105,820 | Reseal | 105,820 | | |
| 55730 | KERRAN_Bennett - End | 16,067 | Reseal | 16,067 | | |
| 55648 | KINBURN_Connaught - Laura | 29,318 | Reseal | 29,318 | | |
| 55731 | KM connector_Hobart-Edinburgh | 29,081 | Reseal | 29,081 | | |
| 55583 | LAWRENCE VALE_#118 - #126 | 46,992 | Reseal | 46,992 | | |
| 55683 | LOGAN / SAWPIT ROADS | 42,751 | Grading reshaping intersection | 42,751 | | |
| 55734 | LYTTON_Invermay - Holbrook | 38,986 | Reseal | 38,986 | | |
| 55833 | Mitchell St | 57,674 | Safety - traffic calming | 11,535 | 46,140 | |
| 55835 | Cedar / Egan / Walkers Av | 10,065 | Safety - traffic calming | 2,013 | 8,052 | |
| 55735 | McKENZIE_Derby - Invermay | 13,281 | Reseal | 13,281 | | |
| 55650 | MONTROSE_David - End | 142,030 | Refurbishment of streetscape | 142,030 | | |
| 55736 | MORNINGTON_Amundsen-Tandara | 49,749 | Reseal | 49,749 | | |
| 55592 | MTARTHUR_Patersonia Riv Br 645 | 223,862 | Replace with concrete structure | 179,090 | 44,772 | |
| 55737 | NEWSTEAD_Wentworth-Penquite | 12,111 | Reseal | 12,111 | | |
| 55738 | North Lilydale Rd Part Seal RD | 56,910 | Reseal | 56,910 | | |
| 55739 | OLIVE ST (Belhaven-Holbers Bdge) | 6,564 | Reseal | 6,564 | | |
| 55808 | POTTERY_Melbourne - End) | 20,289 | Reseal | 20,289 | | |
| 55925 | Community Benefit Works | 35,634 | Reseal | | | 35,634 |
| 55310 | PUNCHBOWL_Ellison - Morshead | 222,073 | Refurbishment of streetscape | 177,658 | 44,415 | |
| 55513 | PUNCHBOWL_Talbot - Blamey | 320,108 | Refurbishment of streetscape | 256,087 | 64,022 | |
| 55749 | QUARRY RD (Argyle - End) Reseal | 20,446 | Reseal | 20,446 | | |
| 55750 | REGENT ST (Bibra - End) Reseal | 24,710 | Reseal | 24,710 | | |
| 55646 | ROOMS_Elm - Forster | 45,411 | Refurbishment of streetscape | 45,411 | | |
| 55752 | STATION_880 -1100 | 47,261 | Reseal | 47,261 | | |
| 55586 | STONE_Hillside - End | 40,324 | Reseal | 40,324 | | |
| 55754 | STURT_Lawson - Mayfield | 15,881 | Reseal | 15,881 | | |
| 55790 | VERMONT_Wildor - Clare | 44,203 | Reseal | 44,203 | | |
| 55557 | VERMONT/Wildor Cr junction | 162,457 | Safety - traffic calming | 129,966 | 32,491 | |
| 55758 | WALDEN_Strahan - Abbott | 69,179 | Reseal | 69,179 | | |
| 55764 | Yarloop_Bundbury - Dalkeith | 43,726 | Reseal | 43,726 | | |
| | VENTURE_Gilmore-End | | New Development | | | 139,268 |
| | CELERY-StLeonards-End | | New Development | | | 177,688 |
| | ELDONHURST_Penquite-End | | New Development | | | 397,788 |
| | HARADLI_Eldonhurst-End | | New Development | | | 117,371 |
| | 2009 Total | 4,095,939 | | 3,358,550 | 701,755 | 867,748 |
| | 2010 | | | | | |
| 55944 | Bathurst_Balfour - Canning | 45,384 | Centre lane Pavement strengthening | 45,384 | | |
| 20354 | Bathurst_Balfour - Canning | 216,136 | K&C + Footpath + reseal | 216,136 | | |
| 55888 | BATMAN_Hill - Wyett | 17,215 | Reseal | 17,215 | | |
