Transport

Strategic Asset Management Plan

April 2018

Burdekin Shire Council

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Item No:	10.1

Contents

1 EXECUTIVE SUMMARY

1.1 Portfolio Description

Burdekin Shire Council's Transport portfolio comprises an extensive network of urban and rural, sealed and unsealed roads plus associated road network assets.

Key statistics are as follows:

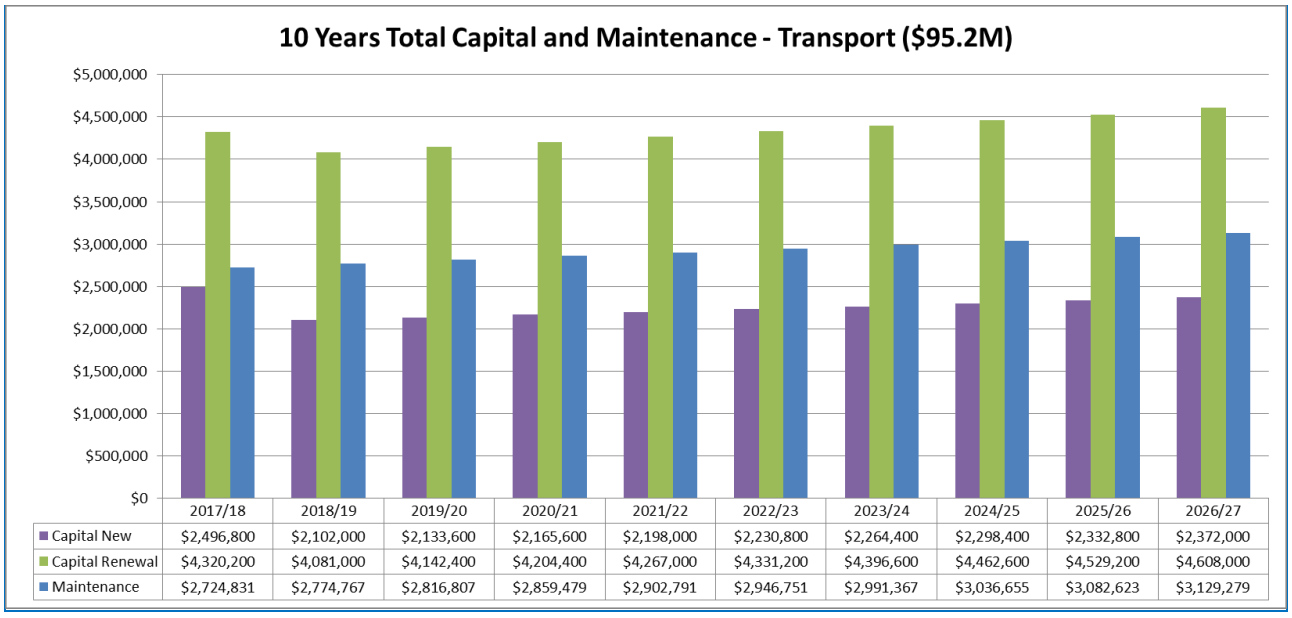
- 1,147km of roads, of which 733km are sealed (64%)
- 7 vehicle bridges
- 1 pedestrian bridge
- 8 major culverts
- 2701 culverts, pipes and inverts (29.09km)
- 40.1km of paths and cycleways
- 189km of kerb and channel
- 29 roundabouts.

The total replacement value of Council's Transport portfolio as provided in the financial asset register at 30 June 2017 was $400.3M.

1.2 Expenditure Forecast

The following chart provides a summary level view of Council's planned capital renewal, capital new, and maintenance expenditure over the outlook period.

Figure 1.1 Planned Capital and Maintenance Forecast



	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Capital New	$2,496,800	$2,102,000	$2,133,600	$2,165,600	$2,198,000	$2,230,800	$2,264,400	$2,298,400	$2,332,800	$2,372,000
Capital Renewal	$4,320,200	$4,081,000	$4,142,400	$4,204,400	$4,267,000	$4,331,200	$4,396,600	$4,462,600	$4,529,200	$4,608,000
Maintenance	$2,724,831	$2,774,767	$2,816,807	$2,859,479	$2,902,791	$2,946,751	$2,991,367	$3,036,655	$3,082,623	$3,129,279

The growth related capital as described above will increase the overall portfolio value by 5.6%.

The consequential impact on maintenance budgets now includes an allowance for new capital works undertaken during the previous financial year. Annual reviews will take into account any revised forecasts for maintenance. Please note, maintenance costs do not include overheads such as supervision, design, office costs, or restoration works carried-out under Natural Disaster Relief and Recovery Arrangements (NDRRA).

Capital new expenditure is for improved services in accordance with the strategies in Council's Corporate Plan and long term Financial Plan and includes:

- Rural road widenings and upgrades
- Provision of kerbing and channelling to urban areas
- Expansion of Council's walking and cycleway network

Key comparison figures reviewed against the planned capital renewals expenditure are as follows:

Planned capital renewals over the next ten years.	$43,342,600
The cumulative annual depreciation over the 10-year forecast period.	$50,221,754
What the financial asset register says we should renew (remaining life based).	$19,098,433

Local Government Regulation 2012 Chapter 5 - Financial planning and accountability [Section 169] provides key indicators to determine how well a Local Government manages infrastructure assets.

The current target for the Asset Sustainability Ratio as per the Financial Management (Sustainability) Guideline 2013 is 90% (on average over a ten year period). Planned capital renewal expenditure is 86.3% of depreciation over the forecast period. As such, planned renewal estimates, while not keeping pace with depreciation, are projected to maintain the transport portfolio in a healthy overall lifecycle position.

