Asset Management Plan Summary

Incorporating Transport, Stormwater, Community & Waste Water Systems and Buildings & Structures.

Clare & Gilbert Valleys Council

June 2017

CLARE & GILBERT VALLEYS COUNCIL

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1 Introduction

This document has been prepared as a summary of the Council's individual asset management plans

- Transport
- Stormwater
- Community and Waste Water System
- Buildings and Structures

It consolidates the financial aspects of the individual plans to provide a complete picture of the financial impact on the Council and the future funding requirements to implement the plans.

This plan should be read in conjunction with the individual plans and will be updated should any of the individual plans be altered.

Council's asset management plans are constantly evolving and improving over time as Council obtains more data and increases its understanding of its asset network. As such, each asset plan contains an improvement plan and this is considered when utilising the data contained within the report for key decisions.

2 What Council Owns

The Clare and Gilbert Valleys Council is the custodian of a large number of assets on behalf of its community. Figure 2.1 provides a summary of the $208 million investment held in those assets based on replacement cost.

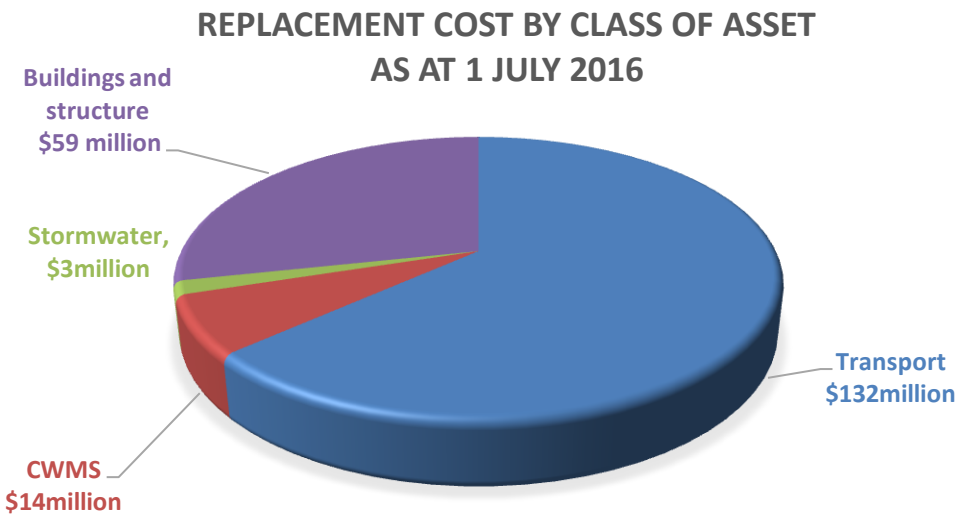


Figure 2.1 Replacement Cost by Asset Class

3 How Council Will Manage the Assets

Council has developed an asset management plan for each asset class. These plans endeavour to;

- Agree and document the services levels for each asset class;
- Determine operating, maintenance, renewal and new capital programmes to achieve those service levels; and

- Ascertain the funding required to implement those plans.

This information directly influences how and to what extent Council will commit resources to the future upkeep of those assets.

3.1 Operating and Maintaining Assets

Operating and maintenance is the regular on-going work that is necessary to keep assets operating including instances where assets or portions of assets fail and need immediate repair to make the asset operational again. Maintenance includes reactive (unplanned) and planned work activities.

Table 3.1 10 Year Operating and Maintenance Cost by Asset Class

Financial Year	Transport	Stormwater	Buildings & Structures	CWMS	Total
2016-17	1,345,000	145,000	249,000	744,714	2,483,714
2017-18	1,345,000	145,000	249,000	665,363	2,404,363
2018-19	1,345,000	145,000	249,000	665,363	2,483,714
2019-20	1,345,000	145,000	249,000	665,363	2,404,363
2020-21	1,345,000	145,000	249,000	665,363	2,404,363
2021-22	1,345,000	145,000	249,000	820,363	2,559,363
2022-23	1,345,000	145,000	249,000	735,363	2,474,363
2023-24	1,345,000	145,000	249,000	665,363	2,404,363
2024-25	1,345,000	145,000	249,000	665,363	2,404,363
2025-26	1,345,000	145,000	249,000	665,363	2,404,363
Total	13,450,000	1,450,000	2,490,000	6,957,981	24,347,981

Table 3.1 and Figure 3.1 estimates an annual spend on operations and maintenance of between $2.4 and $2.6 million, which equates to approximately just over 20% of the Councils annual rate revenue.

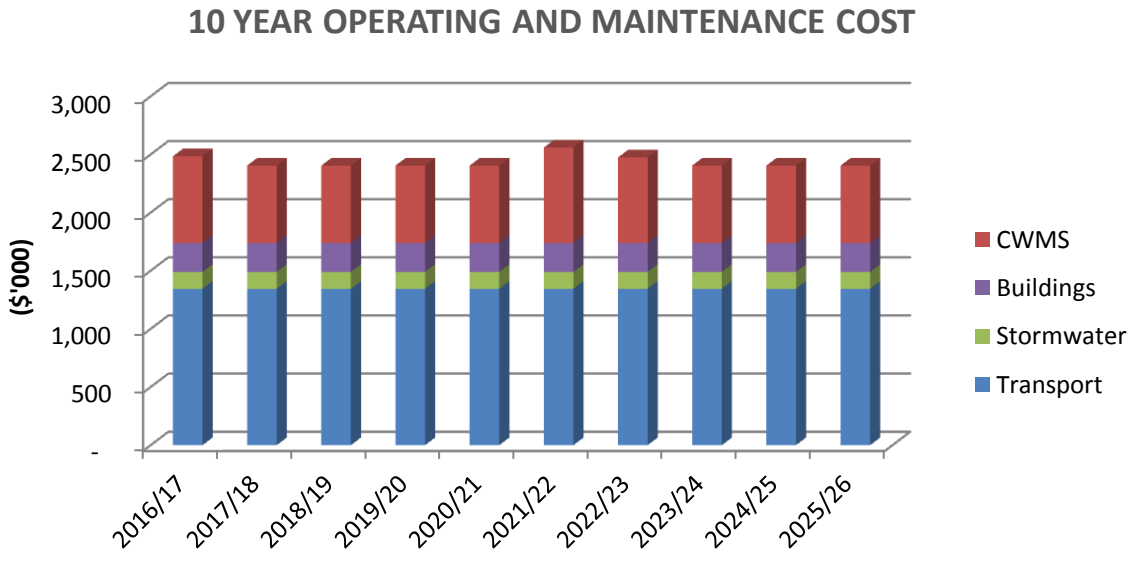


Figure 3.1 10 Year Operating and Maintenance Cost by Asset Class

3.2 Renewing and Replacing Assets

Renewal expenditure is major work which does not increase the assets design capacity but restores, rehabilitates, replaces or renews an existing asset to its original service potential. Work over and above restoring an asset to its original potential is considered upgrade.

Table 3.2 10 Year Renewal Cost by Asset Class

Financial Year	Transport	Stormwater	Buildings & Structures	CWMS	Total
Backlog	321,744	-	-	-	321,744
2016-17	2,576,375	-	49,200	-	2,625,575
2017-18	3,100,518	-	2,511,002	359,500	5,571,020
2018-19	2,261,618	-	331,910	50,000	2,643,528
2019-20	2,170,733	-	102,445	-	2,273,188
2020-21	2,186,046	-	225,150	5,000	2,416,196
2021-22	2,222,251	-	197,000	-	2,419,251
2022-23	2,171,590	5,207	197,000	-	2,373,797
2023-24	2,337,136	-	197,000	-	2,534,136
2024-25	2,253,268	-	197,000	-	2,450,268
2025-26	2,323,090	-	197,000	-	2,520,090
Total	23,924,369	5,207	4,204,717	414,500	28,548,793

Table 3.2 and Figure 3.2 estimate an annual average expenditure on renewal of $2.85 million, which equates to approximately 25% of the Councils annual rate revenue.

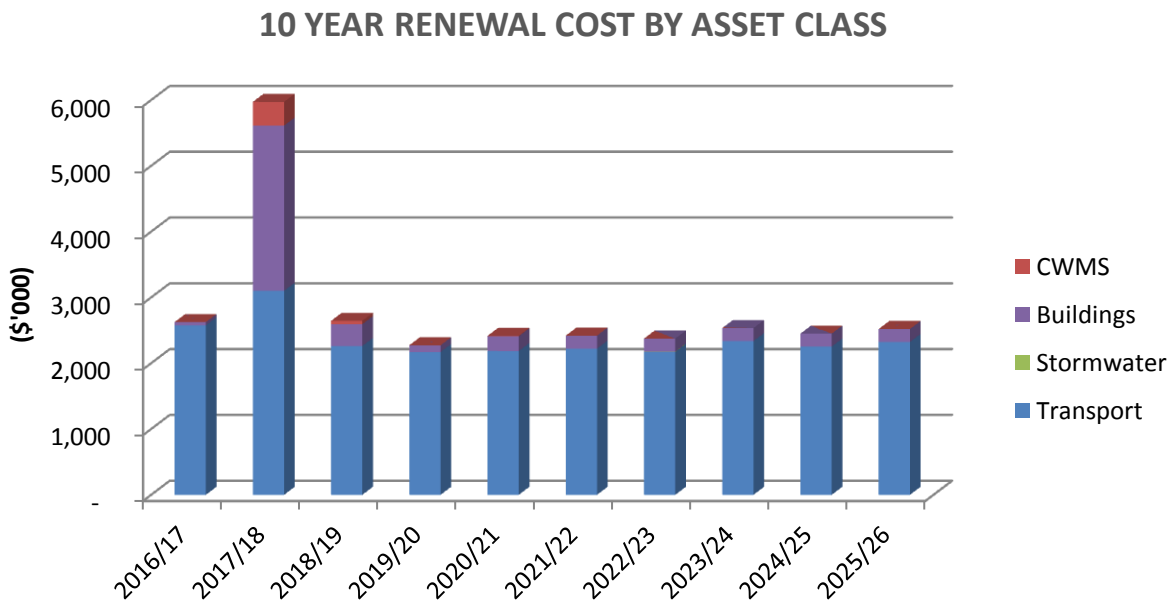


Figure 3.2 10 Year Renewal Cost by Asset Class

3.3 Creating New and Upgrading Assets

New and upgrade expenditure is major work that creates a new asset that did not previously exist, or works which upgrade or improve an existing asset beyond it existing capacity. They may result from growth, social or environmental needs.

Table 3.3 10 Year New and Upgrade Cost by Asset Class

Financial Year	Transport	Stormwater	Buildings & Structures	CWMS	Total
2016-17	1,199,600	130,000	-	-	1,329,600
2017-18	750,000	825,000	9,117,734	648,500	11,341,234
2018-19	750,000	1,000,000	-	240,000	1,990,000
2019-20	750,000	1,000,000	-	150,000	1,900,000
2020-21	750,000	1,000,000	-	150,000	1,900,000
2021-22	750,000	1,000,000	-	150,000	1,900,000
2022-23	750,000	1,000,000	-	150,000	1,900,000
2023-24	750,000	1,000,000	-	150,000	1,900,000
2024-25	750,000	1,000,000	-	150,000	1,900,000
2025-26	750,000	1,000,000	-	150,000	1,900,000
Total	7,949,600	8,955,000	9,117,734	1,938,500	27,960,834

Table 3.3 and Figure 3.3 estimate an investment by Council of over $28 million over the next ten year period.

The large peak in expenditure in the 2017-18 financial year arises primarily from the development of the Clare Valley Sport and Recreation Precinct anticipated, of which council will contribute $2 million with the remaining cost to be funded externally.

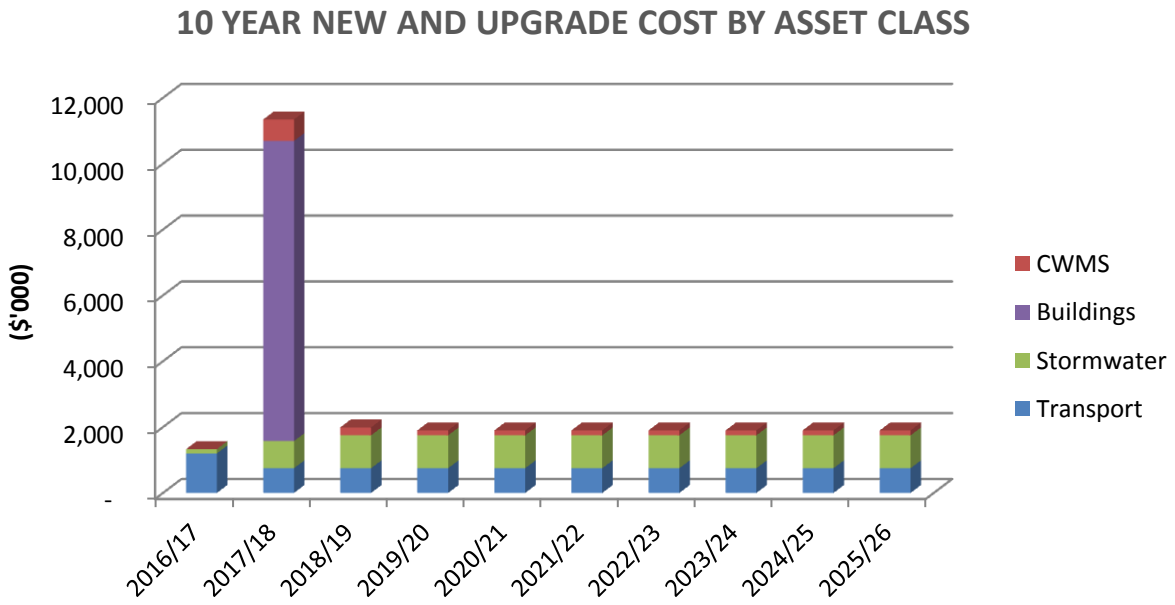


Figure 3.3 10 Year New and Upgrade Cost by Asset Class

3.4 The Total Cost of Managing Council's Assets

Table 3.4 and Figure 3.4 illustrate the magnitude of the commitment Council is required to make to achieve the agreed service levels for each asset class. In total Council will be committing $80.9 million towards the future management of its major classes of assets.

Table 3.4 10 Year Total Cost by Asset Class

Financial Year	Transport	Stormwater	Buildings & Structures	CWMS	Total
Backlog	321,744	-	-	-	321,744
2016-17	5,120,975	275,000	298,200	744,714	6,438,889
2017-18	5,195,518	970,000	11,877,736	1,483,363	19,526,617
2018-19	4,356,618	1,145,000	580,910	1,145,363	7,227,891
2019-20	4,265,733	1,145,000	351,445	815,363	6,577,551
2020-21	4,281,046	1,145,000	474,150	820,363	6,720,559
2021-22	4,317,251	1,145,000	446,000	970,363	6,878,614
2022-23	4,266,590	1,150,207	446,000	885,363	6,748,160
2023-24	4,432,136	1,145,000	446,000	839,363	6,838,499
2024-25	4,348,268	1,145,000	446,000	815,363	6,754,631
2025-26	4,418,090	1,145,000	446,000	815,363	6,824,453
Total	45,323,969	10,410,207	15,812,451	9,310,981	80,857,608

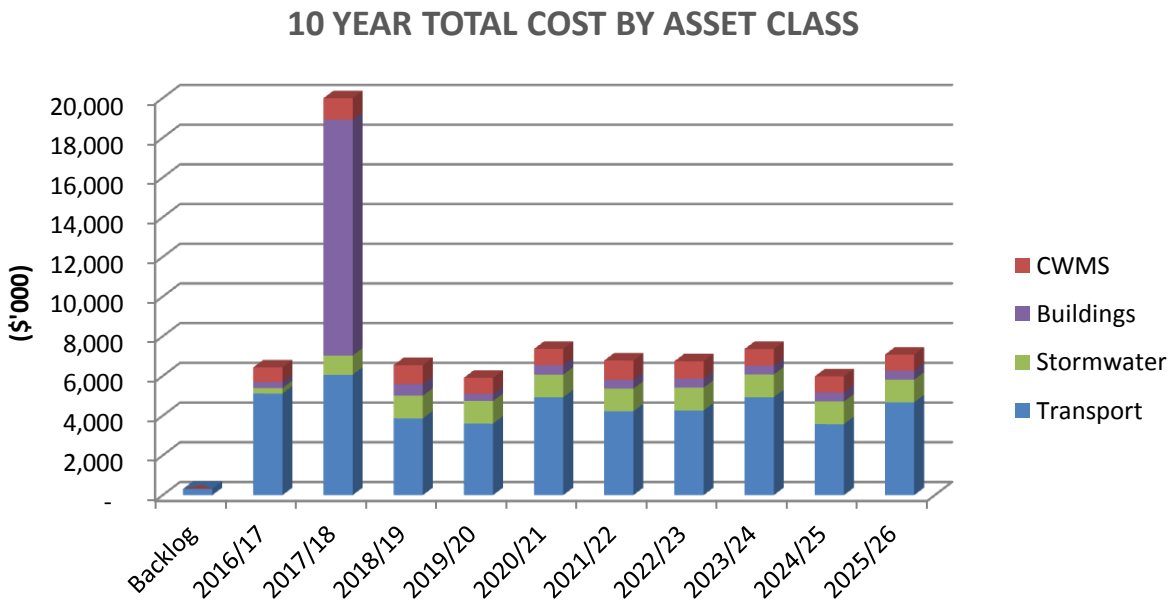


Figure 3.4 10 Year Total Cost by Asset Class

Table 3.5 and Figure 3.5 illustrate the total cost to be expended over the ten years by type of expenditure providing a comparison of recurrent and capital expenditure.

Table 3.5 10 Year Total Cost by Type of Expenditure

Financial Year	Operations & Maintenance	Renewal & Replacement	New & Upgrade	Total
Backlog	-	321,744	-	321,744
2016-17	2,483,714	2,625,575	1,329,600	6,438,889
2017-18	2,404,363	5,971,020	11,151,234	19,526,617
2018-19	2,404,363	2,643,528	2,180,000	7,227,891
2019-20	2,404,363	2,273,188	1,900,000	6,577,551
2020-21	2,404,363	2,416,196	1,900,000	6,720,559
2021-22	2,559,363	2,419,251	1,900,000	6,878,614
2022-23	2,474,363	2,373,797	1,900,000	6,748,160
2023-24	2,404,363	2,534,136	1,900,000	6,838,491
2024-25	2,404,363	2,450,268	1,900,000	6,754,631
2025-26	2,404,363	2,520,090	1,900,000	6,824,453
Total	24,347,981	28,548,793	27,960,834	80,857,608

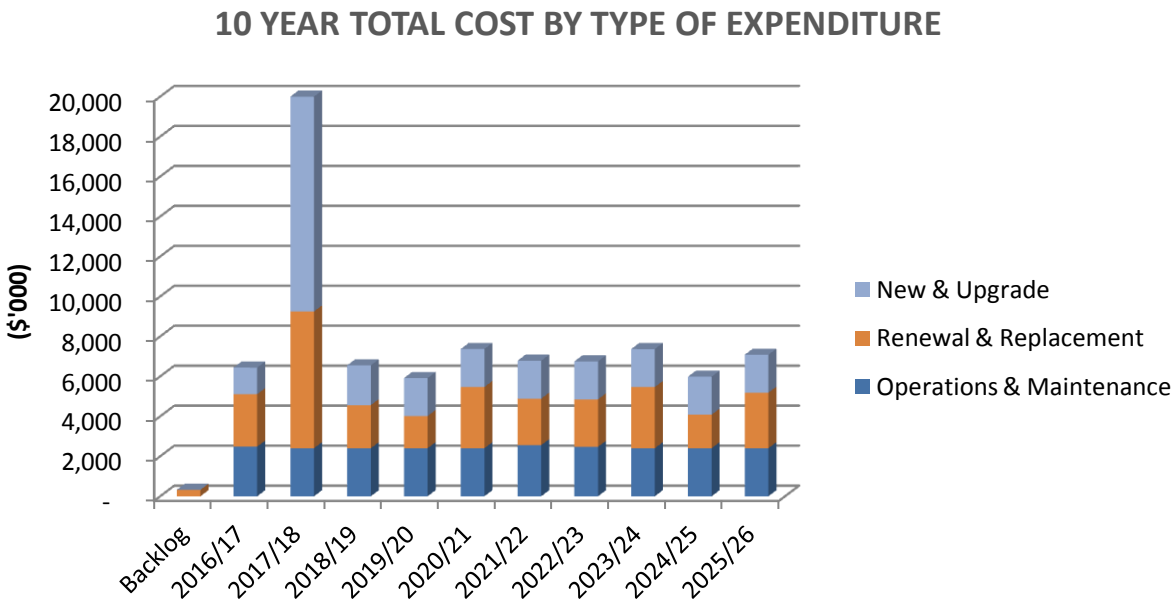


Figure 3.5 10 Year Total Cost by Type of Expenditure

4 Funding the Plan

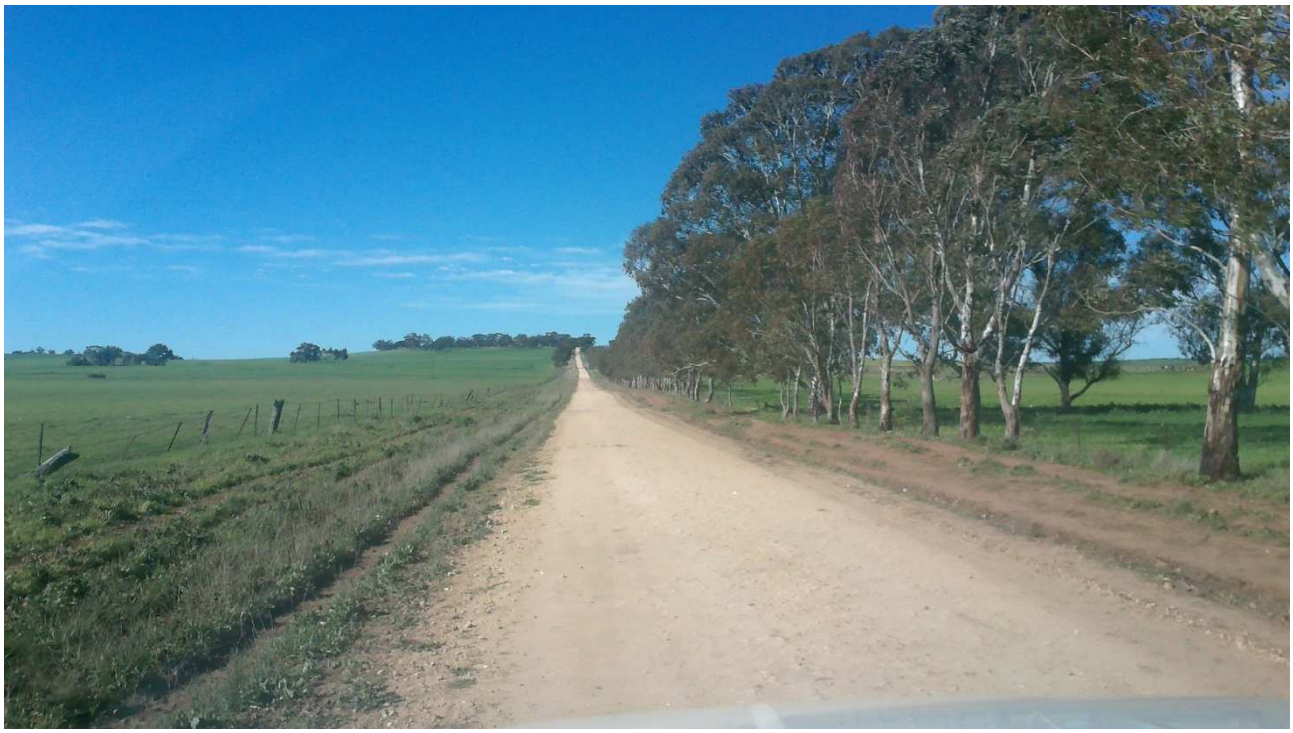
This plan illustrates the required funding to manage the Council's assets at agreed service levels over the next ten years. This information is incorporated into Council's long term financial plan, which determines the method of funding for these activities. The methods of funding include

- Rate revenue
- Loan funds; and
- External funding through grants, donations and transfer of physical assets.

Asset Management Plan

Transport

Clare and Gilbert Valleys Council



29 June 2017

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CLARE & GILBERT VALLEYS COUNCIL

Tonkin CONSULTING

a better approach

Document History and Status

Rev	Description	Author	Reviewed	Approved	Date
A	Draft Plan	RKE/KJS	RKE	RKE	18 October 2016
B	Council comments	BL	RKE	RKE	2 May 2017
C	Edits and addition of executive summary	KJS	RKE	RKE	8 May 2017
D	Adjustments to works plan	KJS	RKE	RKE	12 May 2017
E	Adjustments to improvement plan	RKE	RKE	RKE	15 May 2017
F	Issued for council workshop	RKE	RKE	RKE	17 May 2017
G	Reissued after feedback from workshop	RKE	RKE	RKE	5 June 2017
H	Remove budget estimates and adjust risk plan	RKE	RKE	RKE	13 June 2017
I	Revision of Table 10	RKE	RKE	RKE	14 June 2017
J	Edits provided by Council	KJS	RKE	RKE	29 June 2017

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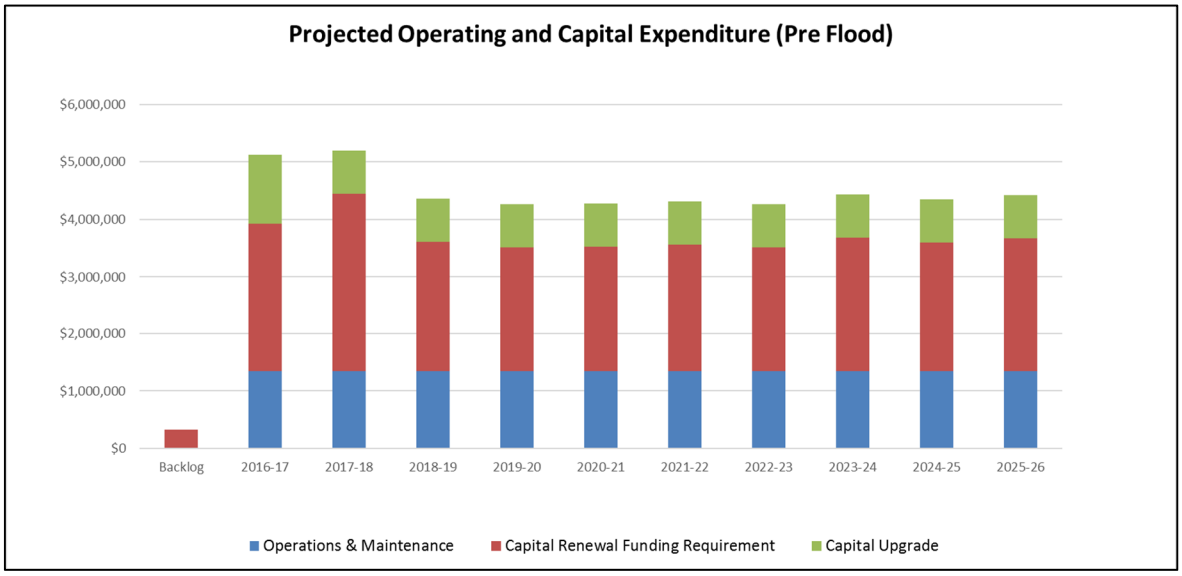
Executive Summary

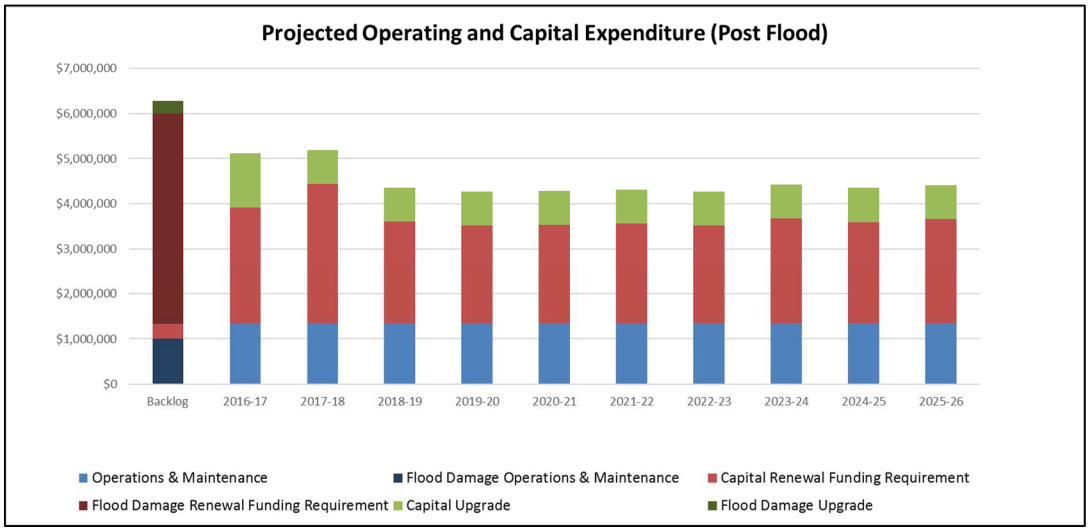
The Clare and Gilbert Valleys Council has worked on the development of this Asset Plan based on the asset base as at 1/7/2016. This plan outlines the requirements for the Council to continue to plan and deliver on the demands to maintain its road infrastructure to prescribed service levels and the expenditure demand and proposed budget is presented below.



The nominal backlog presented above has been established through on-site inspections to verify asset information, delivering a significant works program in 2016/2017 and an expenditure profile in 2017/2018 targeted at back log reduction. Some adjustments to the works program generated from the asset register have been made to even out the annual expenditure requirements by deferring or bringing forward certain road segments for treatment.

One aspect for consideration in 2016/2017 and in subsequent years is the impact of the September 2016 flood event. For the September 2016 Flood event, based on tenders received in late May 2017, it is estimated to have created an additional maintenance expenditure of $1,006,140 and a capital renewal expenditure of $4,668,117 with a further $280,115 upgrade (betterment) expenditure. In addition to this during 2016/2017 Council spent $209,635 on emergency response activities.

As a result, the change in projected operating, capital and upgrade expenditure is show below.



Based on tendering figures and subject to Treasury approval it is anticipated Council will be eligible for $4.3 Million financial assistance leaving a Council contribution of $1.77 Million and the day labour component of the emergency response.

Council will need to decide on how to fund the $1.77 Million shortfall, which could be by:

a. Funding it from existing renewal budget and increasing the backlog.

b. Funding it by deferring upgrade for 3.5 years

c. Increase overall budgets for Road infrastructure and continue with Road renewal and upgrades as presented in this plan.

This plan is based on 2011 and 2012 road data collection. While there has been work undertaken to improve the predication for road surface renewal, it has been found the kerb and footpath renewal is now out of step with reported community feedback and accordingly prior to the collection of new road data there will be a need to remain flexible in annual budgeting to include kerb and footpath renewal in advance of what's included in this plan.

1 Introduction

1.1 Background

The Clare and Gilbert Valleys Council own and manage an extensive rural sheeted road network and a smaller rural sealed network throughout the council area. Council also own and manage a township road network across numerous towns with mainly sealed and some sheeted road surfaces.

Council's rural and township sealed surfaces, Rural Class 1, 2, 3 (fic counts) and 4a sheeted surfaces and township sheeted roads are treated as capital expenditure. Class 4b formed roads are funded entirely under maintenance.

Other asset groups included within the transport infrastructure group include bridges, cross drains, floodways and fords, kerbs and footpaths. Sealed footpaths are treated as capital expenditure however unsealed footpaths including gravel and crusher dust footpaths are funded under maintenance.

An overview of the Transport infrastructure assets covered by this asset management plan are shown in Table 1 and Figure 1. These are preliminary values based on the draft desktop revaluation undertaken in parallel with this plan.

Table 1 Assets covered by this plan

Asset Category	Length (m)	Valuation Dimension	Valuation Unit	Replacement Value
Roads				
Rural Sealed Roads	146,190	1,017,901	m^2	$43,926,153
Township Sealed Roads	83,186	537,659	m^2	$20,673,554
Rural Sheeted Roads	961,838	6,480,508	m^2	$22,793,062
Township Sheeted Roads	6,711	37,957	m^2	$146,886
Rural Form Graded Roads	400,339			Not Valued
Town Form Graded Roads	7,298			Not Valued
Rural Unformed Surface	68,580			Not Valued
Town Unformed Surface	628			Not Valued
Bridges, Cross Drains, Floodways, Kerbs and Footpaths				
Bridges		30	item	$10,937,296
Cross Drain Headwalls		964	item	$1,286,413
Cross Drain Pipes		12,117	m	$3,335,923
Cross Drain Box Culverts		1,750	m	$2,204,390
Floodways & Fords		8,219	m^2	$2,130,378
Kerbs		125,588	m	$20,910,171
Footpaths		57,514	m^2	$3,277,350
Non Valued Footpaths		89,800	m^2	Not Valued
TOTAL				**$131,621,579**

Figure 1 shows the distribution of transport assets by replacement value as at 1 July 2016 (note: sealed roads include the surface and underlying pavement).

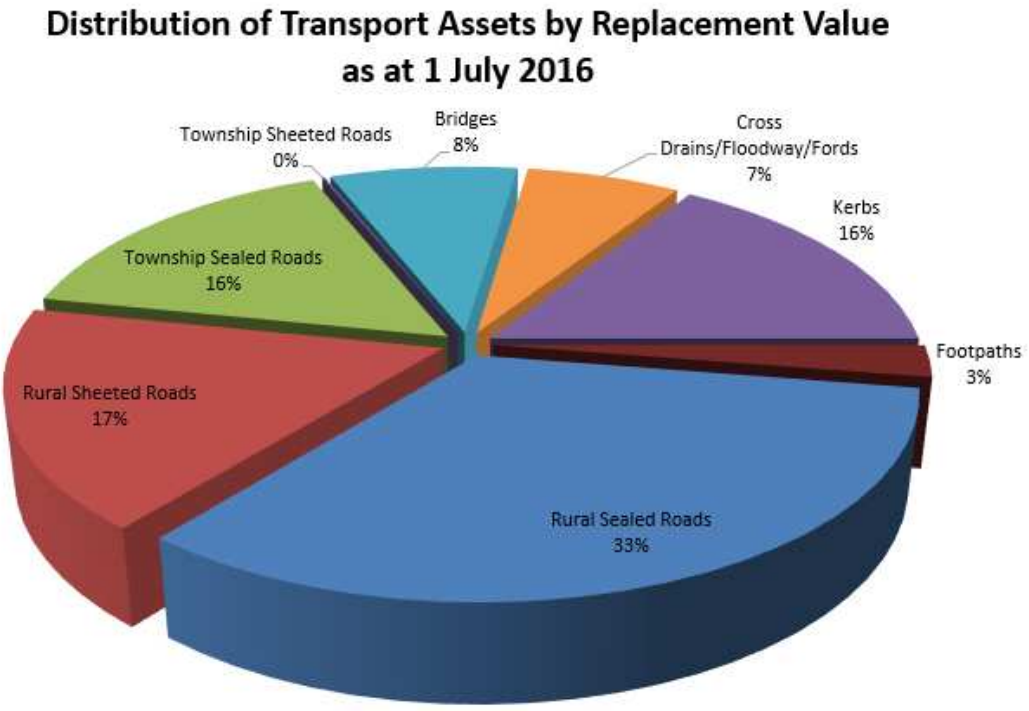


Figure 1 Distribution of Transport Assets by Replacement Value as at 1 July 2016

1.2 Plan Framework

This transport infrastructure asset management plan is based on the fundamental structure of the IPWEA NAMS 3 Asset Management for Small, Rural or Remote Communities template and has been simplified to minimise the content to suit Clare and Gilbert Valleys Council requirements.

The Clare and Gilberts Valleys Council provides services for the community in part through the provision of infrastructure assets. Council have acquired these assets directly through construction by council staff or contractors and by donation of assets constructed by developers and others over time.

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

- Taking a life cycle approach
- Developing cost-effective management strategies for the long term
- Providing a defined level of service and monitoring performance
- Managing risks associated with asset failures
- Sustainable use of physical resources.

Key elements of the plan are:

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

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

Council's vision for the district is:

> *"Vibrant Communities working together to grow in a dynamic, innovative and sustainable way."*

Council will achieve its Vision by:

- Develop, maintain and manage Council's assets and enterprise in a sustainable way for current and future generations
- Increase environmental suitability practices
- Provide innovative and effective community services
- Provide sound leadership, clear direction and effective communication
- Ensure long-term financial viability
- Encourage an environment that supports business growth, tourism and employment.

2 Levels of Service

The community generally expect that Council will provide transport networks which meets the required Australian and State legislative regulations. Council, in response to customer feedback, has defined service levels in two terms and provides the level of service objective, performance measure process and service target in Table 2 and Table 3.

2.1 Community Levels of Service

Community levels of service relate to the service outcomes that the community wants in terms of quality reliability, responsiveness, amenity, safety and financing.

Table 2 Community Levels of Service

Key Performance Measure	Level of Service Objective	Performance Measure Process	Service Target
Quality	Roads - all weather access for all sealed and sheeted roads	Customer complaints are recorded on customer service data base	Deal with requests on a case by case basis in line policy in line with road category
	Footpaths provide safe access for higher pedestrian areas		
	Smooth and safe transition from road across the bridge structure	No of customer complaints	Establish annual reporting and no of complaints trend down
	Town roads will be progressively upgraded from unsealed to sealed	Develop a plan and fund it	Meet plan targets
Function/Capacity/Utilisation	Road suitable for road user needs	Road use are categorised based on traffic volumes and strategic importance	Road categories are defined and regularly updated and communicated
Safety	Provide safe and suitable roads free from hazards	Number of accidents reported and customer service request	Reduce accidents and request caused by road conditions

2.2 Technical Levels of Service

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

Table 3 Technical Levels of Service

Key Performance Measure	Level of Service Objective	Performance Measure Process	Service Target
Operations	Efficiently utilise assets which will consume resources such as manpower, energy and materials (IIMM).	Resource/Expertise/Capacity System/Process	Information is reliable for decision making
Maintenance	Retain assets in a suitable condition to meet it original service potential in line expected life	Routine Maintenance performed as set out in road categories Perform reactive maintenance as required	Based on categories Demand is met when required
Renewal	Replace existing assets with assets of equivalent capacity or performance capability (IIMM).	Asset Renewal is planned and occurs in line with established standards and timeframes	Annual works program is delivered
Upgrade	Upgrades are cost effective and meet end user needs and are affordable	Decision making process is established, agreed with Council and followed	All upgrades meet objective

2.3 Construction, Renewal and Maintenance Standards for Roads

This plan has been developed based on assumptions related to the construction and renewal standards set out in the following sections for the seal and unsealed road network.

The Condition score of a road is a measure of the road consumption between 0 and 100 where 0 represents a newly surfaced road and 100 represents a fully deteriorated road. For sealed roads a condition score is determined based on binder age and surface defects. For sheeted roads the condition score of each road is based on the sheeting depth, sheeting condition and drainage condition of the road. The Condition at End of Life is the condition at which intervention to maintain road serviceability is required.

The Sealed road network is classified as follows:

- Township Seal
- Rural High Use Seal
- Rural Normal Use Seal
- Rural Narrow Road Seal
- Rural Short Section Seal.