| 55887 | BENWERRIN_Quarantine - Denway | 15,285 | Reseal | 15,285 | | |
| 55856 | BERTLAND_Denway - end | 17,889 | Reseal | 17,889 | | |
| 55868 | BINNEY_Booth - Bonella | 34,788 | Reseal | 34,788 | | |

| Project No: | Location Description | Project Cost | Work Description | Renewal | New / Upgrade | Sub Divisions |
|-------------|----------------------------------|------------------|---|------------------|------------------|----------------|
| | | \$ | | \$ | \$ | \$ |
| 55834 | Box St - Cook St | 53,434 | Safety - traffic calming | 10,687 | 42,747 | |
| 55839 | Burns Creek_Burns Crk Br#614 | 29,257 | Replace with concrete structure | 23,406 | 5,851 | |
| 55857 | Cameron_Charles - Wellington | 45,496 | Reseal | 45,496 | | |
| 55300 | CIMITIERE_George - St John | 79,688 | Reseal | 79,688 | | |
| 55853 | CIMITIERE_St John - Bathurst | 73,490 | Reseal | 73,490 | | |
| 55710 | CLARE_Bill - Vermont | 269,670 | Refurbishment of streetscape | 269,670 | | |
| 55889 | CLARK_Caswell - Giblin | 48,272 | Reseal | 48,272 | | |
| 55802 | CONWAY_Derby - Dobson | 35,895 | Reseal | 35,895 | | |
| 55854 | DALKEITH_Magnet - Tasman | 30,526 | Reseal | 30,526 | | |
| 55848 | DELUNGRA_Fairthorne - Dandenong | 158,360 | Refurbishment of streetscape + retaining wall + handrails | 126,688 | 31,672 | |
| 55506 | DENMAN_Dandenong - Fairthorne | 167,241 | Refurbishment of streetscape + retaining wall + handrails | 133,793 | 33,448 | |
| 20374 | DENWAY_Benwerrin - end | 20,242 | Reseal | 20,242 | | |
| 55882 | ESTHER_Brougham - Kinburn | 19,822 | Reseal | 19,822 | | |
| 55855 | FLINDERS_Mayfield - end | 10,934 | Reseal | 10,934 | | |
| 20342 | Footpath 09/10 Program | 282,575 | Reseal | 282,575 | | |
| 55505 | GALVIN_#30 Galvin - End | 99,094 | Refurbishment of streetscape | 99,094 | | |
| 55578 | Georgetown_Haig - University Way | 175,221 | Reseal | 175,221 | | |
| 55679 | GOULBURN_Lewis - End | 255,667 | Refurbishment of streetscape | 255,667 | | |
| 55953 | Gundagai_Gundagai Rd Br#635 | 28,833 | Replace with concrete structure | 23,067 | 5,767 | |
| 55954 | Gundagai_Third River Br#636 | 46,111 | Replace with concrete structure | 36,889 | 9,222 | |
| 55788 | HARDWICKE ST | 192,458 | new asset - extension | | 192,458 | |
| 55874 | Hargrave_Mayfield/Egan - Torrens | 40,716 | Reseal | 40,716 | | |
| 55851 | HART_Elphin - Olive | 55,352 | Reseal | 55,352 | | |
| 55872 | HENRY_Wildor - Ravenswood | 60,538 | Reseal | 60,538 | | |
| 55674 | HILLARY_End - St Leonards | 239,619 | Refurbishment of streetscape | 239,619 | | |
| 45002 | INVERMAY_Forster - Lindsay | 2,545,235 | Revitalisation - shopping precinct | 509,047 | 2,036,188 | |
| 55384 | INVERMAY RD / LINDSAY ST | 250,649 | Land Purchase | | | 250,649 |
| 55890 | JILLIAN_Riseley - Shirley | 18,360 | Reseal | 18,360 | | |
| 55832 | Lawson - Mayfield | 73,762 | Safety - traffic calming | 14,752 | 59,010 | |