Appendix A provides a chart showing the long term renewals forecast generated from the financial asset register. Over the next 10 years, $18.5M in renewals is anticipated whilst over the next 20 years the amount is $33.9M and $241.2M over the next 60 years.

The average annual expenditure required over the 60-year forecast is approximately $4.02M

1.3 Financial Performance Measures

The following financial performance measures have been generated for this plan.

Table 1.1 Financial Performance Measures

Performance Measure	This Plan	Previous Plan (2012)
Asset sustainability ratio	86.3%	127.2%
Future renewal funding ratio	226.9%	100.0%
Asset consumption ratio	84.4%	84.0%

The Asset Consumption Ratio indicates the overall written down value of the portfolio at 84.4%, indicating the portfolio is in good condition overall.

1.4 The Next Steps

The key actions and improvements resulting from this strategic asset management plan are:

- Executive level improvements applicable to all strategic asset management plans are detailed in the Executive Level Strategic Asset Management Plan.
- Disaster recovery plans to incorporate road priorities in order to assist with planning reconstruction schedules and any desired resilience works.
- Following development of the road network strategy, prepare the schedule for road reconstructions and augmentation works thereby bringing higher priority works into alignment with the strategy over the outlook period.

1.5 Plan Adoption Date

This strategic asset management plan was formally adopted by Burdekin Shire Council on 22nd May 2018, Item number 10.1.

2. INTRODUCTION

2.1 Purpose

This strategic asset management plan defines Burdekin Shire Council's strategy for the responsible management of its transport assets (roads and associated infrastructure) in a manner that is compliant with regulatory requirements and is sustainable within available resources. This plan will also be used to communicate any need for additional funding in order to provide the required levels of service.

This plan should be read in conjunction with Council's Executive Level Strategic Asset Management Plan, which contains a number of sections describing Council's approach to asset management that is common across all strategic asset management plans.

2.2 Overview of this Plan

This plan focuses on providing the following key information to assist long term planning for infrastructure and property assets to support and sustain service standards:

- Portfolio description – provides an understanding of the current asset base used to deliver services to the community.
- Future demand – provides an understanding of the current and future changes in demand over the forecast period to allow for the inclusion in financial planning for any growth related capital works.
- Levels of service and performance – provides strategic-level asset performance targets and current performance to drive required capital or maintenance intervention works.
- Financial forecasts and sustainability measures – provides forecast for both unrestricted and restricted budgets and their resulting impacts and implications regarding the long-term sustainability of services standards.
- Asset management improvements – provides a listing of key action items and improvements proposed to enable future versions of this plan to improve accuracy or confidence in the forecasts made.

2.3 Portfolio Description

2.3.1 Asset Summary

Burdekin Shire Council's transport portfolio comprises an extensive network of urban and rural, sealed and unsealed roads plus associated road network assets.

Key statistics are as follows:

- 1,147km of roads, of which 733km are sealed (64%)
- 7 vehicle bridges
- 1 pedestrian bridge
- 8 major culverts
- 2701 culverts, pipes and inverts (29.09km)
- 40.1km of paths and cycleways
- 189km of kerb and channel
- 29 roundabouts.

The following table provides a summary of the asset portfolio by asset type. Current asset cost equates to current construction cost as at 30 June 2017. The total replacement value of the transport portfolio is $400.3M.

Table 2.1 Asset Summary

Category	Group	Replacement Cost	Written Down Value
Bridges & Major Culverts	Major Culvert	$1,082,787	$1,010,764
	Pedestrian Bridge	$65,543	$18,353
	Road Bridge (Standard)	$9,272,274	$7,228,730
Bridges & Major Culverts Total		**$10,420,603**	**$8,257,847**
Minor Culverts/Pipes	Box Culvert	$32,279,305	$20,021,772
	Pipe	$9,886,324	$5,320,290
Minor Culverts/Pipes Total		**$42,165,629**	**$25,342,062**
Off Street Car Park and Hardstand	Hardstand	$12,382	$12,221
	Sealed Car Park	$170,011	$143,171
	Unsealed Car Park	$378,808	$210,809
Off Street Car Park and Hardstand Total		**$561,201**	**$366,201**
Pathways	Cycle	$33,969	$28,058
	Dual use & Shared	$8,380,736	$5,482,557
	Pedestrian	$1,449,983	$752,987
Pathways Total		**$9,864,687**	**$6,263,602**
Road Reserve Amenities	Fencing	$23,183	$13,183
	Retaining Wall	$33,840	$33,365
Road Reserve Amenities Total		**$57,023**	**$46,548**
Roads	Concrete Floodway	$45,365	$45,095
	Concrete Invert	$310,358	$243,924
	Kerb & Channel	$28,107,512	$19,894,367
	Pavement	$154,672,966	$131,230,887
	Seals	$26,733,692	$20,226,134
	Subgrade	$121,269,650	$121,269,650
Roads Total		**$331,139,543**	**$292,910,057**
Traffic Management	Pedestrian Refuge	$60,275	$31,345
	Roundabout	$5,930,000	$4,540,727
	Speed Hump	$37,805	$18,147
	Traffic Island & Median Strip	$70,778	$54,988
Traffic Management Total		**$6,098,858**	**$4,645,207**
Grand Total		**$400,307,545**	**$337,831,524**