The unsealed road network is classified according to its usage and are grouped as follows:

Table 4 Sheeted Road Categories

Sheeted Road Category	Road Usage	Length (km)
Rural Class 1	High Use	74.1km
Rural Class 2a	Medium to High Use	368km
Rural Class 2b (narrow formation)	Medium to High Use	123.2km
Rural Class 3a	Medium Use	208.9km
Rural Class 3b	Medium to Low Use	48.6km
Rural Class 3c	Low Use	136.0km
Rural Class 4a	Very Low Use (sheeted)	2.9km
Township Sheeted	-	6.7km

2.3.1 Township Sealed Roads

Council owns and maintains a township sealed road network totalling approximately 83km in length.

Approximately 30% of the sealed network in Clare township is surfaced with hotmix. The remaining sealed roads in Clare and in all other surrounding towns are spray sealed roads.

Clare Township Roads will be managed in such a way as to extend the life of the hotmix, where appropriate with surface rejuvenation treatment. The remaining 70% of spray seal roads within Clare will remain spray seal for the planning period, unless there is a growing community requirement to use hotmix. This will be reviewed.

All other towns will use spray seals as their main renewal treatment.

For new developments road assets are vested to Council. The standard of construction and surfacing treatment is something Council can enforce through policy and the approval process.

Existing road that have been constructed over time and to varying standards will be maintained and renewed in a life for life standard.

Current Standard for Township Sealed Roads

Construction Method

Seal Width: minimum 3.5m and maximum 10m (average is 6.5m)

Seal Types: Spray seal 2 coat seal or hotmix bitumen seal

Pavement Width: Varies

Pavement Depth: Varies

- Acquired assets 300mm (need to define new land division requirements)
- Existing assets will be renewed by rework and top up on existing pavement rather than full depth reconstruction.

Formation: Included

Renewal Method

Reseal: Varies

- Single coat spray seal (spray seal 7 or 10mm) with an ongoing reseal pattern of 2 coat/1 coat/1 coat/2 coat.

Pavement: Varies

- For existing township roads, rework existing pavement, import 150mm granular material in sections, water and roll
- For vested township roads, rework existing base material, water and roll, prime surface.

Formation: Assume have indefinite life hence no cost incurred at renewal

Seal Life: 20 to 25 years for the upper seal layer depending on usage and 60 to 75 years for the longer life lower seal layer.

Pavement Life: 60 to 80 years for the pavement depending on usage and 120 years for the rural high use pavement sub base.

Maintenance Method

Maintenance: Preventative edge patching, pothole repairs, crack seal and pavement repairs

Side drains cleaned and good working order.

2.3.2 Rural Sealed Roads

Council owns and maintains a rural sealed road network totalling approximately 146km. Rural sealed roads have been categorised based on their existing construction as follows:

Rural High Use Sealed – Roads where terrain does not restrict road width and high traffic volumes

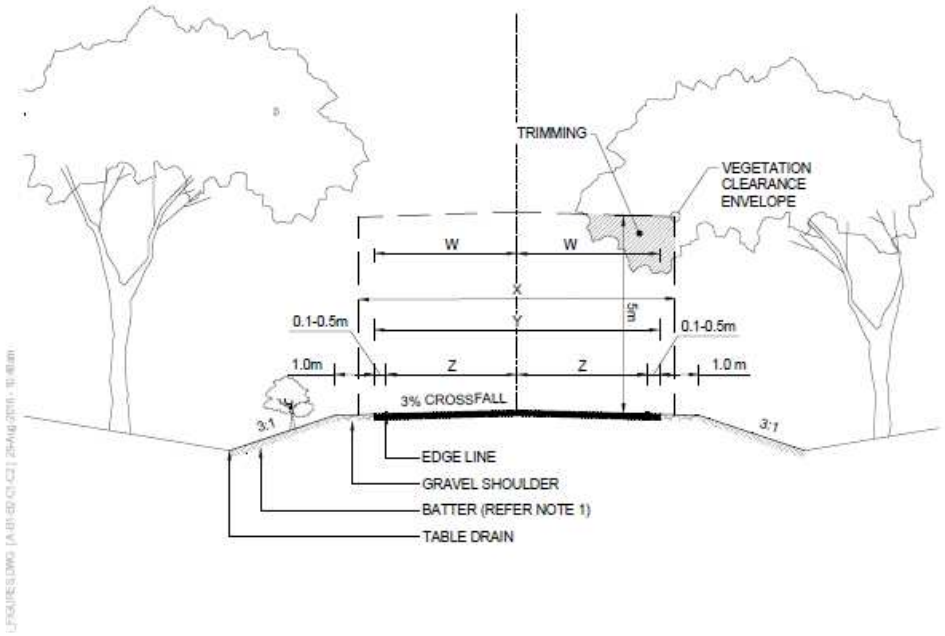
Rural Normal Use Sealed – Roads where terrain does on restrict road width and lower traffic volumes

Rural Narrow Road Sealed- Roads where terrain or historic construction practices have restricted road widths

Rural Short Section Sealed – Road segments, generally on unsealed roads, where the sealed length is less than 100m

The typical construction standard that currently exists related to these categorises is shown on the typical section below and the subsequent table.

Typical Current Construction Standard for Rural Sealed Roads

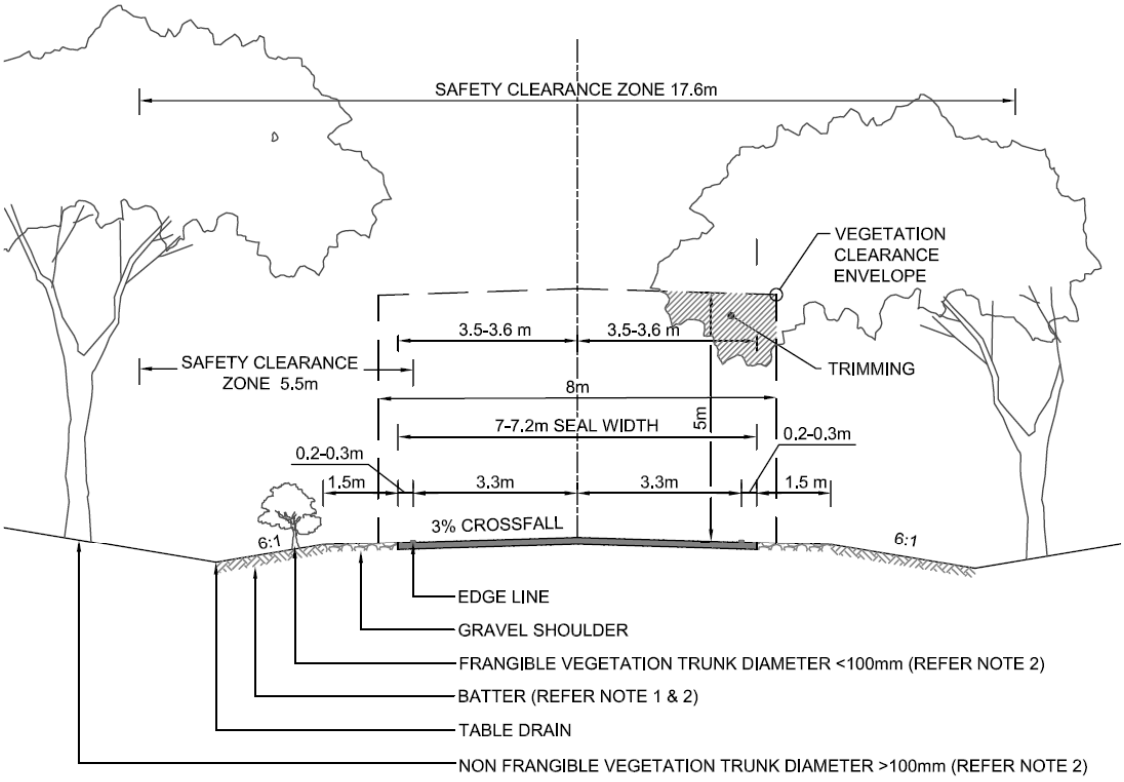


	High Use	Normal Use	Narrow Road	Short Sections
X (desirable)	10m	8-10m	6-7m	n/a
Y (Actual)	6-10m	6-8m	4.5-5.9m	4-15m
Y (desirable minimum)	7.2m	7m	n/a	n/a

Figure 2 Rural Sealed Roads Current Cross Section Construction

Figure 3 shows a typical construction cross section to illustrate a desirable standard for new construction. It is noted that this is not always achievable due to native vegetation restrictions.

Desirable Service Level for Rural Sealed Roads



NOTES

1. Where available safety clearance zone exceeds 21.6m in open country batters can reduce from 6:1 to 4:1, to reduce earthworks footprint.
2. Where terrain requires batters steeper than 3:1, refer Austroad (2010) Part 6 Guide to Road Design for assessment of safety barriers.
3. Frangible vegetation is permitted in the safety clear zone however should be clear in the vegetation clearance envelope.
4. Determination of safety clearance zone is based on an AADT ≤750, Design Speed of 100km/hr and fill batter slope of 6:1.

Figure 3 Desirable Rural Seal Construction Cross Section

Current Standard for Rural Sealed Roads

Construction Method

Seal Width: as per category in Figure 2

Seal Types: Spray seal 2 coat seal

Pavement Width: 1m either side of seal

Pavement Depth: 300mm for rural high use roads, 200mm for normal use, narrow road and short section pavements

Formation: Included.

Renewal Method

Reseal: Single coat spray seal (spray seal 7 or 10mm) with an ongoing reseal pattern of 2 coat/1 coat/1 coat/2 coat

Pavement: Pulverise existing seal and base, top up base where required, water and roll,

Formation: Assume have indefinite life hence no cost incurred at renewal

Seal Life: varies on category.

Road Maintenance

Road maintenance for seal roads is managed to maintain service levels within the network. Maintenance works are undertaken as per planned maintenance schedules and in reaction to public complaints and any defects identified by staff. Works consist of filling potholes, edge repairs, dig outs and crack sealing. A budget has been set based on historical spending and on the assumption the seal program will be funded to ensure roads do not deteriorate beyond a reasonable intervention level.

Typical Rural narrow road seal

Typical Rural High Use seal

2.3.3 Unsealed Road Categorisation

Unsealed Roads within the Clare and Gilbert Valleys serve the community in a wide range of ways from farm gate access, single and multiple residential dwelling access to tourism and freight access and routes for transportation goods like grain, grapes and hay. They play a critical role in supporting the local economy and rural communities.

The unsealed road network has been segmented and digitised in the Council's GIS system.

The development on the road categorises has been undertaken in an initial attempt to allow Council to apply different renewal and construction standards across the road network in an affordable way, rather than having one standard for all unsealed roads. This can evolve and develop over time, however for the purposes of this plan the road categorises have been assigned by staff from local knowledge via a desktop analysis and through some field observations. Over time feedback from local knowledge can help further refine this for future plans.

To determine the remaining useful life of any unsealed road in the network the following data has been used.

Road Condition – The condition of each unsealed road segment is stored in the Council's Asset Management System Conquest. The unique condition score is calculated from field assessed condition data taking into the consideration Sheeting depth, sheeting condition (extent of subgrade breakthrough), Shape (Cross fall and Rideability).

Condition at End of Life (CEoL) – For each road category a condition at end of life has been determined to identify the condition at which intervention is required.

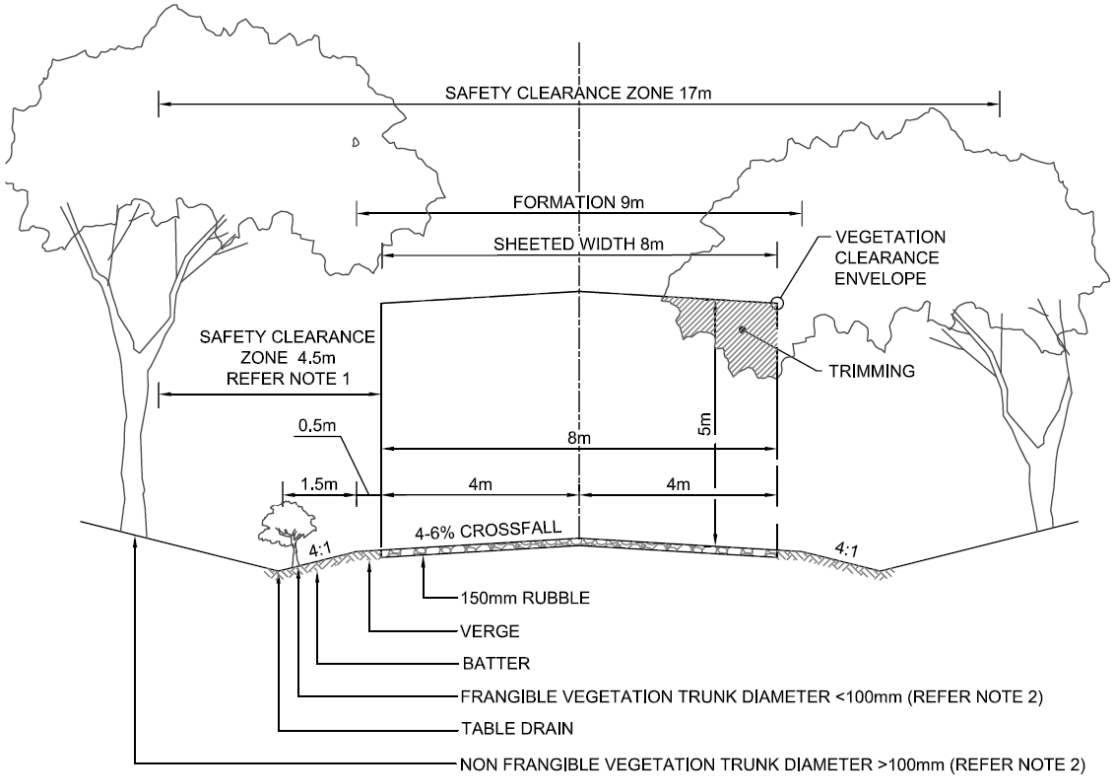
Road Categories – The unsealed road network has been categorised into Class 1, 2a, 2b, 3a,3b, 3c, 4a and 4b roads by Council staff based on a knowledge of the network, during workshops and recent inspections of the backlog list of roads. The class 3 roads were defined as 3a, 3b or 3c based on social, freight and tourism use. The application of this methodology is currently being reviewed and will be further refined in future plans.

2.3.4 Rural Sheeted Class 1 Roads

Council owns and maintains a rural sheeted Class 1 road network totalling approximately 74km. Class 1 unsealed roads within the Council are local arterial roads. These roads generally carry traffic through the Council area and generally connect with DPTI arterial roads. The roads have a higher standard alignment, reasonable sight distance and formation width to allow heavy vehicles to pass. If funds were available, roads would generally be selected for construction and sealing from this category.

Figure 4 shows a typical construction cross section to illustrate Councils service target for rural sheeted Class 1 roads. It is noted that this is not always achievable due to native vegetation restrictions.

Target Service Level Class 1 Sheeted Roads



NOTES

1. Safety clear zones have been based on practicable considerations with consideration to Unsealed Roads Manual : Guide to good practice (March 2009) & Austroads Part 6 Guide to Road Design (2010).
2. Frangible vegetation is permitted in the safety clear zone however should be clear in the vegetation clearance envelope.

Figure 4 Rural Sheeted Class 1 Construction Cross Section

Current Standard for Rural Sheeted Class 1 Roads

Construction Method

Sheeting Width: 8m -9m (currently 7-10m)

Sheeting Depth: 170mm when newly constructed

Formation Width: Additional 1.5m each side of sheeting, 10m minimum

Renewal Method

Resheet: Supply, place and compact 120mm crushed material to restore the sheeted wearing surface.

Condition at End of Life: Assume 50mm rubble left prior to resheeting with no subgrade break through, equates to a score of 55 in the asset system.

Useful Life: The upper sheeted wearing surface varies based on material quality, 6 to 12 years.

Formation: Life of the lower base and earthworks to reform the subgrade prior to resheeting is assumed to be three times that of the associated sheeted wearing surface (18 to 36 years).

Maintenance

2 to 4 grades per year subject to favourable moisture conditions

Heavy patching as required

Pothole repair as required

Side drains and culverts cleaned as required

Regulatory and warning signs replaced as required

Typical Class 1 Rural Sheeted Road in fair condition

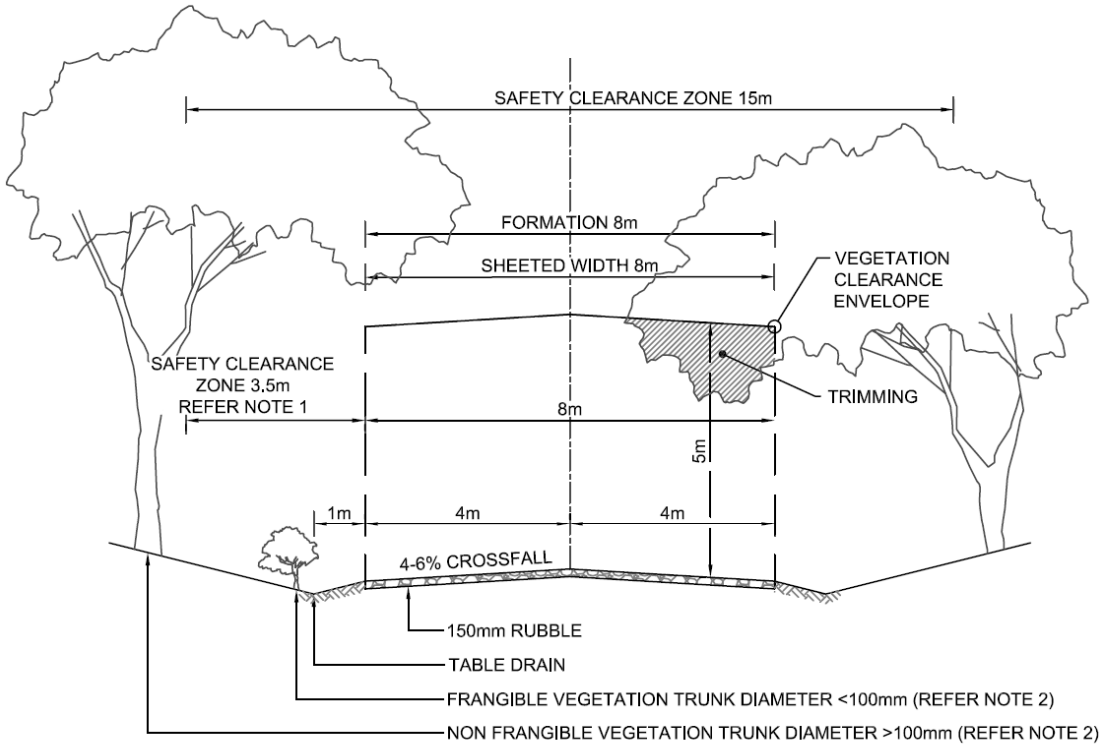
2.3.5 Rural Sheeted Class 2a Roads

Council owns and maintains a rural sheeted Category 2a road network totalling approximately 368km.

These are major roads for local and tourist traffic. These roads often form part of the school bus routes and have regular truck movements (Wineries and farms). Some roads from this category are selected for construction and sealing due to their high maintenance costs, tourist importance and close proximity to townships

Figure 5 shows a typical construction cross section to illustrate Councils service target for rural sheeted Class 2a Roads. It is noted that this is not always achievable due to native vegetation restrictions.

Target Service Level Class 2a Sheeted Roads



NOTES

1. Safety clear zones have been based on practicable considerations with consideration to Unsealed Roads Manual : Guide to good practice (March 2009) & Austroads Part 6 Guide to Road Design (2010).
2. Frangible vegetation is permitted in the safety clear zone however should be clear in the vegetation clearance envelope.

Figure 5 Rural Sheeted Class 2a Construction Cross Section

Current Standard for Rural Sheeted Class 2a Roads

Construction Method

Sheeting Width: 6.5m -8m

Sheeting Depth: 160mm when newly constructed

Formation Width: Additional 1.0m either side of sheeting.

Renewal Method

Resheet: Reform existing material to create cross fall and shape. Supply, place and compact 130mm crushed material.

Condition at End of Life: Assume 30mm rubble left prior to resheeting with minimal subgrade break through, equates to a score of 70 in the asset system.

Useful Life: The upper sheeted wearing surface varies based on material quality, 11 to 22 years.

Formation: Life of the lower base and earthworks to reform the subgrade prior to resheeting is assumed to be three times that of the associated sheeted wearing surface (33 to 66 years).

Maintenance

2 to 3 grades per year subject to favourable moisture conditions

Heavy patching as required

Pothole repair as required

Side drains and culverts cleaned as required

Regulatory and warning signs replaced as required.

Typical Class 2a Rural Sheeted Road approaching CEoL

2.3.6 Rural Sheeted Class 2b Roads

Council owns and maintains a rural sheeted Class 2b road network totalling approximately 123km.

These are major roads for local and tourist traffic. These roads often form part of the school bus routes and have regular truck movements (Wineries and farms). Some roads from this category are selected for construction and sealing due to their high maintenance costs, tourist importance and close proximity to townships

The difference between 2a and 2b roads is that 2b roads have been constructed to a narrower carriageway width. Class 2b roads however still carry similar traffic volumes as 2a roads. This is due to terrain, vegetation restrictions and historic construction practices. A review will be undertaken on these roads to determine if there is some justification for lowering service levels to Class 3 or in some cases planning to widen to 2a standard.

Figure 5 shows a typical construction cross section to illustrate Councils service target for rural sheeted Class 2b roads. It is noted that this is not always achievable due to native vegetation restrictions.

Target Service Level Class 2b Sheeted Roads

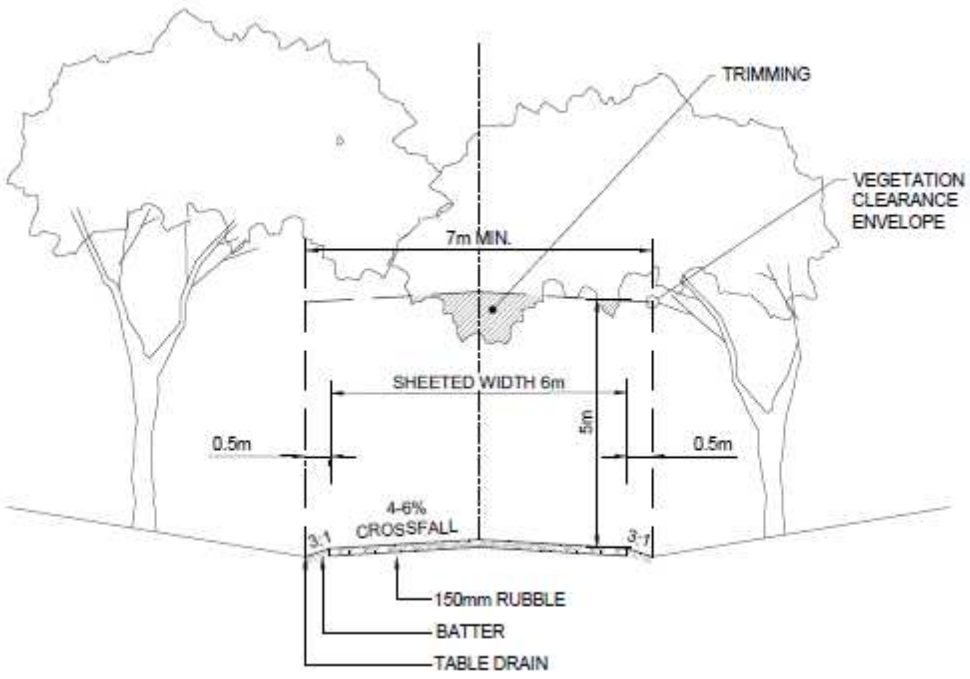


Figure 6 Rural Sheeted Class 2b Construction Cross Section

Current Standard for Rural Sheeted Class 2b Roads

Construction Method

Sheeting Width: 4m -6.5m (Typically 5-6m)

Sheeting Depth: 160mm when newly constructed

Formation Width: Additional 0.5m each side of sheeting.

Renewal Method

Resheet: Reform existing material to create cross fall and shape. Supply, place and compact 100mm crushed material.

Condition at End of Life: Assume 30mm rubble left prior to resheeting with some subgrade break through, equates to a score of 70 in the asset system.

Useful Life: The upper sheeted wearing surface varies based on material quality, 11 to 22 years.

Formation: Life of the lower base and earthworks to reform the subgrade prior to resheeting is assumed to be three times that of the associated sheeted wearing surface (33 to 66 years).

Maintenance

2 to 3 grades per year subject to favourable moisture conditions

Heavy patching as required

Pothole repair as required

Side drains and culverts cleaned as required

Regulatory and warning signs replaced as required.

Typical Class 2b Rural Sheeted Road with exposed subgrade

2.3.7 Rural Sheeted Class 3a Roads

Council owns and maintains a rural sheeted Class 3a road in the network total approximately 209km.

Category 3 roads are formed and sheeted and provide all weather access. Class 3a roads have been identified as having a higher freight, tourism and social importance than other category 3 roads.

Figure 7 shows a typical construction cross section to illustrate Councils service target for rural sheeted class 3a roads. It is noted that this is not always achievable due to native vegetation restrictions.

Target Service Level Class 3a Sheeted Roads

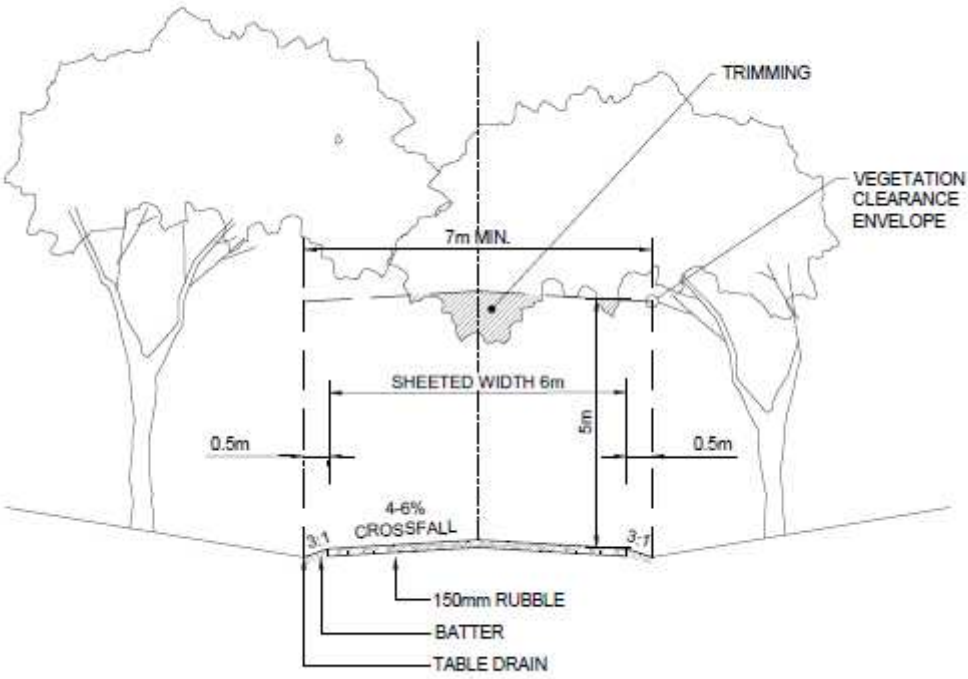


Figure 7 Rural Sheeted Class 3a Construction Cross Section

Current Standard for Rural Sheeted Class 3a Roads

Construction Method

Sheeting Width: Existing widths vary from 4-8m (typically 6-7m)

Sheeting Depth: 120mm when newly constructed.

Formation Width: Additional 0.5m each side of sheeting.

Renewal Method

Resheet: Reform existing material to create cross fall and shape. Supply, place and compact 100mm crushed material.

Condition at End of Life: Assume 20mm rubble left prior to resheeting with significant subgrade break through, equates to a score of 75 in the asset system.

Useful Life: The upper sheeted wearing surface and lower base & earthworks varies based on material quality, 15 to 30 years.

Formation: Assume that some reforming of road cross fall and drainage will be required during resheeting of the road surface.

Maintenance

1 to 2 grades per year subject to favourable moisture conditions

Heavy patching as required

Pothole repair as required

Side drains and culverts cleaned as required

Regulatory and warning signs replaced as required.

Typical Class 3a Rural Sheeted Road showing signs of wear in patches

2.3.8 Rural Sheeted Class 3b Roads

Council owns and maintains a rural sheeted class 3b road network totalling approximately 49km.

Category 3 roads are formed and sheeted and provide all weather access. Class 3b roads have been identified as having less freight, tourism and social importance than Class 3a roads.

Rural sheeted Class 3b roads are all classified as medium to low use. Figure 8 shows a typical construction cross section to illustrate Council's service target for rural sheeted Class 3b roads. It is noted that this is not always achievable due to native vegetation restrictions.

Target Service Level Class 3b Sheeted Roads

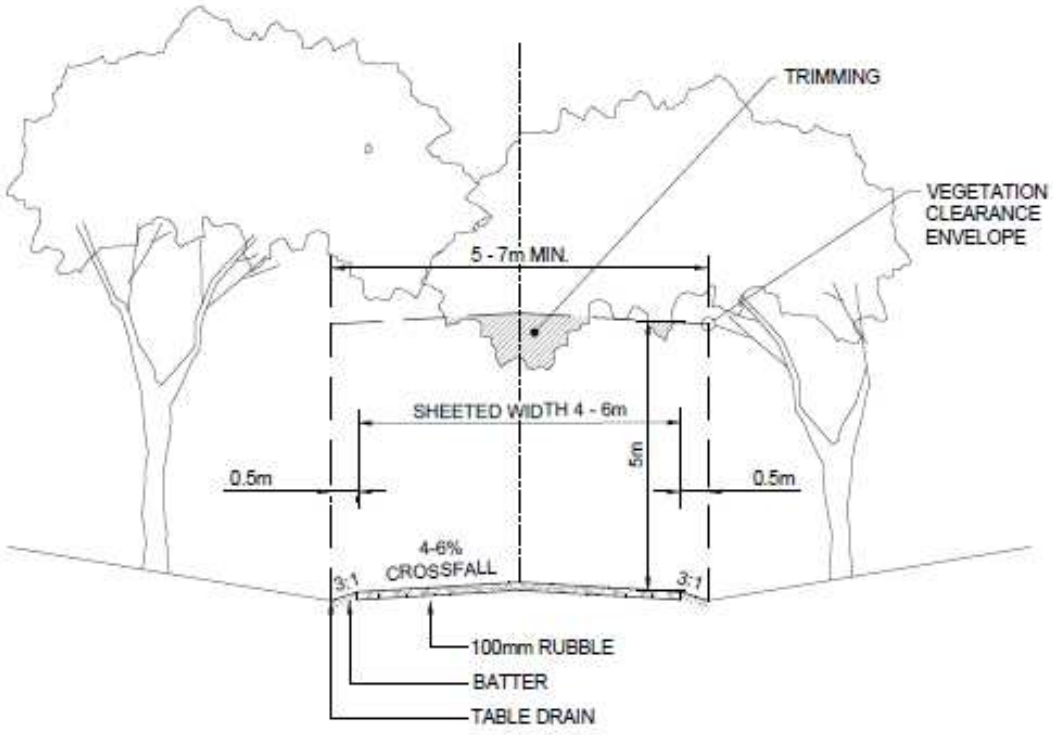


Figure 8 Rural Sheeted Class 3b Construction Cross Section

Current Standard for Rural Sheeted Class 3b Roads

Construction Method

Sheeting Width: 4 -8m (Typically 6m)

Sheeting Depth: 110mm when newly constructed

Formation Width: Additional 0.5m each side of sheeting.

Renewal Method

Resheet: Reform existing material to create cross fall and shape. Supply, place and compact 100mm crushed material.

Condition at End of Life: Assume 10mm rubble left prior to resheeting with extensive subgrade break through, equates to a score of 78 in the asset system.

Useful Life: The upper sheeted wearing surface and lower base & earthworks varies based on material quality, 20 to 35 years

Formation: Assume that some reforming of road cross fall and drainage will be required during resheeting of the road surface.

Maintenance

1 grades per year subject to favourable moisture conditions

Heavy patching, pothole repairs, side drains and culverts cleaned infrequently

Regulatory and warning signs replaced as required.

Typical Class 3b Rural Sheeted Road in backlog

2.3.9 Rural Sheeted Class 3c and 4a Roads

Council owns and maintains a rural sheeted category 3c and 4a road network totalling approximately 135km and 2.9km respectively. Rural sheeted Class 3c and 4a roads classified as low use and will be planned for resheeting to preserve all-weather access however Class 4a roads will be allowed to deteriorate to a poor condition.

Figure 9 shows a typical construction cross section to illustrate Councils service target for rural sheeted Class 3c and 4a roads. It is noted that this is not always achievable due to native vegetation restrictions.

Target Service Level Class 3c & 4a Sheeted Roads

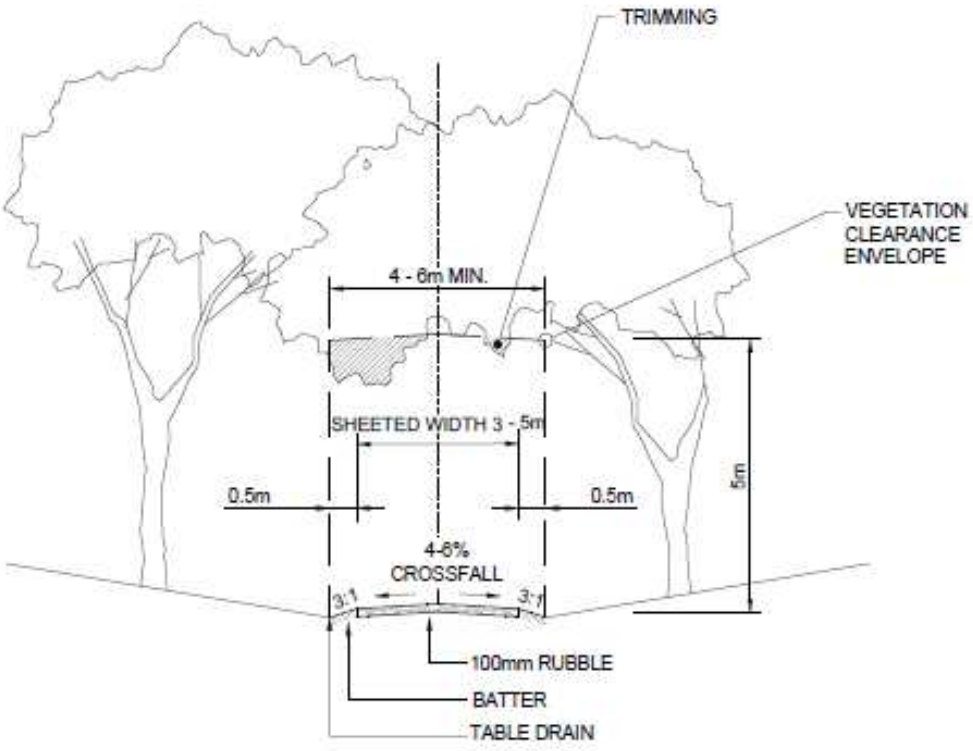


Figure 9 Rural Sheeted Category 3c & 4a Construction Cross Section

Current Standard for Rural Sheeted Class 3c and 4a Roads

Construction Method

Sheeting Width: (4-9m) typically 6m

Sheeting Depth: 110mm when newly constructed

Formation Width: Additional 0.5m each side of sheeting.

Renewal Method

Resheet: Reform existing material to create cross fall and shape. Supply, place and compact 100mm crushed material.

Condition at End of Life: Assume 10mm rubble left prior to resheeting with no subgrade break through, equates to a score of 80 for Class 3c roads in the asset system. Class 4a roads will be allowed to deteriorate to a condition score of 100.

Useful Life: The upper sheeted wearing surface and lower base & earthworks varies based on material quality and usage, 25 to 40 years.

Formation: Assume that some reforming of road cross fall and drainage will be required during resheeting of the road surface.

Maintenance

Grading not planned annually, but undertaken if warranted

Heavy patching, pothole repairs, Side drains and culverts in response to customer complaints

Regulatory and warning signs replaced as required.

Typical Class 3c Rural Sheeted Road

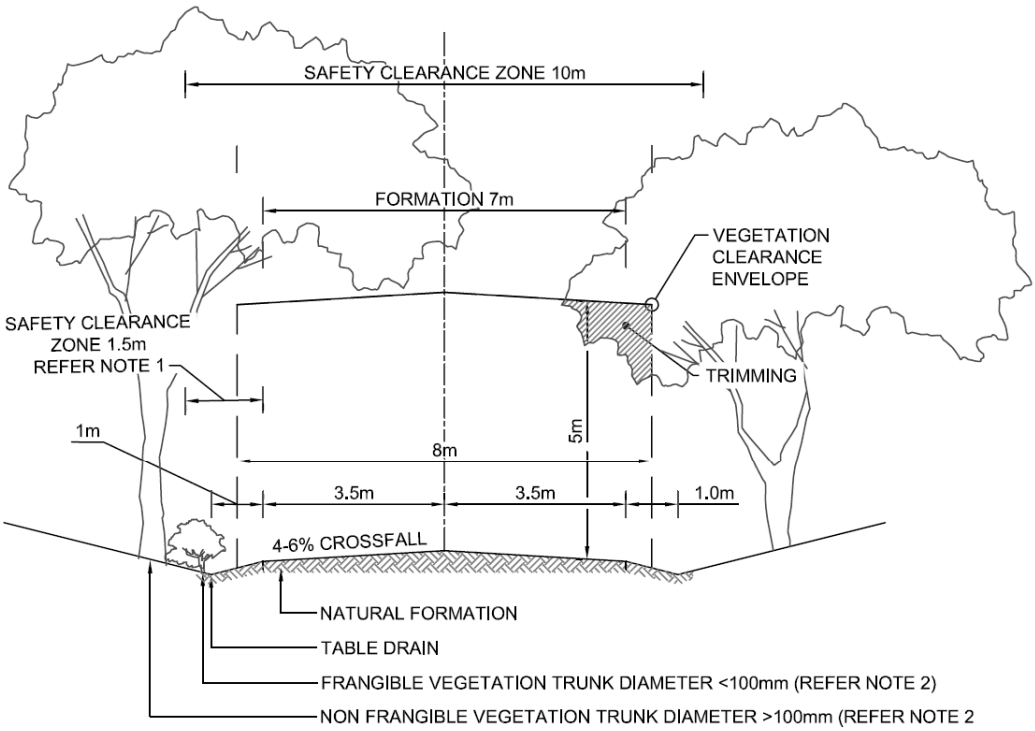
Typical Class 4a Rural Sheeted Road

2.3.10 Rural Natural Form Graded Class 4b Roads

Council owns and maintains a rural formed graded road network totalling approximately 398.6 km (Class 4b roads). Rural formed graded roads are low use roads only. Figure 9 shows a typical construction cross section to illustrate Councils service target for rural formed graded roads. Formed graded roads require no road base material to provide a surface. These roads are not renewed by capital works, however, they do undergo regular maintenance activities (ie grading). Formed graded roads do not require all weather access.

It is noted that the target service level is not always achievable due to native vegetation restrictions.

Target Service Level Class 4b Natural Form Graded Roads



NOTES

1. Safety clear zones have been based on practicable considerations with consideration to Unsealed Roads Manual : Guide to good practice (March 2009) & Austroads Part 6 Guide to Road Design (2010).
2. For single lane, two way roads the following applies
   a. 6m vegetation clear envelope width
   b. 6m formation
   c. 8.5m safety clear zone

Figure 10 Rural Formed Graded Construction Cross Section

Current Service Level for Class 4b Roads

Replacement Cost Assumptions

Not a valued asset

Renewal Method

Not a valued asset, maintained by grading when required.