| 55314 | LONGWOOD_Thyne - End | 32,442 | Reseal | 32,442 | | |
| 55894 | LONGWOOD_Penquite - Thyne | 28,341 | Reseal | 28,341 | | |
| 55647 | MARGARET_Balfour - Frankland | 231,458 | Refurbishment of streetscape | 231,458 | | |
| 55875 | NOTLEY_Georgetown - Sayer | 14,533 | Reseal | 14,533 | | |
| 55687 | Pedder Service Rd &Turning Head | 30,095 | Reseal | 30,095 | | |
| 20368 | PEEL_Merivale - Westbury | 23,954 | Reseal | 23,954 | | |
| 55886 | PIONEER_(Warring - Rosney | 64,075 | Reseal | 64,075 | | |
| 55885 | RISELEY_Jillian - Chifley | 30,433 | Reseal | 30,433 | | |
| 55877 | SOPHIE_Gloucester - end | 30,435 | Reseal | 30,435 | | |
| 55883 | SYDNEY_Goderich -end | 18,378 | Reseal | 18,378 | | |
| 55869 | THORNTON_Alma - end | 12,683 | Reseal | 12,683 | | |
| 55892 | THYNE_Longwood -Riverdale | 24,301 | Reseal | 24,301 | | |
| 55893 | TREFFOS_Thyne - end | 14,993 | Reseal | 14,993 | | |
| 55879 | TRUSCOTT_Grubb - end | 9,781 | Reseal | 9,781 | | |
| 55843 | WESTBURY_Peel - Normanstone | 141,926 | Reseal | 141,926 | | |
| 55884 | WILDOR_Vermont to Henry | 133,191 | Reseal | 133,191 | | |
| 55880 | WYLDROSE_Melbourne - end | 13,014 | Reseal | 13,014 | | |
| | BOWL_ConnectorParkLoop-End | | New Development | | | 169,932 |
| | GLADSTONE_End | | New Development | | | 145,029 |
| | LEGGES_Palmerston-Palmerston | | New Development | | | 350,749 |
| | 2010 Total | 6,607,248 | | 3,940,236 | 2,416,363 | 916,360 |
| | 2011 | | | | | |
| 50529 | ABBOTT / CAMPBELL | 159,350 | New Roundabout | 31,870 | 127,480 | |
| 20363 | BIFRONS COURT | 227,765 | Full refurbishment of street | 227,765 | | |
| 50530 | BIKE PARKING | 14,932 | Bike Racks | | 14,932 | |

| Project No: | Location Description | Project Cost | Work Description | Renewal | New / Upgrade | Sub Divisions |
|-------------|--|--------------|---|---------|---------------|---------------|
| | | \$ | | \$ | \$ | \$ |
| 55858 | BIKEWAYS | 103,379 | Safety - Linemarking | | 103,379 | |
| 55671 | Connector Park Dr | 136,935 | Subdivision contribution | | | 136,935 |
| 20522 | CORIN_Outram - end | 55,593 | Reseal + new K&C at end | 27,796 | 27,796 | |
| 20705 | Forster_Murphy - end | 2,380 | Left footpath | 2,380 | | |
| 55852 | FORSTER_Goderich - Montague | 66,904 | Refurbishment of street | 66,904 | | |
| 50532 | GALVIN_Mulgrave - Wellington | 156,760 | Refurbishment of street | 156,760 | | |
| 20815 | Georgetown Rd Footpath | 4,359 | Reseal | 4,359 | | |
| 55861 | GLEADOW / HOLBROOK | 76,530 | Reseal - mobile plaster to control rutting of surface | 76,530 | | |
| 20510 | GRANVILLE STREET | 173,927 | Reseal + new K&C at end | 69,571 | 104,356 | |
| 20816 | Hargrave Cr Footpath | 16,222 | Reseal | 16,222 | | |
| 50533 | Hobler Br_Penquite - Railway Line | 568,721 | Pavement strengthening + Reseal | 568,721 | | |
| 20627 | INVERMAY_Forster - Lindsay | 147,574 | Safety Pedestrian Lights | | 147,574 | |