2.3.2 Condition Summary

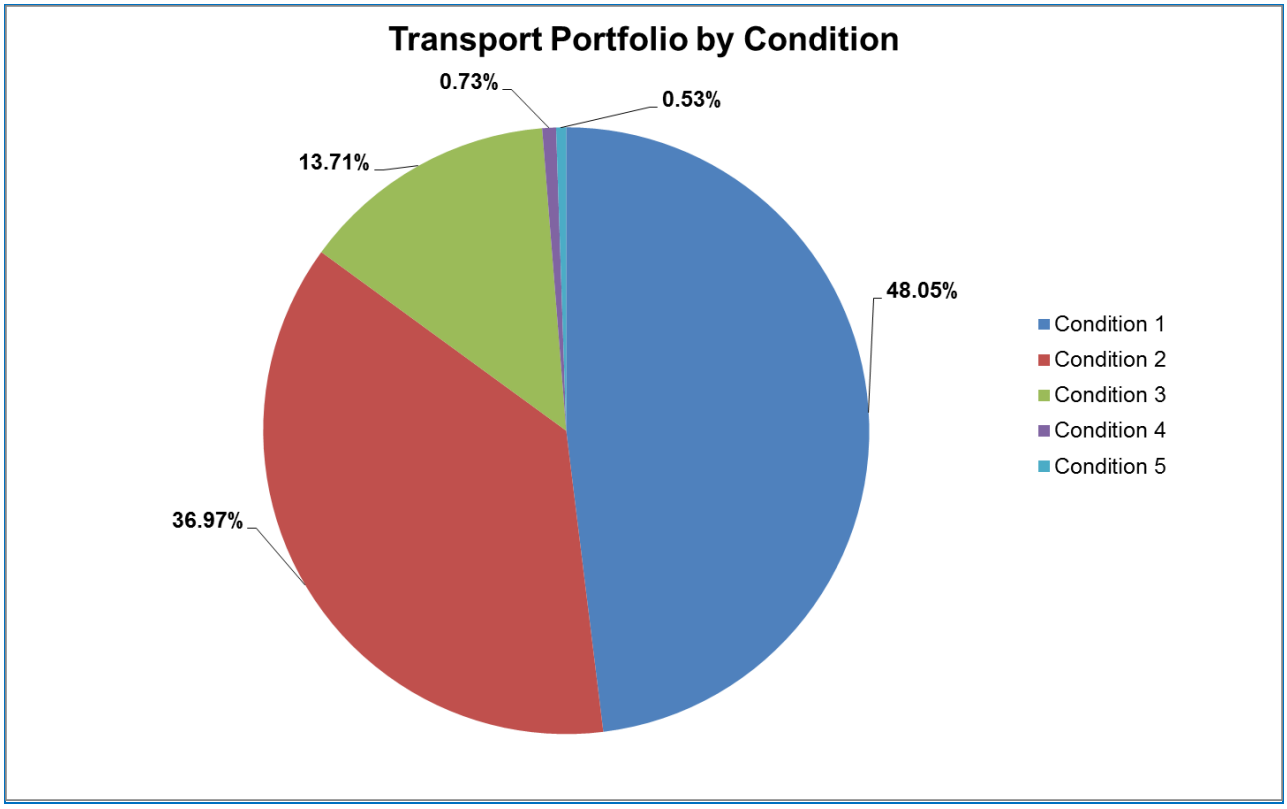
The following table and chart provide an overall view of the condition profile for the transport portfolio shown as a percentage of the asset cost.

Table 2.2 Transport Condition Summary

Transport Condition Ratings and Value	1	2	3	4	5	Total Value
Bridges & Major Culverts						
Major Culvert	$537,244	$545,542				$1,082,787
Pedestrian Bridge	$537,244	$545,542	$65,543			$65,543
Road Bridge (Standard)	$537,244	$9,388,715	$494,644			$9,272,274
Bridges & Major Culverts Total						**$10,420,603**
Minor Culverts/Pipes						
Box Culvert	$3,439,302	$21,231,154	$6,336,763	$626,840	$645,246	$32,279,305
Pipe	$4,787,882	$26,365,955	$8,406,507	$1,455,863	$1,149,421	$9,886,324
Minor Culverts/Pipes Total						**$42,165,629**
Off Street Car Park and Hardstand						
Hardstand	$12,382					$12,382
Sealed Car Park	$182,394					$170,011
Unsealed Car Park	$561,201					$378,808
Off Street Car Park and Hardstand Total						**$561,201**
Pathways						
Cycle	$13,775	$20,194				$33,969
Dual use & Shared	$3,746,868	$2,867,299	$415,058	$849,375	$536,106	$8,380,736
Pedestrian	$4,189,931	$3,327,146	$437,191	$1,146,258	$764,162	$1,449,983
Pathways Total						**$9,864,687**
Road Reserve Amenities						
Fencing	$23,183					$23,183
Retaining Wall	$57,023					$33,840
Road Reserve Amenities Total						**$57,023**
Roads						
Concrete Floodway	$45,365					$45,365
Concrete Invert	$153,871	$201,852				$310,358
Kerb & Channel	$2,556,091	$25,002,701	$893,491	$10,952		$28,107,512
Pavement	$89,996,566	$68,114,459	$24,746,679	$159,068	$119,429	$154,672,966
Seals	$114,228,032	$69,718,532	$25,605,505	$187,049	$130,776	$26,733,692
Subgrade	$178,627,421	$106,394,260	$45,555,441	$338,288	$224,133	$121,269,650
Roads Total						**$331,139,543**
Traffic Management						
Pedestrian Refuge	$60,275					$60,275
Roundabout	$3,460,275	$2,530,000				$5,930,000
Speed Hump	$3,498,080	$2,530,000				$37,805
Traffic Island & Median Strip	$3,568,858	$2,530,000				$70,778
Traffic Management Total						**$6,098,858**
Total Transport Class						**$400,307,545**

Overall, assets are in good condition with the majority being rated condition 1 or 2. It is also noted there are less than 1% of assets if condition is 4 or 5.