Typical Class 4b Rural Sheeted Road in wet conditions

In addition to 4b roads the is an additional 68.8 km of roads that are unformed roads.

3 Future Demand

3.1 Demand Forecast

The demand on Council that would result in change to the way the road assets are maintained, renewed or upgraded in the future is more generally related to ongoing growing expectations from the community to have some roads changed to a higher category.

This relates to the ongoing development of agricultural practices and population and demographic changes influencing expectation being observed through requests and the decisions made to upgrade roads. Demand factor trends and impacts on service delivery are summarised in Table 5.

Table 5 Demand Factors, Projections and Impact on Services

Demand Driver	Present Position	Projection	Impact on Services
Multiple all weather access roads to rural residential properties	Single all weather access to residential properties	Increase in requests for providing alternative all weather access to some residential properties	Potential increase in sheeted road network
Sealing town roads	6.7km of unsealed town roads	Develop a plan to upgrade and prioritise township seals	Potential increase in the town sealed network
Sealing some higher use unsealed roads	74km of category 1 roads	Develop priority approach to seal high use roads	Potential increase in rural seal network
Increase the extent of all-weather rural roads	398km of rural formed graded roads that are not all weather	Develop priority approach to provide all weather access roads	Potential increase in the rural sheeted network

3.2 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. Council will determine the ability of the existing assets to manage increased usage for new and housing developments as well as demand for wider agricultural vehicular movements. Developers will be required to provide additional infrastructure for the existing network and upgrade where necessary to ensure adequate transportation. Opportunities identified to date for demand management are shown in Table 6. Further opportunities will be developed in future revisions of this asset management plan.

Table 6 Demand Management Plan Summary

Service Activity	Demand Management Plan
All weather access	Review formed graded roads in the network to determine whether there is merit in provide all weather access and understand the increased cost to Council to provide that service. An allowance has been made for possible upgrades to the network and the merit of sealing or upgrade needs to be on a priority basis determined by Council.
Town seal roads	Review the 6.7km of unsealed roads in towns and establish cost to prioritise and seal the unsealed roads in towns.
Rural Seal roads	Review the higher use category 1 roads and establish traffic counts and establish criteria for assessing the merit of sealing any more rural unsealed roads
Rural sheeted roads	Review the road network to determine if there is any merit in providing alternative all weather access to rural residual properties that demonstrate a reasonable need.

4 Life Cycle Management

The life cycle management plan details how Council plans to manage and operate the assets at the agreed levels of service (defined in Section 2) while optimising life cycle costs.

4.1 Background Data

Clare and Gilbert Valleys Transport assets are located in both rural areas and townships within the Council and the assets covered by this asset management plan are shown in Table 1. The transport assets consumption is measured by condition at time of inspection. The condition at time of inspection is used to calculate the estimated condition at time of valuation for each asset.

The condition profile (condition at time of valuation) of the transport assets shown by Current Replacement Cost (CRC) included in this plan is shown in the following figures.

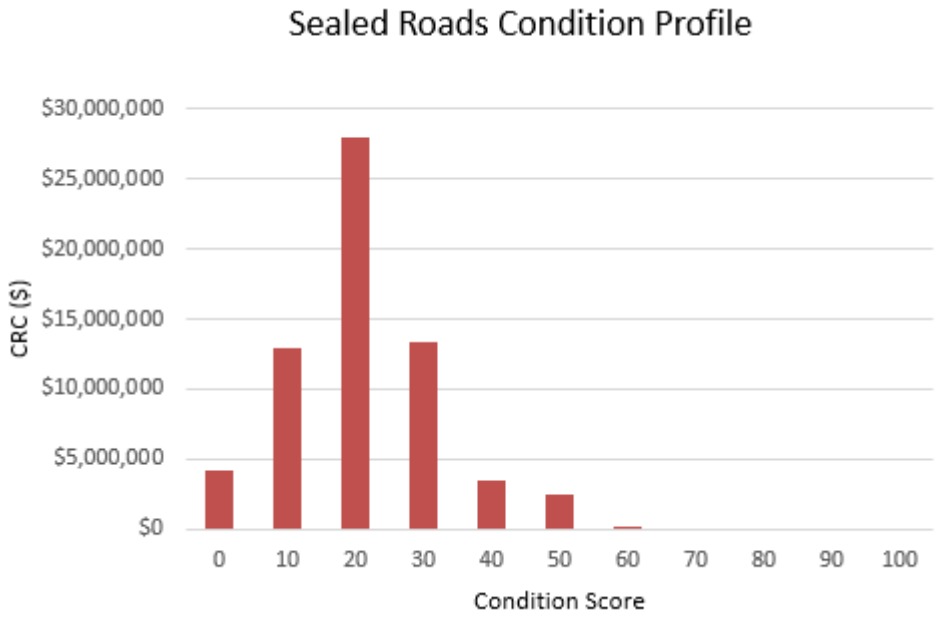


Figure 11 Summary Sealed Road Condition Profile

As shown in Figure 11, nearly half of the rural and township road seal and pavement assets have a condition of 20 and approximately 30% of these assets have a condition of 30 or greater. The defined condition range at which sealed surface upper and lower layer assets reach their end of life is between 45 and 60. The defined condition range at which pavement base and sub base assets reach their end of life is between 60 and 80.

Based on current data, replacement of approximately 55% of the rural and township upper sealed surfaces are included in the 10 year works plan. Approximately 1.1% of the rural pavement and no town pavements are included in the 10 year works plan. A full condition audit is proposed to be conducted in the 2017/18 budget. This will assist with refining asset replacement requirements.

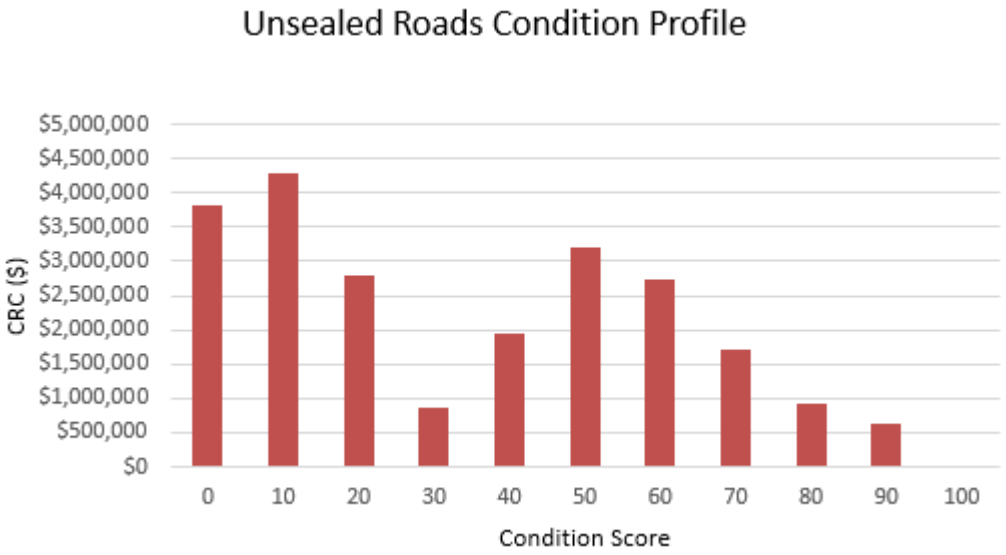


Figure 12 Summary Unsealed Road Condition Profile

As shown in Figure 12, approximately 50% of the rural and township unsealed road assets have a condition of 30 or greater. The defined condition range at which unsealed assets reach their end of life is between 55 and 100. Replacement of almost 50% of the rural and township sheeted roads are included in the 10 year works plan.

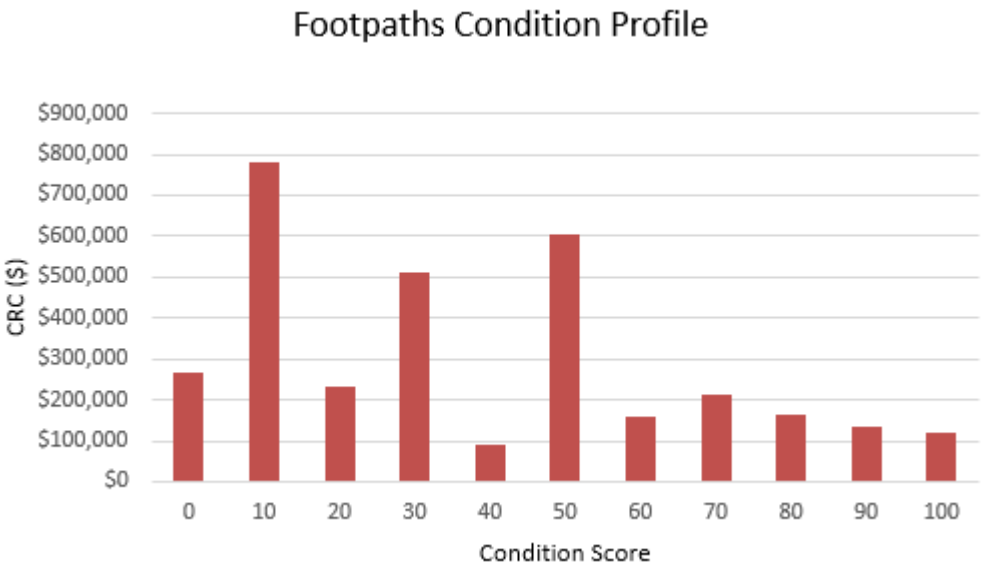


Figure 13 Summary Footpath Condition Profile

As shown in Figure 13, approximately half of the footpath assets have a condition of 40 or greater. The defined condition at which footpath assets reach their end of life is 100. Replacement of approximately 20% of the footpath assets is included in the 10 year works plan.

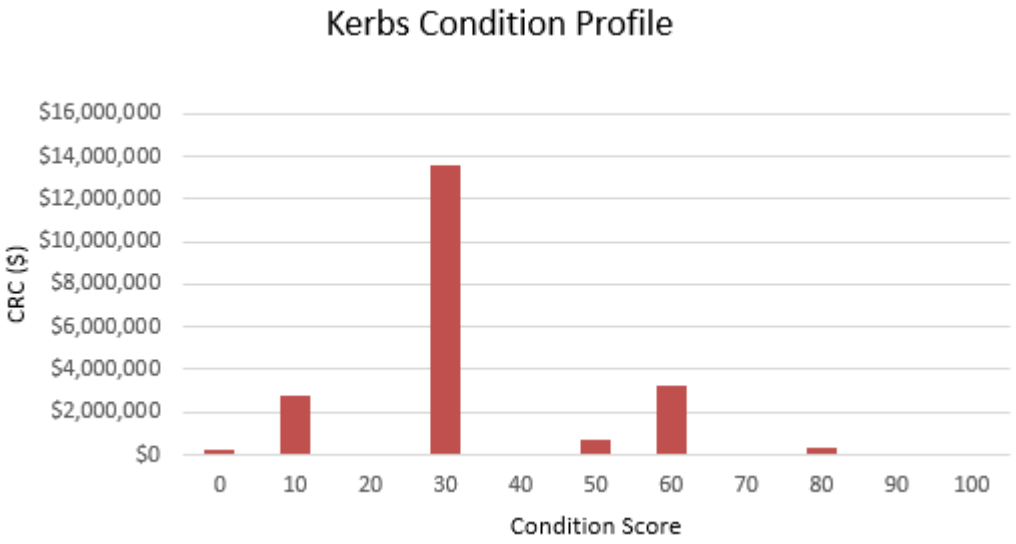


Figure 14 Summary Kerbing Condition Profile

As shown in Figure 14, approximately 65% of the kerb assets have a condition of 30. The defined condition at which kerb assets reach their end of life is 85. Replacement of approximately 2% of the kerb assets are included in the 10 year works plan.

It should be noted that this plan is based on asset condition data collected in 2011 and 2012. It has been identified that the kerb and footpath renewal has become out of step with reported community feedback. Annual budgeting for kerb and footpath asset renewal will need to remain flexible until new asset condition data is collected.

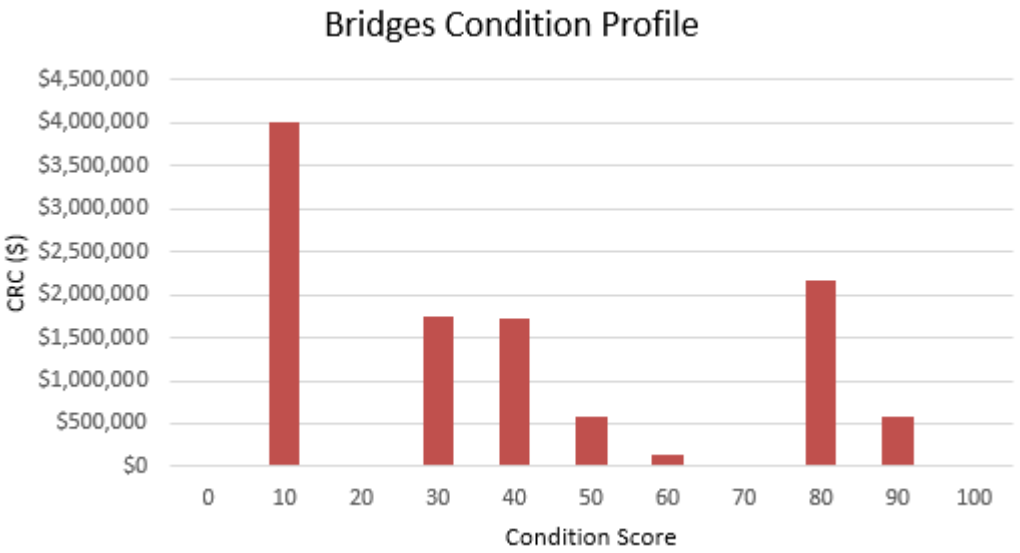


Figure 15 Summary Bridge Condition Profile

The condition data shown in Figure 15 indicates that approximately 40% of the bridges have a condition of 10 and approximately 32% of the bridges have a condition of 50 or greater. Council are currently undertaking a review of the bridges within its register. The data contained in this

asset management plan is preliminary only and subject to review once the Bridges assessment has been undertaken.

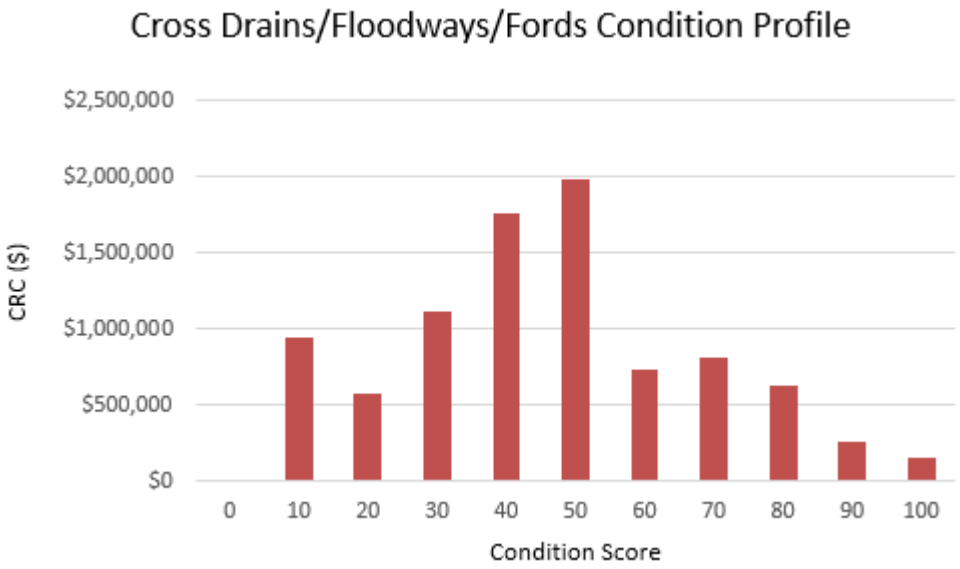


Figure 16 Summary Cross Drains/Floodways/Fords Condition Profile

As shown in Figure 16, approximately 40% of the cross drains, floodway and ford assets have a condition of 40 or 50 and approximately half of the cross drain, floodway and ford assets have a condition of 50 or greater. The defined condition at which cross drain, floodway and ford assets reach their end of life is 100. Due to the longevity of these drainage assets only 5% of these assets are included in the 10 year work plan for renewal.

4.1.1 Asset Capacity and Performance

Council's services are generally provided to meet design standards where these are available. Locations where deficiencies in service performance are known are detailed in Table 7.

Table 7 Known Service Performance Deficiencies

Location	Service Deficiency
Rural road drainage	Insufficient cross drains on some roads where there are long lengths of table drain with no outlet that result in storm water scour in drains and on roads.
All weather access	Farming community unable to access paddocks during period of wet weather
Rural road drainage	Insufficient or in effective cut out and cut off drainage in certain locations in the network

4.1.2 Asset Condition

The transport assets have been visually inspected and the condition is measured using a 0-100 rating system, a summary of the condition rating methodology implemented for the different assets types is described below.

Sealed Road

Sealed roads are inspected at a segment level, several defects are recorded and give a score out of 100 based on their severity and extent of damage. The defects recorded vary depending on the type of surface, additional defects are collected to assess the underlying pavement and

the construction date of the pavement is also included as a factor. The defects collected for sealed roads include:

- Binder Age (spray seal only)
- Stripping (spray seal only)
- Patching
- Environmental cracking
- Load Induced (fatigue) cracking
- Flushing (spray seal only)
- Rutting
- Deformation
- Shape.

The individual defect scores are weighted to provide a single overall score based on a 0 (as new) to 100 (fully consumed) rating.

Unsealed Road

Unsealed sheeted are inspected at a segment level, several defects are recorded and give a score out of 100 based on their severity and extent of damage, the defects collected for sheeted roads include:

- Sheeting depth
- Extent of subgrade breakthrough
- Crossfall (shape)
- Rideabilty
- Drainage
- Vegetation Canopy.

The individual defect scores are weighted to provide a single overall score based on a 0 (as new) to 100 (fully consumed) rating.

Kerbing

Kerbing assets are inspected at a segment level for both left and right hand sides. When a kerb segment is condition rated the overall condition of the kerb upright and kerb gutter is recorded along with the replacement required (m). The individual scores are weighted to provide a single overall score based on a 0 (as new) to 100 (fully consumed) rating.

Footpath

Footpath assets are inspected at a segment level for both left and right hand sides. When a footpath segment is condition rated several individual defects are collected and scored. The individual scores are weighted to provide a single overall score based on a 0 (as new) to 100 (fully consumed) rating.

Bridge

Bridge assets are inspected at a component level and include wingwalls, floor, abutments, deck, kerbs, barriers and surface. The components score is then averaged to provide an overall score based on a 0 (as new) to 100 (fully consumed) rating.

4.1.3 Asset Valuations

The value of the transport assets recorded in the asset register as at 1 July 2016 covered by this asset management plan is shown below. At the time of writing of this asset management plan the 1 July 2016 Road Asset Valuation has been developed and updated within Conquest but has not yet been approved by Council. The Bridge assets have not been included with the Road Asset Valuation. The Bridge valuation data is draft only and has been reported separately.

Table 8 Road and Bridge Asset Valuations

Asset Group	Current Replacement Cost	Written Down Value	Annual Depreciation Expense
Road Assets	$120,684,283	$73,529,087	$2,836,318
Bridge Assets	$10,937,296	$7,109,242	$106,402
Total	**$131,621,579**	**$80,638,329**	**$2,942,720**

The current rate of consumption (annual depreciation / depreciable amount (CRC)) for transport assets is 2.3%. This indicates on average over the life of the asset that 2.3% of the depreciable amount is consumed annually. The translation of this consumption rate into renewals is subject to a decision on funding, service level determination, timing of renewal and condition.

4.2 Risk Management

An assessment of risks associated with service delivery from transport infrastructure assets has been undertaken by Council. 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.

Risks assessed as being 'Extreme' and 'High' - will be identified with associated costs in future revisions of the plan.

Table 9 is a summary of these risks.

Table 9 Risk Treatment Plan Summary

Service or Asset at Risk	What can Happen	Risk Rating (Ex,H,M,L)	Risk Treatment Plan
Sheeted roads	Flood damage	H	Early identification of damage and lodging claim to disaster fund
Floodways	Vehicles attempt to cross when water depth and velocity too high	H	Maintain signage and depth gauges on floodways

Managing risk priority rating is covered in CGVC Risk Management Framework document.

4.3 Required Expenditure

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 medium term financial planning period, this provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

4.3.1 Routine Operations/Maintenance

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. Maintenance includes reactive (unplanned), planned and specific

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

Note that all costs are shown in 2016/2017 financial year dollar values.

Future operations and maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Table 9 and Figure 17. The average annual operation and maintenance cost over a 10-year planning period (medium term) is $1,345,000/year. The projected operations and maintenance cost is based on the actual costs for transport operations and maintenance in 2015/16 and Council's expectation that Bridges maintenance will cost $10,000 each year. A review of Council's Bridge assets is currently being undertaken and future revisions of this plan may include adjusted maintenance costs for bridges.

Table 10 Projected Operations and Maintenance Expenditure (Pre Flood)

Financial Year	Bridge Maintenance	Other Transport Operations & Maintenance	Operations & Maintenance
2016-17	$10,000	$1,335,000	$1,345,000
2017-18	$10,000	$1,335,000	$1,345,000
2018-19	$10,000	$1,335,000	$1,345,000
2019-20	$10,000	$1,335,000	$1,345,000
2020-21	$10,000	$1,335,000	$1,345,000
2021-22	$10,000	$1,335,000	$1,345,000
2022-23	$10,000	$1,335,000	$1,345,000
2023-24	$10,000	$1,335,000	$1,345,000
2024-25	$10,000	$1,335,000	$1,345,000
2025-26	$10,000	$1,335,000	$1,345,000
Total	**$100,000**	**$13,350,000**	**$13,450,000**

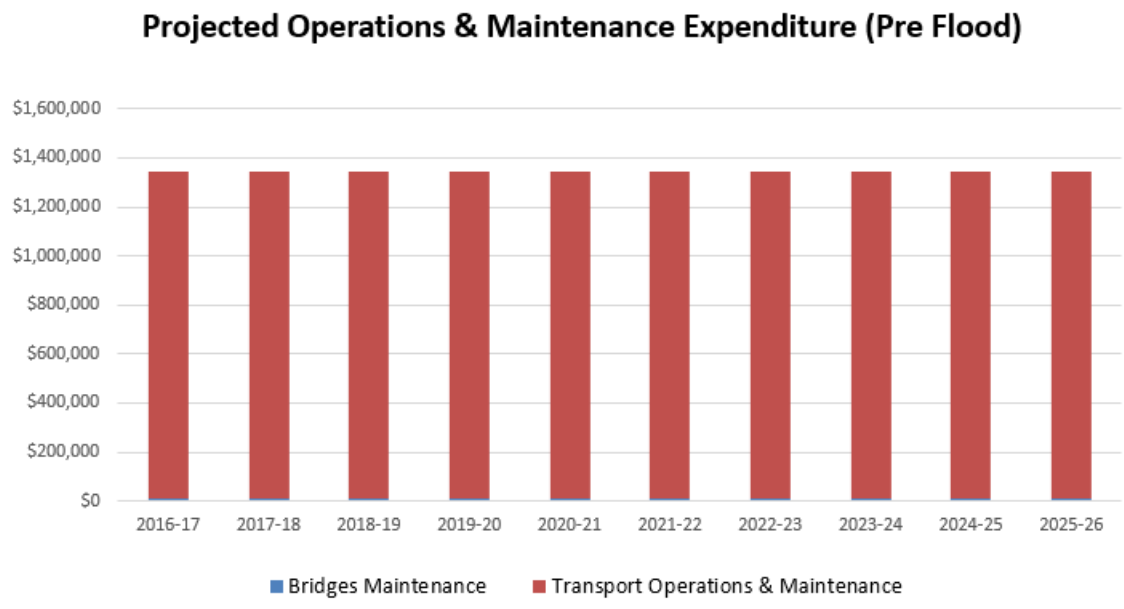


Figure 17 Projected Operations & Maintenance Expenditure

It is assumed that the operations and maintenance budgets will generally remain static over the 10-year planning period (medium term) apart from the bridge maintenance budget.

4.3.2 Capital Renewal

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

The method used to develop the renewal plan uses the asset register data to project the renewal costs for renewal years using acquisition year and useful life, this equates to the expiry date generated from Council's asset management system. The renewal plan for Backlog, 2016/2017 and 2017/2018 financial years has been reviewed and adjusted based on the actual planned work to be undertaken during 2016/2017 and 2017/2018. Budgets for these works have been based on a combination of calculated current replacement costs from valuation data and cost estimates from planned works budgets. The works identified for 2016/2017 and 2017/2018 address the majority of the work that was identified in the Backlog, 2016/2017 and 2017/2018 financial years. Some work has also been reassigned to the 2018/2019 financial year.

Some adjustments to the works program generated from the asset register have been made to even out the annual expenditure requirements by deferring or bringing forward certain road segments for treatment.

The costs associated with the renewals have been aggregated for each financial year over a 10 year planning period (medium term) and shown in Table 11 and Figure 18.

Table 11 Required Capital Renewal Expenditure (Pre Flood)

Financial Year	Capital Renewal Expenditure
Backlog	$321,744
2016-17	$2,576,376
2017-18	$3,100,518
2018-19	$2,261,618
2019-20	$2,170,733
2020-21	$2,186,046
2021-22	$2,222,251
2022-23	$2,171,590
2023-24	$2,337,136
2024-25	$2,253,268
2025-26	$2,323,090
Total	**$23,924,370**

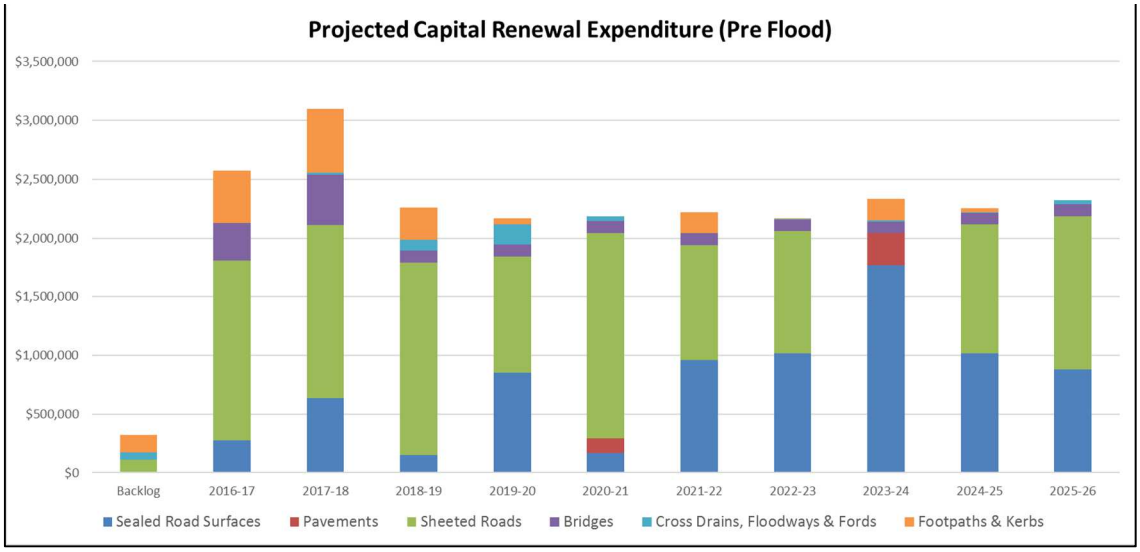


Figure 18 Projected Capital Renewal Expenditure

The 5 Year Projected capital renewal program is shown in Appendix A.

This plan is based on 2011 and 2012 road data collection. Whilst work has been undertaken to re-inspect many of the roads surfaces and adjust the expiry dates to match actual renewal requirements it should be noted that the kerb and footpath renewal is now out of step with reported community feedback. Until new asset condition data is collected there will be a need to remain flexible in annual budgeting to include kerb and footpath renewal in advance of what is included in this plan.

4.3.3 Capital New/Upgrade and Acquisition

New/upgrade expenditure is major work that creates a new asset that did not previously exist, or works which upgrade or improve an existing asset beyond its existing capacity. They may result from growth, social or environmental needs. Assets may also be acquired at no cost to the Council from land development.

The costs associated with the new/upgrades have been aggregated for each financial year over a 10 year planning period (medium term) as shown in Table 11.

Table 12 Budgeted New/Upgrade Expenditure

Financial Year	Capital New/Upgrade Expenditure
2016-17	$1,199,600
2017-18	$750,000
2018-19	$750,000
2019-20	$750,000
2020-21	$750,000
2021-22	$750,000
2022-23	$750,000
2023-24	$750,000
2024-25	$750,000
2025-26	$750,000
Total	**$7,949,600**

*Capital New/Upgrade Works require further investigation as part of the improvement plan.

The budget for 2016/17 is based on the Council sealed road upgrade budget for 2016/17 in which the following roads have been identified for upgrade works.

- MinMan Road, Mintaro
- Spring Gully Road, Clare
- Gillentown Road, Clare
- Morrison Road, Penwortham
- Wakefield Road, Leasingham
- Greenwood Park Road, Leasingham
- South Street, Auburn.

It has been assumed in response to the demands and service deficiencies identified in this plan there will be some ongoing pressure from the community to upgrade the road network. The extent has not been fully investigated and determined, however some budget has been allocated with no specific project identified at this stage.

4.3.4 Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. Council has not identified any transport infrastructure assets to be disposed in the 10 year planning period (medium term).

4.3.5 Financial Projections

The financial projections are shown in Table 13 and Figure 19 for projected operating (operations and maintenance), capital renewal, capital new/upgrade and estimated budget funding.

Table 13 Operating and Capital Expenditure

Financial Year	Operations and Maintenance	Capital Renewal	Capital New/Upgrade*
Backlog		$321,744	
2016-17	$1,345,000	$2,576,376	$1,199,600
2017-18	$1,345,000	$3,100,518	$750,000
2018-19	$1,345,000	$2,261,618	$750,000
2019-20	$1,345,000	$2,170,733	$750,000
2020-21	$1,345,000	$2,186,046	$750,000
2021-22	$1,345,000	$2,222,251	$750,000
2022-23	$1,345,000	$2,171,590	$750,000
2023-24	$1,345,000	$2,337,136	$750,000
2024-25	$1,345,000	$2,253,268	$750,000
2025-26	$1,345,000	$2,323,090	$750,000
Total	**$13,450,000**	**$23,924,370**	**$7,949,600**

*Capital New/Upgrade Works require further investigation as part of the improvement plan.

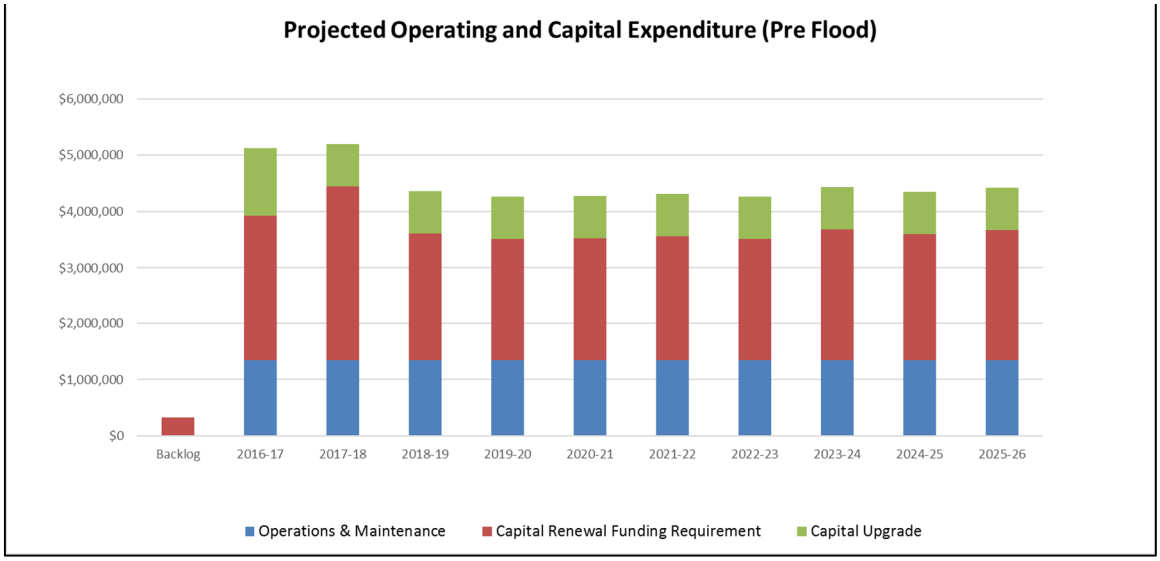


Figure 19 Projected Operating and Capital Expenditure (Pre Flood) over the Medium Term (10 Years)

The projected operations, maintenance and capital expenditure required over the 10 year planning period is $4.53M per year.

4.3.6 September 2016 Flood Event impacts

This Asset Management Plan has been developed as of 1 July 2016 and all asset information and financial data provided has been based on the status of assets as of 1 July 2016.

One aspect for consideration in 2016/2017 and in subsequent years is the impact of the September 2016 flood event. The September 2016 Flood event, abased on tenders received in late May 2017 is estimated to have created an additional maintenance expenditure of $1,006,140 and a capital renewal expenditure of $4,668,117 with a further $280,115 upgrade (betterment) expenditure. In addition to this during 2016/2017 Council spent $209,635 on emergency response activities.

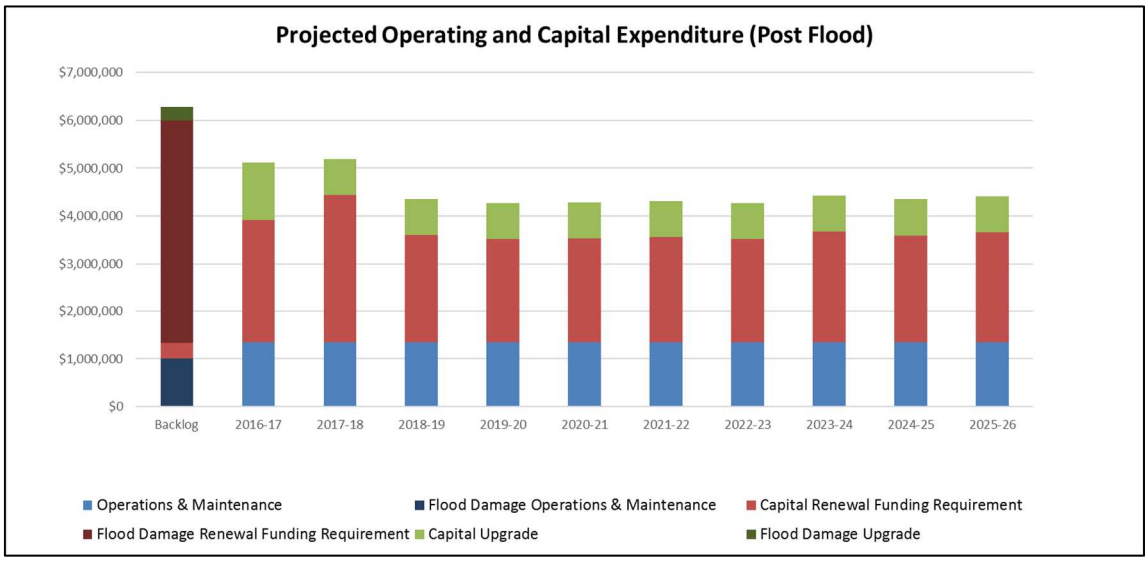


Figure 20 Projected Operating and Capital Expenditure (Post Flood) over the Medium Term (10 Years)

Based on tendering figures and subject to Treasury approval it is anticipated Council will be eligible for $4.3 Million financial assistance leaving a Council contribution of $1.77 Million and the day labour component of the emergency response.

Council will need to decide on how to fund the $1.77 Million shortfall, which could be by:

a. Funding it from existing renewal budget and increasing the backlog.

b. Funding it by deferring upgrade for 3.5 years

c. Increase overall budgets for Road infrastructure and continue with Road renewal and upgrades as presented in this plan.

5 Plan Improvement and Monitoring

The following tasks have been identified for improving future versions of the plan. Council should assign responsibilities and recourses to these tasks as part of the endorsement of the plan.

Table 14 Tasks identified for improving future versions of the plan

Task No.	Task	Responsibility
1.	Undertake a sealed and unsealed road, kerb and footpath condition audit in 2017/2018	Council Administration
2.	Review road categories and update as part of ongoing development of the road register	Council Administration
3.	Formalise the Bridge asset valuation 1/7/16 by updating Conquest	Council Administration
4.	Update Conquest with new condition data, revaluation 1/7/2017	Council Administration
5.	Develop upgrade plan with consideration to demand and service deficiencies	Council Administration
6.	Develop a footpath renewal and upgrade plan based on new condition data	Council Administration
7.	Update this Asset plan once new road data is collected and analysed and upgrade plan formalised	Council Administration

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.

This plan has a life of 4 years and is due for revision and updating within 2 years of each Council election.