| 20524 | JANET_Kay - Reid | 92,608 | Both sides K&C + Footpath | 92,608 | | |
| 20817 | Jillian St | 5,371 | Footpath Reseal | 5,371 | | |
| 20539 | Launceston Arterial Bike Route Network | 394,425 | Safety - Linemarking | | 394,425 | |
| 55835 | Walkers Ave | 22,891 | Safety - traffic calming | 4,578 | 18,313 | |
| 20871 | MONTIFIOR ST | 25,609 | Footpath | 25,609 | | |
| 20513 | MULGRAVE_Gee - Melbourne | 108,471 | Refurbishment of street | 108,471 | | |
| 20676 | Normanstone Rd Footpath Bus Bay | 112,000 | Realign K&C | 89,600 | 22,400 | |
| 20502 | NORTH_Garfield - Galvin | 100,994 | Refurbishment of street | 100,994 | | |
| 55828 | PENQUITE_ #246 to #278 | 91,884 | K&C + Footpath | 91,884 | | |
| 55850 | Punchbowl_Blamey - Reserve | 430,494 | Refurbishment of street | 387,444 | 43,049 | |
| 55849 | RICHARDS_Elphin - Pen-y-Bryne | 16,633 | Reseal | 16,633 | | |
| 20289 | Road Traffic Counters | 8,033 | Reseal | | | 8,033 |
| 20702 | STATION/ST LEONARDS | 55,568 | Junction islands | 55,568 | | |
| 55846 | TRAFFIC SAFETY PROGRAM | 375,905 | Safety | 75,181 | 300,724 | |
| 50574 | TRETHEWIE_Seymour - Faulkner | 222,334 | Refurbishment of street | 222,334 | | |
| 55863 | Wellington_Normanstone- Westbury | 89,660 | Traffic islands | 17,932 | 71,728 | |
| 20399 | WELMAN_York - Elizabeth | 105,194 | Refurbishment of street | 105,194 | | |
| 50578 | Westbury/Normanstone Rd (Int) | 14,029 | Reseal | 14,029 | | |
| 55955 | MORSEHEAD_KM Rivulet Bridge 644 | 115,520 | Replace with concrete structure | 92,416 | 23,104 | |
| 20665 | Second River_Second River Bridge 660 | 115,307 | Replace with new deck - high impact load | 115,307 | | |
| 20512 | GLENWOOD_Poplar - Glen Shian | 476,524 | Refurbishment of street + widening | 428,872 | 47,652 | |
| 20509 | Golconda_Doaks - Lilydale Falls | 381,750 | Refurbishment of street + widening | 343,575 | 38,175 | |
| 50508 | ABBOTT/Arthur | 21,726 | Traffic islands | 21,726 | | |
| 50510 | ARTHUR_Abbott - Berean | 45,190 | Reseal | 45,190 | | |
| 50511 | BAILEY_Wellington - Leslie | 11,554 | Reseal | 11,554 | | |
| 50512 | BASIN_Brougham - Denison | 64,422 | Reseal | 64,422 | | |
| 50513 | BAVARIA_Opossum - Carr | 42,537 | Reseal | 42,537 | | |
| 20742 | Bill Gr | 30,963 | Footpath Reseal | 30,963 | | |
| 20704 | Bluegum Rd | 3,018 | Footpath Reseal | 3,018 | | |
| 20710 | Brooklyn Rd | 6,564 | Footpath Reseal | 6,564 | | |
| 20712 | Carr St | 6,653 | Footpath Reseal | 6,653 | | |
| 50514 | CORIN_Denison - end | 3,908 | Reseal | 3,908 | | |
| 50515 | Cornwell_Tompson - Ronneby | 61,764 | Reseal | 61,764 | | |
| 20706 | Denison Rd | 15,705 | Footpath Reseal | 15,705 | | |
| 20720 | Derby St | 5,258 | Footpath Reseal | 5,258 | | |
| 20694 | Elizabeth St | 8,864 | Footpath Reseal | 8,864 | | |
| 20732 | Elphin_College-Cypress | 10,401 | Footpath Reseal | 10,401 | | |