Figure 2.3 Transport Condition Chart



One of Council's key service standards is to maintain the portfolio's overall condition index (OCI) in a condition state of 3.0 or better. The current OCI of 1.72 is hence above the minimum level desired by Council.

3 FUTURE DEMAND

3.1 Demand Forecast

The future demand for services is derived from Council's Priority Infrastructure Plan, soon to be updated to the Local Government Infrastructure Plan (LGIP) as per the Sustainability Planning Act 2009.

The Executive Level Strategic Asset Management Plan describes the growth forecast for Burdekin Shire Council and results indicate little to no growth anticipated over the forecast period.

3.2 Demand Management Plan

The demand for transport services will be managed through ongoing monitoring of road usage through traffic counts plus the development of a road network strategy, due for release by June 2019.

The strategy shall classify all roads against a desired road hierarchy that caters for current and anticipated future vehicle movements. The desired standards for each road hierarchy shall be developed and a gap analysis undertaken to identify what improvements are required to bring all roads into alignment with their allocated hierarchy.

4. LEVELS OF SERVICE

4.1 Community Research and Expectations

Investigations to date regarding community expectations and satisfaction levels have been directed towards Council's overall performance, rather than performance for this particular asset portfolio. Overall customer performance measures are provided in the Executive Level Strategic Asset Management Plan as well as the community and technical levels of service recorded in the following tables.

4.2 Community Levels of Service

Community levels of service relate to how the community (or users) receive the service in terms of safety, quality, quantity, reliability, accessibility and responsiveness to requests.

Table 4.1 Transport Level of Service - Community

Key Performance Measure	Level of Service	Performance Measure	Performance Measure Process	Performance Target	Current Performance
Safety	All reasonable measures will be taken to ensure Transport assets are safe for use.	Road design standards per hierarchy classification.	Design reviews and compliance reviews.	90% of roads and pathways are in accordance with acceptable design standards.	TBA – Transport Network Strategy document by June 2019.
				Zero black spots identified on Council road network.	No black spots identified on Council road network.
				Number of reported traffic accidents/km of local road below state average (asset related).	TBA
Access	Private property is to be accessible by road.	Number of private properties and duration of inability of access.	Customer requests system. Operations crews' feedback.	Less than 10% of properties isolated for more than 4 hours following any one-rainfall event. (Excludes riverine flooding).	TBA
Capacity	Assets have adequate capacity for their current function	Number of non-compliant locations.	Rolling review of 10% of transport network per year.	90% of roads audited meet minimum requirements of road classification standard.	TBA – awaiting Transport Network Strategy - June 2019

4.3 Technical Levels of Service

The following technical standards are provided to support the community standards.

Table 4.2 Transport Level of Service - Technical

Key Performance Measure	Level of Service	Performance Measure	Performance Measure Process	Performance Target	Current Performance
Compliance	Compliance with all legislative, regulatory and other mandatory standards for roads management including design standards, safety, etc.	Number of non-compliances.	Rolling review of 10% of transport network per year.	< 20% of reviewed road length non-compliant.	TBA – future performance measure.
Responsiveness	User is satisfied with the responsiveness of the Council to their works request.	Compliance with targets defined in Levels of Service manual.	Regular reporting on completion of customer requests (CRM) within defined targets.	95% of targets met annually.	TBA
Condition	Maintain assets in an acceptable condition and standard.	Average portfolio condition score. Number of high-risk assets in poor condition.	Ongoing condition audits. Risk matrix – condition v criticality.	Average portfolio condition <= 3. Zero extreme or high-risk assets in condition 5.	OCI = 1.72 No high risk assets in Condition 5
Footpaths	Provision of footpaths where needed.	CBD – footpaths both sides.	Review of pedestrian movements to identify possible location for footpaths.	Programme developed to provide continuous improvement towards strategic plan.	TBA – awaiting Transport Network Strategy - June 2019.
Bridges and Culverts	Design standard.	Bridges and culverts are to be designed to the standard suitable for the roads classification.	Design review.	Continuous improvement of bridges and culverts to meet relevant design standard.	TBA – awaiting Transport Network Strategy - June 2019.

5 LIFECYCLE MANAGEMENT STRATEGY

The lifecycle management plan details how Council plans to manage and maintain its assets at the agreed levels of condition and service whilst optimising life cycle costs. Council's Asset Management Strategy provides further details on the processes and systems employed to develop this asset class plan.

5.1 Renewal/Replacement Plan

Council maintains an asset register of all transport assets. Assets are typically broken down into component parts for valuation and renewals planning such as:

Asset Type	Component Description
Bridges & Major Culverts	Road bridges, major culverts or pedestrian bridges
Minor Culverts/Pipes	Box culvert or pipe
Off Street Car Parking	No component types
Pathways	Dual use & shared, pedestrian or cycle
Road Reserve Amenities	Fencing
Roads	Concrete inverts, kerb & channel, pavements, seals and subgrades
Traffic Management	Pedestrian refuges, traffic island & median strip, roundabout or speed hump

External valuers undertake an annual desktop review, and three-yearly on-site inspections to update condition data and current costs for bridges and major culverts. Currently, road network inspections are undertaken three-yearly by external contractors using advanced road monitoring techniques, which identify asset condition data inputs that are analysed to produce revised condition data and uploaded into the asset register. Road assets are then revalued using the latest unit rates determined by Council.

Remaining useful lives are used to forecast renewal expenditure for the outlook period and to generate renewal programs. The forecast is then provided to the relevant asset manager to assess and make decisions on what projects are to be included in the capital bids submission.