6 References

IPWEA, 2006, *NAMS.PLUS3 Asset Management*, Institute of Public Works Engineering Australia, Sydney, www.ipwea.org

IPWEA, 2011, Asset Management for Small, Rural or Remote Communities Practice Note, Institute of Public Works Engineering Australia, Sydney, www.ipwea.org

Appendix A

Projected 5 Year Capital Renewal (excluding Flood damage)

Projected 5 Year Capital Renewal Program

Asset ID	Spatial ID	Sub Category	Asset Description	Location	Asset Type	Planned Renewal Year	Useful Life (years)	Renewal Cost ($)
4265	00065020	Rural Sheeted Wearing Surface	Wearing Surface - Blocks Rd (Riverton) (020) from Road Reserve at RRD 3570 to Old Main North Rd	Riverton	Rural Class 2b Poor Material Sheeted Wearing Surface	Backlog	11	$14,403
4615	00247005	Rural Sheeted Wearing Surface	Surface - Hare Rd (005) from Merildin Rd to Start of Seal	Mintaro	Rural Class 3c Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	Backlog	32	$22,868
4559	00419025	Rural Sheeted Wearing Surface	Wearing Surface - Mintaro-Manoora Rd (025) from Farm Driveway at RRD 5220 to Start of Seal	Manoora	Rural Class 1 Average Material Sheeted Wearing Surface	Backlog	9	$18,068
4524	00714010	Rural Sheeted Wearing Surface	Wearing Surface - Wakefield Rd (010) from End of Seal (West Tce) to Williams Rd	Leasingham	Rural Class 2a Average Material Sheeted Wearing Surface	Backlog	14	$9,639
4585	00751015	Rural Sheeted Wearing Surface	Surface - Wirrilla Rd (015) from Halls Rd to Fairview Diagonal Rd	Manoora	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	Backlog	22	$23,365
4891	00280045	Town Sheeted Wearing Surface	Wearing Surface - Hilltown Rd (045) from South Tce to Start of Seal	Hilltown	Township Sheeted Wearing Surface	Backlog	25	$11,946
16885	00280045	Town Sheeted Lower Base & Earthworks	Lower Base - Hilltown Rd (045) from South Tce to Start of Seal	Hilltown	Township Sheeted Lower Base & Earthworks	Backlog	75	$8,242
5545	00173005	Footpath Surface	Right Footpath Surface - Elliot Ave (Clare) (005) from Blyth Rd to End	Clare	Spray Seal Footpath Surface	Backlog	25	$10,135
5484	00366050	Footpath Surface	Right Footpath - Main North Rd (Clare) (050) from Harriet St to Sabine St	Clare	Partial Concrete Footpath	Backlog	60	$16,400
5538	00377005	Footpath Surface	Right Footpath Surface - Marrabel Rd (005) from Saddleworth Rd to Side St	Marrabel	Spray Seal Footpath Surface	Backlog	25	$14,089
5543	00110005	Footpath Surface	Right Footpath Surface - Charles St (Riverton) (005) from Torrens Rd to Swinden St	Riverton	Partial Hotmix Bitumen Footpath Surface	Backlog	30	$5,523
5556	00110005	Footpath Surface	Left Footpath Surface - Charles St (Riverton) (005) from Torrens Rd to Swinden St	Riverton	Partial Hotmix Bitumen Footpath Surface	Backlog	30	$3,615
5555	00230005	Footpath Surface	Right Footpath Surface - Gray St (005) from Charles St to Gilbert St	Riverton	Hotmix Bitumen Footpath Surface	Backlog	30	$11,858
5541	00653005	Footpath Surface	Right Footpath Surface - Strickland St (Riverton) (005) from Torrens Rd to Swinden St	Riverton	Partial Hotmix Bitumen Footpath Surface	Backlog	30	$3,089
5542	00653005	Footpath Surface	Left Footpath Surface - Strickland St (Riverton) (005) from Torrens Rd to Swinden St	Riverton	Hotmix Bitumen Footpath Surface	Backlog	30	$22,455
5549	00691040	Footpath Surface	Left Footpath Surface - Torrens Rd (040) from Light St to Washington Rd	Riverton	Partial Hotmix Bitumen Footpath Surface	Backlog	30	$6,870
5562	00520005	Footpath Surface	Left Footpath Surface - Prescott St (005) from Gilbert St to Craig St	Tarlee	Partial Hotmix Bitumen Footpath Surface	Backlog	30	$2,676
16907	00173005	Footpath Base	Right Footpath Base - Elliot Ave (Clare) (005) from Blyth Rd to End	Clare	Spray Seal Footpath Base	Backlog	50	$4,899
16937	00377005	Footpath Base	Right Footpath Base - Marrabel Rd (005) from Saddleworth Rd to Side St	Marrabel	Spray Seal Footpath Base	Backlog	50	$6,810
16893	00110005	Footpath Base	Left Footpath Base - Charles St (Riverton) (005) from Torrens Rd to Swinden St	Riverton	Partial Hotmix Bitumen Footpath Base	Backlog	60	$405
16894	00110005	Footpath Base	Right Footpath Base - Charles St (Riverton) (005) from Torrens Rd to Swinden St	Riverton	Partial Hotmix Bitumen Footpath Base	Backlog	60	$619
16897	00230005	Footpath Base	Right Footpath Base - Gray St (005) from Charles St to Gilbert St	Riverton	Hotmix Bitumen Footpath Base	Backlog	60	$1,324
16903	00653005	Footpath Base	Right Footpath Base - Strickland St (Riverton) (005) from Torrens Rd to Swinden St	Riverton	Partial Hotmix Bitumen Footpath Base	Backlog	60	$346
16904	00653005	Footpath Base	Left Footpath Base - Strickland St (Riverton) (005) from Torrens Rd to Swinden St	Riverton	Hotmix Bitumen Footpath Base	Backlog	60	$2,507
16930	00691040	Footpath Base	Left Footpath Base - Torrens Rd (040) from Light St to Washington Rd	Riverton	Partial Hotmix Bitumen Footpath Base	Backlog	60	$769
16889	00520005	Footpath Base	Left Footpath Base - Prescott St (005) from Gilbert St to Craig St	Tarlee	Partial Hotmix Bitumen Footpath Base	Backlog	60	$300
6554	00110005	Kerb & Watertable	Spoon Drain No.1 at East End (Perpendicular) - Charles St (Riverton) (005) from Torrens Rd to Swinden St	Riverton	Concrete Spoon Drain	Backlog	70	$2,418
6556	00212005	Kerb & Watertable	Spoon Drain No.1 at East End (Perpendicular) - Gilbert St (Riverton) (005) from Torrens Rd to Swinden St	Riverton	Concrete Spoon Drain	Backlog	70	$1,773
6553	00230005	Kerb & Watertable	Spoon Drain No.1 (Perpendicular) - Gray St (005) from Charles St to Gilbert St	Riverton	Concrete Spoon Drain	Backlog	70	$3,224
6558	00354005	Kerb & Watertable	Spoon Drain No.1 at East End (Perpendicular) - Light St (005) from Torrens Rd to Swinden St	Riverton	Concrete Spoon Drain	Backlog	70	$2,418
6560	00653005	Kerb & Watertable	Spoon Drain No.1 at East End (Perpendicular) - Strickland St (Riverton) (005) from Torrens Rd to Swinden St	Riverton	Concrete Spoon Drain	Backlog	70	$1,289
6575	00653005	Kerb & Watertable	Spoon Drain No.2 at West End (Perpendicular) - Strickland St (Riverton) (005) from Torrens Rd to Swinden St	Riverton	Concrete Spoon Drain	Backlog	70	$1,289
6588	00133010	Kerb & Watertable	Right Kerb & Watertable - Craig St (010) from Hallett St to Oldham St	Tarlee	Upright Composite Concrete/Stone Kerb & Watertable	Backlog	70	$23,568
13215	FW0045	Fords & Floodways	Ford Surface for FW0045 in Powerline South Rd		Concrete Floodway / Ford	Backlog	50	$5,772
13213	FW0081	Fords & Floodways	Ford Surface for FW0081 in Taylors Rd		Spray Seal Floodway / Ford	Backlog	20	$6,528
11989	CD0354	Cross Drain	Pipe No. 1 for CD0354 in Anama Ln from Spalding - Clare Rd to Main North Rd		300mm Class 4 Cross Drain Pipe	Backlog	70	$1,990
11695	CD0355	Cross Drain	Pipe No. 1 for CD0355 in Anama Ln from Spalding - Clare Rd to Main North Rd		300mm Class 4 Cross Drain Pipe	Backlog	70	$1,990
12014	CD0533	Cross Drain	Pipe No. 1 for CD0533 in Bowman Rd from Bruce Rd to Sings Rd		300mm Class 4 Cross Drain Pipe	Backlog	70	$1,990
11804	CD0032	Cross Drain	Pipe No. 1 for CD0032 in Barinia Rd from Gaelic Cemetery Rd to Main North Rd		300mm Class 4 Cross Drain Pipe	Backlog	70	$1,990
11990	CD0566	Cross Drain	Pipe No. 1 for CD0566 in Days Hill Rd from Station Rd to Boundry		300mm Class 4 Cross Drain Pipe	Backlog	70	$1,990
11671	CD0611	Cross Drain	Pipe No. 1 for CD0611 in GolfCourse Rd from Hentschke Rd to Tuela Rd		300mm Class 4 Cross Drain Pipe	Backlog	70	$1,990
11736	CD0373	Cross Drain	Pipe No. 1 for CD0373 in Harveys Highway from Spalding - Clare Rd to Calcania Rd		300mm Class 4 Cross Drain Pipe	Backlog	70	$1,990
11685	CD0625	Cross Drain	Pipe No. 1 for CD0625 in Hicks Rd from Ashby Rd to Old Blyth Rd		300mm Class 4 Cross Drain Pipe	Backlog	70	$1,990
12174	CD0402	Cross Drain	Culvert No. 1 for CD0402 in Main Road 45 from Whyte Park Rd to Steelton Rd		450mm x 300mm Cross Drain Box Culvert	Backlog	70	$4,852
12638	CD0402	Cross Drain	Inlet Headwall No. 1 for CD0402 in Main Road 45 from Whyte Park Rd to Steelton Rd		300mm - 450mm span Cross Drain Single Cell Headwall for Box Culvert	Backlog	70	$827
13062	CD0402	Cross Drain	Outlet Headwall No. 1 for CD0402 in Main Road 45 from Whyte Park Rd to Steelton Rd		300mm - 450mm span Cross Drain Single Cell Headwall for Box Culvert	Backlog	70	$827
11769	CD0403	Cross Drain	Pipe No. 1 for CD0403 in Main Road 45 from Philbey Rd to Whyte Park Rd		300mm Class 4 Cross Drain Pipe	Backlog	70	$1,990
11726	CD0404	Cross Drain	Pipe No. 1 for CD0404 in Main Road 45 from Philbey Rd to Whyte Park Rd		300mm Class 4 Cross Drain Pipe	Backlog	70	$1,990
11784	CD0405	Cross Drain	Pipe No. 1 for CD0405 in Main Road 45 from H.Behns Rd to Talla Walla Rd		300mm Class 4 Cross Drain Pipe	Backlog	70	$1,990
11661	CD0406	Cross Drain	Pipe No. 1 for CD0406 in Main Road 45 from Kunden Rd to Schutz Rd		225mm Class 4 Cross Drain Pipe	Backlog	70	$1,774
11750	CD0407	Cross Drain	Pipe No. 1 for CD0407 in Main Road 45 from Eckermann Rd to Mollers Gap Rd		225mm Class 4 Cross Drain Pipe	Backlog	70	$1,774
12006	CD0696	Cross Drain	Pipe No. 1 for CD0696 in Mt Horrocks Rd from Main North Rd to Springvale Rd		300mm Class 4 Cross Drain Pipe	Backlog	70	$1,990
12004	CD0697	Cross Drain	Pipe No. 1 for CD0697 in Mt Horrocks Rd from Main North Rd to Springvale Rd		300mm Class 4 Cross Drain Pipe	Backlog	70	$1,990
11868	CD0744	Cross Drain	Pipe No. 1 for CD0744 in Plew Rd from Rhynie - Balaklava Rd to Woolshed Flat - Undalya Rd		300mm Class 4 Cross Drain Pipe	Backlog	70	$1,990
11874	CD0801	Cross Drain	Pipe No. 1 for CD0801 in Riverton - Undalya Rd from McInerney Rd to Mitchells Rd		300mm Class 4 Cross Drain Pipe	Backlog	70	$1,990
11748	CD0443	Cross Drain	Pipe No. 1 for CD0443 in Rhynie - Balaklava Rd from Plew Rd to Nyowee Rd		600mm Class 4 Cross Drain Pipe	Backlog	70	$4,232
12029	CD0785	Cross Drain	Pipe No. 1 for CD0785 in Riverton - Finnis Point Rd from Flavels Rd to Tarlee - Finnis Point Rd		300mm Class 4 Cross Drain Pipe	Backlog	70	$1,990
11742	CD0465	Cross Drain	Pipe No. 1 for CD0465 in Tarlee - Alma Rd from Salt Creek Rd to Stockport - Giles Corner Rd		150mm Class 4 Cross Drain Pipe	Backlog	70	$1,191
11875	CD1018	Cross Drain	Pipe No. 1 for CD1018 in Woolshed Flat - Undalya Rd from Rubbish Dump Rd to Rhynie - Balaklava Rd		450mm Class 4 Cross Drain Pipe	Backlog	70	$2,930
						Backlog Sub-Total		**$321,744**
3630	00370010	Rural Sealed Upper Surface	Surface Upper Layer - Main Road 45 (010) from Rowett Rd to Slant Rd	Marrabel	Rural High Use Spray Seal Surface - Upper Layer	2016-17	20	$65,192
3762	00477005	Rural Sealed Upper Surface	Surface Upper Layer - Outa/Wurta Rd (005) from Muanu Rd to Rundles Rd Nth	Boconnoc Park	Rural Normal Use Spray Seal Surface - Upper Layer	2016-17	20	$40,147
3711	00754010	Rural Sealed Upper Surface	Surface Upper Layer - Woodlands Brae Rd (010) from Start of Seal to Muanu Rd	Boconnoc Park	Rural Short Section Spray Seal Surface - Upper Layer	2016-17	20	$1,161
15930	00370010	Rural Sealed Lower Surface	Surface Lower Layer - Main Road 45 (010) from Rowett Rd to Slant Rd	Marrabel	Rural High Use Spray Seal Surface - Lower Layer	2016-17	60	$18,626
15998	00477005	Rural Sealed Lower Surface	Surface Lower Layer - Outa/Wurta Rd (005) from Muanu Rd to Rundles Rd Nth	Boconnoc Park	Rural Normal Use Spray Seal Surface - Lower Layer	2016-17	60	$11,471
15907	00754010	Rural Sealed Lower Surface	Surface Lower Layer - Woodlands Brae Rd (010) from Start of Seal to Muanu Rd	Boconnoc Park	Rural Short Section Spray Seal Surface - Lower Layer	2016-17	60	$332
3892	00169030	Town Sealed Upper Surface	Surface Upper Layer - Elder St (030) from Arthur St to Archer St	Auburn	Township Spray Seal Surface - Upper Layer	2016-17	20	$3,338
3811	00405005	Town Sealed Upper Surface	Surface Short Life Layer - Michael Ct (005) from Michael St to End	Clare	Township Hotmix Bitumen Surface - Short Life Layer	2016-17	25	$35,220
4559	00419025	Rural Sealed Surface	Surface - Mintaro-Manoora Rd (025) from Farm Driveway at RRD 5220 to Start of Seal		Rural Normal Use Spray Seal Surface - Upper Layer & Lower Layer	2016-17	20	$47,275
4560	00419015	Rural Sealed Surface	Surface - Mintaro-Manoora Rd (015) from Pugsleys Rd to Road Reserve at RRD 3920		Rural Normal Use Spray Seal Surface - Upper Layer & Lower Layer	2016-17	20	$52,548
4174	00007005	Rural Sheeted Wearing Surface	Wearing Surface - Alma Rd (005) from Range Rd to Stockport-Giles Corner Rd	Alma	Rural Class 1 Average Material Sheeted Wearing Surface	2016-17	9	$57,715
4561	00064010	Rural Sheeted Wearing Surface	Wearing Surface - Blocks Rd (Leasingham) (010) from Bend at RRD 2320 to Horrocks Hwy	Auburn	Rural Class 2a Average Material Sheeted Wearing Surface	2016-17	14	$13,253
15643	00065015	Rural Sheeted Wearing Surface	Wearing Surface - Blocks Rd (Riverton) (015) from Farm Driveway at RRD 2730 to Road Reserve at RRD 3570	Riverton	Rural Class 2b Average Material Sheeted Wearing Surface	2016-17	14	$10,447
15705	00143005	Rural Sheeted Wearing Surface	Wearing Surface - Dame St (005) from Blyth Rd to Mine St	Armagh	Rural Class 2b Average Material Sheeted Wearing Surface	2016-17	14	$2,232
4721	00143010	Rural Sheeted Wearing Surface	Wearing Surface - Dame St (010) from Mine St to St Patricks Tce	Armagh	Rural Class 2b Average Material Sheeted Wearing Surface	2016-17	14	$1,761
4749	00149005	Rural Sheeted Wearing Surface	Wearing Surface - Diagonal Rd (North) (005) from Bennys Hill Rd to Spring Gully Rd	Emu Flat	Rural Class 2b Average Material Sheeted Wearing Surface	2016-17	14	$5,667
4799	00158010	Rural Sheeted Wearing Surface	Wearing Surface - Dudley Rd (010) from End of Seal to Pearson Rd	Hill River	Rural Class 2a Average Material Sheeted Wearing Surface	2016-17	14	$8,934
4262	00180015	Rural Sheeted Wearing Surface	Wearing Surface - Ettrick Rd (015) from Hondows Rd to Blazes Rd	Riverton	Rural Class 2b Average Material Sheeted Wearing Surface	2016-17	14	$20,162
4235	00180025	Rural Sheeted Wearing Surface	Wearing Surface - Ettrick Rd (025) from Greenslades Rd to Saddleworth Rd	Saddleworth	Rural Class 2a Average Material Sheeted Wearing Surface	2016-17	14	$26,564
4636	00193005	Rural Sheeted Wearing Surface	Wearing Surface - Flagstaff Rd (005) from Barrier Hwy to Fairview Rd	Black Springs	Rural Class 2a Poor Material Sheeted Wearing Surface	2016-17	11	$19,899
4310	00202015	Rural Sheeted Wearing Surface	Wearing Surface - Frederick Rd (015) from Rehder Rd to Tothill Creek Rd	Tarnma	Rural Class 2a Poor Material Sheeted Wearing Surface	2016-17	11	$20,925
4339	00224015	Rural Sheeted Wearing Surface	Wearing Surface - Golf Course Rd (Saddleworth) (015) from Klems Rd to Hentschke Rd	Saddleworth	Rural Class 2a Average Material Sheeted Wearing Surface	2016-17	14	$24,781
4566	00231005	Rural Sheeted Wearing Surface	Wearing Surface - Great Northern Rd (005) from Leasingham Rd to Start of Seal	Leasingham	Rural Class 2b Average Material Sheeted Wearing Surface	2016-17	14	$20,977

Asset ID	Spatial ID	Sub Category	Asset Description	Location	Asset Type	Planned Renewal Year	Useful Life (years)	Renewal Cost ($)
15677	00557005	Rural Sheeted Wearing Surface	Wearing Surface - Garryowen Rd (005) from Riverton Rd to Road Reserve at RRD 1560	Riverton	Rural Class 2a Excellent Material Sheeted Wearing Surface	2016-17	22	$30,998
4618	00339005	Rural Sheeted Wearing Surface	Wearing Surface - Koonoona Rd (005) from Council Boundary (North) to Black Springs Rd	Black Springs	Rural Class 2a Poor Material Sheeted Wearing Surface	2016-17	11	$51,695
4533	00383005	Rural Sheeted Wearing Surface	Wearing Surface - Marydale Rd (005) from Brothers Hill Rd to Moores Rd	Auburn	Rural Class 2b Poor Material Sheeted Wearing Surface	2016-17	11	$14,447
4722	00418005	Rural Sheeted Wearing Surface	Wearing Surface - Mine St (005) from Hicks Rd to Dame St	Armagh	Rural Class 2b Average Material Sheeted Wearing Surface	2016-17	14	$5,201
4549	00427010	Rural Sheeted Wearing Surface	Wearing Surface - Moores Rd (010) from Freeman Rd to Marydale Rd	Auburn	Rural Class 2a Average Material Sheeted Wearing Surface	2016-17	14	$20,263
4597	00436010	Rural Sheeted Wearing Surface	Wearing Surface - Mt Horrocks Rd (010) from Horrocks Hwy to Great Northern Rd	Watervale	Rural Class 2b Average Material Sheeted Wearing Surface	2016-17	14	$7,476
4595	00436015	Rural Sheeted Wearing Surface	Wearing Surface - Mt Horrocks Rd (015) from Great Northern Rd to Springvale Rd	Watervale	Rural Class 2b Average Material Sheeted Wearing Surface	2016-17	14	$6,897
4673	00437040	Rural Sheeted Wearing Surface	Wearing Surface - Mt Rufus Rd (040) from Hentschke Rd to Road Reserve at RRD 9065	Polish Hill River	Rural Class 2a Average Material Sheeted Wearing Surface	2016-17	14	$6,107
4145	00463010	Rural Sheeted Wearing Surface	Wearing Surface - Observatory Rd (010) from End of Seal to Un-named Rd	Stockport	Rural Class 2a Poor Material Sheeted Wearing Surface	2016-17	11	$8,627
4858	00463015	Rural Sheeted Wearing Surface	Wearing Surface - Observatory Rd (015) from Un-named Rd to Bend at 70m Sth of Farm Driveway	Stockport	Rural Class 2b Poor Material Sheeted Wearing Surface	2016-17	11	$16,864
4814	00491005	Rural Sheeted Wearing Surface	Wearing Surface - Pearson Rd (005) from Dudley Rd to Hilltown Rd	Hill River	Rural Class 2a Average Material Sheeted Wearing Surface	2016-17	14	$46,510
4541	00502010	Rural Sheeted Wearing Surface	Wearing Surface - Pine Creek Rd (North) (010) from Dixon Rd to Vogts Rd	Manoora	Rural Class 2b Average Material Sheeted Wearing Surface	2016-17	14	$17,928
4661	00509015	Rural Sheeted Wearing Surface	Wearing Surface - Polish Hill Rd (015) from End of Seal to Blue Stone Rd	Polish Hill River	Rural Class 2b Average Material Sheeted Wearing Surface	2016-17	14	$11,200
4677	00509020	Rural Sheeted Wearing Surface	Wearing Surface - Polish Hill Rd (020) from Blue Stone Rd to Mt Rufus Rd	Polish Hill River	Rural Class 2a Average Material Sheeted Wearing Surface	2016-17	14	$30,213
4472	00521015	Rural Sheeted Wearing Surface	Wearing Surface - Priests Rd (015) from Blatchford Rd to Sandows Rd	Mintaro	Rural Class 2b Average Material Sheeted Wearing Surface	2016-17	14	$12,360
4376	00522005	Rural Sheeted Wearing Surface	Wearing Surface - Priors Rd (005) from Curio Rd to Orana Rd	Marrabel	Rural Class 2b Poor Material Sheeted Wearing Surface	2016-17	11	$18,415
4329	00522010	Rural Sheeted Wearing Surface	Wearing Surface - Priors Rd (010) from Orana Rd to Roehr Rd	Marrabel	Rural Class 2b Poor Material Sheeted Wearing Surface	2016-17	11	$15,086
4368	00522015	Rural Sheeted Wearing Surface	Wearing Surface - Priors Rd (015) from Roehr Rd to Council Boundary (South)	Tarnma	Rural Class 2b Poor Material Sheeted Wearing Surface	2016-17	11	$10,680
4504	00531015	Rural Sheeted Wearing Surface	Wearing Surface - Quondong Rd (015) from Sunnyside Rd to Saddleworth Rd	Auburn	Rural Class 2a Average Material Sheeted Wearing Surface	2016-17	14	$32,472
13542	00536010	Rural Sheeted Wearing Surface	Surface - Range Rd (East) (010) from Powerline South Rd to Main Road 45	Marrabel	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2016-17	22	$19,582
4821	00558005	Rural Sheeted Wearing Surface	Surface - Riverview Rd (005) from Smart Rd to Callery Rd	Hilltown	Rural Class 3a Excellent Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2016-17	30	$52,148
4118	00570005	Rural Sheeted Wearing Surface	Wearing Surface - Rubbish Tip Rd (005) from Horrocks Hwy to Rubbish Tip Entrance	Rhynie	Rural Class 2a Average Material Sheeted Wearing Surface	2016-17	14	$10,802
4206	00573050	Rural Sheeted Wearing Surface	Wearing Surface - Ryelands Rd (050) from Ballard Rd to Riverton-Marrabel Rd	Riverton	Rural Class 2a Average Material Sheeted Wearing Surface	2016-17	14	$35,181
4694	00632005	Rural Sheeted Wearing Surface	Wearing Surface - St Patricks Tce (005) from Dame St to St Georges Tce	Armagh	Rural Class 2b Average Material Sheeted Wearing Surface	2016-17	14	$2,138
4667	00656005	Rural Sheeted Wearing Surface	Wearing Surface - Surrey Ln (005) from Horrocks Hwy to Pawelski Rd	Penwortham	Rural Class 2b Average Material Sheeted Wearing Surface	2016-17	14	$3,844
4229	00679005	Rural Sheeted Wearing Surface	Wearing Surface - The Link Rd (005) from Horrocks Hwy to Barrier Hwy	Giles Corner	Rural Class 2a Average Material Sheeted Wearing Surface	2016-17	14	$20,519
4469	00693005	Rural Sheeted Wearing Surface	Wearing Surface - Tothill Belt Rd (005) from Tothill Creek Rd to Williams Rd	Tothill Creek	Rural Class 2a Poor Material Sheeted Wearing Surface	2016-17	11	$40,388
4470	00693010	Rural Sheeted Wearing Surface	Wearing Surface - Tothill Belt Rd (010) from Williams Rd to Braebrook Rd	Tothill Creek	Rural Class 2a Poor Material Sheeted Wearing Surface	2016-17	11	$35,752
4389	00693015	Rural Sheeted Wearing Surface	Wearing Surface - Tothill Belt Rd (015) from Braebrook Rd to Braewood Rd	Tothill Creek	Rural Class 2a Poor Material Sheeted Wearing Surface	2016-17	11	$38,994
4319	00694010	Rural Sheeted Wearing Surface	Wearing Surface - Tothill Creek Rd (010) from Salt Creek Rd to Frederick Rd	Tothill Creek	Rural Class 2a Poor Material Sheeted Wearing Surface	2016-17	11	$28,891
4344	00694005	Rural Sheeted Wearing Surface	Wearing Surface - Tothill Creek Rd (005) from Tothill Belt Rd to Salt Creek Rd	Tothill Creek	Rural Class 2a Poor Material Sheeted Wearing Surface	2016-17	11	$47,979
4545	00713010	Rural Sheeted Wearing Surface	Wearing Surface - Vogts Rd (010) from 2345m from Barrier Hwy to 3424m from Barrier Hwy	Saddleworth	Rural Class 2a Poor Material Sheeted Wearing Surface	2016-17	11	$18,731
4520	00714020	Rural Sheeted Wearing Surface	Wearing Surface - Wakefield Rd (020) from Upper Skilly Rd to Lower Skilly Rd	Watervale	Rural Class 2a Average Material Sheeted Wearing Surface	2016-17	14	$19,817
4698	00754005	Rural Sheeted Wearing Surface	Wearing Surface - Woodlands Brae Rd (005) from Council Boundary (West) to Start of Seal	Boconnoc Park	Rural Class 2a Average Material Sheeted Wearing Surface	2016-17	14	$16,584
16451	00007005	Rural Sheeted Lower Base & Earthworks	Lower Base - Alma Rd (005) from Range Rd to Stockport-Giles Corner Rd	Alma	Rural Class 1 Average Material Sheeted Lower Base & Earthworks	2016-17	27	$53,178
16551	00064010	Rural Sheeted Lower Base & Earthworks	Lower Base - Blocks Rd (Leasingham) (010) from Bend at RRD 2320 to Horrocks Hwy	Auburn	Rural Class 2a Average Material Sheeted Lower Base & Earthworks	2016-17	42	$7,802
16799	00065015	Rural Sheeted Lower Base & Earthworks	Lower Base - Blocks Rd (Riverton) (015) from Farm Driveway at RRD 2730 to Road Reserve at RRD 3570	Riverton	Rural Class 2b Average Material Sheeted Lower Base & Earthworks	2016-17	42	$5,729
16823	00143005	Rural Sheeted Lower Base & Earthworks	Lower Base - Dame St (005) from Blyth Rd to Mine St	Armagh	Rural Class 2b Average Material Sheeted Lower Base & Earthworks	2016-17	42	$1,224
16589	00143010	Rural Sheeted Lower Base & Earthworks	Lower Base - Dame St (010) from Mine St to St Patricks Tce	Armagh	Rural Class 2b Average Material Sheeted Lower Base & Earthworks	2016-17	42	$966
16612	00149005	Rural Sheeted Lower Base & Earthworks	Lower Base - Diagonal Rd (North) (005) from Bennys Hill Rd to Spring Gully Rd	Emu Flat	Rural Class 2b Average Material Sheeted Lower Base & Earthworks	2016-17	42	$3,108
16615	00158010	Rural Sheeted Lower Base & Earthworks	Lower Base - Dudley Rd (010) from End of Seal to Pearson Rd	Hill River	Rural Class 2b Average Material Sheeted Lower Base & Earthworks	2016-17	42	$5,260
16461	00180015	Rural Sheeted Lower Base & Earthworks	Lower Base - Ettrick Rd (015) from Hondows Rd to Blazes Rd	Riverton	Rural Class 2b Average Material Sheeted Lower Base & Earthworks	2016-17	42	$11,056
16463	00180025	Rural Sheeted Lower Base & Earthworks	Lower Base - Ettrick Rd (025) from Greenslades Rd to Saddleworth Rd	Saddleworth	Rural Class 2a Average Material Sheeted Lower Base & Earthworks	2016-17	42	$15,638
16568	00193005	Rural Sheeted Lower Base & Earthworks	Lower Base - Flagstaff Rd (005) from Barrier Hwy to Fairview Rd	Black Springs	Rural Class 2a Poor Material Sheeted Lower Base & Earthworks	2016-17	33	$11,714
16483	00202015	Rural Sheeted Lower Base & Earthworks	Lower Base - Frederick Rd (015) from Rehder Rd to Tothill Creek Rd	Tarnma	Rural Class 2a Poor Material Sheeted Lower Base & Earthworks	2016-17	33	$12,318
16484	00224015	Rural Sheeted Lower Base & Earthworks	Lower Base - Golf Course Rd (Saddleworth) (015) from Klems Rd to Hentschke Rd	Saddleworth	Rural Class 2a Average Material Sheeted Lower Base & Earthworks	2016-17	42	$14,589
16546	00231005	Rural Sheeted Lower Base & Earthworks	Lower Base - Great Northern Rd (005) from Leasingham Rd to Start of Seal	Leasingham	Rural Class 2a Average Material Sheeted Lower Base & Earthworks	2016-17	42	$11,504
16811	00557005	Rural Sheeted Lower Base & Earthworks	Lower Base - Garryowen Rd (005) from Riverton Rd to Road Reserve at RRD 1560	Riverton	Rural Class 2a Excellent Material Sheeted Lower Base & Earthworks	2016-17	66	$18,249
16565	00339005	Rural Sheeted Lower Base & Earthworks	Lower Base - Koonoona Rd (005) from Council Boundary (North) to Black Springs Rd	Black Springs	Rural Class 2a Poor Material Sheeted Lower Base & Earthworks	2016-17	33	$30,433
16537	00383005	Rural Sheeted Lower Base & Earthworks	Lower Base - Marydale Rd (005) from Brothers Hill Rd to Moores Rd	Auburn	Rural Class 2b Poor Material Sheeted Lower Base & Earthworks	2016-17	33	$7,923
16595	00418005	Rural Sheeted Lower Base & Earthworks	Lower Base - Mine St (005) from Hicks Rd to Dame St	Armagh	Rural Class 2b Average Material Sheeted Lower Base & Earthworks	2016-17	42	$2,852
16535	00427010	Rural Sheeted Lower Base & Earthworks	Lower Base - Moores Rd (010) from Freeman Rd to Marydale Rd	Auburn	Rural Class 2a Average Material Sheeted Lower Base & Earthworks	2016-17	42	$11,929
16553	00436010	Rural Sheeted Lower Base & Earthworks	Lower Base - Mt Horrocks Rd (010) from Horrocks Hwy to Great Northern Rd	Watervale	Rural Class 2b Average Material Sheeted Lower Base & Earthworks	2016-17	42	$4,100
16555	00436015	Rural Sheeted Lower Base & Earthworks	Lower Base - Mt Horrocks Rd (015) from Great Northern Rd to Springvale Rd	Watervale	Rural Class 2b Average Material Sheeted Lower Base & Earthworks	2016-17	42	$3,782
16577	00437040	Rural Sheeted Lower Base & Earthworks	Lower Base - Mt Rufus Rd (040) from Hentschke Rd to Road Reserve at RRD 9065	Polish Hill River	Rural Class 2a Average Material Sheeted Lower Base & Earthworks	2016-17	42	$3,595
16450	00463010	Rural Sheeted Lower Base & Earthworks	Lower Base - Observatory Rd (010) from End of Seal to Un-named Rd	Stockport	Rural Class 2a Poor Material Sheeted Lower Base & Earthworks	2016-17	33	$5,079
16680	00463015	Rural Sheeted Lower Base & Earthworks	Lower Base - Observatory Rd (015) from Un-named Rd to Bend at 70m Sth of Farm Driveway	Stockport	Rural Class 2b Poor Material Sheeted Lower Base & Earthworks	2016-17	33	$9,248
16616	00491005	Rural Sheeted Lower Base & Earthworks	Lower Base - Pearson Rd (005) from Dudley Rd to Hilltown Rd	Hill River	Rural Class 2a Average Material Sheeted Lower Base & Earthworks	2016-17	42	$27,381
16534	00502010	Rural Sheeted Lower Base & Earthworks	Lower Base - Pine Creek Rd (North) (010) from Dixon Rd to Vogts Rd	Manoora	Rural Class 2b Average Material Sheeted Lower Base & Earthworks	2016-17	42	$9,831
16584	00509015	Rural Sheeted Lower Base & Earthworks	Lower Base - Polish Hill Rd (015) from End of Seal to Blue Stone Rd	Polish Hill River	Rural Class 2b Average Material Sheeted Lower Base & Earthworks	2016-17	42	$6,142
16575	00509020	Rural Sheeted Lower Base & Earthworks	Lower Base - Polish Hill Rd (020) from Blue Stone Rd to Mt Rufus Rd	Polish Hill River	Rural Class 2a Average Material Sheeted Lower Base & Earthworks	2016-17	42	$17,787
16505	00521015	Rural Sheeted Lower Base & Earthworks	Lower Base - Priests Rd (015) from Blatchford Rd to Sandows Rd	Mintaro	Rural Class 2b Average Material Sheeted Lower Base & Earthworks	2016-17	42	$6,778
16488	00522005	Rural Sheeted Lower Base & Earthworks	Lower Base - Priors Rd (005) from Curio Rd to Orana Rd	Marrabel	Rural Class 2b Poor Material Sheeted Lower Base & Earthworks	2016-17	33	$10,098
16481	00522010	Rural Sheeted Lower Base & Earthworks	Lower Base - Priors Rd (010) from Orana Rd to Roehr Rd	Marrabel	Rural Class 2b Poor Material Sheeted Lower Base & Earthworks	2016-17	33	$8,273
16489	00522015	Rural Sheeted Lower Base & Earthworks	Lower Base - Priors Rd (015) from Roehr Rd to Council Boundary (South)	Tarnma	Rural Class 2b Poor Material Sheeted Lower Base & Earthworks	2016-17	33	$5,857
16520	00531015	Rural Sheeted Lower Base & Earthworks	Lower Base - Quondong Rd (015) from Sunnyside Rd to Saddleworth Rd	Auburn	Rural Class 2a Average Material Sheeted Lower Base & Earthworks	2016-17	42	$19,117
16448	00570005	Rural Sheeted Lower Base & Earthworks	Lower Base - Rubbish Tip Rd (005) from Horrocks Hwy to Rubbish Tip Entrance	Rhynie	Rural Class 2a Average Material Sheeted Lower Base & Earthworks	2016-17	42	$6,359
16453	00573050	Rural Sheeted Lower Base & Earthworks	Lower Base - Ryelands Rd (050) from Ballard Rd to Riverton-Marrabel Rd	Riverton	Rural Class 2a Average Material Sheeted Lower Base & Earthworks	2016-17	42	$20,711
16594	00632005	Rural Sheeted Lower Base & Earthworks	Lower Base - St Patricks Tce (005) from Dame St to St Georges Tce	Armagh	Rural Class 2b Average Material Sheeted Lower Base & Earthworks	2016-17	42	$1,172
16582	00656005	Rural Sheeted Lower Base & Earthworks	Lower Base - Surrey Ln (005) from Horrocks Hwy to Pawelski Rd	Penwortham	Rural Class 2b Average Material Sheeted Lower Base & Earthworks	2016-17	42	$2,108
16455	00679005	Rural Sheeted Lower Base & Earthworks	Lower Base - The Link Rd (005) from Horrocks Hwy to Barrier Hwy	Giles Corner	Rural Class 2a Average Material Sheeted Lower Base & Earthworks	2016-17	42	$12,079
16495	00693005	Rural Sheeted Lower Base & Earthworks	Lower Base - Tothill Belt Rd (005) from Tothill Creek Rd to Williams Rd	Tothill Creek	Rural Class 2a Poor Material Sheeted Lower Base & Earthworks	2016-17	33	$23,777
16496	00693010	Rural Sheeted Lower Base & Earthworks	Lower Base - Tothill Belt Rd (010) from Williams Rd to Braebrook Rd	Tothill Creek	Rural Class 2a Poor Material Sheeted Lower Base & Earthworks	2016-17	33	$21,048
16501	00693015	Rural Sheeted Lower Base & Earthworks	Lower Base - Tothill Belt Rd (015) from Braebrook Rd to Braewood Rd	Tothill Creek	Rural Class 2a Poor Material Sheeted Lower Base & Earthworks	2016-17	33	$22,956
16491	00694010	Rural Sheeted Lower Base & Earthworks	Lower Base - Tothill Creek Rd (010) from Salt Creek Rd to Frederick Rd	Tothill Creek	Rural Class 2a Poor Material Sheeted Lower Base & Earthworks	2016-17	33	$17,009
16493	00694005	Rural Sheeted Lower Base & Earthworks	Lower Base - Tothill Creek Rd (005) from Tothill Belt Rd to Salt Creek Rd	Tothill Creek	Rural Class 2a Poor Material Sheeted Lower Base & Earthworks	2016-17	33	$28,246
16539	00713010	Rural Sheeted Lower Base & Earthworks	Lower Base - Vogts Rd (010) from 2345m from Barrier Hwy to 3424m from Barrier Hwy	Saddleworth	Rural Class 2a Poor Material Sheeted Lower Base & Earthworks	2016-17	33	$11,027
16517	00714020	Rural Sheeted Lower Base & Earthworks	Lower Base - Wakefield Rd (020) from Upper Skilly Rd to Lower Skilly Rd	Watervale	Rural Class 2a Average Material Sheeted Lower Base & Earthworks	2016-17	42	$11,666
16586	00754005	Rural Sheeted Lower Base & Earthworks	Lower Base - Woodlands Brae Rd (005) from Council Boundary (West) to Start of Seal	Boconnoc Park	Rural Class 2a Average Material Sheeted Lower Base & Earthworks	2016-17	42	$9,763
		Bridges	Simos Bridge			2016-17		$316,000
		Footpath & Kerb	Riverton - Torrens Rd			2016-17		$80,000
		Footpath & Kerb	Clare - PDTL to Ness			2016-17		$180,000
		Footpath & Kerb	Old North Road			2016-17		$36,500
		Footpath & Kerb	South St Auburn			2016-17		$50,000
		Footpath & Kerb	Sadd, Tarlee, Manoora			2016-17		$15,000