| 20738 | Elphin_Kenyon-Richards | 17,213 | Footpath Reseal | 17,213 | | |
| 50516 | EMERALD_Tandara - end | 26,417 | Reseal | 26,417 | | |
| 50517 | FOREST_Trevallyn - West Tamar | 71,095 | Reseal | 71,095 | | |
| 20709 | Frankland St | 3,288 | Footpath Reseal | 3,288 | | |

| Project No: | Location Description | Project Cost | Work Description | Renewal | New / Upgrade | Sub Divisions |
|-------------|---------------------------------------|------------------|---|------------------|------------------|----------------|
| | | \$ | | \$ | \$ | \$ |
| 20708 | Helen St | 2,827 | Footpath Reseal | 2,827 | | |
| 20697 | Home St | 4,313 | Footpath Reseal | 4,313 | | |
| 20718 | Ingamells St | 4,938 | Footpath Reseal | 4,938 | | |
| 20688 | Jackson St | 13,679 | Footpath Reseal | 13,679 | | |
| 20739 | Kay St | 13,523 | Footpath Reseal | 13,523 | | |
| 20698 | Mawson Pl | 7,331 | Footpath Reseal | 7,331 | | |
| 50519 | OPOSSUM_Bavaria - Norwood | 52,168 | Reseal | 52,168 | | |
| 20713 | Osborne Ave Service Rd | 3,596 | Footpath Reseal | 3,596 | | |
| 50520 | OSWALD_Lamont - Mann - Henty | 49,342 | Reseal | 49,342 | | |
| 50521 | PANUBRA_Chifley - Maroney | 50,745 | Reseal | 50,745 | | |
| 20726 | Punchbowl Rd Footpath Reseal | 5,207 | Reseal | 5,207 | | |
| 50522 | RONNEBY_Woodland - Cornwall | 67,297 | Reseal | 67,297 | | |
| 50524 | ROSEBERRY_Rosetta/Warring - end | 6,245 | Reseal | 6,245 | | |
| 50525 | ROSNY_Blyth - Pioneer | 20,468 | Reseal | 20,468 | | |
| 50527 | RYAN_Bishops - end | 10,762 | Reseal | 10,762 | | |
| 20744 | Summerdale Gr | 41,702 | Footpath Reseal | 41,702 | | |
| 55891 | VIEW_Peel - Norwich | 22,982 | Reseal | 22,982 | | |
| 50518 | YORK/Margaret | 43,351 | Reseal | 43,351 | | |
| 20666 | York/Charles | 16,047 | Intersection Reseal | 16,047 | | |
| | KACHINA_Marion-End | | New Development | | | 107,550 |
| | MARION_Eldonhurst-Kachina | | New Development | | | 118,335 |
| | STREAMSIDE_Southgate_End | | New Development | | | 106,205 |
| | EASTFIELD_Franmaree-Malachi | | New Development | | | 87,939 |
| | 2011 Total | 6,165,598 | | 4,535,542 | 1,485,089 | 564,996 |
| | 2012 | | | | | |
| 20912 | Alanvale/Georgetown - Roundabout | 3,872 | Left footpath resurface | 3,872 | | |
| 20753 | ALBERT_Victoria-End | 292,953 | Full refurbishment of streetscape | 292,953 | | |
| 20500 | ANDERSON_Delungra-Fairthorne | 247,615 | Partial refurbishment of streetscape + new retaining walls parking bays | 198,092 | 49,523 | |
| 20915 | Arthur St_Hornsey - High | 5,696 | Partial footpath resurface | 5,696 | | |
| 20783 | BACALA_Paling Track - Golconda(-200m) | 431,797 | Widen road pavement | 345,438 | 86,359 | |
| 21246 | BACALA_Tunnel - Golconda(-200m) | 269,134 | Partial New sealed surface | 215,308 | 53,827 | |
| 20586 | BACALA_Tunnel-Paling Track | 354,945 | Widen road pavement | 283,956 | 70,989 | |