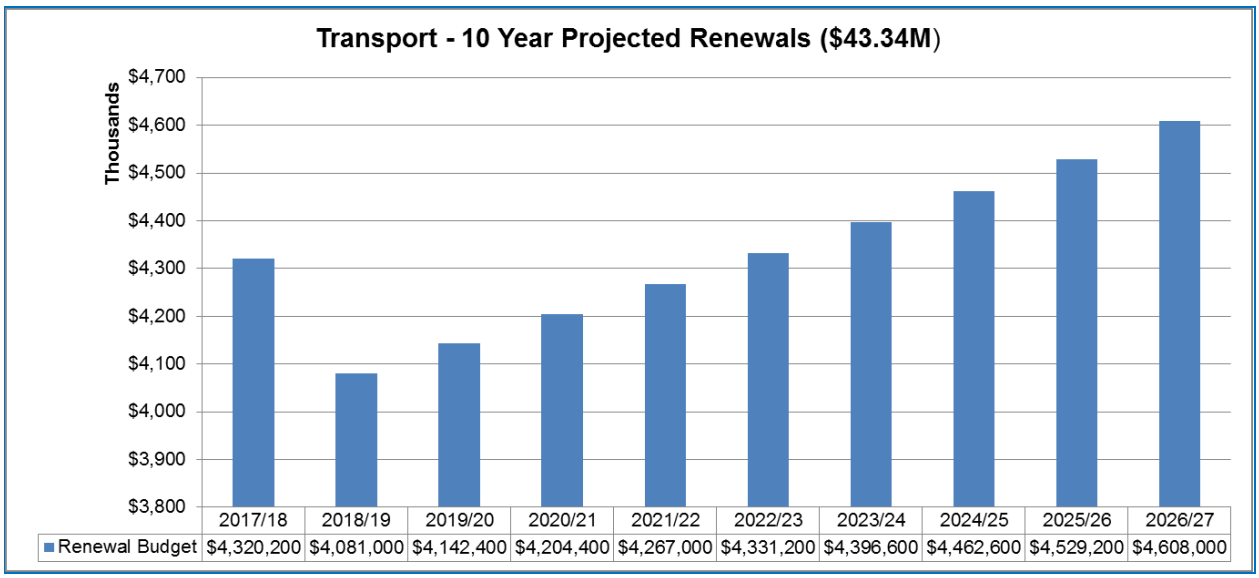
5.1.2 Forward Capital Renewals Program

Figure 5.1 and Appendix B present capital renewal projects.

Renewal investments are projected at $43.34M over the 10-year forecast period, based on historical trends.

Figures are presented in current dollar terms indicating an increase per annum in expenditure.

Figure 5.1 –Capital Renewals Chart.



5.2 Creation/Acquisition/Upgrade Plan

The following projects have been identified in Council's 10-year capital forecast.

Estimates for years 2 to 10 are provided to address road widenings and other upgrades as existing roads are renewed to align with the proposed Road Network Strategy.

Table 5.2 –Capital Upgrades

Fin Year	Description	Project Cost Other
2017/18	Roadworks	$1,872,800
2017/18	Kerb & Channelling - Fourth Street	$172,000
2017/18	Roundabout - Young and Macmillan Street	$80,000
2017/18	Plantation Park - Sealing Roads and Car Park	$66,000
2017/18	Upgrade of Existing Footpaths	$80,000
2017/18	Ayr Industrial Estate Expansion Project - Roadworks	$226,000
2018/19	Roadworks	$2,102,000
2019/20	Roadworks	$2,133,600
2020/21	Roadworks	$2,165,600
2021/22	Roadworks	$2,198,000
2022/23	Roadworks	$2,230,800
2023/24	Roadworks	$2,264,400
2024/25	Roadworks	$2,298,400
2025/26	Roadworks	$2,332,800
2026/27	Roadworks	$2,372,000
Grand Total		**$22,594,400**

5.3 Maintenance Planning

Maintenance is the regular on-going work that is necessary to keep assets operating within their normal serviceable physical condition, including rectification works to restore the asset back to an acceptable standard.

5.3.1 Scheduled and Unscheduled Maintenance

Council's response to maintenance on roads infrastructure is defined in Council's Transport Maintenance Level of Service Manual. Within this manual are details of the service standards as well as response times to particular event types.

The majority of Council's maintenance expenditure is for scheduled maintenance activities identified by asset inspections, prioritisation and inclusion to maintenance programs.

5.3.2 Future Maintenance Expenditure

The growth related capital, as described above, will increase the overall portfolio value by 5.6% over the forecast period. The consequential impact on maintenance budgets now includes an allowance for new capital works undertaken during the previous financial year. Annual reviews will take into account any revised forecasts for maintenance.

The scheduled maintenance budget presented in the following table is estimated to be 20**%** of the overall maintenance budget.

Maintenance expenditure trends are shown in figure 5.3 below:

Table 5.3 – Maintenance Expenditure Table

	Maintenance Expenditure		
Financial Year	Scheduled Maintenance	Unscheduled Maintenance	Total
2017/18	$1,907,382	$817,449	**$2,724,831**
2018/19	$1,942,337	$832,430	**$2,774,767**
2019/20	$1,971,765	$845,042	**$2,816,807**
2020/21	$2,001,635	$857,844	**$2,859,479**
2021/22	$2,031,954	$870,837	**$2,902,791**
2022/23	$2,062,726	$884,025	**$2,946,751**
2023/24	$2,093,957	$897,410	**$2,991,367**
2024/25	$2,125,659	$910,997	**$3,036,655**
2025/26	$2,157,836	$924,787	**$3,082,623**
2026/27	$2,190,495	$938,784	**$3,129,279**
Total	**$20,485,746**	**$8,779,605**	**$29,265,350**

5.3.3 Disposal Plan

Disposal includes any activity associated with disposal of or decommissioning an asset including sale, demolition or relocation.