Asset ID	Spatial ID	Sub Category	Asset Description	Location	Asset Type	Planned Renewal Year	Useful Life (years)	Renewal Cost ($)
		Footpath & Kerb	Main Nth Rd			2016-17		$5,000
		Footpath & Kerb	Blyth Road Clare			2016-17		$80,000
						2016-17 Sub-Total		**$2,576,376**
3629	00370015	Rural Seal Upper Layer	Main Road 45 (015) from Slant Rd to Range Rd - Reconstruction on failing section	Marrabel	Rural High Use Spray Seal Surface - Upper Layer	2017-18	20	$250,841
3684	00130020	Rural Seal Upper Layer	Copper Ore Rd (020) from Miss Martin Rd to Betterson Rd - Widening	Farrell Flat	Rural High Use Spray Seal Surface - Upper Layer	2017-18	20	$80,029
		Rural Seal Upper Layer	Waterloo Road - Powerline North Road to MR45 - Pavement Failure and re-seal	Waterloo	Rural High Use Spray Seal Surface - Upper Layer	2017-18		$67,592
		Rural Seal Upper Layer	Barinia Road - Pavement Repairs Between Calcania & Gaelic Cemetery plus Calcania Intersection	Stanly Flat	Rural High Use Spray Seal Surface - Upper Layer	2017-18		$15,000
		Rural Seal Upper Layer	Spring Farm Road - From Quarry Road to Farrell Flat Road - Various locations - Pavement Repairs approx m2	Clare	Rural High Use Spray Seal Surface - Upper Layer	2017-18		$20,000
4079	00134015	Township Seal Upper Layer	Crawford Ave (015) from Ford to Girth St	Saddleworth	Township Spray Seal Surface - Upper Layer	2017-18	20	$4,858
4077	00134005	Township Seal Upper Layer	Crawford Ave (005) from Belvidere Rd to Newark St - Include Pavement repairs	Saddleworth	Township Spray Seal Surface - Upper Layer	2017-18	20	$15,051
		Township Seal Upper Layer	Crawford Ave (010) from Newark St to Ford	Saddleworth	Township Spray Seal Surface - Upper Layer	2017-18	20	$12,135
		Township Seal Upper Layer	Bridle Street Saddleworth - Profiling and 40mm hotmix overlay	Saddleworth	Township Spray Seal Surface - Upper Layer	2017-18		$25,600
		Township Seal Upper Layer	White Hut Road - Profiling failures / surface correction - 40mm hotmix - FF Road to Waller Drive	Clare	Township Spray Seal Surface - Upper Layer	2017-18		$96,000
		Township Seal Upper Layer	Brothers Hill Road - Intersection with Barrier HWY - Profiling and 80mm hot mix - Possible 50/50 Split DPTI	Manoora	Township Spray Seal Surface - Upper Layer	2017-18		$15,000
		Township Seal Upper Layer	MinMan Road - Intersection with Barrier HWY - Profiling and 80mm hot mix - Possible 50/50 Split DPTI	Manoora	Township Spray Seal Surface - Upper Layer	2017-18		$7,500
		Township Seal Upper Layer	Brothers Hill Road - Edge Reinstatement from Flaxmill road to Elder street - 2 Coat Seal	Auburn	Township Spray Seal Surface - Upper Layer	2017-18		$18,750
		Township Seal Upper Layer	Kelly Street / Barnard Street Intersection - Profiling and 40mm Hotmix pavement failures	Clare	Township Spray Seal Surface - Upper Layer	2017-18		$6,160
4147	00543005	Rural Sheeted Surface	Surface - Rhodes Rd (005) from Horrocks Hwy to Bethel Rd	Stockport	Rural Class 2a Poor Material Sheeted Wearing Surface	2017-18	11	$75,170
4159	00550010	Rural Sheeted Surface	Surface - River Rd (Tarlee) (010) from End of Seal to Bond St	Tarlee	Rural Class 3a Poor Material Sheeted Wearing Surface (Incl Lower Base & Earthworks)	2017-18	15	$22,251
4176	00122005	Rural Sheeted Surface	Surface - Claytons Rd (005) from Range Rd to Stockport-Giles Corner Rd	Stockport	Rural Class 3b Poor Material Sheeted Wearing Surface (Incl Lower Base & Earthworks)	2017-18	20	$27,065
4222	00023010	Rural Sheeted Surface	Surface - Ashton Rd (010) from End of Seal to Old Main North Rd	Saddleworth	Rural Class 3a Poor Material Sheeted Wearing Surface (Incl Lower Base & Earthworks)	2017-18	15	$31,578
4257	00180020	Rural Sheeted Surface	Surface - Ettrick Rd (020) from Blazes Rd to Greenslades Rd	Riverton	Rural Class 2a Average Material Sheeted Wearing Surface	2017-18	14	$36,323
4269	00358010	Rural Sheeted Surface	Surface - Lookout Rd (Nth of Riverton) (010) from From Barrier HWY to Hentschkes Rd	Riverton	Rural Class 2b Poor Material Sheeted Wearing Surface	2017-18	11	$31,956
		Rural Sheeted Surface	Surface - Lookout Rd (Nth of Riverton) (010) from Hentschkes Rd to Garryowen Rd	Riverton	Rural Class 2b Poor Material Sheeted Wearing Surface	2017-18	11	$13,911
4271	00229005	Rural Sheeted Surface	Surface - Granny Creek Rd (005) from Salter Springs Rd to Road Reserve at RRD 2000	Salter Springs	Rural Class 3c Poor Material Sheeted Wearing Surface (Incl Lower Base & Earthworks)	2017-18	25	$41,861
4273	00469005	Rural Sheeted Surface	Surface - Old Main Rd North (005) from Main North Rd to Un-Named Rd	Riverton	Rural Class 3c Poor Material Sheeted Wearing Surface (Incl Lower Base & Earthworks)	2017-18	25	$19,149
4318	00202005	Rural Sheeted Surface	Surface - Frederick Rd (005) from Curio Rd to Tarnma Rd	Tarnma	Rural Class 2a Poor Material Sheeted Wearing Surface	2017-18	11	$60,057
4342	00476010	Rural Sheeted Surface	Surface - Orana Rd (010) from Road Reserve at RRD 2090 to Road Reserve at RRD 2690	Marrabel	Rural Class 3c Poor Material Sheeted Wearing Surface (Incl Lower Base & Earthworks)	2017-18	25	$21,000
4372	00476005	Rural Sheeted Surface	Surface - Orana Rd (005) from Marrabel Rd to Road Reserve at RRD 2090	Marrabel	Rural Class 3a Poor Material Sheeted Wearing Surface (Incl Lower Base & Earthworks)	2017-18	15	$43,949
4438	00518015	Rural Sheeted Surface	Surface - Powerline North Rd (015) from Pindari Rd to Mollers Gap Rd	Waterloo	Rural Class 3a Average Material Sheeted Wearing Surface (Incl Lower Base & Earthworks)	2017-18	22	$16,489
		Rural Sheeted Surface	Surface - Powerline North Rd (015) from Pindari Rd to Schwartz Rd	Waterloo	Rural Class 3a Average Material Sheeted Wearing Surface (Incl Lower Base & Earthworks)	2017-18	22	$20,144
4485	00585005	Rural Sheeted Surface	Surface - Schmerl Rd (005) from Horricks Hwy to Kench Rd	Auburn	Rural Class 3a Average Material Sheeted Wearing Surface (Incl Lower Base & Earthworks)	2017-18	22	$20,391
4490	00345005	Rural Sheeted Surface	Surface - Lamkins Rd (005) from Schmerl Rd to Baum Rd	Auburn	Rural Class 3b Average Material Sheeted Wearing Surface (Incl Lower Base & Earthworks)	2017-18	27	$35,795
4535	00321015	Rural Sheeted Surface	Surface - Kench Rd (015) from English Rd to Saddleworth Rd	Auburn	Rural Class 3b Poor Material Sheeted Wearing Surface (Incl Lower Base & Earthworks)	2017-18	20	$17,447
4537	00321010	Rural Sheeted Surface	Surface - Kench Rd (010) from River Rd to English Rd	Auburn	Rural Class 3b Poor Material Sheeted Wearing Surface (Incl Lower Base & Earthworks)	2017-18	20	$11,390
4574	00478005	Rural Sheeted Surface	Surface - Overton Rd (005) from Brothers Hill Rd to Winery Rd	Auburn	Rural Class 3c Average Material Sheeted Wearing Surface (Incl Lower Base & Earthworks)	2017-18	32	$47,408
4647	00119005	Rural Sheeted Surface	Surface - Clampett Rd (005) from Farrell Flat Rd to Dunns Range Rd	Hill River	Rural Class 3a Average Material Sheeted Wearing Surface (Incl Lower Base & Earthworks)	2017-18	22	$40,043
4652	00431010	Rural Sheeted Surface	Surface - Morrison Rd (010) from Fairfield Rd to Farm Driveway 970m E of Fairfield Rd	Penwortham	Rural Class 2a Average Material Sheeted Wearing Surface	2017-18	14	$18,346
4674	00181005	Rural Sheeted Surface	Surface - Fairfield Rd (005) from Morrison Rd to Pearce Rd	Penwortham	Rural Class 2b Average Material Sheeted Wearing Surface	2017-18	14	$27,289
4681	00325005	Rural Sheeted Surface	Surface - Kimber Rd (005) from Horrocks Highway to Start of Seal	Stanley Flat	Rural Class 2b Excellent Material Sheeted Wearing Surface	2017-18	22	$12,453
4682	00325015	Rural Sheeted Surface	Surface - Kimber Rd (015) from End of Seal to Square Mile Rd	Stanley Flat	Rural Class 2b Excellent Material Sheeted Wearing Surface	2017-18	22	$9,720
4687	00439010	Rural Sheeted Surface	Surface - Muanu Rd (010) from Jacobs Range Rd to Woodlands Brae Rd	Boconnoc Park	Rural Class 2a Average Material Sheeted Wearing Surface	2017-18	14	$50,875
4732	00049020	Rural Sheeted Surface	Surface - Benbournie Rd (020) from Basham Rd to MacDonald Rd	Armagh	Rural Class 2a Excellent Material Sheeted Wearing Surface	2017-18	22	$48,892
4735	00049015	Rural Sheeted Surface	Surface - Benbournie Rd (015) from End of Seal at Emu Rock Rd to Basham Rd	Stanley Flat	Rural Class 2b Excellent Material Sheeted Wearing Surface	2017-18	22	$8,563
4739	00271025	Rural Sheeted Surface	Surface - Hicks Rd (025) from end of seal to Bend at RRD 1765	Armagh	Rural Class 2b Excellent Material Sheeted Wearing Surface	2017-18	22	$28,080
4794	00568005	Rural Sheeted Surface	Surface - Rossmoore Rd (005) from Lookout Rd to Stradbrooke Rd	Benbournie	Rural Class 3a Excellent Material Sheeted Wearing Surface (Incl Lower Base & Earthworks)	2017-18	30	$36,639
4800	00253015	Rural Sheeted Surface	Surface - Harvey Hwy (015) from End of Seal at Bridge to Lehman Creek Rd	Hilltown	Rural Class 1 Excellent Material Sheeted Wearing Surface	2017-18	12	$45,766
4815	00613010	Rural Sheeted Surface	Surface - Smart Rd (010) from End of Seal to End	Hilltown	Rural Class 3a Excellent Material Sheeted Wearing Surface (Incl Lower Base & Earthworks)	2017-18	30	$59,074
4854	00563010	Rural Sheeted Surface	Surface - Robins Rd (010) from Farm Driveway at RRD 2475 to Hills Rd	Tarlee	Rural Class 3a Poor Material Sheeted Wearing Surface (Incl Lower Base & Earthworks)	2017-18	15	$43,742
4866	00371005	Rural Sheeted Surface	Surface - Main St / Black Springs Road (Black Springs) (005) from Black Springs Rd to Old Burra Rd at RRD 920	Black Springs	Rural Class 2a Poor Material Sheeted Wearing Surface	2017-18	11	$54,600
4792a	00096020	Rural Sheeted Surface	Surface - Calcania Rd (020) from RRD 3720 to Cornwell Rd	Barinia	Rural Class 3a Average Material Sheeted Wearing Surface (Incl Lower Base & Earthworks)	2017-18	22	$87,392
		Rural Sheeted Surface	Surface - Old Manoora Road (015) from Pluckahahns Road to Steelton Road	Saddleworth	Rural Class 2a Average Material Sheeted Wearing Surface	2017-18		$32,760
		Rural Sheeted Surface	Surface - Bruce Road (025) - From Ettrick road to Peters Hill Road	Riverton	Rural Class 2a Excellent Material Sheeted Wearing Surface	2017-18		$81,900
		Rural Sheeted Surface	Surface - Quarry Road (Marrabel) (005) - From Curio Road to Tarma Road	Marrabel	Rural Class 2a Excellent Material Sheeted Wearing Surface	2017-18		$68,568
		Rural Sheeted Surface	Surface - Light River Road (005) From Rowett Road to Tothill Road	Marrabel	Rural Class 3b Average Material Sheeted Wearing Surface (Incl Lower Base & Earthworks)	2017-18		$36,434
		Rural Sheeted Surface	Surface - Winders Road (005) From Barrier Hwy To Cemetery Road	Black Springs	Rural Class 1 Excellent Material Sheeted Wearing Surface	2017-18		$52,224
		Rural Sheeted Surface	Surface - Betterson Road from Copper Ore road to Toringa Road	Mintaro	Rural Class 1 Excellent Material Sheeted Wearing Surface	2017-18		$34,125
4883	00434015	Township Sheeted Surface	Road Alignment-Meller Street, Auburn Road currently on private property	Auburn	Township Sheeted Wearing Surface	2017-18		$9,600
		Floodways&Fords	Riverview Road	Marrabel	Concrete Floodway Repairs	2017-18		$15,000
		Bridges	Ryelands Bridge - in WIP from 2014-15	Tarlee	Concrete Box Culverts	2017-18		$35,000
		Bridges	Morris Bridge - Steelton Rd - Pending Federal Grand Funding	Saddleworth	Concrete Box Culverts	2017-18		$363,000
			Simmos Bridge - Completion of Pavement works from 16/17	Saddleworth		2017-18		$30,000
6334	710005	Kerbs	Left Kerb & Watertable - Victoria Rd (005) from Main North Rd to Albert St - Pat Section near Korinia	Clare	Upright Concrete Kerb & Watertable	2017-18	70	$20,000
		Kerbs	Main North Road Clare - Powell St to Paxton Street - Cost estimate from dilapidation report 16/17	Clare	Hi Upright Stone Kerb & Watertable	2017-18		$85,000
		Footpath Surface	Heath Drive / Beal Drive Subdivision (developer contribution paid)	Clare	Concrete Footpath	2017-18		$47,586
		Footpath Surface	Torrens Road Riverton - From Hanniford Avenue to Eliot St - Upgrades	Riverton	Concrete Footpath & Kerb	2017-18		$130,000
		Footpath Surface	Main North Road Clare (CBD) - Ness St to Subway - Upgrades	Clare	Concrete Footpath & Kerb	2017-18		$260,000
						2017-18 Sub-Total		**$3,100,518**
3613	00293050	Rural Sealed Upper Surface	Surface Upper Layer - Hughes Park Rd (050) from Start of Seal at RRD 5065 to End of Seal at RRD 5115	Penwortham	Rural Short Section Spray Seal Surface - Upper Layer	2018-19	20	$1,392
3722	00738010	Rural Sealed Upper Surface	Surface Upper Layer - White Hut Rd (010) from Melrose Ave to Waller Dr	Clare	Rural High Use Spray Seal Surface - Upper Layer	2018-19	20	$8,770
3721	00738015	Rural Sealed Upper Surface	Surface Upper Layer - White Hut Rd (015) from Waller Dr to Jarman Cr	Clare	Rural High Use Spray Seal Surface - Upper Layer	2018-19	20	$22,273
3784	00390005	Town Sealed Upper Surface	Surface Upper Layer - McBride Ln (005) from Union St to End	Clare	Township Spray Seal Surface - Upper Layer	2018-19	20	$2,772
3815	00686005	Town Sealed Upper Surface	Surface Upper Layer - Tilbrook Ave (005) from Agnes St to End	Clare	Township Spray Seal Surface - Upper Layer	2018-19	20	$10,116
3810	00718020	Town Sealed Upper Surface	Surface Upper Layer - Warenda Rd (020) from Wendouree Rd East to End of Seal at Tim Adams Wines	Clare	Township Spray Seal Surface - Upper Layer	2018-19	20	$7,246
4053	00278005	Town Sealed Upper Surface	Surface Upper Layer - Hill St (Mintaro) (005) from Young St to Burra St	Mintaro	Township Spray Seal Surface - Upper Layer	2018-19	20	$15,672
4029	00764010	Town Sealed Upper Surface	Surface Upper Layer - Young St (Mintaro) (010) from Burra St to Kingston Rd	Mintaro	Township Spray Seal Surface - Upper Layer	2018-19	20	$14,970
4083	00534005	Town Sealed Upper Surface	Surface Upper Layer - Railway Tce (005) from Sart of Seal to End of Seal (North)	Riverton	Township Spray Seal Surface - Upper Layer	2018-19	20	$5,340
4075	00657005	Town Sealed Upper Surface	Surface Upper Layer - Swinden St (005) from Washington Rd to Masters Rd	Riverton	Township Spray Seal Surface - Upper Layer	2018-19	20	$27,320
3992	00213020	Town Sealed Upper Surface	Surface Upper Layer - Gilbert St (Tarlee) (020) from Prescott St to Hallett St	Tarlee	Township Spray Seal Surface - Upper Layer	2018-19	20	$6,050
4023	00528005	Town Sealed Upper Surface	Surface Upper Layer - Quelltaler Rd (005) from Main North Rd to Great Northen Rd	Watervale	Township Spray Seal Surface - Upper Layer	2018-19	20	$27,006
4239	00026005	Rural Sheeted Wearing Surface	Surface - Avondale Rd (005) from Horrocks Hwy to End at Private Driveway RRD 1810	Riverton	Rural Class 3a Excellent Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	30	$35,616
4402	00036015	Rural Sheeted Wearing Surface	Wearing Surface - Barton Hill Rd (015) from Old Burra Rd to Hardings Rd	Black Springs	Rural Class 1 Poor Material Sheeted Wearing Surface	2018-19	6	$6,690
4354	00047005	Rural Sheeted Wearing Surface	Surface - Belvidere Rd (Marrabel) (005) from Saddleworth Rd to Ulandi Rd	Marrabel	Rural Class 3b Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	20	$43,093
4715	00049035	Rural Sheeted Wearing Surface	Wearing Surface - Benbournie Rd (035) from Ingomar Rd to Council Boundary (West)	Benbournie	Rural Class 2b Excellent Material Sheeted Wearing Surface	2018-19	22	$6,806
4248	00060010	Rural Sheeted Wearing Surface	Surface - Blazes Rd (010) from Schulz Rd to Blocks Rd	Riverton	Rural Class 3c Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	25	$21,506

Asset ID	Spatial ID	Sub Category	Asset Description	Location	Asset Type	Planned Renewal Year	Useful Life (years)	Renewal Cost ($)
4225	00065005	Rural Sheeted Wearing Surface	Wearing Surface - Blocks Rd (Riverton) (005) from Rhynie-Marrabel Rd to Windy Hill Rd	Riverton	Rural Class 2a Average Material Sheeted Wearing Surface	2018-19	14	$25,464
4116	00069010	Rural Sheeted Wearing Surface	Surface - Bond St (010) from Fogge St to River Rd	Tarlee	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	22	$7,697
4590	00070030	Rural Sheeted Wearing Surface	Wearing Surface - Bowmans Rd (030) from Farm Driveway at RRD 8790 to Hogben Rd	Manoora	Rural Class 2a Average Material Sheeted Wearing Surface	2018-19	14	$24,501
4403	00083005	Rural Sheeted Wearing Surface	Surface - Bruhns Rd (005) from Waterloo Rd to End at Farm Driveway	Manoora	Rural Class 3b Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	27	$33,970
4497	00084010	Rural Sheeted Wearing Surface	Surface - Bryskys Hill Rd (010) from End of Seal to Mt Horrocks Rd	Watervale	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	22	$18,392
4330	00085005	Rural Sheeted Wearing Surface	Surface - Buchanan Rd (005) from Kapunda Rd to RRD 1430	Tarnma	Rural Class 3a Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	15	$24,164
4366	00085010	Rural Sheeted Wearing Surface	Surface - Buchanan Rd (010) from Kapunda Road to Council Boundary (East)	Tarnma	Rural Class 3a Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	15	$24,056
4802	00094005	Rural Sheeted Wearing Surface	Surface - Cairn Hil Rd (005) from Hilltown Rd to Weckert Rd	Hill River	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	22	$12,593
4432	00102005	Rural Sheeted Wearing Surface	Wearing Surface - Carlesruh Rd (005) from Waterloo Rd to Powerline North Rd	Waterloo	Rural Class 2b Average Material Sheeted Wearing Surface	2018-19	14	$18,793
4134	00147005	Rural Sheeted Wearing Surface	Surface - Dennis Rd (005) from North St to Tank Rd	Auburn	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	22	$18,768
4603	00184005	Rural Sheeted Wearing Surface	Surface - Farleys Rd (005) from Barrier Hwy to Cemetery Rd	Black Springs	Rural Class 3b Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	20	$30,419
4630	00184010	Rural Sheeted Wearing Surface	Surface - Farleys Rd (010) from Cemetery Rd to Whites Rd (Council Boundary)	Black Springs	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	22	$23,767
4582	00189010	Rural Sheeted Wearing Surface	Wearing Surface - Finns Rd (010) from Hean Rd to Taylors Rd	Auburn	Rural Class 2b Average Material Sheeted Wearing Surface	2018-19	14	$17,482
4602	00193010	Rural Sheeted Wearing Surface	Wearing Surface - Flagstaff Rd (010) from Fairview Rd to Road Reserve at RRD 4150	Black Springs	Rural Class 2a Average Material Sheeted Wearing Surface	2018-19	14	$52,142
4565	00195005	Rural Sheeted Wearing Surface	Wearing Surface - Flaxmill Rd (005) from Taylors Rd to Bend at Farm Driveway	Auburn	Rural Class 2b Average Material Sheeted Wearing Surface	2018-19	14	$4,594
4378	00223005	Rural Sheeted Wearing Surface	Surface - Golf Course Rd (Marrabel) (005) from Marrabel Rd to Campion Rd	Marrabel	Rural Class 3a Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	15	$19,571
4380	00223015	Rural Sheeted Wearing Surface	Surface - Golf Course Rd (Marrabel) (015) from Links Rd to Quarry Rd	Marrabel	Rural Class 3a Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	15	$19,598
4481	00269005	Rural Sheeted Wearing Surface	Wearing Surface - Herds Hill Rd (005) from Council Council Boundary (West) to Balaklava Rd	Halbury	Rural Class 2a Average Material Sheeted Wearing Surface	2018-19	14	$66,005
4397	00282005	Rural Sheeted Wearing Surface	Wearing Surface - Hogben Rd (005) from Bowman Rd to Barrier Hwy	Manoora	Rural Class 2a Average Material Sheeted Wearing Surface	2018-19	14	$20,606
4383	00284005	Rural Sheeted Wearing Surface	Surface - Hondows Rd (005) from 70m East of Riverton-Marrabel Rd to Road Reserve at RRD 825	Riverton	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	22	$11,605
4741	00292005	Rural Sheeted Wearing Surface	Surface - Hubbe Rd (005) from Roach Rd to Koorama Rd	Stanley Flat	Rural Class 3a Excellent Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	30	$31,458
4684	00292010	Rural Sheeted Wearing Surface	Surface - Hubbe Rd (010) from Koorama Rd to Start of Seal	Stanley Flat	Rural Class 3a Excellent Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	30	$11,492
4478	00293045	Rural Sheeted Wearing Surface	Wearing Surface - Hughes Park Rd (045) from End of Seal at RRD 4900 to Start of Seal at RRD 5065	Penwortham	Rural Class 2b Average Material Sheeted Wearing Surface	2018-19	14	$2,057
4510	00293055	Rural Sheeted Wearing Surface	Wearing Surface - Hughes Park Rd (055) from End of Seal at RRD 5115 to Start of Seal at RRD 5260	Penwortham	Rural Class 2b Average Material Sheeted Wearing Surface	2018-19	14	$1,787
4514	00293065	Rural Sheeted Wearing Surface	Wearing Surface - Hughes Park Rd (065) from End of Seal at RRD 5350 to Upper Skilly Rd	Watervale	Rural Class 2b Average Material Sheeted Wearing Surface	2018-19	14	$19,253
4486	00318010	Rural Sheeted Wearing Surface	Surface - Kelly Rd (South) (010) from Farm Driveway at RRD 1050 to Baum Rd (Auburn)	Auburn	Rural Class 3b Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	27	$22,344
4543	00321005	Rural Sheeted Wearing Surface	Surface - Kench Rd (005) from Horrocks Hwy to River Rd	Auburn	Rural Class 3b Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	27	$4,748
4531	00344005	Rural Sheeted Wearing Surface	Surface - Lambert Rd (005) from Horrocks Hwy to River Rd	Auburn	Rural Class 3c Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	25	$5,464
4525	00359010	Rural Sheeted Wearing Surface	Wearing Surface - Lower Skilly Rd (010) from Farm Driveway at RRD 1560 to Farm Driveway at RRD 3155	Auburn	Rural Class 2b Average Material Sheeted Wearing Surface	2018-19	14	$23,748
4508	00359015	Rural Sheeted Wearing Surface	Wearing Surface - Lower Skilly Rd (015) from Farm Driveway at RRD 3155 to Greenwood Park Rd	Auburn	Rural Class 2b Average Material Sheeted Wearing Surface	2018-19	14	$33,543
4242	00360005	Rural Sheeted Wearing Surface	Wearing Surface - Macaw Creek Rd (005) from Horrocks Hwy to Nobby White Hill Rd	Riverton	Rural Class 2a Excellent Material Sheeted Wearing Surface	2018-19	22	$31,500
4753	00361005	Rural Sheeted Wearing Surface	Surface - MacDonald Rd (005) from Horrocks Hwy to Basham Rd	Stanley Flat	Rural Class 3a Excellent Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	30	$19,627
4228	00384005	Rural Sheeted Wearing Surface	Surface - Masters Rd (005) from Barrier Highway to Hentschkes Rd	Riverton	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	22	$30,504
4309	00389005	Rural Sheeted Wearing Surface	Surface - McAuliffes Rd (005) from Hazeleigh Rd to Saddle Rd	Saddleworth	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	22	$11,132
4633	00401020	Rural Sheeted Wearing Surface	Wearing Surface - Merildin Rd (020) from End of Seal to Chaff Mill Rd	Mintaro	Rural Class 2a Average Material Sheeted Wearing Surface	2018-19	14	$12,908
4256	00404005	Rural Sheeted Wearing Surface	Surface - Messiter Cole Rd (005) from Riverton Rd to Camacs Rd	Riverton	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	22	$40,084
4234	00404010	Rural Sheeted Wearing Surface	Surface - Messiter Cole Rd (010) from Camacs Rd to Farm Driveway at RRD 2970	Riverton	Rural Class 3c Excellent Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	40	$6,194
4401	00411005	Rural Sheeted Wearing Surface	Surface - Milde Rd (005) from Main Road 45 to End of Sheeting at RRD 270	Waterloo	Rural Class 3c Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	25	$4,263
4560	00419015	Rural Sheeted Wearing Surface	Wearing Surface - Mintaro-Manoora Rd (015) from Pugsleys Rd to Road Reserve at RRD 3920	Manoora	Rural Class 1 Average Material Sheeted Wearing Surface	2018-19	9	$20,082
15479	00419012	Rural Sheeted Wearing Surface	Wearing Surface - Mintaro-Manoora Rd (012) from End of Seal 110m E of Pugsleys Rd to Pugsleys Rd	Manoora	Rural Class 1 Average Material Sheeted Wearing Surface	2018-19	9	$1,763
4671	00421010	Rural Sheeted Wearing Surface	Surface - Miss Martin Rd (010) from Martin Rd to Toringa Rd	Stanley	Rural Class 3a Excellent Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	30	$22,993
4447	00426010	Rural Sheeted Wearing Surface	Wearing Surface - Mollers Gap Rd (010) from Main Road 45 to River Source Rd	Waterloo	Rural Class 2a Poor Material Sheeted Wearing Surface	2018-19	11	$32,482
4458	00426015	Rural Sheeted Wearing Surface	Wearing Surface - Mollers Gap Rd (015) from River Source Rd to Road Reserve at RRD 4680	Waterloo	Rural Class 2a Poor Material Sheeted Wearing Surface	2018-19	11	$37,438
4650	00431005	Rural Sheeted Wearing Surface	Wearing Surface - Morrison Rd (005) from Horrocks Hwy to Fairfield Rd	Penwortham	Rural Class 2b Average Material Sheeted Wearing Surface	2018-19	14	$6,278
4656	00437035	Rural Sheeted Wearing Surface	Wearing Surface - Mt Rufus Rd (035) from Polish Hill Rd to Hentschke Rd	Polish Hill River	Rural Class 2a Average Material Sheeted Wearing Surface	2018-19	14	$15,289
4646	00437045	Rural Sheeted Wearing Surface	Wearing Surface - Mt Rufus Rd (045) from Road Reserve at RRD 9065 to Belt Rd	Mintaro	Rural Class 2a Average Material Sheeted Wearing Surface	2018-19	14	$11,537
4710	00439005	Rural Sheeted Wearing Surface	Wearing Surface - Muanu Rd (005) from Spring Gully Rd to Jacobs Range Rd	Emu Flat	Rural Class 2a Average Material Sheeted Wearing Surface	2018-19	14	$11,368
4498	00440005	Rural Sheeted Wearing Surface	Surface - Mulkirri Rd (005) from Horrocks Hwy to Grace Rd	Leasingham	Rural Class 3b Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	27	$10,523
4233	00454015	Rural Sheeted Wearing Surface	Surface - Nobby White Hill Rd (015) from Start of Sheeting at RRD 3315 to Macaw Creek Rd	Riverton	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	22	$11,547
4212	00468030	Rural Sheeted Wearing Surface	Surface - Old Main Rd (South) (030) from Riverton-Finnis Point Rd to Navan Cemetery Rd	Riverton	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	22	$29,204
4214	00468005	Rural Sheeted Wearing Surface	Surface - Old Main Rd (South) (005) from Finnis Point Rd to Road Reserve at RRD 1460	Tarlee	Rural Class 3a Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	15	$24,659
4213	00468010	Rural Sheeted Wearing Surface	Surface - Old Main Rd (South) (010) from Road Reserve at RRD 1460 to Molineux Rd (East)	Tarlee	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	22	$39,438
4196	00468015	Rural Sheeted Wearing Surface	Wearing Surface - Old Main Rd (South) (015) from Molineux Rd (East) to Molineux Rd (West)	Giles Corner	Rural Class 2a Average Material Sheeted Wearing Surface	2018-19	14	$7,114
4274	00469015	Rural Sheeted Wearing Surface	Surface - Old Main Rd North (015) from Blocks Rd to Hannaford Rd	Riverton	Rural Class 3c Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	25	$19,312
4589	00529005	Rural Sheeted Wearing Surface	Surface - Quigley Rd (005) from Leasingham-Mintaro Rd to Trelawney Rd	Mintaro	Rural Class 3c Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	32	$27,506
4333	00531005	Rural Sheeted Wearing Surface	Wearing Surface - Quondong Rd (005) from Horrocks Hwy to Golf Course Rd	Undalya	Rural Class 2a Average Material Sheeted Wearing Surface	2018-19	14	$12,723
4519	00531010	Rural Sheeted Wearing Surface	Wearing Surface - Quondong Rd (010) from Golf Course Rd to Sunnyside Rd	Undalya	Rural Class 2a Average Material Sheeted Wearing Surface	2018-19	14	$25,240
4130	00532005	Rural Sheeted Wearing Surface	Surface - Raglan St (005) from Saddleworth Rd to Globe St	Auburn	Rural Class 3c Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	25	$6,813
4294	00544045	Rural Sheeted Wearing Surface	Wearing Surface - Rhynie-Balaklava Rd (045) from Gregor Rd to Diagonal Rd	Halbury	Rural Class 1 Excellent Material Sheeted Wearing Surface	2018-19	12	$17,754
4714	00545005	Rural Sheeted Wearing Surface	Surface - Rices Creek Rd (North) (005) from Farrell Flat Rd to End	Hill River	Rural Class 3c Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	32	$47,539
4144	00550020	Rural Sheeted Wearing Surface	Surface - River Rd (Tarlee) (020) from Farm Driveway to Stockport-Tarlee Rd	Tarlee	Rural Class 3c Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	32	$14,715
4371	00566005	Rural Sheeted Wearing Surface	Wearing Surface - Roehrs Rd (005) from Priors Rd to Nash Rd	Tarnma	Rural Class 2b Poor Material Sheeted Wearing Surface	2018-19	11	$23,970
4152	00572015	Rural Sheeted Wearing Surface	Surface - Ruradene Rd (015) from Thomas Rd to Stribling Rd	Stockport	Rural Class 3c Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	25	$25,597
4153	00579020	Rural Sheeted Wearing Surface	Surface - Salt Creek Rd (South) (020) from Farm Driveway at RRD 4330 to Thomas Rd	Stockport	Rural Class 3c Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	32	$12,047
4523	00587005	Rural Sheeted Wearing Surface	Surface - Schober Rd (005) from Balaklava Rd to Ponderosa Rd	Auburn	Rural Class 3c Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	25	$2,745
4268	00590005	Rural Sheeted Wearing Surface	Surface - Schulz Rd (005) from Ashon Rd to Marrett Rd	Saddleworth	Rural Class 3a Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	15	$23,664
4421	00593005	Rural Sheeted Wearing Surface	Surface - Schwartz Rd (005) from Powerline North Rd to Main Road 45	Waterloo	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	22	$16,690
4236	00610005	Rural Sheeted Wearing Surface	Surface - Slape Rd (005) from Mitchells Rd to End of Sheeting at RRD 820	Riverton	Rural Class 3c Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	25	$10,795
4708	00612010	Rural Sheeted Wearing Surface	Wearing Surface - Slaughterhouse Rd (010) from Spring Farm Rd to Moccundunda North Rd	Stanley Flat	Rural Class 2a Excellent Material Sheeted Wearing Surface	2018-19	22	$8,487
4761	00626035	Rural Sheeted Wearing Surface	Wearing Surface - Spring Gully Rd (035) from Seven Sisters Rd to Saw Mill Rd	Spring Gully	Rural Class 2a Average Material Sheeted Wearing Surface	2018-19	14	$36,871
4413	00642070	Rural Sheeted Wearing Surface	Wearing Surface - Steelton Rd (070) from Back Track Rd to Tothill Belt Rd	Tothill Belt	Rural Class 2a Average Material Sheeted Wearing Surface	2018-19	14	$7,179
4695	00649005	Rural Sheeted Wearing Surface	Surface - Stonecutting Rd (005) from Spring Farm Rd to Edwards Rd	Polish Hill River	Rural Class 4a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	40	$32,233
4356	00694015	Rural Sheeted Wearing Surface	Wearing Surface - Tothill Creek Rd (015) from Frederick Rd to Council Boundary (East)	Tarnma	Rural Class 2a Poor Material Sheeted Wearing Surface	2018-19	11	$29,037
4128	20001005	Rural Sheeted Wearing Surface	Surface - Un-Named Rd 20001 (005) from Mintaro-Manoora Rd to Chinkford Ln	Manoora	Rural Class 3c Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2018-19	25	$3,217
4479	00707015	Rural Sheeted Wearing Surface	Wearing Surface - Upper Skilly Rd (015) from End of Seal (Popes Hill Rd) to Hughes Park Rd	Watervale	Rural Class 2b Average Material Sheeted Wearing Surface	2018-19	14	$22,047
4420	00741020	Rural Sheeted Wearing Surface	Wearing Surface - Whyte Park Rd (020) from Road Reserve at RRD 3485 to Tothill Belt Rd	Steelton	Rural Class 2b Poor Material Sheeted Wearing Surface	2018-19	11	$20,360
16466	00360005	Rural Sheeted Lower Base & Earthworks	Lower Base - Macaw Creek Rd (005) from Horrocks Hwy to Nobby White Hill Rd		Rural Class 2a Excellent Material Sheeted Lower Base & Earthworks	2018-19	66	$18,544
4882	00118005	Town Sheeted Wearing Surface	Wearing Surface - Church St (Sevenhill) (005) from Bayes Rd to End	Sevenhill	Township Sheeted Wearing Surface	2018-19	25	$1,978
5553	00366050	Footpath Surface	Left Footpath Surface - Main North Rd (Clare) (050) from Harriet St to Sabine St	Clare	Partial Hotmix Bitumen Footpath Surface	2018-19	30	$5,007
5536	00441005	Footpath Surface	Right Footpath Surface - Murray St (Riverton) (005) from Davis St to End	Riverton	Partial Hotmix Bitumen Footpath Surface	2018-19	30	$1,083
5552	00691010	Footpath Surface	Left Footpath Surface - Torrens Rd (010) from Davis St to Horner St	Riverton	Partial Hotmix Bitumen Footpath Surface	2018-19	30	$5,761
5551	00691015	Footpath Surface	Left Footpath Surface - Torrens Rd (015) from Horner St to Moorhouse Tce	Riverton	Partial Hotmix Bitumen Footpath Surface	2018-19	30	$6,201
5537	00691040	Footpath Surface	Right Footpath Surface - Torrens Rd (040) from Light St to Washington Rd	Riverton	Partial Hotmix Bitumen Footpath Surface	2018-19	30	$6,870
5540	00720005	Footpath Surface	Right Footpath Surface - Washington Rd (005) from Hartley St to Swinden St	Riverton	Partial Hotmix Bitumen Footpath Surface	2018-19	30	$3,701
5539	00720010	Footpath Surface	Right Footpath Surface - Washington Rd (010) from Swinden St to Torrens Rd	Riverton	Partial Hotmix Bitumen Footpath Surface	2018-19	30	$6,061