| 20711 | BATHURST_ST_Elizabeth-Brisbane | 98,495 | Resurface | 98,495 | | |
| 20398 | Bennells Way_Welman-Adelaide | 123,119 | Full refurbishment of pathway | 123,119 | | |
| 20916 | Brewer Pl_Goderich - end | 11,699 | Full resurface | 11,699 | | |
| 50577 | BRIDGE_KingsBridge-Paterson | 28,807 | Safety - new pedestrian crossing | 5,761 | 23,046 | |
| 20918 | Brougham St_Wilhelmina - Emma | 7,938 | Right footpath resurface | 7,938 | | |
| 20910 | Cambridge St_Outram - West Park | 25,256 | Left footpath resurface + geofabric | 25,256 | | |
| 21361 | CAMDEN_22040-Blessington | 13,857 | Resurface | 13,857 | | |
| 20714 | Chifley St_Maroney - Gascoyne | 3,743 | Left footpath resurface | 3,743 | | |
| 20857 | Clark St_Dobson - Caswell | 3,782 | Right footpath resurface | 3,782 | | |
| 21272 | Cleveland_Wellington-End | 25,348 | Partial refurbishment of streetscape to supplement hospital development | 25,348 | | |
| 20526 | CORKERYS_Tasman Hwy - Br # 621 | 222,868 | Realign Tasman Hwy junction & sealed, sealed approach to bridge | 178,294 | 44,574 | |
| 50528 | CORKERYS_St Patricks River Br # 621 | 413,618 | Bridge upgrade to a wider concrete structure | 330,894 | 82,724 | |
| 20716 | CROWN STREET | 12,174 | Resurface | 12,174 | | |
| 20501 | DENISON_Wilhelmina-DenisonGr | 41,055 | Section of new K&C + Footpath | 8,211 | 32,844 | |
| 20754 | DEVIATION_Trevritch-End | 174,875 | Full refurbishment of streetscape included new K&C | 104,925 | 69,950 | |
| 20755 | DIPROSE_End-Machen | 109,468 | Full refurbishment of streetscape | 109,468 | | |
| 20919 | Dorset Pl_Warwick - end | 8,683 | Left footpath resurface | 8,683 | | |
| 20756 | DRY_Holbrook-Bernard | 70,868 | Partial refurbishment of streetscape | 70,868 | | |

| Project No: | Location Description | Project Cost | Work Description | Renewal | New / Upgrade | Sub Divisions |
|-------------|--|--------------|--|---------|---------------|---------------|
| | | \$ | | \$ | \$ | \$ |
| 20689 | Effingham St | 3,142 | Footpath Reseal | 3,142 | | |
| 20736 | Elphin_David - Belhaven | 7,210 | Right footpath resurface | 7,210 | | |
| 20757 | ERNEST_Reid-Kay | 68,446 | Left K&C renewed | 68,446 | | |
| 20719 | ESPLANADE | 35,097 | Resurface | 35,097 | | |
| 20920 | Frankland_Lord - High / Frankland_Rocher - Upton | 8,005 | Left footpath resurface / Right footpath resurface | 8,005 | | |
| 20921 | Georgetown_Parklands - Alanvale | 20,001 | Upper & Lower left footpath resurfaced | 20,001 | | |
| 20784 | GLENWOOD_Opossum-Glen Shian | 299,472 | Widen to S4 LCC standard | 239,577 | 59,894 | |
| 21301 | GLENWOOD_Quarantine-Opossum | 46,122 | Resurface | 46,122 | | |
| 21302 | Golconda_Doaks-Falls Bridge 634 | 141,430 | Resurface | 141,430 | | |
| 20785 | Golconda_12200-Dorset Bdy | 573,142 | Widen to S5 LCC standard | 458,514 | 114,628 | |
| 20723 | HARDWICKE STREET | 7,477 | Resurface | 7,477 | | |