No transport assets are currently under consideration for disposal.

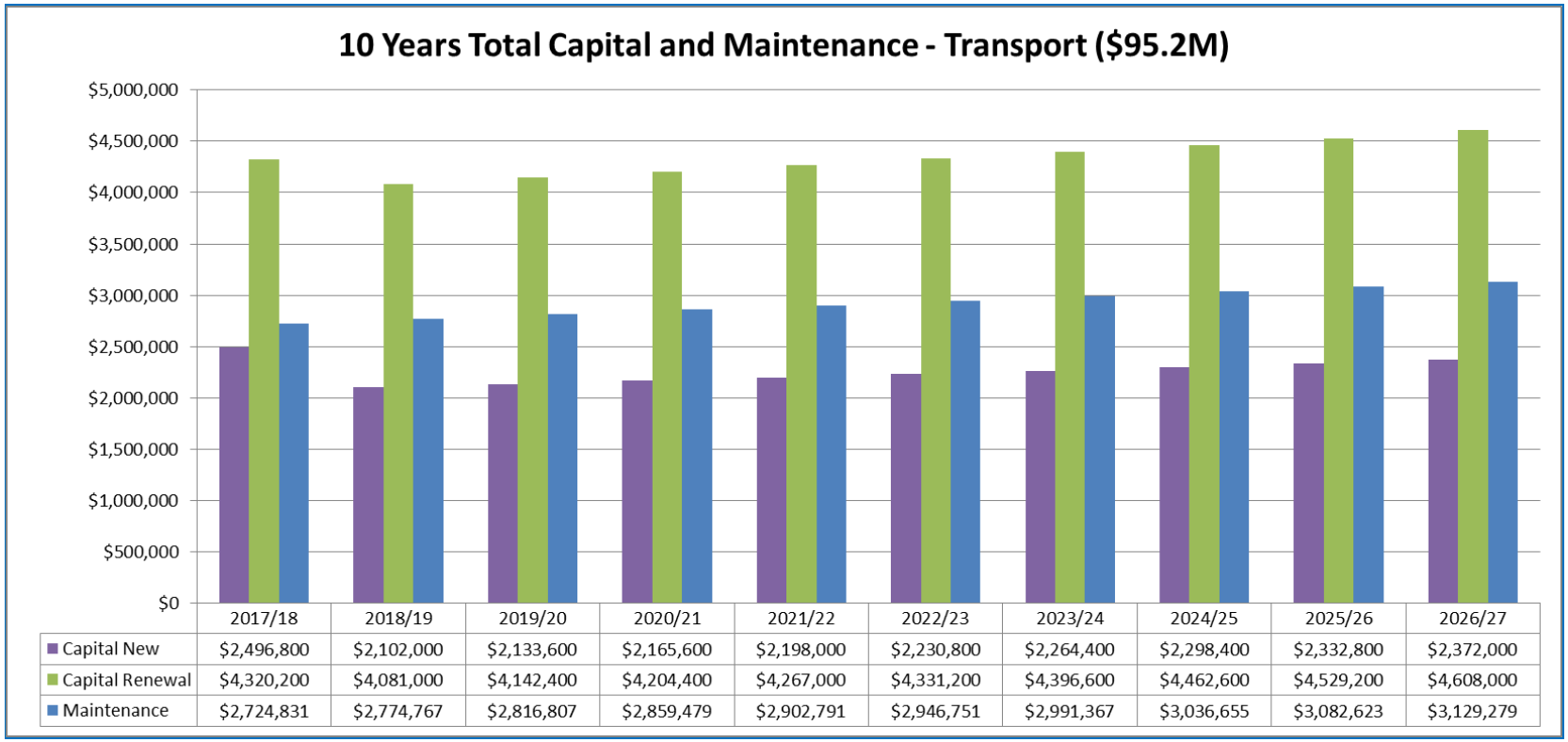
6 FINANCIAL SUMMARY

This section contains the financial requirements resulting from all the information presented in the previous sections of this strategic 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 10 Year Expenditure Projection

The following figure identifies the estimated maintenance and capital expenditure required to provide an agreed level of service to the community over the 10-year forecast period.

Figure 6.1 10 Year Expenditure Forecast



	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Capital New	$2,496,800	$2,102,000	$2,133,600	$2,165,600	$2,198,000	$2,230,800	$2,264,400	$2,298,400	$2,332,800	$2,372,000
Capital Renewal	$4,320,200	$4,081,000	$4,142,400	$4,204,400	$4,267,000	$4,331,200	$4,396,600	$4,462,600	$4,529,200	$4,608,000
Maintenance	$2,724,831	$2,774,767	$2,816,807	$2,859,479	$2,902,791	$2,946,751	$2,991,367	$3,036,655	$3,082,623	$3,129,279

6.2 Financial Performance Measures

This section reports on the financial sustainability of the proposed forward capital works program.

Refer to the Executive Level Strategic Asset Management Plan for detailed description of each performance measure. The Transport portfolio's projected depreciation expense for FY 2017/18 is $4,902,600.

6.2.1 Asset Sustainability Ratio

Asset sustainability ratio - is capital renewal expenditure divided by the depreciation expense, expressed as a percentage.

Asset sustainability ratio = $4,334,260 / $5,022,175 = 86.3%

Previous asset management plan performance (2012) was 127.2**%**

The current target for the Asset Sustainability Ratio as per the Financial Management (Sustainability) Guideline 2013 is 90% (on average over a ten year period).

6.2.2 Asset Renewal Funding Ratio

Net present value (NPV) of planned capital expenditure over the forecast period is divided by the NPV of the required capital expenditure over the same period.