Asset ID	Spatial ID	Sub Category	Asset Description	Location	Asset Type	Planned Renewal Year	Useful Life (years)	Renewal Cost ($)
5554	00240010	Footpath Surface	Right Footpath Surface - Hallett St (010) from Craig St to Gilbert St	Tarlee	Partial Hotmix Bitumen Footpath Surface	2018-19	30	$9,621
16935	00366050	Footpath Base	Left Footpath Base - Main North Rd (Clare) (050) from Harriet St to Sabine St	Clare	Partial Hotmix Bitumen Footpath Base	2018-19	60	$561
16892	00441005	Footpath Base	Right Footpath Base - Murray St (Riverton) (005) from Davis St to End	Riverton	Partial Hotmix Bitumen Footpath Base	2018-19	60	$121
16924	00691010	Footpath Base	Left Footpath Base - Torrens Rd (010) from Davis St to Horner St	Riverton	Partial Hotmix Bitumen Footpath Base	2018-19	60	$645
16928	00691015	Footpath Base	Left Footpath Base - Torrens Rd (015) from Horner St to Moorhouse Tce	Riverton	Partial Hotmix Bitumen Footpath Base	2018-19	60	$695
16929	00691040	Footpath Base	Right Footpath Base - Torrens Rd (040) from Light St to Washington Rd	Riverton	Partial Hotmix Bitumen Footpath Base	2018-19	60	$769
16931	00720005	Footpath Base	Right Footpath Base - Washington Rd (005) from Hartley St to Swinden St	Riverton	Partial Hotmix Bitumen Footpath Base	2018-19	60	$415
16938	00720010	Footpath Base	Right Footpath Base - Washington Rd (010) from Swinden St to Torrens Rd	Riverton	Partial Hotmix Bitumen Footpath Base	2018-19	60	$679
16939	00240010	Footpath Base	Right Footpath Base - Hallett St (010) from Craig St to Gilbert St	Tarlee	Partial Hotmix Bitumen Footpath Base	2018-19	60	$1,078
6335	00044015	Kerb & Watertable	Left Kerb & Watertable - Beare St (015) from Powell St to End	Clare	Upright Concrete Kerb & Watertable	2018-19	70	$32,410
6545	00058005	Kerb & Watertable	Spoon Drain No.1 (Longitudinal) - Blanche St (005) from Main North Rd to Strickland St	Clare	Concrete Spoon Drain	2018-19	70	$1,289
6322	00517005	Kerb & Watertable	Right Kerb & Watertable - Powell St (005) from Main North Rd to Albert St	Clare	Mountable Concrete Kerb & Watertable	2018-19	70	$52,345
6332	00517005	Kerb & Watertable	Left Kerb & Watertable - Powell St (005) from Main North Rd to Albert St	Clare	Mountable Concrete Kerb & Watertable	2018-19	70	$52,345
6287	00129005	Kerb & Watertable	Right Kerb & Watertable - Cooper St (005) from Paul St to Gilbert St	Riverton	Upright Concrete Kerb & Watertable	2018-19	70	$18,818
6333	00212005	Kerb & Watertable	Left Kerb & Watertable - Gilbert St (Riverton) (005) from Torrens Rd to Swinden St	Riverton	Upright Concrete Kerb & Watertable	2018-19	70	$33,232
6392	00428005	Kerb & Watertable	Left Kerb & Watertable - Moorhouse Tce (005) from Torrens Rd to Swinden St	Riverton	Upright Concrete Kerb & Watertable	2018-19	70	$33,149
13188	FW0018	Fords & Floodways	Floodway Surface for FW0018 in Hughes Park Rd		Spray Seal Floodway / Ford	2018-19	20	$8,635
13219	FW0038	Fords & Floodways	Ford Surface for FW0038 in Old Main Rd North		Concrete Floodway / Ford	2018-19	50	$14,429
13216	FW0070	Fords & Floodways	Ford Surface for FW0070 in Tothill Rd		Concrete Floodway / Ford	2018-19	50	$56,562
12157	CD0365	Cross Drain	Culvert No. 1 for CD0365 in Black Springs Rd from Barton Hill Rd to Victoria St		600mm x 600mm Cross Drain Box Culvert	2018-19	70	$9,521
12466	CD0365	Cross Drain	Inlet Headwall No. 1 for CD0365 in Black Springs Rd from Barton Hill Rd to Victoria Street		600mm span Cross Drain Single Cell Headwall for Box Culvert	2018-19	70	$951
12914	CD0365	Cross Drain	Outlet Headwall No. 1 for CD0365 in Black Springs Rd from Barton Hill Rd to Victoria Street		600mm span Cross Drain Single Cell Headwall for Box Culvert	2018-19	70	$951
		Bridges	Bridge renewal work			2018-19		$100,000
						2018-19 Sub-Total		**$2,261,618**
3663	00012005	Rural Sealed Upper Surface	Surface Upper Layer - Annies Ln (005) from Sevenhill-Mintaro Rd to Polish Hill Rd	Polish Hill River	Rural Normal Use Spray Seal Surface - Upper Layer	2019-20	20	$51,521
3633	00293040	Rural Sealed Upper Surface	Surface Upper Layer - Hughes Park Rd (040) from Start of Seal at RRD 4850 to End of Seal at RRD 4900	Penwortham	Rural Short Section Spray Seal Surface - Upper Layer	2019-20	20	$1,329
3733	00375015	Rural Sealed Upper Surface	Surface Upper Layer - Waterloo Rd (015) from Anembo Rd to Carlsruhe Rd	Manoora	Rural High Use Spray Seal Surface - Upper Layer	2019-20	20	$34,695
3885	00139030	Town Sealed Upper Surface	Surface Upper Layer - Curling St (030) from Arthur St to Archer St	Auburn	Township Spray Seal Surface - Upper Layer	2019-20	20	$3,618
3891	00169025	Town Sealed Upper Surface	Surface Upper Layer - Elder St (025) from King St to Arthur St	Auburn	Township Spray Seal Surface - Upper Layer	2019-20	20	$2,996
3893	00200005	Town Sealed Upper Surface	Surface Upper Layer - Frederick Pl (Auburn) (005) from Elder St to Curling St	Auburn	Township Spray Seal Surface - Upper Layer	2019-20	20	$6,124
3855	00326005	Town Sealed Upper Surface	Surface Upper Layer - King St (Auburn) (005) from Main North Rd to Ford	Auburn	Township Spray Seal Surface - Upper Layer	2019-20	20	$7,974
3858	00329005	Town Sealed Upper Surface	Surface Upper Layer - King William St (005) from South St to Henry St	Auburn	Township Spray Seal Surface - Upper Layer	2019-20	20	$5,627
3861	00329020	Town Sealed Upper Surface	Surface Upper Layer - King William St (020) from St Vincent St to North St	Auburn	Township Spray Seal Surface - Upper Layer	2019-20	20	$5,046
3862	00332025	Town Sealed Upper Surface	Surface Upper Layer - Kingston Tce (025) from Frederick Pl to Archer St	Auburn	Township Spray Seal Surface - Upper Layer	2019-20	20	$9,210
3874	00332005	Town Sealed Upper Surface	Surface Upper Layer - Kingston Tce (005) from Ford St to Daly St	Auburn	Township Spray Seal Surface - Upper Layer	2019-20	20	$11,747
3864	00332010	Town Sealed Upper Surface	Surface Upper Layer - Kingston Tce (010) from Daly St to Young St	Auburn	Township Spray Seal Surface - Upper Layer	2019-20	20	$4,913
3854	00332015	Town Sealed Upper Surface	Surface Upper Layer - Kingston Tce (015) from Young St to Church St	Auburn	Township Spray Seal Surface - Upper Layer	2019-20	20	$6,068
3866	00332020	Town Sealed Upper Surface	Surface Upper Layer - Kingston Tce (020) from Church St to Frederick Pl	Auburn	Township Spray Seal Surface - Upper Layer	2019-20	20	$6,058
3922	00762005	Town Sealed Upper Surface	Surface Upper Layer - Young St (Auburn) (005) from Kingston Tce to Stanley St	Auburn	Township Spray Seal Surface - Upper Layer	2019-20	20	$6,537
3925	00004005	Town Sealed Upper Surface	Surface Upper Layer - Albert St (005) from Victoria Rd to Powell St	Clare	Township Spray Seal Surface - Upper Layer	2019-20	20	$31,762
3934	00042005	Town Sealed Upper Surface	Surface Upper Layer - Beal Cl (005) from East End to South End	Clare	Township Spray Seal Surface - Upper Layer	2019-20	20	$3,337
3936	00044005	Town Sealed Upper Surface	Surface Upper Layer - Beare St (005) from Stanley St to Houghton St	Clare	Township Spray Seal Surface - Upper Layer	2019-20	20	$17,213
3938	00044015	Town Sealed Upper Surface	Surface Upper Layer - Beare St (015) from Powell St to End	Clare	Township Spray Seal Surface - Upper Layer	2019-20	20	$9,939
3899	00078005	Town Sealed Upper Surface	Surface Short Life Layer - Bright St (Clare) (005) from Harriet St to West Tce	Clare	Township Hotmix Bitumen Surface - Short Life Layer	2019-20	25	$53,980
3902	00091005	Town Sealed Upper Surface	Surface Upper Layer - Burton Street (Clare) (005) from Main North Rd to Agnes St	Clare	Township Spray Seal Surface - Upper Layer	2019-20	20	$16,313
3918	00132005	Town Sealed Upper Surface	Surface Upper Layer - Craig Hill Rd (005) from Horrocks Highway to End of Kerb	Clare	Township Spray Seal Surface - Upper Layer	2019-20	20	$5,618
3909	00156005	Town Sealed Upper Surface	Surface Upper Layer - Dominic St (005) from Main North Rd to Archer Pl	Clare	Township Spray Seal Surface - Upper Layer	2019-20	20	$8,504
3912	00165005	Town Sealed Upper Surface	Surface Upper Layer - East View St (005) from Sunnyside Rd to End	Clare	Township Spray Seal Surface - Upper Layer	2019-20	20	$7,830
3914	00173005	Town Sealed Upper Surface	Surface Upper Layer - Elliot Ave (Clare) (005) from Blyth Rd to End	Clare	Township Spray Seal Surface - Upper Layer	2019-20	20	$7,944
3790	00219010	Town Sealed Upper Surface	Surface Upper Layer - Gleeson St (010) from King St to Burton St	Clare	Township Spray Seal Surface - Upper Layer	2019-20	20	$10,243
3801	00264005	Town Sealed Upper Surface	Surface Short Life Layer - Henry St (Clare) (005) from Albert St to Neagles Rock Rd	Clare	Township Hotmix Bitumen Surface - Short Life Layer	2019-20	25	$118,562
3799	00303005	Town Sealed Upper Surface	Surface Upper Layer - James Rd (005) from Blyth Rd to End	Clare	Township Spray Seal Surface - Upper Layer	2019-20	20	$15,092
3773	00327005	Town Sealed Upper Surface	Surface Upper Layer - King St (Clare) (005) from Sabine St to Buchanan St	Clare	Township Spray Seal Surface - Upper Layer	2019-20	20	$20,636
4060	00489010	Town Sealed Upper Surface	Surface Upper Layer - Paxton St (010) from Beare St to Houghton St	Clare	Township Spray Seal Surface - Upper Layer	2019-20	20	$2,951
4050	00516005	Town Sealed Upper Surface	Surface Upper Layer - Powell Pl (005) from Main North Rd to East Tce	Clare	Township Spray Seal Surface - Upper Layer	2019-20	20	$11,486
4062	00517005	Town Sealed Upper Surface	Surface Upper Layer - Powell St (005) from Main North Rd to Albert St	Clare	Township Spray Seal Surface - Upper Layer	2019-20	20	$13,376
4064	00565005	Town Sealed Upper Surface	Surface Upper Layer - Rocky Glen Ct (005) from Hentsche Rd to End	Clare	Township Spray Seal Surface - Upper Layer	2019-20	20	$5,606
3814	00674015	Town Sealed Upper Surface	Surface Upper Layer - Temple Rd (015) from King St to Victoria Rd	Clare	Township Spray Seal Surface - Upper Layer	2019-20	20	$6,257
3816	00696005	Town Sealed Upper Surface	Surface Upper Layer - Toyota Access Rd (005) from Sunnyside Rd to End	Clare	Township Spray Seal Surface - Upper Layer	2019-20	20	$8,289
3831	00712005	Town Sealed Upper Surface	Surface Upper Layer - Vista Pl (005) from Sunnyside Rd to End	Clare	Township Spray Seal Surface - Upper Layer	2019-20	20	$2,759
4034	00724005	Town Sealed Upper Surface	Surface Upper Layer - Webb St (005) from Farrell Flat Rd to End	Clare	Township Spray Seal Surface - Upper Layer	2019-20	20	$11,456
3824	00729005	Town Sealed Upper Surface	Surface Upper Layer - Wendouree Rd East (005) from Warenda Rd to Spring Farm Rd	Spring Farm	Township Spray Seal Surface - Upper Layer	2019-20	20	$68,113
4052	00261010	Town Sealed Upper Surface	Surface Upper Layer - Hector St (010) from Kingston Rd to Burra St	Mintaro	Township Spray Seal Surface - Upper Layer	2019-20	20	$5,875
4046	00331010	Town Sealed Upper Surface	Surface Upper Layer - Kingston Rd (010) from Young St to Hector St	Mintaro	Township Spray Seal Surface - Upper Layer	2019-20	20	$28,692
4061	00416005	Town Sealed Upper Surface	Surface Upper Layer - Milne St (005) from Main North Rd to Woolshed Flat Rd	Rhynie	Township Spray Seal Surface - Upper Layer	2019-20	20	$28,761
4007	00110005	Town Sealed Upper Surface	Surface Upper Layer - Charles St (Riverton) (005) from Torrens Rd to Swinden St	Riverton	Township Spray Seal Surface - Upper Layer	2019-20	20	$10,698
4102	00212005	Town Sealed Upper Surface	Surface Upper Layer - Gilbert St (Riverton) (005) from Torrens Rd to Swinden St	Riverton	Township Spray Seal Surface - Upper Layer	2019-20	20	$13,021
4107	00306005	Town Sealed Upper Surface	Surface Upper Layer - Jean Pl (005) from Frederick Pl to End	Riverton	Township Spray Seal Surface - Upper Layer	2019-20	20	$4,873
4108	00320005	Town Sealed Upper Surface	Surface Upper Layer - Kelly St (Riverton) (005) from Horner St to Moorhouse Tce	Riverton	Township Spray Seal Surface - Upper Layer	2019-20	20	$9,613
3976	00479005	Town Sealed Upper Surface	Surface Upper Layer - Oxford Tce (005) from Torrens Rd to Burrows Ln	Riverton	Township Spray Seal Surface - Upper Layer	2019-20	20	$23,640
3948	00449005	Town Sealed Upper Surface	Surface Upper Layer - Newark St (005) from Belvidere Rd to Minden St	Saddleworth	Township Spray Seal Surface - Upper Layer	2019-20	20	$4,454
3951	00575010	Town Sealed Upper Surface	Surface Upper Layer - Saddle Rd (010) from Bridle St to Charles St	Saddleworth	Township Spray Seal Surface - Upper Layer	2019-20	20	$4,852
3955	00628010	Town Sealed Upper Surface	Surface Upper Layer - Spur St (010) from Stirrup St to Saddle Rd	Saddleworth	Township Spray Seal Surface - Upper Layer	2019-20	20	$5,999
3988	00442020	Town Sealed Upper Surface	Surface Upper Layer - Murray St (Stockport) (020) from Smith St to Observatory Rd	Stockport	Township Spray Seal Surface - Upper Layer	2019-20	20	$13,934
4010	00615005	Town Sealed Upper Surface	Surface Upper Layer - Smith St (005) from Murray St to Gardiner Tce	Stockport	Township Spray Seal Surface - Upper Layer	2019-20	20	$9,713
4013	00133005	Town Sealed Upper Surface	Surface Upper Layer - Craig St (005) from Gilbert St to Hallett St	Tarlee	Township Spray Seal Surface - Upper Layer	2019-20	20	$15,569
3991	00133015	Town Sealed Upper Surface	Surface Upper Layer - Craig St (015) from Oldham St to Charles St	Tarlee	Township Spray Seal Surface - Upper Layer	2019-20	20	$13,705
4019	00370085	Town Sealed Upper Surface	Surface Upper Layer - Main Road 45 (085) from William St to Mahood St	Waterloo	Township Spray Seal Surface - Upper Layer	2019-20	20	$7,112
4001	00622005	Town Sealed Upper Surface	Surface Upper Layer - South Tce (Watervale) (005) from Horrocks Highway to Commercial Rd	Watervale	Township Spray Seal Surface - Upper Layer	2019-20	20	$5,650
4002	00622010	Town Sealed Upper Surface	Surface Upper Layer - South Tce (Watervale) (010) from Commercial Rd to Glaetzer St	Watervale	Township Spray Seal Surface - Upper Layer	2019-20	20	$16,078
4051	00633015	Town Sealed Upper Surface	Surface Upper Layer - St Vincent Rd (015) from West Rd to Glaetzer Rd	Watervale	Township Spray Seal Surface - Upper Layer	2019-20	20	$5,009
4752	00009005	Rural Sheeted Wearing Surface	Wearing Surface - Anama Ln (005) from Horrocks Hwy to RM Williams Way	Bungaree	Rural Class 1 Average Material Sheeted Wearing Surface	2019-20	9	$77,706
4850	00035005	Rural Sheeted Wearing Surface	Surface - Barrys Vineyard Rd (005) from Farrell Flat Rd to End at Private Driveway	Spring Farm	Rural Class 3b Excellent Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	35	$6,080
4557	00062010	Rural Sheeted Wearing Surface	Wearing Surface - Blenhiem Rd (010) from Sandows Rd to Kenworthy Rd	Watervale	Rural Class 2a Average Material Sheeted Wearing Surface	2019-20	14	$20,197
4621	00070015	Rural Sheeted Wearing Surface	Wearing Surface - Bowmans Rd (015) from Railway Rd to Water Reserve Rd	Mintaro	Rural Class 2a Average Material Sheeted Wearing Surface	2019-20	14	$36,725

Asset ID	Spatial ID	Sub Category	Asset Description	Location	Asset Type	Planned Renewal Year	Useful Life (years)	Renewal Cost ($)
4139	00096015	Rural Sheeted Wearing Surface	Surface - Calcania Rd (015) from Barinia Rd to RRD 3720	Barinia	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	22	$55,068
4127	00140005	Rural Sheeted Wearing Surface	Surface - Cutters Rd (005) from Waterloo Rd to Anembo Rd	Manoora	Rural Class 3c Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	32	$9,103
4826	00148005	Rural Sheeted Wearing Surface	Surface - Dennison Rd (005) from Balaklava Rd to Farm Driveway	Auburn	Rural Class 3c Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	32	$6,785
4727	00176010	Rural Sheeted Wearing Surface	Surface - Emu Rock Rd (010) from End of Seal to Farm Driveway at RRD 1350	Armagh	Rural Class 3a Excellent Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	30	$19,061
4729	00176015	Rural Sheeted Wearing Surface	Surface - Emu Rock Rd (015) from Farm Driveway at RRD 1350 to Farm Driveway at RRD 2040	Armagh	Rural Class 3a Excellent Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	30	$9,683
4181	00668010	Rural Sheeted Wearing Surface	Wearing Surface - Finnis Point Rd (010) from End of Seal to Shearers Rd	Tarlee	Rural Class 2a Average Material Sheeted Wearing Surface	2019-20	14	$33,249
4346	00224005	Rural Sheeted Wearing Surface	Wearing Surface - Golf Course Rd (Saddleworth) (005) from Quondong Rd to McInerney Rd	Undalya	Rural Class 2a Average Material Sheeted Wearing Surface	2019-20	14	$36,894
4341	00224010	Rural Sheeted Wearing Surface	Wearing Surface - Golf Course Rd (Saddleworth) (010) from McInerney Rd to Klems Rd	Saddleworth	Rural Class 2a Average Material Sheeted Wearing Surface	2019-20	14	$26,602
4798	00253005	Rural Sheeted Wearing Surface	Wearing Surface - Harvey Hwy (005) from RM Williams Way to Start of Seal at Bridge	Hilltown	Rural Class 1 Excellent Material Sheeted Wearing Surface	2019-20	12	$16,598
4382	00284010	Rural Sheeted Wearing Surface	Surface - Hondows Rd (010) from Road Reserve at RRD 825 to Etterick Rd	Riverton	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	22	$16,819
4516	00293015	Rural Sheeted Wearing Surface	Wearing Surface - Hughes Park Rd (015) from End of Seal at RRD 3355 to Start of Seal at RRD 3700	Penwortham	Rural Class 2b Average Material Sheeted Wearing Surface	2019-20	14	$4,262
4484	00293025	Rural Sheeted Wearing Surface	Wearing Surface - Hughes Park Rd (025) from End of Seal at RRD 3730 to Start of Seal at RRD 4640	Penwortham	Rural Class 2b Average Material Sheeted Wearing Surface	2019-20	14	$11,240
4482	00293035	Rural Sheeted Wearing Surface	Wearing Surface - Hughes Park Rd (035) from End of Seal at RRD 4690 to Start of Seal at RRD 4850	Penwortham	Rural Class 2b Average Material Sheeted Wearing Surface	2019-20	14	$2,015
4771	00295005	Rural Sheeted Wearing Surface	Surface - Hut River Rd (005) from Council Boundary (North) to The Bluff Rd	Hilltown	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	22	$13,452
4425	00299005	Rural Sheeted Wearing Surface	Wearing Surface - I'anson Rd (005) from Steelton Rd to Powerline South Rd	Steelton	Rural Class 2b Average Material Sheeted Wearing Surface	2019-20	14	$12,188
4149	00337005	Rural Sheeted Wearing Surface	Surface - Kochs Rd (005) from Ayliffe Bridge Rd to Watts Tce	Stockport	Rural Class 3a Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	15	$6,426
4839	00343005	Rural Sheeted Wearing Surface	Wearing Surface - Lallys Rd (005) from Farrell Flat Rd to Farm Driveway at RRD 2730	Hill River	Rural Class 1 Average Material Sheeted Wearing Surface	2019-20	9	$56,250
4843	00343010	Rural Sheeted Wearing Surface	Wearing Surface - Lallys Rd (010) from Farm Driveway at RRD 2730 to Angas Ct	Hill River	Rural Class 1 Average Material Sheeted Wearing Surface	2019-20	9	$43,986
4733	00352005	Rural Sheeted Wearing Surface	Surface - Lewcock Rd (005) from Moccandunda North Rd to Blockers Rd	Stanley Flat	Rural Class 3c Excellent Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	40	$18,509
4751	00357005	Rural Sheeted Wearing Surface	Wearing Surface - Lookout Rd (Nth of Clare) (005) from Horrocks Hwy to Rossmore Rd	Stanley Flat	Rural Class 2a Excellent Material Sheeted Wearing Surface	2019-20	22	$37,771
4754	00357010	Rural Sheeted Wearing Surface	Wearing Surface - Lookout Rd (Nth of Clare) (010) from Rossmore Rd to Council Boundary (West)	Benbournie	Rural Class 2b Excellent Material Sheeted Wearing Surface	2019-20	22	$20,714
4474	00359005	Rural Sheeted Wearing Surface	Wearing Surface - Lower Skilly Rd (005) from Balaklava Rd to Farm Driveway at RRD 1560	Auburn	Rural Class 2b Average Material Sheeted Wearing Surface	2019-20	14	$19,386
4760	00391005	Rural Sheeted Wearing Surface	Surface - McCord Ln (005) from Gillentown Rd to Farm Driveway at RRD 325	Gillentown	Rural Class 3c Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	32	$4,272
4467	00426020	Rural Sheeted Wearing Surface	Wearing Surface - Mollers Gap Rd (020) from Road Reserve at RRD 4680 to Tothill Belt Rd	Tothill Belt	Rural Class 2b Average Material Sheeted Wearing Surface	2019-20	14	$22,306
4653	00437050	Rural Sheeted Wearing Surface	Wearing Surface - Mt Rufus Rd (050) from Belt Rd to Sevenhill-Mintaro Rd	Mintaro	Rural Class 2a Average Material Sheeted Wearing Surface	2019-20	14	$5,520
4243	00454005	Rural Sheeted Wearing Surface	Surface - Nobby White Hill Rd (005) from Riverton Rd to 60m Sth of Masters Rd	Riverton	Rural Class 3b Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	27	$10,198
4628	00466005	Rural Sheeted Wearing Surface	Wearing Surface - Old Burra Rd (Black Springs) (005) from Main St to Road Reserve at RRD 580	Black Springs	Rural Class 2a Excellent Material Sheeted Wearing Surface	2019-20	22	$10,100
4275	00469010	Rural Sheeted Wearing Surface	Surface - Old Main Rd North (010) from Un-Named Rd to Blocks Rd	Riverton	Rural Class 3c Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	25	$20,050
4117	00469020	Rural Sheeted Wearing Surface	Surface - Old Main Rd North (020) from Hannaford Rd to Marrett Rd	Riverton	Rural Class 3c Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	25	$16,561
4119	00469025	Rural Sheeted Wearing Surface	Surface - Old Main Rd North (025) from Marrett Rd to Ashton Rd	Saddleworth	Rural Class 3c Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	25	$7,548
4121	00469030	Rural Sheeted Wearing Surface	Surface - Old Main Rd North (030) from Ashton Rd to Barrier Hwy	Saddleworth	Rural Class 3c Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	25	$8,137
4570	00490005	Rural Sheeted Wearing Surface	Wearing Surface - Pearce Rd (005) from Horrocks Hwy to Fairfield Rd	Watervale	Rural Class 2b Average Material Sheeted Wearing Surface	2019-20	14	$7,884
15673	00518025	Rural Sheeted Wearing Surface	Surface - Powerline North Rd (025) from Waterloo Rd to Schoenberg Rd	Waterloo	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	22	$21,125
4540	00551010	Rural Sheeted Wearing Surface	Surface - River Rd (Undalya) (010) from Koonowla Rd to Kench Rd	Auburn	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	22	$21,456
4529	00606005	Rural Sheeted Wearing Surface	Surface - Skillogalee Creek Rd (005) from Wakefield Rd to End	Watervale	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	22	$33,085
4779	00626030	Rural Sheeted Wearing Surface	Wearing Surface - Spring Gully Rd (030) from Muanu Rd to Seven Sisters Rd	Spring Gully	Rural Class 2a Average Material Sheeted Wearing Surface	2019-20	14	$24,477
4556	00627005	Rural Sheeted Wearing Surface	Surface - Springvale Rd (005) from Pearce Rd to Mt Horrocks Rd	Watervale	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	22	$16,519
4423	00642045	Rural Sheeted Wearing Surface	Wearing Surface - Steelton Rd (045) from Powerline Rd North to Main Road 45	Steelton	Rural Class 2a Average Material Sheeted Wearing Surface	2019-20	14	$23,169
4747	00650015	Rural Sheeted Wearing Surface	Wearing Surface - Stradbrooke Rd (015) from Rossmore Rd to Benbournie Rd	Benbournie	Rural Class 2a Excellent Material Sheeted Wearing Surface	2019-20	22	$31,156
4272	00659010	Rural Sheeted Wearing Surface	Surface - Talbots Rd (010) from Farm Driveway at RRD 1255 to Golf Course Rd	Saddleworth	Rural Class 3b Excellent Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	35	$11,993
4475	00663005	Rural Sheeted Wearing Surface	Surface - Tank Rd (005) from Dennis Rd to Farm Driveway at RRD 950	Auburn	Rural Class 3b Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	27	$14,980
4363	00705010	Rural Sheeted Wearing Surface	Surface - Ulandi Rd (010) from Belvidere Rd to Pfitzners Rd	Marrabel	Rural Class 3c Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	25	$9,454
4536	00713005	Rural Sheeted Wearing Surface	Wearing Surface - Vogts Rd (005) from Barrier Hwy to 2345m from Barrier Hwy	Saddleworth	Rural Class 2a Average Material Sheeted Wearing Surface	2019-20	14	$40,777
4142	00723010	Rural Sheeted Wearing Surface	Surface - Watts Tce (010) from Gardiner Tce to Pine Ridge Rd	Stockport	Rural Class 3c Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2019-20	25	$20,870
5520	00003010	Footpath Surface	Right Footpath Surface - Agnes St (010) from Buchanan St to Victoria Rd	Clare	Partial Spray Seal Footpath Surface	2019-20	25	$2,886
5521	00003010	Footpath Surface	Left Footpath Surface - Agnes St (010) from Buchanan St to Victoria Rd	Clare	Partial Spray Seal Footpath Surface	2019-20	25	$3,367
5558	00091005	Footpath Surface	Left Footpath Surface - Burton Street (Clare) (005) from Main North Rd to Agnes St	Clare	Partial Spray Seal Footpath Surface	2019-20	25	$4,524
5524	00516005	Footpath Surface	Right Footpath Surface - Powell Pl (005) from Main North Rd to East Tce	Clare	Spray Seal Footpath Surface	2019-20	25	$8,427
5548	00479005	Footpath Surface	Right Footpath Surface - Oxford Tce (005) from Torrens Rd to Burrows Ln	Riverton	Spray Seal Footpath Surface	2019-20	25	$16,767
16909	00003010	Footpath Base	Left Footpath Base - Agnes St (010) from Buchanan St to Victoria Rd	Clare	Partial Spray Seal Footpath Base	2019-20	50	$1,629
16914	00003010	Footpath Base	Right Footpath Base - Agnes St (010) from Buchanan St to Victoria Rd	Clare	Partial Spray Seal Footpath Base	2019-20	50	$1,396
16911	00091005	Footpath Base	Left Footpath Base - Burton Street (Clare) (005) from Main North Rd to Agnes St	Clare	Partial Spray Seal Footpath Base	2019-20	50	$2,189
16916	00516005	Footpath Base	Right Footpath Base - Powell Pl (005) from Main North Rd to East Tce	Clare	Spray Seal Footpath Base	2019-20	50	$4,074
16905	00479005	Footpath Base	Right Footpath Base - Oxford Tce (005) from Torrens Rd to Burrows Ln	Riverton	Spray Seal Footpath Base	2019-20	50	$8,105
13232	FW0078	Fords & Floodways	Floodway Surface for FW0078 in Elizabeth St (Manoora)		Concrete Floodway / Ford	2019-20	50	$10,100
13218	FW0015	Fords & Floodways	Ford Surface for FW0015 in Hannaford Rd		Concrete Floodway / Ford	2019-20	50	$20,778
13207	FW0029	Fords & Floodways	Ford Surface for FW0029 in Lower Skilly Rd		Concrete Floodway / Ford	2019-20	50	$22,509
13172	FW0036	Fords & Floodways	Floodway Surface for FW0036 in Nobby White Hill Rd		Spray Seal Floodway / Ford	2019-20	20	$829
13240	FW0076	Fords & Floodways	Ford Surface for FW0076 in Newark St		Spray Seal Floodway / Ford	2019-20	20	$2,418
13204	FW0033	Fords & Floodways	Ford Surface for FW0033 in Old Main Rd (South)		Concrete Floodway / Ford	2019-20	50	$36,361
13199	FW0040	Fords & Floodways	Ford Surface for FW0040 in Peters Hill Rd		Concrete Floodway / Ford	2019-20	50	$40,401
13230	FW0090	Fords & Floodways	Ford Surface for FW0090 in Stanley St (Clare)		Hotmix Floodway / Ford	2019-20	25	$2,960
13220	FW0064	Fords & Floodways	Floodway Surface for FW0064 in Tarlee - Alma Rd		Concrete Floodway / Ford	2019-20	50	$34,630
		Bridges	Bridge renewal work			2019-20		$100,000
						2019-20 Sub-Total		**$2,170,733**
3626	00011005	Rural Sealed Upper Surface	Surface Upper Layer - Angas Ct (005) from White Hut Rd to End of Seal	Stanley Flat	Rural Normal Use Spray Seal Surface - Upper Layer	2020-21	20	$5,183
3668	00130005	Rural Sealed Upper Surface	Surface Upper Layer - Copper Ore Rd (005) from Merildin Rd to Wookie Creek Rd	Stanley	Rural High Use Spray Seal Surface - Upper Layer	2020-21	20	$121,106
3640	00271005	Rural Sealed Upper Surface	Surface Upper Layer - Hicks Rd (005) from Blyth Rd to End of Seal	Armagh	Rural Short Section Spray Seal Surface - Upper Layer	2020-21	20	$1,291
3765	00625015	Rural Sealed Upper Surface	Surface Upper Layer - Spring Farm Rd (015) from Dunns Range Rd to Wendouree Rd	Spring Farm	Rural Normal Use Spray Seal Surface - Upper Layer	2020-21	20	$40,186
5021	00375015	Rural Sealed Pavement Base	Pavement Base - Waterloo Rd (015) from Anembo Rd to Carlsruhe Rd	Manoora	Rural High Use Pavement Base	2020-21	60	$124,204
4322	00001005	Rural Sheeted Wearing Surface	Surface - Aarons Rd (005) from Murrays Rd to Farm Driveway	Marrabel	Rural Class 3a Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	15	$13,883
4855	00011010	Rural Sheeted Wearing Surface	Wearing Surface - Angas Ct (010) from End of Seal to Blockers Rd	Stanley Flat	Rural Class 2a Excellent Material Sheeted Wearing Surface	2020-21	22	$8,456
4836	00011015	Rural Sheeted Wearing Surface	Wearing Surface - Angas Ct (015) from Blockers Rd to RRD 2873	Hill River	Rural Class 2a Excellent Material Sheeted Wearing Surface	2020-21	22	$46,298
4852	00011020	Rural Sheeted Wearing Surface	Wearing Surface - Angas Ct (020) from RRD 2873 to Hilltown Rd	Hill River	Rural Class 2a Excellent Material Sheeted Wearing Surface	2020-21	22	$43,298
4680	00021005	Rural Sheeted Wearing Surface	Surface - Ashby Rd (005) from St George Tce to Hicks Rd	Armagh	Rural Class 3a Excellent Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	30	$10,530
4418	00036005	Rural Sheeted Wearing Surface	Wearing Surface - Barton Hill Rd (005) from Barrier Hwy to Heinrichs Rd	Black Springs	Rural Class 1 Average Material Sheeted Wearing Surface	2020-21	9	$15,044
4411	00036010	Rural Sheeted Wearing Surface	Wearing Surface - Barton Hill Rd (010) from Heinrichs Rd to Old Burra Rd	Black Springs	Rural Class 1 Average Material Sheeted Wearing Surface	2020-21	9	$34,805
4649	00053005	Rural Sheeted Wearing Surface	Surface - Betterson Rd (005) from Claremont Rd to RRD 1280	Hill River	Rural Class 3a Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	15	$25,137
4608	00057005	Rural Sheeted Wearing Surface	Wearing Surface - Black Springs Rd (005) from Barton Hill Rd to Tamarisk Tree Rd	Black Springs	Rural Class 1 Average Material Sheeted Wearing Surface	2020-21	9	$33,456
4623	00057010	Rural Sheeted Wearing Surface	Wearing Surface - Black Springs Rd (010) from Tamarisk Tree Rd to Start of Seal	Black Springs	Rural Class 1 Average Material Sheeted Wearing Surface	2020-21	9	$13,941
4612	00057020	Rural Sheeted Wearing Surface	Wearing Surface - Black Springs Rd (020) from Old Burra Rd to Emuville Rd	Black Springs	Rural Class 1 Average Material Sheeted Wearing Surface	2020-21	9	$13,388
4611	00057025	Rural Sheeted Wearing Surface	Wearing Surface - Black Springs Rd (025) from Emuville Rd to Start of Seal	Black Springs	Rural Class 1 Average Material Sheeted Wearing Surface	2020-21	9	$13,675
4610	00057035	Rural Sheeted Wearing Surface	Wearing Surface - Black Springs Rd (035) from End of Seal to Council Boundary	Black Springs	Rural Class 1 Average Material Sheeted Wearing Surface	2020-21	9	$8,117
4791	00063015	Rural Sheeted Wearing Surface	Wearing Surface - Blockers Rd (015) from Angas Ct to Roach Rd	Stanley Flat	Rural Class 2a Excellent Material Sheeted Wearing Surface	2020-21	22	$20,137
4468	00073005	Rural Sheeted Wearing Surface	Surface - Braewood Rd (005) from Tothill Belt Rd to House 800m East of Tothill Belt Rd	Tothill Creek	Rural Class 3a Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	15	$11,563