| 20724 | HIGHGATE STREET | 41,784 | Resurface | 41,784 | | |
| 20911 | Hillt_Batman - Brisbane | 27,357 | Full Left & partial right footpath resurface | 27,357 | | |
| 20725 | HILLSIDE CR SERVICE RD | 23,928 | Resurface | 23,928 | | |
| 20781 | HOBART_Record-Charbooday | 283,443 | New K&C + footpath left side | 56,689 | 226,754 | |
| 20760 | Holebrook_Dunning-Forster | 24,146 | Section of new K&C | 24,146 | | |
| 21187 | INVERMAY_Conway-Sadler | 30,974 | Rutting area milled out - resealed with mobile plaster | 30,974 | | |
| 20362 | JACKSON_Invermay-End | 262,945 | Full refurbishment of streetscape+ new retaining walls parking bays | 210,356 | 52,589 | |
| 20761 | KEITHLEIGH_Highgate-Woolven | 222,001 | Full refurbishment of streetscape | 222,001 | | |
| 20859 | Kelham St_Howick - Hampden | 1,383 | Right footpath resurface | 1,383 | | |
| 20939 | LALLA BRIDGE 638 | 42,980 | New guardrail | | 42,980 | |
| 20924 | Lantana Ave_Helen - Penquite | 5,835 | Left footpath resurface | 5,835 | | |
| 20762 | LAWRENCEVALE_Bellevue-Meredith | 200,990 | Partial refurbishment of streetscape | 200,990 | | |
| 20763 | Golconda_LEBRINA TOWNSHIP | 55,012 | New footpath | | 55,012 | |
| 21211 | LEES_Third Riv Flood Opening Br 640 | 41,308 | Upgrade to concrete deck | 33,046 | 8,262 | |
| 20743 | Lithgow St_Wellington - Cosgrove Park | 6,243 | Right footpath resurface | 6,243 | | |
| 20913 | Mercer St_Binalong - end | 5,467 | Right footpath resurface | 5,467 | | |
| 20519 | MEREDITH_#40-KarlaPlace | 66,912 | Refurbished left retaining wall & footpath - joined K & C + footpath | 53,529 | 13,382 | |
| 20870 | Mitchell_Torrens - Hargrave | 41,787 | Both footpath resurface + geofabric | 41,787 | | |
| 20914 | Murray St_Vermont - Conway | 13,512 | Partial - both sides footpath resurface | 13,512 | | |
| 20397 | NEIKA_Duke-ThistleWest | 281,219 | Full refurbishment + new K&C, retaining walls parking bays | 224,976 | 56,244 | |
| 20925 | Normanstone_Hobart - Lithgow | 3,959 | Right footpath resurface | 3,959 | | |
| 20774 | North Lilydale_ 820-1902/Browns_0-240 | 76,064 | Upgrade to sealed surface | 60,851 | 15,213 | |
| 20880 | John Lees Way | 4,795 | Linemarking concept | | | 4,795 |
| 20926 | Opossum_Quarantine - Poplar | 35,225 | Both footpath resurface | 35,225 | | |
| 21269 | Parklands Pde Estate The 'Green' - #62 | 16,038 | Contribution by Council to works | | | 16,038 |
| 20775 | PATERSONIA RD_Segment 10970-13800/Targa Hill | 125,468 | Widen to S3 LCC standard | 100,374 | 25,094 | |
| 21303 | PATERSONIA_Prossers-Amelia | 97,006 | Resurface | 97,006 | | |
| 20782 | Peel West_Start-Granville | 58,180 | New Footpath | | 58,180 | |
| 50576 | Pipers Brook_Golconda- Dorset Bdy | 30,613 | Widen to S4 LCC standard | 24,490 | 6,123 | |
| 20729 | QUEECHY ROAD | 44,282 | Resurface | 44,282 | | |
| 55818 | RAGLAN_KM CONNECTOR | 1,032,577 | New Roundabout | | | 1,032,577 |