Future renewal funding ratio = $43,342,600 / $19,098,433 **=** 226.9%

Previous asset management plan performance (2012) was 100%

6.2.3 Asset Consumption Ratio

The asset consumption ratio is the depreciated replacement cost (DRC) divided by the current replacement cost (CRC), expressed as a percentage.

Asset consumption ratio = $337,831,524 / $400,307,545 = 84.4**%.**

Previous asset management plan performance (2012) was 84**%**

6.2.4 Impact of Inflation

Figures presented over the 10-year forecast period are expressed in current year terms and have not been indexed to consider inflation.

6.3 Funding Strategy

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

6.4 Key Assumptions made in Financial Forecasts

Key assumptions made in this strategic asset management plan are:

- Roads upgrade capital works proposed are aligned with transport renewal works to bring roads into line with the future road network strategy.
- Renewals capital works proposed have an increasing investment (in current dollars) each year from years 1 to 10.
- Maintenance expenditure is expected to remain constant, however, there is likely to be some change in maintenance required following the roll out of upgrade/renewal works. Maintenance expenditure increased by an percentage of the upgrade/new works undertaken in the previous financial year.

7 ASSET CLASS RISKS AND IMPROVEMENT PLAN

7.1 Risk Management Plan

The following table lists the risks specific to this asset class and their current and proposed risk management controls. Refer to the Executive Level Asset Management Plan for risks that are applicable across all asset classes. These risks are described in alignment with Council's Enterprise Risk Management Policy and associated risk matrix as documented in Council's Asset Management Strategy.

Table 7.1 – Corporate Risk Management Plan

					RESIDUAL RISK RATING		
ITEM NO.	RISK	CAUSES	CURRENT CONTROLS	ADDITIONAL CONTROLS (TO BE RECORDED IN 'CURRENT CONTROLS' ONCE IMPLEMENTED)	LIKELIHOOD	CONSEQUENCE	RISK RATING
1	NDRRA funding may not be adequate for repair works or available after a time past the event.	Government financial health, extent, and frequency of natural disasters.	Robust reporting and photographic evidence maintained during and post all possible events to support any claim.	Development of contingency plans to prioritise expenditure in times of scarcity.	POSSIBLE–5	MAJOR - 16	HIGH - 21
2	Assets may potentially be unsafe for their intended function causing road accidents.	Poor condition. Inadequate road, bridge or culvert width.	Ongoing condition assessment program.	Develop Road network strategy to define the hierarchy classification to apply to each road within the network and then assess suitability of existing assets.	RARE - 1	CATASTROPHIC-21	HIGH - 22
3	Private property access is prevented.	Flooding events, Bridge faults / failures or Roadworks.	Management of flooding events and maintenance of drainage network. Bridge inspection program. Communication to landowners for upcoming roadworks.	Develop a register of high-risk properties impacted during seasonal weather events and communicate likely implications based on typical events.	POSSIBLE–5	MINOR - 6	MEDIUM - 11
4	Signs, guideposts, guardrails or other traffic control or roadside furniture degraded, damaged or missing.	Natural weather events, vandalism, accidental impact or other damage.	Regular inspection regimes in place with reporting and programmed repairs in reasonable timeframes.	Consider replacement of damaged items with more robust items that are fit for purpose.	POSSIBLE - 5	MINOR - 6	MEDIUM - 11
5	Reduced availability of raw materials or replacement assets e.g. signs or culverts.	Poor stock control. Unreliable suppliers.	Stock management systems in place.	Multiple or alternative sources of supply identified.	UNLIKELY - 3	MINOR - 6	LOW -9
6	Concrete or bitumen footpaths may present unacceptable hazard to user.	Age-related deterioration, vehicular damage, root intrusion, slippery surface.	Routine inspection of network.	Priority-based inspection regime based on factors such as demand and location.	POSSIBLE–5	MODERATE - 11	MEDIUM -16
7	Increased traffic loads accelerating network wear.	Increased heavy vehicle use servicing new industry.	Condition assessment of road network to determine deterioration trends. Traffic count data.	Forward planning of network upgrades based on regional investment and growth.	UNLIKELY-3	MODERATE - 11	MEDIUM -14

7.2 Improvement Plan

The asset management improvement plan generated from this strategic asset management plan is shown below.

Table 7.2 – Improvement Plan

Task No	Task	Responsibility	Timeline
1.	Disaster recovery plans to incorporate road priorities in order to assist with planning reconstruction schedules and any desired resilience works.	Manager Technical Services Manager Operations	December 2019
2.	Following development of the Road network strategy, develop the schedule for road reconstructions and augmentation works to bring higher priority works into alignment with the strategy over the outlook period.	Manager Technical Services Manager Operations	December 2019
3.	Other corporate level improvements as listed in the Executive Level Strategic Asset Management Plan.	TBA	July 2019

7.3 Monitoring and Review Procedures

This strategic asset management plan will be reviewed and refined during annual budget preparation and amended/updated to recognise any changes in service levels and/or resources available to provide services depending upon outcomes of the budget decision process.

8 SUPPORT / REFERENCE DOCUMENTS

The following describes the relevant documents that support the production of this strategic asset management plan.

Please refer to the Executive Level Strategic Asset Management Plan, which describes the hierarchy of asset management related documents across Council.