Asset ID	Spatial ID	Sub Category	Asset Description	Location	Asset Type	Planned Renewal Year	Useful Life (years)	Renewal Cost ($)
4177	00074005	Rural Sheeted Wearing Surface	Surface - Branson Rd (005) from Range Road to Farm Driveway at RRD 680	Stockport	Rural Class 3a Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	15	$11,527
4477	00084015	Rural Sheeted Wearing Surface	Surface - Bryskys Hill Rd (015) from Mt Horrocks Rd to Main North Rd	Watervale	Rural Class 3b Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	27	$3,682
4406	00092005	Rural Sheeted Wearing Surface	Surface - Busch Rd (005) from Tothill Belt Rd to Julia Rd	Tothill Belt	Rural Class 3c Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	25	$22,574
4805	00094010	Rural Sheeted Wearing Surface	Surface - Cairn Hil Rd (010) from Weckert Rd to End 100m East of Bridge	Hill River	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	22	$2,864
4444	00102010	Rural Sheeted Wearing Surface	Wearing Surface - Carlesruh Rd (010) from Powerline North Rd to Start of Seal	Waterloo	Rural Class 2b Average Material Sheeted Wearing Surface	2020-21	14	$5,806
4369	00124010	Rural Sheeted Wearing Surface	Surface - Coles Rd (010) from End of Sheeting at RRD 700 to End	Hamilton	Rural Class 3a Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	15	$8,272
4765	00175005	Rural Sheeted Wearing Surface	Wearing Surface - Emu Flat Rd (005) from Blyth Rd to Bennys Hill Rd	Armagh	Rural Class 2a Average Material Sheeted Wearing Surface	2020-21	14	$47,864
4223	00180005	Rural Sheeted Wearing Surface	Wearing Surface - Ettrick Rd (005) from Riverton-Marrabel Rd to Windy Hill Rd	Riverton	Rural Class 2a Excellent Material Sheeted Wearing Surface	2020-21	22	$29,665
4601	00193020	Rural Sheeted Wearing Surface	Wearing Surface - Flagstaff Rd (020) from Riley Rd to Road Reserve at RRD 7020	Mintaro	Rural Class 2a Average Material Sheeted Wearing Surface	2020-21	14	$23,108
4838	00195010	Rural Sheeted Wearing Surface	Wearing Surface - Flaxmill Rd (010) from Bend at Farm Driveway to Start of Seal	Auburn	Rural Class 2b Average Material Sheeted Wearing Surface	2020-21	14	$8,787
4218	00199005	Rural Sheeted Wearing Surface	Surface - Francis St (Navan Cemetery) (005) from Old Main Rd (South) to John St	Riverton	Rural Class 3c Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	32	$1,974
4216	00207005	Rural Sheeted Wearing Surface	Surface - Gants Hill Rd (005) from Ryelnds Rd to End at Council Boundary (East)	Riverton	Rural Class 3a Excellent Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	30	$25,167
4237	00222005	Rural Sheeted Wearing Surface	Surface - Glynnard Rd (005) from Salter Springs Rd to End of Sheeting at Farm Driveway	Woolshed Flat	Rural Class 3a Excellent Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	30	$14,724
4325	00224030	Rural Sheeted Wearing Surface	Wearing Surface - Golf Course Rd (Saddleworth) (030) from Slant Rd to Barrier Hwy	Saddleworth	Rural Class 2a Average Material Sheeted Wearing Surface	2020-21	14	$12,256
4288	00557010	Rural Sheeted Wearing Surface	Wearing Surface - Garryowen Rd (010) from Road Reserve at RRD 1560 to Mitchells Rd	Riverton	Rural Class 2a Average Material Sheeted Wearing Surface	2020-21	14	$19,612
4264	00245005	Rural Sheeted Wearing Surface	Surface - Hannafords Rd (005) from Riverton-Marrabel Rd to Windy Hill Rd	Riverton	Rural Class 3a Excellent Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	30	$29,263
4161	00257005	Rural Sheeted Wearing Surface	Surface - Hazelton Rd (005) from Station Rd to End of Sheeting at RRD 815	Alma	Rural Class 3a Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	15	$11,499
4631	00262005	Rural Sheeted Wearing Surface	Surface - Heinrichs Rd (005) from Barrier Hwy to Old Burra Rd	Black Springs	Rural Class 3a Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	15	$34,632
4627	00262010	Rural Sheeted Wearing Surface	Surface - Heinrichs Rd (010) from Old Burra Rd to End of Sheeting at RRD 4040	Black Springs	Rural Class 3c Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	25	$31,224
4240	00268015	Rural Sheeted Wearing Surface	Surface - Hentschkes Rd (015) from Start of Sheeting at Farm Driveway to Masters Rd	Riverton	Rural Class 3b Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	20	$14,889
4172	00275005	Rural Sheeted Wearing Surface	Surface - Highfarm Rd (005) from Stockport - Giles Corner Rd to Girraween Rd	Alma	Rural Class 3a Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	15	$63,068
4817	00280005	Rural Sheeted Wearing Surface	Wearing Surface - Hilltown Rd (005) from Angas Court to Cairn Hill Rd	Hill River	Rural Class 1 Average Material Sheeted Wearing Surface	2020-21	9	$43,815
4818	00280055	Rural Sheeted Wearing Surface	Wearing Surface - Hilltown Rd (055) from End of Seal to Sommerville Rd	Hilltown	Rural Class 1 Average Material Sheeted Wearing Surface	2020-21	9	$13,898
4809	00280060	Rural Sheeted Wearing Surface	Wearing Surface - Hilltown Rd (060) from Sommerville Rd to Camels Hump Rd	Hilltown	Rural Class 1 Average Material Sheeted Wearing Surface	2020-21	9	$25,950
4820	00280065	Rural Sheeted Wearing Surface	Wearing Surface - Hilltown Rd (065) from Camels Hump Rd to Council Boundar (North)	Hilltown	Rural Class 1 Average Material Sheeted Wearing Surface	2020-21	9	$12,553
4217	00281005	Rural Sheeted Wearing Surface	Surface - Hogan Rd (005) from Tarlee Rd to Wild Dog Hill Rd	Tarlee	Rural Class 3c Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	32	$23,219
4515	00293080	Rural Sheeted Wearing Surface	Surface - Hughes Park Rd (080) from Start of Sheeting at RRD 9300 to Council Boundary (West)	Watervale	Rural Class 3c Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	32	$13,115
4669	00315010	Rural Sheeted Wearing Surface	Wearing Surface - Kadlunga Rd (010) from Tickle Rd to Slate Quarry Rd	Mintaro	Rural Class 2b Average Material Sheeted Wearing Surface	2020-21	14	$26,180
4575	00322005	Rural Sheeted Wearing Surface	Wearing Surface - Kenworthy Rd (005) from Taylors Rd to Blenhiem Rd	Watervale	Rural Class 2a Average Material Sheeted Wearing Surface	2020-21	14	$19,977
4489	00345010	Rural Sheeted Wearing Surface	Surface - Lamkins Rd (010) from Baum Rd to Farm Driveway at RRD 2910	Auburn	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	22	$12,149
4766	00349010	Rural Sheeted Wearing Surface	Surface - Lehman Creek Rd (010) from Sommerville Rd to The Bluff Rd	Hilltown	Rural Class 3c Excellent Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	40	$15,414
4781	00350015	Rural Sheeted Wearing Surface	Wearing Surface - Leighton Rd (015) from Possingham Pit Rd to Saw Mill Rd	Spring Gully	Rural Class 2b Average Material Sheeted Wearing Surface	2020-21	14	$22,482
4226	00360010	Rural Sheeted Wearing Surface	Wearing Surface - Macaw Creek Rd (010) from Nobby White Hill Rd to Barrier Hwy	Riverton	Rural Class 2a Average Material Sheeted Wearing Surface	2020-21	14	$23,109
4867	00370070	Rural Sheeted Wearing Surface	Wearing Surface - Main Road 45 (070) from Schutz Rd to Waterloo Rd	Waterloo	Rural Class 1 Average Material Sheeted Wearing Surface	2020-21	9	$13,080
4459	00370100	Rural Sheeted Wearing Surface	Wearing Surface - Main Road 45 (100) from End of Seal to Schwartz Rd	Waterloo	Rural Class 1 Average Material Sheeted Wearing Surface	2020-21	9	$5,984
4463	00370105	Rural Sheeted Wearing Surface	Wearing Surface - Main Road 45 (105) from Schwartz Rd to Eckermann Rd	Waterloo	Rural Class 1 Average Material Sheeted Wearing Surface	2020-21	9	$5,509
4449	00370040	Rural Sheeted Wearing Surface	Wearing Surface - Main Road 45 (040) from Steelton Rd to Rawlins Rd	Steelton	Rural Class 1 Average Material Sheeted Wearing Surface	2020-21	9	$23,980
4450	00370045	Rural Sheeted Wearing Surface	Wearing Surface - Main Road 45 (045) from Rawlins Rd to Panchapoo Rd	Steelton	Rural Class 1 Average Material Sheeted Wearing Surface	2020-21	9	$26,592
4433	00370050	Rural Sheeted Wearing Surface	Wearing Surface - Main Road 45 (050) from Panchapoo Rd to Talla Walla Rd	Waterloo	Rural Class 1 Average Material Sheeted Wearing Surface	2020-21	9	$26,611
4457	00370055	Rural Sheeted Wearing Surface	Wearing Surface - Main Road 45 (055) from Talla Walla Rd to Start of Seal	Waterloo	Rural Class 1 Average Material Sheeted Wearing Surface	2020-21	9	$24,168
4456	00370065	Rural Sheeted Wearing Surface	Wearing Surface - Main Road 45 (065) from End of Seal to Schutz Rd	Waterloo	Rural Class 1 Average Material Sheeted Wearing Surface	2020-21	9	$24,900
4455	00370110	Rural Sheeted Wearing Surface	Wearing Surface - Main Road 45 (110) from Eckermann Rd to Mollers Gap Rd	Waterloo	Rural Class 1 Average Material Sheeted Wearing Surface	2020-21	9	$32,625
4461	00370115	Rural Sheeted Wearing Surface	Wearing Surface - Main Road 45 (115) from Mollers Gap Rd to Hardings Rd	Waterloo	Rural Class 1 Average Material Sheeted Wearing Surface	2020-21	9	$31,288
4306	00393005	Rural Sheeted Wearing Surface	Surface - Mclnerney Rd (005) from Golf Course Rd to Winkler Rd	Undalya	Rural Class 3c Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	32	$12,845
4473	00402010	Rural Sheeted Wearing Surface	Surface - Mernowie Rd (010) from Light River Rd to End	Marrabel	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	22	$15,620
4190	00468028	Rural Sheeted Wearing Surface	Surface - Old Main Rd (South) (028) from Francis St (Navan Cemetery) to Navan Cemetery Rd	Riverton	Rural Class 3a Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	22	$12,860
4395	00470003	Rural Sheeted Wearing Surface	Wearing Surface - Old Manoora Rd (003) from Barrier Hwy (South) to Intersection with Segment 005	Manoora	Rural Class 2a Average Material Sheeted Wearing Surface	2020-21	14	$4,004
4407	00470005	Rural Sheeted Wearing Surface	Wearing Surface - Old Manoora Rd (005) from Barrier Hwy (North) to Road Reserve at RRD 1820	Manoora	Rural Class 2a Average Material Sheeted Wearing Surface	2020-21	14	$31,598
4548	00502005	Rural Sheeted Wearing Surface	Wearing Surface - Pine Creek Rd (North) (005) from Auburn - Manoora Rd to Dixon Rd	Manoora	Rural Class 2b Average Material Sheeted Wearing Surface	2020-21	14	$7,694
4299	00544050	Rural Sheeted Wearing Surface	Wearing Surface - Rhynie-Balaklava Rd (050) from Diagonal Rd to Anderson Rd	Halbury	Rural Class 1 Excellent Material Sheeted Wearing Surface	2020-21	12	$21,665
4281	00544020	Rural Sheeted Wearing Surface	Wearing Surface - Rhynie-Balaklava Rd (020) from Woolshed Flat-Undalya Rd to Glynard Rd	Woolshed Flat	Rural Class 1 Excellent Material Sheeted Wearing Surface	2020-21	12	$16,616
4287	00544035	Rural Sheeted Wearing Surface	Wearing Surface - Rhynie-Balaklava Rd (035) from Nyowee Rd to Road Reserve	Halbury	Rural Class 1 Excellent Material Sheeted Wearing Surface	2020-21	12	$43,325
4278	00544040	Rural Sheeted Wearing Surface	Wearing Surface - Rhynie-Balaklava Rd (040) from Road Reserve to Gregor Rd	Halbury	Rural Class 1 Excellent Material Sheeted Wearing Surface	2020-21	12	$47,953
4624	00549015	Rural Sheeted Wearing Surface	Wearing Surface - Riley Rd (015) from Torrdale Rd to Flagstaff Rd	Mintaro	Rural Class 2a Average Material Sheeted Wearing Surface	2020-21	14	$7,855
4365	00556040	Rural Sheeted Wearing Surface	Wearing Surface - Riverton-Marrabel Rd (040) from Schnaitmann Rd to Saddleworth Rd	Saddleworth	Rural Class 2a Average Material Sheeted Wearing Surface	2020-21	14	$34,480
4795	00564005	Rural Sheeted Wearing Surface	Surface - Robinson Rd (005) from MacDonald Rd to Farm Driveway at RRD 410	Stanley Flat	Rural Class 3c Excellent Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	40	$5,384
4320	00566010	Rural Sheeted Wearing Surface	Surface - Roehrs Rd (010) from Nash Rd to Kapunda Rd	Tarnma	Rural Class 3a Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	15	$27,575
4705	00612005	Rural Sheeted Wearing Surface	Wearing Surface - Slaughterhouse Rd (005) from Farrell Flat Rd to Spring Farm Rd	Spring Farm	Rural Class 2a Excellent Material Sheeted Wearing Surface	2020-21	22	$13,260
4663	00614005	Rural Sheeted Wearing Surface	Surface - Smith Rd (005) from Copper Ore Rd to Dunns Rd	Stanley	Rural Class 3c Excellent Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	40	$32,631
4480	00618015	Rural Sheeted Wearing Surface	Wearing Surface - Sollys Hill Rd (015) from Mt Horrocks Rd to End	Watervale	Rural Class 2b Average Material Sheeted Wearing Surface	2020-21	14	$14,437
4703	00625005	Rural Sheeted Wearing Surface	Wearing Surface - Spring Farm Rd (005) from Slaughterhouse Rd to Farrell Flat Rd	Spring Farm	Rural Class 2a Average Material Sheeted Wearing Surface	2020-21	14	$14,477
4422	00642040	Rural Sheeted Wearing Surface	Wearing Surface - Steelton Rd (040) from I'anson Rd to Powerline Rd North	Steelton	Rural Class 2a Average Material Sheeted Wearing Surface	2020-21	14	$11,099
4770	00675005	Rural Sheeted Wearing Surface	Surface - The Bluff Rd (005) from RM Williams Way to Hut River Rd	Hilltown	Rural Class 3a Excellent Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	30	$30,092
4670	00678005	Rural Sheeted Wearing Surface	Surface - The Gap Rd (South) (005) from Mt Rufus Rd to Road Reserve at RRD 1570	Hill River	Rural Class 3c Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	32	$32,930
4675	00678010	Rural Sheeted Wearing Surface	Surface - The Gap Rd (South) (010) from Road Reserve at RRD 1570 to Miss Martin Rd	Hill River	Rural Class 3c Excellent Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	40	$19,907
4635	00690005	Rural Sheeted Wearing Surface	Surface - Torrdale Rd (005) from Baum Rd to Farm Driveway at RRD 740	Stanley	Rural Class 3c Average Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	32	$11,651
4321	00705005	Rural Sheeted Wearing Surface	Surface - Ulandi Rd (005) from Marrabel Rd to Belvidere Rd	Marrabel	Rural Class 3c Poor Material Sheeted Wearing Surface (incl Lower Base & Earthworks)	2020-21	25	$21,169
4451	00741005	Rural Sheeted Wearing Surface	Wearing Surface - Whyte Park Rd (005) from Powerline South Rd to Main Road 45	Steelton	Rural Class 2a Average Material Sheeted Wearing Surface	2020-21	14	$20,223
4419	00741010	Rural Sheeted Wearing Surface	Wearing Surface - Whyte Park Rd (010) from Main Road 45 to Light River Rd	Steelton	Rural Class 2a Average Material Sheeted Wearing Surface	2020-21	14	$20,177
4464	00741015	Rural Sheeted Wearing Surface	Wearing Surface - Whyte Park Rd (015) from Light River Rd to Road Reserve at RRD 3485	Steelton	Rural Class 2a Poor Material Sheeted Wearing Surface	2020-21	11	$20,168
4527	00745010	Rural Sheeted Wearing Surface	Wearing Surface - Williams Rd (West) (010) from 80m North Greenwood Park Rd to Greenwood Park Rd	Auburn	Rural Class 2a Average Material Sheeted Wearing Surface	2020-21	14	$1,369
11744	CD0394	Cross Drain	Pipe No. 1 for CD0394 in Lallys Rd from Farrell Flat Rd to Angas Ct		225mm Class 4 Cross Drain Pipe	2020-21	70	$1,774
11815	CD0395	Cross Drain	Pipe No. 1 for CD0395 in Lallys Rd from Farrell Flat Rd to Angas Ct		225mm Class 4 Cross Drain Pipe	2020-21	70	$1,774
12172	CD0410	Cross Drain	Culvert No. 1 for CD0410 in Main Road 45 from Kunden Rd to Schutz Rd		1200mm x 900mm Cross Drain Box Culvert	2020-21	70	$17,315
12437	CD0410	Cross Drain	Inlet Headwall No. 1 for CD0410 in Main Road 45 from Kunden Rd to Schutz Rd		1200mm span Cross Drain Single Cell Headwall for Box Culvert	2020-21	70	$1,948
12923	CD0410	Cross Drain	Outlet Headwall No. 1 for CD0410 in Main Road 45 from Kunden Rd to Schutz Rd		1200mm span Cross Drain Single Cell Headwall for Box Culvert	2020-21	70	$1,948
12173	CD0207	Cross Drain	Culvert No. 1 for CD0207 in Stockport - Hamley Bridge Rd from Ayliffes Bridge Rd to Boundry		1200mm x 600mm Cross Drain Box Culvert	2020-21	70	$15,473
		Bridges	Bridge renewal work			2020-21		$100,000
						2020-21 Sub-Total		**$2,186,046**
						Total 5yr Works Plan		**$12,617,035**

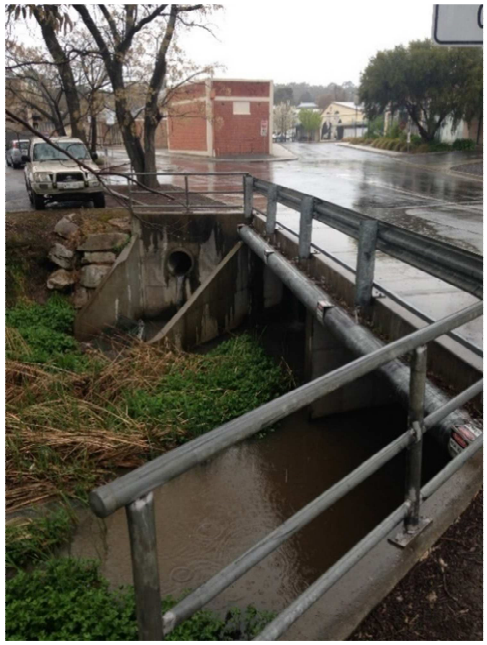
Infrastructure Asset Management Plan

Clare & Gilbert Valleys Stormwater

Clare & Gilbert Valleys Council

June 2017

Ref No. 20160464DR1E



CLARE & GILBERT VALLEYS COUNCIL

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Document History and Status

Rev	Description	Author	Reviewed	Approved	Date
A	Draft	RKE	RKE		18 October 2016
B	Edits following Council review	KJS/BL	BL/MB	RKE	18 May 2017
C	Update following Council workshop	KJS/BL	KJS	RKE	5 June 2017
D	Update risk section	RKE	RKE	RKE	13 June 2017
E	Minor edit to level of service	KJS	RKE	RKE	29 June 2017

Contents

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1 Introduction

1.1 Context

This plan is limited to Township network drainage and has been developed using the most up to date information available from Councils records. This includes the stormwater valuation register 30/6/2013. Councils has also invested in stormwater management plans on towns throughout the Council. Where possible the recommendations have been used in order to inform future upgrade requirements for stormwater network.

There is limited information available on the size and length of the pipe system and the number and type of stormwater pits. This information in planned to be collected in the future in order to further develop the stormwater asset register. There has been some work undertaken through the stormwater management planning to determine the underground network drainage, however this has not been transferred into Councils asset register at this time. This work will be undertaken as part of the Asset Improvement Plan.

1.2 Background

Clare & Gilbert Valleys Council is situated to the north of Adelaide in South Australia and includes the towns of Clare, Riverton, Saddleworth and Auburn and villages of Stockport, Tarlee, Rhynie, Manoora, Marrabel, Waterloo, Mintaro, Penwortham, Leasingham, Watervale and Sevehill. The Council has a population of 8,749 (2011 Census). Tarlee, situated in the southern area of the Council, is 85km north of Adelaide and the main Council office in Clare is 140km north of Adelaide.

Council own and manage stormwater assets within the townships that are included in this plan

For rural roads there are bridges, pipes, box culverts, drains, pits, headwalls which are not included in this plan. These are included in the Transport Plan.

An overview of the Stormwater infrastructure assets covered by this asset management plan are shown in Table 1.1 and Figure 1.1.

Table 1.1 Assets covered by this plan

Asset Category	Replacement Value
Stormwater Drainage	$2,845,338
Stormwater Pollutant Traps	$58,572
Stormwater Open Drains	$325,850
Total	**$3,229,760**

The stormwater infrastructure is predominantly located in Clare and Riverton, and in Mintaro to a lesser degree which combine to comprises 95% of the drainage infrastructure by value. The remaining 5% is spread across the other towns as shown the the figure below.

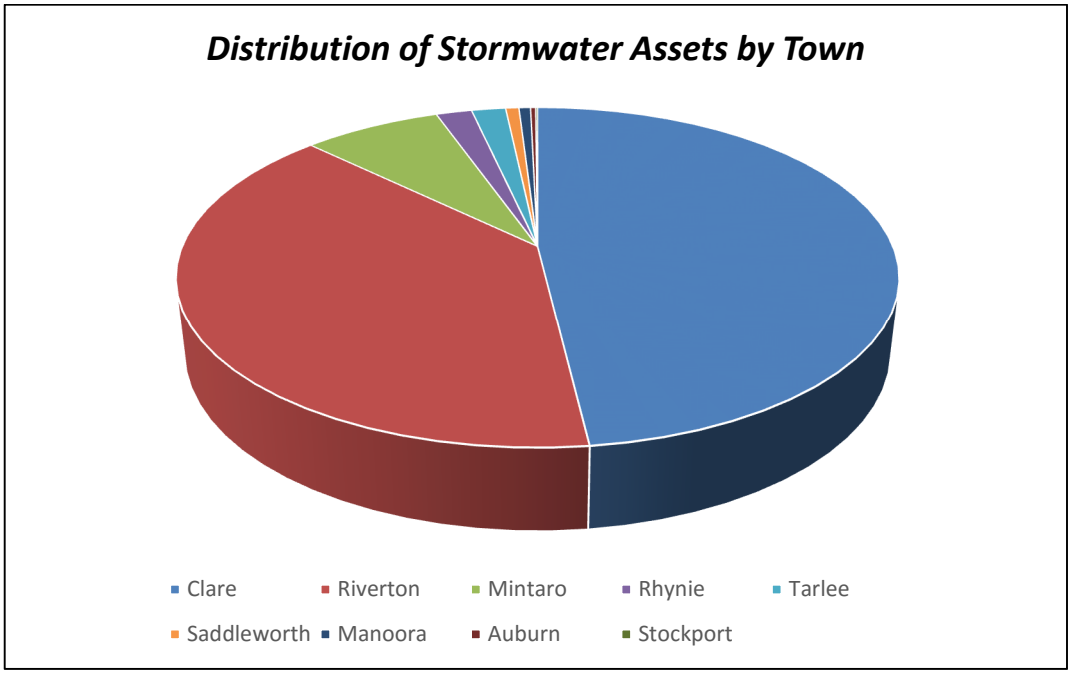

Figure 1.1 Distribution of Stormwater Assets by Replacement Value as at 2013

1.3 Plan Framework

This Stormwater infrastructure asset management plan is based on the fundamental structure of the IPWEA NAMS 3 Asset Management for Small, Rural or Remote Communities template and has been simplified for Clare & Gilbert Valleys Council.

The Clare & Gilbert Valleys Council provide services for the community in part through the provision of infrastructure assets. Council have acquired these assets directly through construction by council staff or contractors and by inheritance from developers or other organisations.

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

- Taking a life cycle approach
- Developing cost-effective management strategies for the long term
- Providing a defined level of service and monitoring performance
- Managing risks associated with asset failures
- Sustainable use of physical resources.

Key elements of the plan are:

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

This asset management plan is prepared under the direction of Council's vision which is:

"Clare & Gilbert Valleys will be a harmonious and welcoming community living in an attractive and culturally rich rural environment, with first class facilities, innovative business and internationally recognised local produce and services."

2 Levels of Service

The community generally expect that Council will have the necessary infrastructure and operation and maintenance practices in place to control the storm water in such a way that the tolerance to minor and major flooding is balanced against the cost to install and maintain a drainage system network.

Council has defined service levels in two terms and provides the level of service objective, performance measure process and service target in Table 2.1 and Table 2.2.

Community Levels of Service relates to the service outcomes that the community wants in terms of reliability, responsiveness, amenity, safety and financing.

Table 2.1 Community Levels of Service

Key Performance Measure	Level of Service Objective	Performance Measure Process	Current Service	Target
Performance	Rainfall and runoff is managed within Council's existing storm water infrastructure with negligible impact on the public and property for a 5 year Average Recurrence Interval (ARI) on Arterial and Collector Roads and a 2 year ARI for local roads in towns and 10 year ARI for open drains	Stormwater management plans prepared and upgrade plans in place for each town	4 planned projects funded in 2016/2017 budget	High priority projects completed within budget allocated funded years
Reliability	Drainage system operation without blockage	Report or identify blockages.	Reactive	20 complaints per year
Responsiveness	Response to request within set timeframe.	Response to complaints assessed and recommendation made	Assess and create works request and record outcome, varied timeframe	5 working days
Amenity	Maintain visual amenity of stormwater infrastructure.	Maintain, clear debris and weeds from pit entry points	Weed spraying and debris clearing to suit seasonal conditions	Weed spraying and debris clearing as programmed
Safety	Accidents related to asset conditions are minimised	No successful claim increase against Council	Zero claims against Council.	Zero claims against Council.
Major Flood	Flooding risk and impact to buildings, property and public is understood and where practical flood mitigation plans put in place	Stormwater management plans	Majority of plans have been developed	Complete plans all township plan

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

Table 2.2 Technical Levels of Service

Key Performance Measure	Level of Service Objective	Performance Measure Process	Current Service	Target
Maintenance	Existing infrastructure is free from debris and in good working order	Routine inspections of known problem areas and prior to significant forecast events	Fortnightly	Fortnightly
Renewal	Asset renewal is planned	Asset renewal is accurately predicted in the plan	No asset renewal is anticipated based on limited condition data	Asset Renewal is confidently planned based on condition data
Upgrade	Remove all gaps between desire service level and actual service level for performance	Finalise plans to be approved by Council and funded through Long Term Financial plan	No planned priority work in place beyond 2016/2017 (subject to Council's priorities for each township)	Introduce of prioritise 10-year upgrade plan

3 Future Demand

3.1 Demand Forecast

Factors affecting demand include population change, changes in demographics, seasonal factors, vehicle ownership, consumer preferences and expectations, economic factors, agricultural practices, environmental awareness, etc. Demand factor trends and impacts on service delivery are summarised in Table 3.1.

Table 3.1 Demand Factors, Projections and Impact on Services

Demand Driver	Present Position	Projection	Impact on Services
Growth in storm water drainage area due to new development areas	Limited capacity of underground storm water network creates reliance on surface flow within the road carriageway	Minor developments could impact on existing downstream properties	Potential risk of creating flooding issues by approving development without understanding impact on performance of existing drainage system and upgrading capacity of the system to cope with development
Flood protection	Several towns are located near river systems or large catchments	Risk of flooding to property from river systems and runoff from large catchment	Emergency response and public awareness of risks and a need to identify priority capital works from finalised and adopted storm water management plans

3.2 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. Council will determine the ability of the existing systems to manage increased requirements. Opportunities identified to date for demand management are shown in Table 3.2. Further opportunities will be developed in future revisions of this asset management plan.

Table 3.2 Demand Management Plan

Service Activity	Demand Management Plan
Stormwater Drainage	1. Complete the Capacity assessment of stormwater drainage system against desired standards for performance and develop an upgrade plan 2. Evaluation of impact of new allotments on existing infrastructure 3. Planning to incorporate any identified growth over asset life 4. Review risk of flooding from large catchments and river systems 5. Incorporate in future iterations of the Asset Management Plan as requirements are known.

4 Life Cycle Management

The life cycle management plan details how Council plans to manage and operate the assets as the agreed levels of service (defined in section 2) while optimising life cycle costs.

4.1 Background Data

Clare & Gilbert Valleys Council's storm water assets are located throughout several towns in the Council area. The assets covered by this asset management plan are shown in Table 1.1.

The condition profile of the assets shown by Current Replacement Cost (CRC) included in this plan is shown in Figure 4.1. The basis of the condition profile was derived from the 2013 valuation.

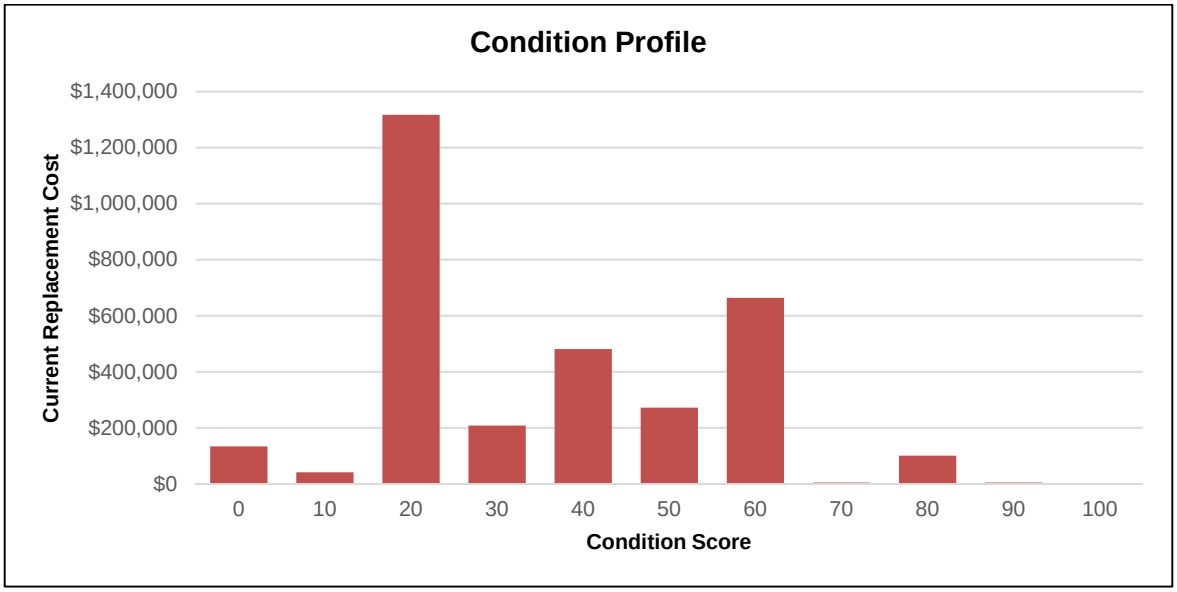

Figure 4.1 Stormwater Asset Age Profile

The condition profile should be considered indicative only. There is no age data or pipe/pit condition data available. The improvement plan recommends there being more work undertaken on mapping and condition assessing the pipe network.

4.1.1 Asset Capacity

Council's services are generally provided to meet design standards where these are available. Locations where deficiencies in service performance are known are detailed in Table 4.1.

Table 4.1 Known Service Performance Deficiencies

Assets	Service Deficiency
Underground pipe/pit system	Standard of underground pipe system need to be defined and added to Conquest
Open Channel System	Standard of underground pipe system need to be defined and added to Conquest
Flood mitigation	Standard of underground pipe system need to be defined and added to Conquest

4.1.2 Asset Condition

Asset condition information was included in the 2013 valuation and has been converted to a scoring system 0 = as new to 100 being the condition at end of life.

The remaining life of all assets is currently measured by condition at valuation and the consumptions calculated as a proportion of the condition compare to condition at end of life over the total useful life of the assets being (80 years storm water drainage, 40 years pollutant traps and 30 years open drains).

As further asset condition information becomes available this will be included. Condition has been presented using a 0-100 rating system as detailed in Table 4.2.

Table 4.2 Asset Condition Scores

Condition Rating	Description
(0-20)	Very good: no sign of deterioration
(30-40)	Good: no sign of deterioration
(50-60)	Poor: signs of deterioration
(70-80)	Plan for recondition/replacement
(90-100)	Immediate recondition/replacement required

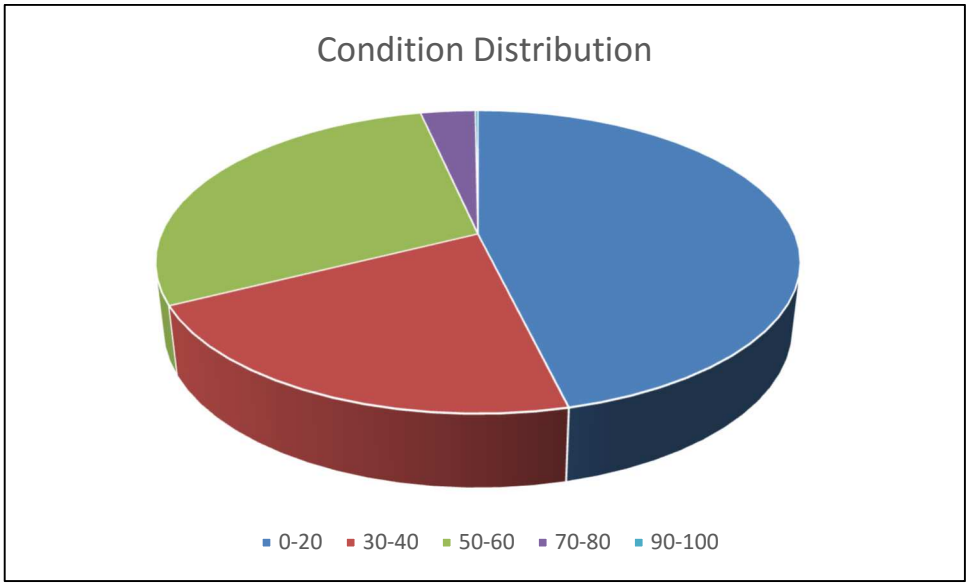

Figure 4.2 Stormwater Asset Condition Profile converts to 1 to 5

The following provides a list of the assets rated in poor condition:

Asset	Current Replacement Cost	Condition	Expiry Date
Tarlee (Old MR South (TSWD8)	$5,200	90	Included in proposed upgrade
Clare (Burton/Old North Street (CSWD5)	$44,000	80	2030
Clare (CSWD6)	$39,000	80	2030
Clare (CSWD7)	$18,000	80	2030

The basis of the condition assessment undertaken as part of the valuation is largely unknown and is a presented for information only. In the improvement plan there is a recommendation for further investigation work to confirm the extent and condition of the underground drainage network.

4.1.3 Asset Valuations

The value of the stormwater assets recorded in the asset register as at 1 July 2013 for assets acquired before 1 July 2013 and at cost for assets acquired after 1 July 2013. The value of the stormwater assets that are addressed in this asset management plan is shown in Table 4.3 below.

Table 4.3 Stormwater Asset Valuation Summary

Current Replacement Cost/Depreciable Amount	$3,229,760
Written Down Value	$2,124,863
Annual Depreciation Expense	$47,860

The current rate of consumption (annual depreciation/depreciable amount) for Stormwater assets is 1.5 %. This indicates that on average, over the life of an asset, 1.5 % of the depreciable amount is consumed annually. The translation of this consumption rate into renewals is subject to a decision on funding, service level determination and asset condition.

4.2 Risk Management

An assessment of the preliminary risks associated with the service delivery of the Clare & Gilbert Valleys Council's Stormwater networks has been undertaken by Council. The risk assessment process identifies credible risks, considers the likelihood of an event occurring and assesses the impact or consequence that would be caused by an event occurring. A risk rating system using a risk matrix of likelihood versus impact is developed and a risk treatment plan to address non-acceptable risk is being finalised (refer Appendix A). Priority risks to property and identified actions will be identified and priority risk will be considered by Council for future budget allocation.

Risks assessed as being "Extreme" and "High" will be identified and addressed in future revisions of the plan.

This plan does not include a formal risk assessment however the following risks have been identified for further consideration in future iterations of this plan.

Table 4.4 Stormwater Preliminary Risk Register

Risk	Comments
Major Flooding	Given the river systems in or near towns the risk of flooding in major storm events is not well documented and defined. Some investigation work has been undertaken and over the life of this plan further work will be needed to understand and manage this risk
Lack of Easements	Storm water plan for Clare and Gilbert Valleys Council will assist in defining where drainage easements are needed to control and maintain key existing storm water infrastructure or create new infrastructure.
Awareness of flood risks	Opportunity to identify flood risks and create awareness for those affected to improve response to flooding and establish opportunities for mitigation work in the future
Legal action	Councils defence against any future legal claim will be improved once all stormwater management plans are formalised and plans put in place for upgrades or plans put in place where mitigation is not feasible.

4.3 Required Expenditure

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 medium term financial planning period, this provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

State Government Stormwater Management Authority contributions will be required to offset Council's expenditure to fund priority works identified in the township plans.

4.3.1 Routine Maintenance

Routine maintenance is the regular on-going work that is necessary to keep assets operating, including instances where portions of an asset fails and needs immediate repair to make the asset operational again. Maintenance includes reactive (unplanned), planned and specific maintenance work activities. Assessment and prioritisation of reactive maintenance is undertaken by operational staff using experience and judgement.

Council's current and future stormwater drainage maintenance costs are based on the maintenance costs provided for the past five years.

Table 4.5 Annual Operations & Maintenance Expenses

Operations and Maintenance	2011	2012	2013	2014	2015
Stormwater Drainage Maintenance	$108,961	$149,262	$115,247	$167,045	$172,515

Future operation and maintenance expenditure is forecast to trend in line with the 5-year average (2011-2015) of 145,000. The average annual operation and maintenance cost over a 10-year planning period (medium term) is $145,000.

Should Council invest in upgrading the storm water system over time then allowance will be needed in future plans to incrementally increase the maintenance cost. Given there is no adopted upgrade plan in place for the purposes of this plan no allowance is made from increasing maintenance over time.

4.3.2 Capital Renewal

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

The method used to develop the renewal plan uses the asset register data to project the renewal costs for renewal years using acquisition year and useful life, this equates to the expiry date generated from Council's asset management system.

Projected future renewal expenditures are forecast to increase over time as the asset stock ages. From the data obtained from Council's asset management system, Conquest, negligible storm water assets will require renewal in the next 10 years. The costs associated with the renewals will be reviewed and will be aggregated for each financial year as part of the improvement plan.

Table 4.6 Required Capital Renewal Expenditure

Financial Year	Capital Renewal Expenditure
Backlog	Nil
2022/23	$5207

Note – there is a low level of confidence in this renewal plan. In the improvement plan further work is suggested to better understand the extent, condition and remaining life of the existing underground storm water system.

4.3.3 Capital New/Upgrade and Acquisition

New/upgrade expenditure is major work that creates a new asset that did not previously exist, or works which upgrade or improve an existing asset beyond its existing capacity. They may result from growth, social or environmental needs. Assets may also be acquired at no cost to the Council from land development.

The Clare and Gilbert Valleys Council has developed Stormwater Management Plans for the following townships;

- Auburn
- Manoora
- Mintaro
- Rhynie
- Riverton
- Saddleworth
- Stockport
- Tarlee.

A Stormwater Management Plan is being prepared for the Clare township to be incorporated into improvement plan once completed.

Identification of nuisance and major flood risks have been assessed and identified for consideration in future budget deliberations and inclusion in future iterations of this plan.

The township stormwater management plans contain a range of recommended actions for consideration. The availability and timing of funding and resources will be determined in the order and staging of the actions detailed in the stormwater township plans.

While the status of the reporting is preliminary the following table provides an order of magnitude of the works being identified in the studies to date. This is highlighted as an emerging funding consideration for the Council.

Towns	Identified Upgrade Works for Consideration
Auburn	$4,140,000
Clare including flood control dam Clare not including flood control dam	$13,100,000 $19,400,000
Manoora	$3,433,500
Mintaro	$765,000
Rhynie	$675,000
Riverton	$1,005,000
Saddleworth	$2,710,000
Stockport	$2,705,000
Tarlee	$1,170,000
Estimated Total Including Clare flood control dam Not Including Clare flood control dam	 $29,703,500 $36,003,500

Assistance in the form of future funding and/or resources will be sought from the following:

- Australia Government – grants and subsidies
- State government of South Australia – grant and subsidies
- Private sector – developer contributions
- Council – administration, implementation and funding.

Work is continuing by Council administration to prioritise, quantify and develop the upgrade plan. For the purpose of this plan only the committed and approved budget for 2016/2017 and 2017/2018 is included in this plan.

Stormwater	Town	Financial Year	Planned Upgrade Works
Stormwater Management, Charles Street Tarlee - redirect water from properties & infrastructure	Tarlee	2016/17	$100,000
Stormwater Management, Kingston Terrace Auburn	Auburn	2016/17	$30,000
Stormwater Upgrades Clare - Williams St catchment, Neagles Rock Road upgrades, Henry St, Jarman, Norman Cresent	Clare	2017/18	$550,000
Stormwater Management, Riverton (rollover approx $75k from 2015/16 budget)	Riverton	2017/18	$275,000
TOTAL STORMWATER			**$955,000**

Future plans should include additional projects once Council has time to consider.

Table 4.7 Upgrade Expenditure approved

Financial Year	Capital Renewal Expenditure
2016/17	$130,000
2017/18	$825,000
2018/2019 and onwards	$1,000,000*

*Amount allocated in Council's Long Term Financial Plan

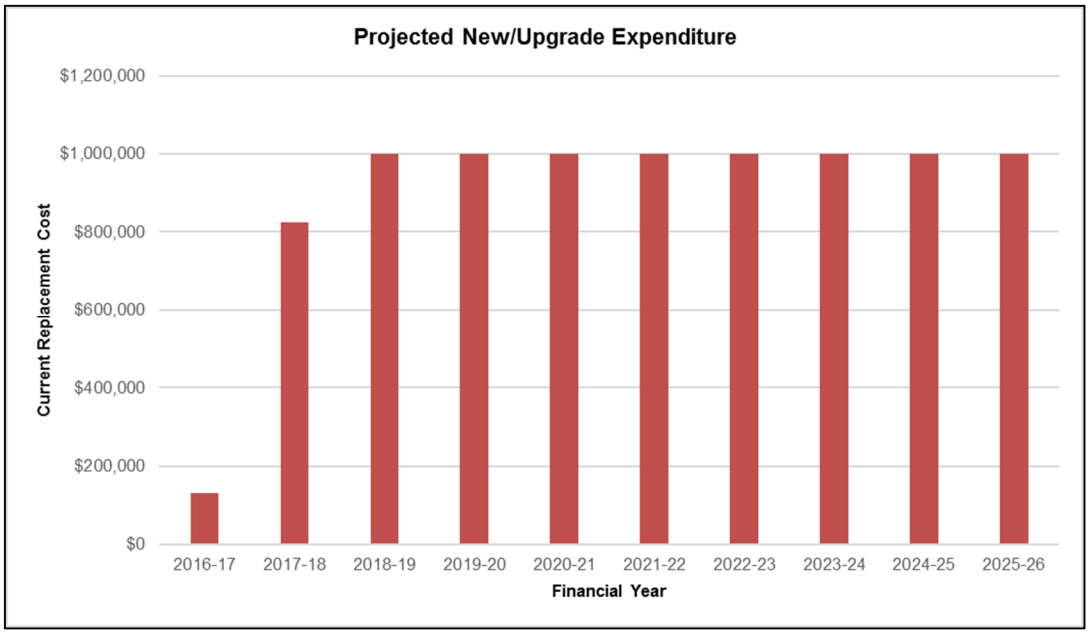

Figure 4.3 Budgeted New/Upgrade Expenditure

4.3.4 Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. Council has not identified any stormwater infrastructure assets to be disposed in the 10 year planning period (medium term).

4.3.5 Financial Projections

The financial projections are shown in Table 4.8 and Figure 4.3 for projected operating (operations and maintenance), capital upgrade and estimated budget funding.

Table 4.8 Operating and Capital Expenditure

Financial Year	Operations & Maintenance	Capital Renewal	Capital Upgrade*	Total Expenditure Requirement
2016-17 & backlog)	$145,000	$0	$130,000	$275,000
2017-18	$145,000	$0	$825,000	$970,000
2018-19	$145,000	$0	$1,000,000	$1,145,000
2019-20	$145,000	$0	$1,000,000	$1,145,000
2020-21	$145,000	$0	$1,000,000	$1,145,000
2021-22	$145,000	$0	$1,000,000	$1,145,000
2022-23	$145,000	$5,207	$1,000,000	$1,150,207
2023-24	$145,000	$0	$1,000,000	$1,145,000
2024-25	$145,000	$0	$1,000,000	$1,145,000
2025-26	$145,000	$0	$1,000,000	$1,145,000
Total	**$1,450,000**	**$5,207**	**$8,955,000**	**$10,410,207**

*Capital Upgrade amounts allocated in Council's Long Term Financial Plan. Works will be identified on a priority basis once Stormwater Management Plans are complete for all areas and determined by Council for future budget allocation.