| 20730 | RESERVE STREET | 23,891 | Resurface | 23,891 | | |
| 20927 | Rocher St_Frankland - Princes - Balfour | 13,173 | Left footpath Strip & seal includes geofabric | 13,173 | | |
| 20928 | Ronald Pl_Kenneth - end | 13,891 | Both footpath resurface + geofabric | 13,891 | | |
| 50523 | ROSE_Westbury - Peel | 73,523 | Resurface | 73,523 | | |
| 55844 | ROSE_Peel-#8 | 273,485 | New footpath, K&C/retaining wall & reseal | 164,091 | 109,394 | |
| 20861 | Springvale Pl_Essendon - end | 17,622 | Both footpath resurface | 17,622 | | |

| Project No: | Location Description | Project Cost | Work Description | Renewal | New / Upgrade | Sub Divisions |
|------------------------------------|------------------------------------|------------------|---|------------------|------------------|------------------|
| | | \$ | | \$ | \$ | \$ |
| 55841 | ST LEONARDS_#41-#171 | 324,215 | Section of new footpath - K&C | 64,843 | 259,372 | |
| 20733 | STATION ROAD | 44,351 | Resurface | 44,351 | | |
| 20932 | Stoke_Lambert - Seymour | 21,296 | Left footpath resurface | 21,296 | | |
| 20929 | SUFFOLK_Cardigan - Lanoma | 5,735 | Left footpath resurface | 5,735 | | |
| 55755 | TALBOT_Lawrence Vale-Punchbowl | 34,886 | Safety - Linemarking - traffic islands | | 34,886 | |
| 20776 | TARGA HILL ROAD | 95,394 | Widen to S2 LCC standard | 76,316 | 19,079 | |
| 20767 | TREVALLYN_Kings Bridge - South Esk | 104,965 | Excavate & reinstate bluestone wall | 104,965 | | |
| 20675 | Trotters_ Eastern side | 22,217 | Partial - New K&C | 17,773 | 4,443 | |
| 20768 | TULLOCH/SHORT junction | 88,241 | Excavate & reinstate Bluestone retaining wall - K&C | 88,241 | | |
| 20777 | TUNNEL ROAD | 27,493 | Widen to S3 LCC standard | 21,994 | 5,499 | |
| 21217 | UNDERWOOD_Pipers River Bridge 107 | 0 | New guardrail | | | |
| 20999 | UNIVERSITY TRAIL-Mayne St Crossing | 30,686 | Access ramps, at Mayne Street over bridge. | 30,686 | | |
| 20934 | Van Dieman Ave_Peel - Maria | 20,700 | Right footpath resurface + geofabric | 20,700 | | |
| 20935 | Vasey_Blamey - end | 6,685 | Both footpath resurface | 6,685 | | |
| 20937 | Victoria_Hobart - Albert | 13,358 | Both footpath resurface | 13,358 | | |
| 20938 | Wadley_Tompsons - Notley | 10,675 | Left footpath resurface | 10,675 | | |
| 20503 | WEEDON_Gascoyne-Ainslie | 291,832 | Full refurbishment of street scape | 291,832 | | |
| 20740 | WELLINGTON STREET | 161,003 | Pavement strengthening | 161,003 | | |
| 20741 | WHITEMARK PLACE | 18,911 | Resurface | 18,911 | | |
| | LEGGES_Palmerston-Peel West | | New Development | | | 125,776 |
| | CELERY_Right_fork | | New Development | | | 18,531 |
| | ROMAN_Junction-End | | New Development | | | 38,260 |
| | Expenditure | 9,152,870 | | 6,418,598 | 1,680,863 | 1,235,977 |
| Av Expenditure 2006 to 2012 | | 5,855,735 | | 4,361,531 | 1,282,109 | 917,470 |