8.1 Transport Levels of Service Manual

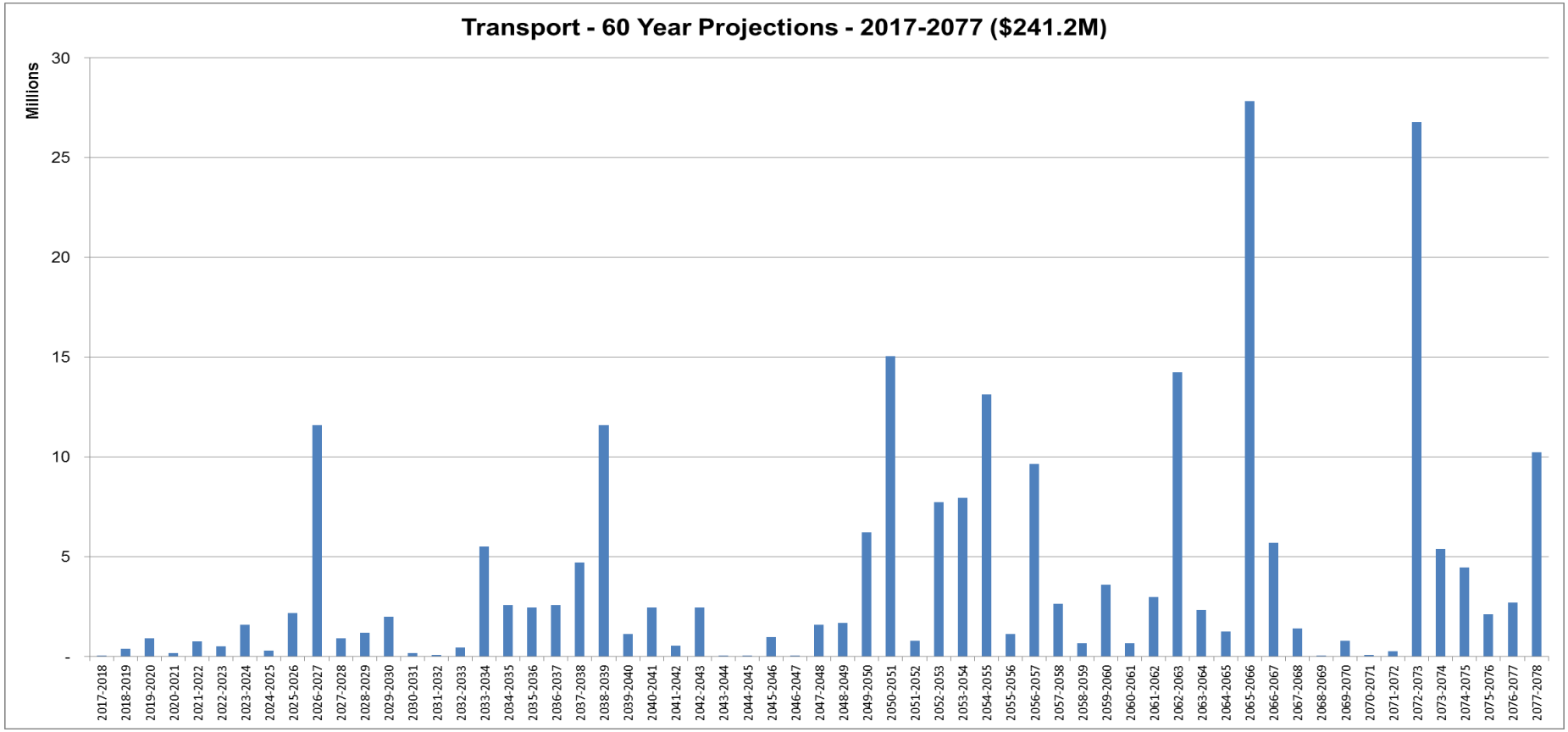
Describes the list of assets that make up this portfolio plus the desired response times to customer, and other, requests for work that vary depending on the priority rating applied to the asset or asset type.

9 APPENDICES

9.1 Appendix A Asset Register Derived Long Range Renewals Forecast

The following chart provides an indication of the potential renewals requirements beyond the 10-year outlook period covered by this strategic asset management plan. Broad level conclusions can be drawn regarding the level of expenditure that may be required for future asset management plans. A table of the source treatments to be applied over 60-years appear on the pages following Figure 9.1.

Figure 9.1 – Long Range Asset Renewals Chart



9.2 Appendix B - 10-Year Forward Capital Works Projects by Year

The following table details the capital works projects as described in Council's capital bids spreadsheet that is divided into renewal and other project costs. Other costs generally align with augmentation or expansion type works.

Table 9.2 – LTFP Capital Project Listing

Fin Year	Description	Project Cost Renewal	Project Cost Other
2017/18	Ayr Industrial Estate Expansion Project - Roadworks		$226,000
	Kerb & Channelling - Fourth Street	$258,000	$172,000
	Plantation Park - Sealing Roads and Car Park	$99,000	$66,000
	Replacement of Existing Footpaths	$120,000	$80,000
	Reseals	$914,000	
	Roadworks	$2,809,200	$1,872,800
	Roundabout - Young and Macmillan Street	$120,000	$80,000
2018/19	Reseals	$928,000	
	Roadworks	$3,153,000	$2,102,000
2019/20	Reseals	$942,000	
	Roadworks	$3,200,400	$2,133,600
2020/21	Reseals	$956,000	
	Roadworks	$3,248,400	$2,165,600
2021/22	Reseals	$970,000	
	Roadworks	$3,297,000	$2,198,000
2022/23	Reseals	$985,000	
	Roadworks	$3,346,200	$2,230,800
2023/24	Reseals	$1,000,000	
	Roadworks	$3,396,600	$2,264,400
2024/25	Reseals	$1,015,000	
	Roadworks	$3,447,600	$2,298,400
2025/26	Reseals	$1,030,000	
	Roadworks	$3,499,200	$2,332,800
2026/27	Reseals	$1,050,000	
	Roadworks	$3,558,000	$2,372,000
Grand Total		**$43,342,600**	**$22,594,400**

Burdekin Shire Council