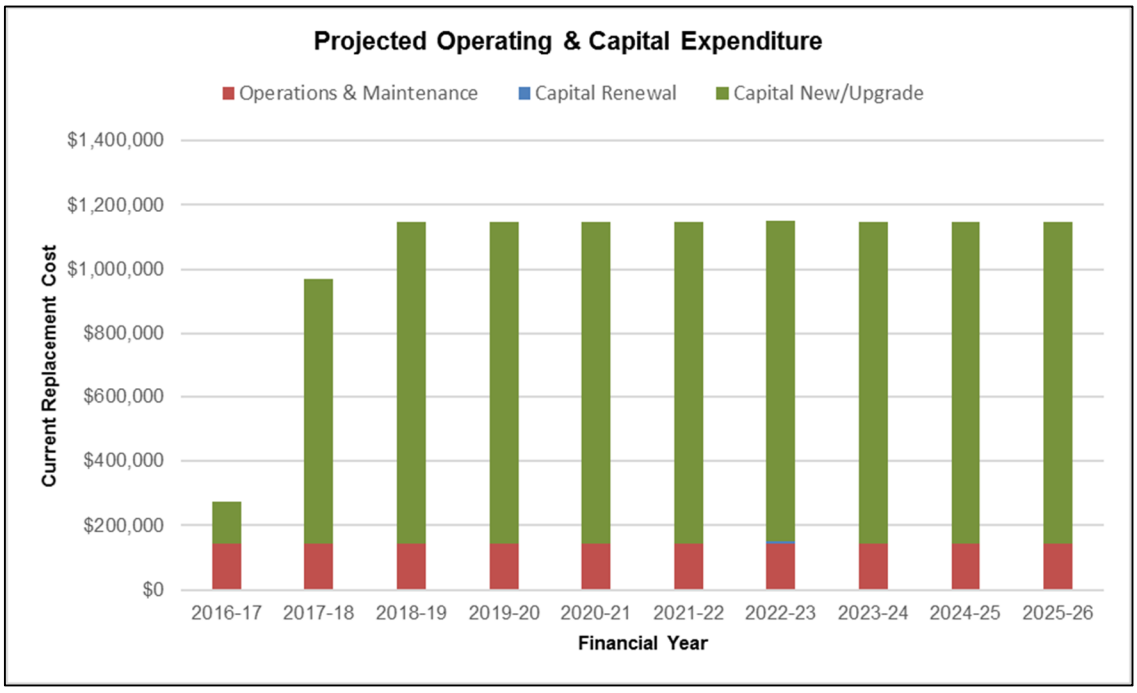

Figure 4.4 Projected Operating and Capital Expenditure over the Medium Term (10 Years)

The average projected operations, maintenance and capital expenditure required over the 10 year planning period is $1,041,000 per year.

5 Plan Improvement and Monitoring

The following tasks have been identified for improving future versions of the plan. Council should assign responsibilities and resources to these tasks as part of the endorsement of the plan.

Table 5.1 Tasks Identified for improving future versions of the plan

Task No.	Task	Responsibility
1	Complete Storm water management plan for Clare	Council Administration
2	Digitise stormwater network so pipe, pit and outlet sizes and construction dates are recorded from work as executed plans and on site observations and then store on GIS	Council Administration
3	Field CCTV survey on 10% of the network and review remaining life predications compared to age	Councils Administration
4	Revaluation of network and update Council asset system and Exponare	Council Administration
5	Develop as prioritised stormwater upgrade implementation plan for each town as a follow-on from the stormwater management plans	Council Administration
6	Conduct a risk assessment workshop in order to develop a risk register and identify critical risks and a treatment plan for inclusion in future iterations of the plan.	Council Administration
7	Develop and revised Asset Plan based on improved data and analysis from the above steps	Council Administration

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

This plan is current as of June 2017 and due for revision and updating in October 2017 once the improvement plan is completed and Council prioritises future budget predictions and possible funding sources.

6 References

IPWEA, 2006, *NAMS.PLUS3 Asset Management*, Institute of Public Works Engineering Australia, Sydney, www.ipwea.org

IPWEA, 2011, Asset Management for Small, Rural or Remote Communities Practice Note, Institute of Public Works Engineering Australia, Sydney, www.ipwea.org

Clare and Gilbert Valleys Council primary township stormwater management plans, Australian Water Environments, Government of South Australia Stormwater Management Authority

Appendix A

Stormwater Priorities Assessment

Determining priorities - 7 Towns Stormwater Management Plan

Considerations:	Ranking system:
Level of flood risk	Low = 1 in 100 ARI, Medium = 1 in 50 ARI, High = 1 in 20 ARI
Number of properties protected (%age) - based on properties at risk in 1 in 100ARI	Low = <20%, Medium = 20%-50%, High = >50% properties protected
Cost effectiveness ($ per property)	Low = >$250,000, Medium = $100,000-$250,000, High = <$100,000
Community aspiration	Low = <20%, Medium = 20%-50%, High = >50% importance

	Recommendation	Current flood exposure	Number of properties protected	Value of properties protected - Valuer General's valuation as per Council's current records (date)	Flood Damges Estimate	Cost of intervention	Cost of intervention per property	Recurrent costs $/annum	Priority - Low Med High	Suggested Timeframes (Yrs)	Priority	Comments
Tarlee	New and upgraded infrastructure to the north and east of Tarlee	High	9	$1,908,000.00	$390,000.00	$590,000.00	$65,556.00	$1,000.00	H	1 to 5	1	SMA funding
Tarlee	Removal of the old stone Bridge	High	8	$1,635,000.00	$350,000.00	$210,000.00	$26,250.00		H	1 to 5	1	DPTI Asset Possible SMA/DPTI funding
Tarlee	Regular maintenance of stormwater drainage infrastructure and watercourses	High				$5,000.00		$1,000.00	H	0 to 1	1	Operating
Tarlee	Development / planning controls	High							H	0 to 1	1	Operating
Tarlee	Flood preparedness - Flood warning system	High				$30,000.00		$5,000.00	M	1 to 5	2	
Tarlee	Flood preparedness - Community education program	High				$10,000.00		$1,000.00	M	1 to 5	2	Operating
Tarlee	Regrading Horrocks Highway and add culvert	High	0			$20,000.00		$500.00	M	5 to 10	3	DPTI Responsibility
Tarlee	Water Treatment – verge infiltration pit systems (4)					$15,000.00		$1,000.00	L	5 to 10	4	Schedule future replanting program
Tarlee	New and upgraded infrastructure to the south of Tarlee	High	3	$642,000.00	$130,000.00	$280,000.00	$93,333.00	$1,000.00	M	1 to 5	5	SMA Funding
Tarlee	Feasibility assessment of rain garden and small scale MAR scheme	Low				$10,000.00			M	1 to 5	3	Needs further investigation
	Total		**20**	**$4,185,000.00**	**$870,000.00**	**$1,170,000.00**		**$10,500.00**				
Stockport	Modifications to Gilbert river, bridge height and a proposed levee		31	$4,307,000.00	$1,360,000.00	$2,000,000.00	$64,516.00	$5,000.00				
Stockport	Modifications and proposed infrastructure on eastern side of town	High	11	$1,852,000.00	$480,000.00	$400,000.00	$36,363.64	$2,000.00	H	1 to 5	1	SMA Funding
Stockport	Measures to address local runoff	High	11	$2,080,000.00	$480,000.00	$260,000.00	$23,636.36	$20,000.00	H	1 to 5	1	SMA Funding
Stockport	Regular maintenance of stormwater drainage infrastructure and watercourses	Medium				$5,000.00		$1,000.00	H	0 to 1	1	Operating
Stockport	Enforcement and inclusion of flood maps in Council's Development Plan	High							H	0 to 1	1	Operating
Stockport	Flood warning system	High				$30,000.00		$5,000.00	H	0 to 1	2	Grant Funding
Stockport	Community education program	High				$10,000.00		$1,000.00	H	0 to 1	2	Operating
	Total		**53**	**$8,239,000.00**	**$2,320,000.00**	**$2,705,000.00**		**$34,000.00**				
Manoora	Modification to existing Diversion channel and dam		13	$1,422,000.00	$570,000.00	$3,120,000.00	$240,000.00	$250,000 based on * % of capital cost	H			
Manoora	Proposed Eastern Swale	High	6	$762,000.00	$260,000.00	$60,000.00	$10,000.00	$2,000.00	H	1 to 5	1	Possible SMA Funding
Manoora	Regular maintenance of stormwater drainage infrastructure and watercourses	High				$5,000.00		$5,000.00	H	0 to 1	1	Operating
Manoora	Flood warning system	High				$30,000.00		$5,000.00	H	0 to 1	1	Grant Application
Manoora	Enforcement and inclusion of flood maps in Council's Development Plan	High							H	0 to 1	1	Operating
Manoora	Improved drainage/protection in vicinity of Chinkford Lane	High	4	$343,000.00	$180,000.00	$130,000.00	$32,500.00	$2,000.00	M	1 to 5	2	Possible SMA Funding
Manoora	Community education program	High				$10,000.00		$1,000.00	M	0 to 1	2	Operating
Manoora	Stream rehabilitation: • Weed and exotic tree management with landowners					n/a			L	5 to 10	3	
Manoora	Stream rehabilitation: • Rock scour protection at stormwater outlets along Barrier Hwy					$8,500.00			L	5 to 10	3	
Manoora	Water Treatment – Wetland/basin					$70,000.00		$5,600.00	M	5 to 10	4	
	Total		**10**	**$2,527,000.00**	**$1,010,000.00**	**$3,433,500.00**		**$270,600.00**				

Determining priorities - 7 Towns Stormwater Management Plan

	Recommendation	Current flood exposure	Number of properties protected	Value of properties protected - Valuer General's valuation as per Council's current records (date)	Flood Damges Estimate	Cost of intervention	Cost of intervention per property	Recurrent costs $/annum	Priority - Low Med High	Suggested Timeframes (Yrs)	Priority	Comments
Mintaro	Modification to Millers Creek, remove exotic vegetation and provide additional infrastructure	High	3	$1,090,000.00	$130,000.00	$190,000.00	$63,333.33	$15,000.00	H	1 to 5	1	King Street Culvert been upgraded recent road construction
Mintaro	Enforcement and inclusion of flood maps in Council's Development Plan	High							H	0 to 1	1	Operating
Mintaro	Modification to southern watercourse and new infrastructure, remove exotic vegetation	High	4	$1,044,000.00	$180,000.00	$150,000.00	$37,500.00	$5,000.00	H	1 to 5	1	Possible SMA Funding
Mintaro	Regular maintenance of stormwater drainage infrastructure and watercourses	High				$10,000.00		$5,000.00	H	0 to 1	1	Operating
Mintaro	Roaside swales along Young, Hill and Wakefield Streets		2	$400,000.00	$90,000.00	$90,000.00	$45,000.00	$3,000.00	H	1 to 5	2	
Mintaro	Proposed infrastructure on Jacka Road/Leasingham Rd	High	0			$75,000.00		$1,000.00	M	1 to 5	2	
Mintaro	Flood warning system	High				$30,000.00		$5,000.00	M	0 to 1	2	
Mintaro	Community education program	High				$10,000.00		$1,000.00	M	0 to 1	2	Operating
Mintaro	Reshape road drain along Burton Street and provide scour protection	High	0			$10,000.00		$1,000.00	M	1 to 5	3	Operating
Mintaro	Inspect dam for an adequate spillway		0						L	0 to 1	3	
Mintaro	Treatment, harvesting and reuse – Two bioretention basins and two wetlands					$200,000.00		$4,000.00	L	5 to 10	4	
	Total		**9**	**$2,534,000.00**	**$400,000.00**	**$765,000.00**		**$40,000.00**				
Rhynie	Regrade Milne Street to increase ford overflow capactiy		2	$385,000.00	$90,000.00	$40,000.00	$20,000.00	$1,000.00	H	1 to 5	1	
Rhynie	Increase channel capacity	High	3	$590,000.00	$130,000.00	$40,000.00	$13,333.33	$1,000.00	H	1 to 5	1	SMA Funding
Rhynie	Provide a levee and flow path around existing dwelling on Rhynie-Balaklava Road	High	2	$465,000.00	$90,000.00	$20,000.00	$10,000.00	$1,000.00	H	1 to 5	1	SMA Funding
Rhynie	Regular maintenance of stormwater drainage infrastructure and watercourses	High				$5,000.00			H	0 to 1	1	
Rhynie	Enforcement and inclusion of flood maps in Council's Development Plan	High							H	0 to 1	1	
Rhynie	Regrade Salter Springs Road	High	2	$260,000.00	$90,000.00	$110,000.00	$55,000.00	$1,000.00	H	1 to 5	2	SMA Funding
Rhynie	Create road side swale and duplicate culverts under Main North Road at intersection of Riverton Road	High	1	$270,000.00	$40,000.00	$50,000.00	$50,000.00	$1,000.00	M	1 to5	2	SMA Funding
Rhynie	Formalise swale/overflow path along Bernard Street	High	2	$415,000.00	$90,000.00	$30,000.00	$15,000.00	$1,000.00	M	1 to5	2	
Rhynie	Community education program	High				$10,000.00		$2,000.00	L	0 to 1	2	
Rhynie	Provide a ford crossing and drop structure at Slape Road	High	0			$40,000.00		$1,000.00	M	1 to 5	2	SMA Funding
Rhynie	Flood warning system	High				$30,000.00		$5,000.00	L	0 to 1	2	
Rhynie	Provide contour drain to east of properties on the Main North Rd	High	0			$30,000.00			M	5 to10	3	
Rhynie	Duplicate culverts under Main North Road	High	0			$120,000.00			M	5 to 10	3	DPTI
Rhynie	Water Treatment – Wetland/basin					$150,000.00			L	5 to 10	4	
	Total		**12**	**$2,385,000.00**	**$530,000.00**	**$675,000.00**		**$14,000.00**				

Determining priorities - 7 Towns Stormwater Management Plan

	Recommendation	Current flood exposure	Number of properties protected	Value of properties protected - Valuer General's valuation as per Council's current records (date)	Flood Damges Estimate	Cost of intervention	Cost of intervention per property	Recurrent costs $/annum	Priority - Low Med High	Suggested Timeframes (Yrs)	Priority	Comments
Riverton	Regular maintenance of stormwater drainage infrastructure and watercourses	High				$10,000.00		$5,000.00	H	0 to 1	1	Operating
Riverton	P1: Flood preparedness program - Flood warning system	High				$30,000.00		$5,000.00	L	1 to 5	1	BoM, SMA
Riverton	Flood preparedness program - Community education program	High				$10,000.00		$1,000.00	L-M	1 to 5	1	Operating
Riverton	Development / planning controls	High							H	0 to 1	1	
Riverton	Torrens Road Drainage Works	High	6	$1,208,000.00	$260,000.00	$220,000.00	$35,000.00	$1,000.00	H	1 to 5	1	Budget Allocation 2016/2017
Riverton	Swale to intercept runoff from the west of the town and culverts under Washington Road	High	13	$2,050,000.00	$570,000.00	$80,000.00	$6,154.00	$1,000.00	H	1 to 5	2	
Riverton	Swale and culvert to direct flows into existing dam/basin	High	6	$1,440,000.00	$260,000.00	$60,000.00	$10,000.00	$1,000.00	M	1 to 5	2	
Riverton	Cairns Crescent Drainage Review	Medium	2	$490,000.00	$90,000.00	$10,000.00	$5,000.00		M	1 to 5	2	2016/2017 project
Riverton	Regrade land adjacent Oxford Terrace and Channel	Medium	1	$140,000.00	$40,000.00	$50,000.00	$50,000.00	$1,000.00	M	1 to 5	3	SMA Funding
Riverton	Extend stormwater network along James Street	High	2	$405,000.00	$90,000.00	$60,000.00	$30,000.00	$500.00	M	1 to 5	3	
Riverton	F1 and F2: Modifications to the levee along Washington Road and the channel along Oxford Terrace, including modifications to the three private bridges along Washington Road		88	$16,678,500.00	$3,850,000.00	$325,000.00	$4,200.00	$4,200.00	H	1 to 5	3	SMA Funding
Riverton	Water Treatment – verge infiltration pit systems (4) and wetland					$150,000.00		$1,000.00	L	5 to 10	4	
	Total		**118**	**$22,411,500.00**	**$5,160,000.00**	**$1,005,000.00**		**$20,700.00**				
S'wth	Levee along Saddle Road and a levee along Barrier Highway	High	66	$9,963,000.00	$2,890,000.00	$100,000.00	$1,515.15	$1,000.00	H	1 to 5	1	SMA Funding
S'wth	Works in vicinity of Marrabel Road	High	4	$400,000.00	$180,000.00	$120,000.00	$30,000.00	$500.00	M	1 to 5	1	SMA Funding
S'wth	Measures to address local runoff - Additional stormwater infrastructure and channel enlargement on Saddleworth Road/Michael St and Barrier Hwy. Additional inlets and pipes on Mary St and Curb St. Additional culvert crossing, swale enlargement and road regrading on Saddle Rd. Enlarge/duplicate culvert crossings on Barrier Hwy. Provide box culvert crossing on the corner of Hill Street and Barrier Hwy	High	9	$1,499,000.00	$390,000.00	$1,270,000.00	$141,111.11	$1,000.00	H	1 to 5	1	SMA Funding
S'wth	Regular maintenance of stormwater drainage infrastructure and watercourses	High				$10,000.00		$5,000.00	H	0 to 1	1	Operating
S'wth	Flood warning system	High				$30,000.00		$5,000.00	H	0 to 1	1	BoM, SMA Grant Funding approved subject to Council approval
S'wth	Enforcement and inclusion of flood maps in Council's Development Plan	High							H	0 to 1	1	Operating
S'wth	Community education program	High				$10,000.00		$1,000.00	M	0 to 1	1	
S'wth	Two levees and culverts in vicinity of Newark Street	High	3	$460,000.00	$130,000.00	$60,000.00	$20,000.00	$500.00	M	1 to 5	2	SMA Funding
S'wth	Inspect drainage along Hazeleigh Road to identify any problems	High							M	0 to 5	2	Operating
S'wth	Erosion protection works in main at southern culvert crossing on Barrier Highway Creation of pond in main channel near War Memorial	High				$100,000.00			M	5 to 10	2	SMA Funding
S'wth	Levee and bridge on Hazeleigh Road		2	$845,000.00	$90,000.00	$710,000.00	$355,000.00	$2,000.00	L	0 to 1	2	
S'wth	Two levees along the river bank north of intersection of the Barrier Highway and Golf Course Road	High	2	$425,000.00	$90,000.00	$50,000.00	$25,000.00	$500.00	H	5 to 10	3	SMA Funding
S'wth	Water Treatment – Southern wetland/basin					$250,000.00			L	5 to 10	4	
	Total		**86**	**$3,229,000.00**	**$700,000.00**	**$2,710,000.00**		**$16,500.00**				

Determining priorities - 7 Towns Stormwater Management Plan

	Recommendation	Current flood exposure	Number of properties protected	Value of properties protected - Valuer General's valuation as per Council's current records (date)	Flood Damges Estimate	Cost of intervention	Cost of intervention per property	Recurrent costs $/annum	Priority - Low Med High	Suggested Timeframes (Yrs)	Priority	Comments
Auburn	Regular maintenance of stormwater drainage infrastructure and watercourses	High	na			$5,000.00	na		H	0 to 1	1	Operating
Auburn	Development/Planning Controls	High	na			na	na		H	0 to 1	1	Operating
Auburn	Auburn East - Upgraded and new infrastructure	High	22	$4,395,000.00	$960,000.00	$600,000.00	$27,272.73	$2,000.00	H - M	1 to 5	2	SMA Funding
Auburn	Watercourse rehabilitation	na	na			$30,000.00	na	$1,000.00	M	1 to 5	2	
Auburn	Flood Preparedness - Community education program	High	na			$10,000.00	na		M	1 to 5	2	SMA Funding
Auburn	Dennis Creek and Auburn West - Detention basin and upgrade drainage infrastructure		50	$10,709,000.00	$2,190,000.00	$1,700,000.00	$34,000.00	$10,000.00	H	5 to 10	2	
Auburn	Auburn North – Detention basins and additional infrastructure	High	32	$6,433,000.00	$1,400,000.00	$1,300,000.00	$40,625.00	$5,000.00	M	5 to 10	3	SMA Funding
Auburn	Water Treatment – Wetland	na	na			$425,000.00	na	$5,000.00	M	5 to 10	3	SMA Funding
Auburn	Water Treatment – Verge Infiltration / Biofiltration Pit Systems	na	na			$70,000.00	na	$2,000.00	L	5 to 10	4	
	Total		**104**	**$21,537,000.00**	**$4,550,000.00**	**$4,140,000.00**		**$25,000.00**				

Clare Preliminary

		Total Cost ($m)	Timeframe	Works Description
Riparian Works	Main Channel Downstream Pioneer Avenue Reserve	$700,000	1 to 5	Channel clearing, revegetation
	Downstream Pioneer Avenue	$210,000	1 to 5	Channel clearing, revegetation
	Western Tributary Upstream of Recreation Centre	$310,000	1 to 5	Channel clearing, revegetation
	Eastern Tributary Upstream of Main North Road to Stanley St	$960,000	5 to 10	Channel clearing, channel armouring, partial land acquisition, revegetation
	Main Channel west of Main North Road	$1,080,000	5 to 10	Channel clearing, channel armouring, partial land acquisition, revegetation
Flood Mitigation	Flood Control Dam	$8,000,000	5 to 10	Land acquisition, dam construction, earthworks
	Channel Widening - Alternative to Flood Control Dam	$15,000,000	5 to 10	Land acquisition, earthworks, channel armouring, maintenance access, revegetation, bridge reconstuction
Internal Drainage Strategies	Neagles Rock Road Drainage	$150,000	1 to 5	Pipework and pits
	Daly Street Trunk Drainagfe System	$180,000	1 to 5	Channel widening, pipeworks/culverts and pits
	Daly Street Collector	$60,000	5 to 10	Pipeworks and pits
	Lennon Street Trunk Drainage System	$80,000	5 to 10	Pipeworks and pits
	East Terrace Collector	$160,000	5 to 10	Pipeworks and pits
	New Road Collector	$70,000	5 to 10	Pipeworks and pits
	Gleeson Trunk Drainage System	$230,000	5 to 10	Channel widening, pipeworks/culverts and pits
	Victoria Street Collector	$190,000	5 to 10	Pipeworks and pits
	Main Street	$310,000	1 to 5	Pipeworks and pits
	Old Main Road	$280,000	1 to 5	Pipeworks and pits
Water Reuse	Council Infrastructure Audit	$50,000	1 to 5	
Alert System	Re-establish Warning System	$40,000	1 to 5	
Planning Systems	Incorporate updated WSUD targets into next review of Development Plan	$40,000	1 to 5	
	Total including Detention	**$13,100,000**		
	Total excluding Detention including channel widening	**$19,400,000**		

Infrastructure Asset Management Plan

Community Wastewater Management System (CWMS)

Clare & Gilbert Valleys Council

June 2017

Ref No. 20160464DR2M

CLARE & GILBERT VALLEYS COUNCIL

Tonkin CONSULTING

a better approach

Document History and Status

Rev	Description	Author	Reviewed	Approved	Date
A	For Client Comment	BL/KJS	RKE		18 October 2016
B	Edits following Council review	BL/KJS	RKE		17 November 2016
C	Edits to include additional upgrade requirements	BL/KJS	RKE		29 November 2016
D	Edits to capital expenditure and scheduled expenditure years	BL/KJS	RKE		12 January 2017
E	Included example SCADA image	BL/KJS	RKE		19 January 2017
F	Edits to annual operation and maintenance costs	BL/KJS	RKE		9 February 2017
G	Further edits to operation and maintenance costs and other minor edits	BL/KJS	RKE		9 February 2017
H	Final version	BL/KJS	RKE	RKE	9 February 2017
I	Final version with minor edits to Tables 4.11 and 4.14	BL/KJS	RKE	RKE	10 February 2017
J	Edits to commence further works in 2017/18	BL/KJS	RKE	RKE	17 May 2017
K	Edits to commence 10yr plan in 2016/17	KJS/BL	MB	RKE	18 May 2017
L	Updated risk section	RKE	RKE	RKE	13 June 2017
M	Deferred SCADA upgrade works	RKE	RKE	RKE	29 June 2017

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1 Introduction

1.1 Background

The goal and purpose of this Community Wastewater Management System (CWMS) Asset Management Plan is to improve Council's long-term strategic management of its CWMS assets in order to cater for the community's desired levels of service in the future, in accordance with Council's key strategic documents and demonstrate reasonable management in the context of Council's available financial and human resources.

The CWMS Plan is maintained and managed in accordance with all regulatory requirements under the South Australian Water Act 2012, the Essential Services Commission of South Australia (ESCOSA) the Office of the Technical Regulator (OTR) and Local government Act 1999.

Council will continue to develop service levels and asset renewal projects to ensure needs for the community are delivered. These service levels have been set in accordance with user needs, regulations, industry practice and legislative codes of practice.

This CWMS Asset Management Plan is to be read with the organisation's Asset Management Policy and Asset Management Strategy adopted September 2016 and the following associated planning documents:

- CWMS - Safety Reliability Maintenance and Technical Management Plan for Clare Gilbert Valleys Council
- Council's Long Term Financial Plan (as adopted June 2016)
- Clare Gilbert Valleys Council Strategic Plan 2020
- Annual Budget and Business Plan (as adopted August 2016)
- Annual Financial Statements for the Year Ending 30 June 2015
- National Water Initiative Pricing Principles.

1.2 Community Wastewater Management Scheme Assets

The basic function of a CWMS network is to convey household and commercial wastewater from sinks, bathrooms and toilets (everything that goes down the drain) to a point of disposal being a lagoon and /or treatment plant, prior to disposing of the wastewater.

This infrastructure asset management plan covers the following infrastructure assets owned by the Clare Gilbert Valleys Council:

- Pipes including gravity mains, rising mains and connections
- Manholes
- CWMS inspection openings and flushing points
- Pump stations (8) and associated assets (including mechanical, civil and electrical assets)
- Wastewater Treatment and Storage Systems.

The CWMS described includes septic tank effluent collection networks consisting of gravity mains, pumping stations and rising (pressure) mains which transport wastewater to a treatment plant for treatment, storage and reuse.

The CWMS were designed and constructed to service the various communities and considered population growth as predicted by Australian Bureau of Statistics surveys and forecasts. The three CWMS systems managed by Council were built between 1969 and 2011 as outlined in Table 1.1 below.

Table 1.1 CWMS Age Summary

CWMS System	Original Design Year (as constructed drawings)	Additional Areas Design Year (as constructed drawings)	Design Life	Years in Service (original scheme)
Clare	1974	2006	Unknown	42 years
Saddleworth	1969	2011	Unknown	47 years
Riverton	1971	2011	Unknown	45 years

A summary of each of the CWMS systems covered by this plan is provided below.

Clare CWMS

The Clare CWMS currently has 1,955 active property connections (occupied properties), and an annual flow of approximately 200ML. This CWMS is a septic tank effluent scheme and comprises:

- Five pumping stations, located on Blyth Rd, the corner of East View St and Sunnyside Rd, Stanley St, Catford Garden and at the Clare Aquatic Centre
- The Clare wastewater treatment plant (activated sludge treatment plant) is located on Christison Ave
- Treated wastewater is disinfected by chlorination in a contact tank prior to discharge to a storage facility. The treated wastewater is stored in the following facilities:
  - In a 25ML HDPE lined storage lagoon located at the Clare golf course adjacent to the treatment plant.
  - In a 120ML HDPE lined lagoon located at the Kirribilly Vineyard on Moccundunda Rd, Clare.
  - In storage tanks located at the Clare Town Oval on Main North Rd, Clare.
- A water meter records recycled water meter volumes provided to Kirribilly Vineyard. This is the only recycled water meter within the three schemes
- Operation and maintenance of the Clare oval irrigation system is the responsibility of community volunteers. Operation and maintenance of other irrigation systems is the responsibility of the respective water users
- Digitised maps of the town's waste water collection system are recorded on 'Exponare' and also on A3 paper sheets held at Council's offices.

Saddleworth CWMS

The Saddleworth CWMS has 262 active property connections (occupied properties). This CWMS is a septic tank effluent scheme with a gravity network that drains to the Saddleworth wastewater treatment plant located on Girth St Saddleworth. Features of the scheme include.

- The Saddleworth wastewater treatment plant (activated sludge treatment plant)
- Treated wastewater is disinfected by chlorination in a contact tank and is then reused to irrigate the Saddleworth town oval. Operation and maintenance of the Saddleworth oval irrigation system is the responsibility of community volunteers
- Digitised maps of the town's waste water collection system are recorded on 'Exponare' and also on A3 paper sheets held at Council's offices.

Riverton CWMS

The Riverton CWMS has 456 active property connections (occupied properties) and comprises;

- A gravity collection system with one pumping station located at the side of the Barrier Highway in Riverton
- An activated sludge treatment plant and storage lagoon located off Oxford Tce Riverton
- Treated wastewater is disinfected by chlorination in a contact tank prior to discharge into the storage lagoon and reuse by irrigation.
- Reuse of treated wastewater on the town oval in Riverton and on an agricultural demonstration plot of approximately six acres in size located adjacent the town oval and run by the local high school
- Operation and maintenance of the Riverton oval irrigation system is the responsibility of community volunteers. Operation and maintenance of the demonstration plot is the responsibility of the high school
- Digitised maps of the town's waste water collection system are recorded on 'Exponare' and also on A3 paper sheets held at Council's offices.

A summary of the assets covered by this asset management plan is provided in Table 1.2 below.

Table 1.2 CWMS Asset Quantities

CWMS Asset Category	Quantity
Collection Pipes	56,000m
Maintenance Holes	96
Inspection Points/Flushing Points	4,205
Pump Stations	8
Wastewater Treatment Plants	3
Facultative Lagoons and Wetlands	5

Treated wastewater is stored at the lagoon site and used for irrigation in accordance with approvers Irrigation Management Plans.

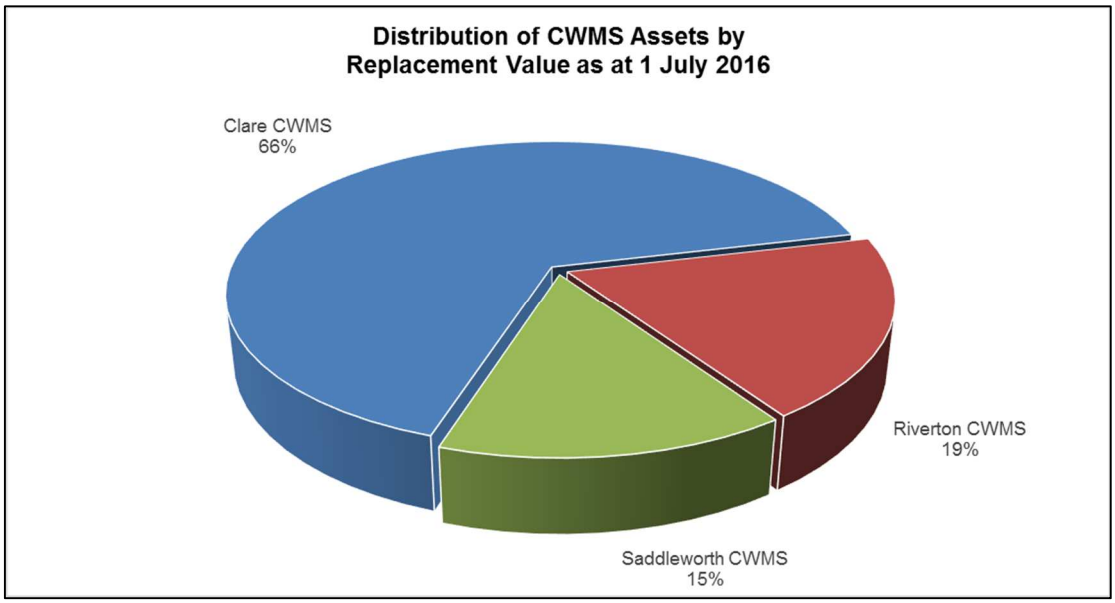


Figure 1.1 Distribution of CWMS Assets by Replacement Value as at 2016

1.3 What we will do

Clare and Gilbert Valleys Council plan to provide CWMS services in accordance with the following:

- Ensure the CWMS network is maintained at a safe and functional standard to Environmental Protection Authority (EPA), Department of Health (DOH), Essential Services Commission of South Australia (ESCOSA) and Office of The Technical Regulator's (OTR) requirements as set out in this Infrastructure and Asset Management Plan
- Recognise and implement monitoring of the useful life and operational efficiency of CWMS infrastructure via effective and regular maintenance
- Implement programmed replacement / upgrade of CWMS infrastructure in accordance with long term infrastructure plans
- Provide community benefits from water resources derived from CWMS operations.

1.4 Managing the Risks

There are risks associated with providing the service and being able to complete all identified activities and projects. The following major risks have been identified:

- Not ensuring full cost recovery
- Non-compliance to regulatory bodies
- Power outages
- Stormwater infiltration during flood events
- Environment impact to river and local catchment.

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

- Implementing effective programmed and preventative maintenance
- Continued operation improvements in tasks and activities
- Continued monitoring and condition assessment of the network.

1.5 The Next Steps

The actions resulting from this asset management plan are:

- Develop and establish ongoing assessment in relationship to safety and specified maintenance intervention levels
- Audit and review of maintenance response times (to confirm whether maintenance works are delivered on time)
- Review and assess changing Community Wastewater Management System studies, community expectations and customer feedback/contact
- Consultation to ascertain the community's service needs and preferences and confirm performance targets
- Completing the improvement plan by November 2020
- Review of the customer request to determine tends and implement appropriate action.

1.6 Plan Framework

This CWMS infrastructure asset management plan is based on the fundamental structure of the IPWEA NAMS 3 Asset Management for Small, Rural or Remote Communities template and has been simplified for Clare & Gilbert Valleys Council.

The Clare & Gilbert Valleys Council provides services for the community in part through the provision of infrastructure assets. Council have acquired these assets directly through construction by council staff or contractors and by inheritance from developers and other organisations.

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

- Taking a life cycle approach
- Developing cost-effective management strategies for the long term
- Providing a defined level of service and monitoring performance
- Managing risks associated with asset failures
- Sustainable use of physical resources.

Key elements of the plan are:

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

This asset management plan is prepared under the direction of Council's vision which is:

"Clare & Gilbert Valleys will be a harmonious and welcoming community living in an attractive and culturally rich rural environment, with first class facilities, innovative business and internationally recognised local produce and services."

2 Levels of Service

Levels of Service define the assets performance targets, in relation to reliability, quantity, quality, responsiveness, safety, capacity, environmental impacts, comfort, cost/affordability and legislative compliance.

A key objective of this CWMS AMP has been to match the level of service provided by Council's CWMS network to the expectations of the users (i.e the community) within available resources. This requires a clear understanding of the user needs, expectations and preferences.

To achieve and sustain acceptable standards of service for Council's CWMS asset network requires an annual commitment of funds. These funds provide for regular and responsive maintenance and for timely renewal or replacement of the asset. The provision of adequate financial resources ensures that the CWMS network are appropriately managed and preserved.

Funding below requirement impacts directly on community development and if prolonged will result in the need for "catch up" expenditure imposed on ratepayers in the future. Additionally, deferred renewal results in increased and escalating reactive maintenance as aged assets deteriorate at increasing rates.

No authority can deliver everything all the time. In fact, in line with good practice and affordable service delivery, it may not be practical or cost effective to deliver the same level of service across the entire asset portfolio. Therefore the CGVC has documented a hierarchy that classifies the CWMS asset portfolio / network into appropriate groups based.

This CWMS AMP has different maintenance interventions, inspection frequencies and response times for each asset classification. In accordance with the International Infrastructure Management Manual, Council acknowledges that the primary purpose of an asset hierarchy is to ensure that appropriate management, engineering standards and planning practices are applied to the asset based on its function. It also enables more efficient use of limited resources by allocating funding to those assets that are in greater need and the costs are better justified.

The community generally expect that Council will provide an effective method for collection and disposal of wastewater which meets the required Australian and State legislative regulations applicable to CWMS assets. Council has defined service levels in two terms and provides the level of service objective, performance measure process and service target in Table 2.1 and Table 2.2.

2.1 Community Levels of Service

Community Levels of Service relate to the service outcomes that the community wants in terms of reliability, responsiveness, amenity, safety and cost.

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

- Quality: How good is the service?
- Function: Does the service meet users' needs?
- Responsiveness: How quickly are problems attended to and resolved?
- Capacity/Utilisation: Is the service over or under used?
- Safety: Does the service achieve appropriate levels of public and environmental safety?

Table 2.1 Community Levels of Service

Service Attribute	Service Objective	Performance Measure Process	Current Performance	Expected position in 10 years based on current LTFP
Community Outcomes				
Provide efficient and affordable collection and disposal of Community Wastewater				
Community Levels of Service				
Quality	Well maintained and suitable wastewater collection and disposal system	No. of customer requests relating to CWMS maintenance	Acceptable compliance to SA Health and EPA requirements	Continuing to meet the service delivery needs of the community.
Function	Meet SA Health Dept & EPA standards	Compliance to approval conditions	All uncontrolled releases from the network stopped within 4 hours of being reported	Continuing to meet community expectations.
Responsiveness	Response time to customer requests & time taken to complete requests	> 80% of all requests adequately responded to and dealt with within 4 hours of being notified	Acceptable Compliance to SA Health and EPA requirements	Continuing to meet capacity requirements.
Safety	Low level of risk to personal and environmental health	Overflows within the pipe network, treatment plant and/or at pump stations	Acceptable Compliance to SA Health and EPA requirements	Continuing to provide a low risk service to the community.

2.2 Technical Levels of Service

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

Table 2.2 Technical Levels of Service

Service Attribute	Service Objective	Activity Measure Process	Current Performance *
Operations Cost Effectiveness	Provide cost effective Community Wastewater Management System to meet DOH & EPA guidelines.	Monitor energy usage	Energy usage maintained to current or below current levels
Maintenance	Periodic visual assessment and servicing of access points	Routine removal and inspection of access lids	Access to all reported blockages available within the 4 hour timeframe
	Periodic visual assessment to determine condition and function of drains	CCTV inspection and drain flushing	20 % of network has been inspected. Remaining drains program for inspection 2016/2017. Ongoing inspections and flushing at intervals of not more than 6 years
Condition	Network assets in good condition to ensure Community Wastewater Management System has appropriate design capacity	Continuous monitoring of pump stations operating hours	No pump station to operate for more than 12 hours per day as per SA Health guidelines
Renewal	Renewal of existing assets at an optimum time in their lifecycle	CCTV inspection and drain flushing	100 % of network inspected at intervals of not more than 6 years
	Planned works that requires replacement identified as part of periodic inspection	Planned Renewal Works	As and where required as identified and planned from periodic visual inspection
Upgrade/New	Targeted Capital works if capacity issue	Planned Capital Works	As and where required as identified and planned from periodic visual inspection
	Targeted Capital works to address WHS issues	Planned Capital Works	As and where required as identified and planned from periodic visual inspection
Function	Odour control from WWTP lagoon storage	Periodic monitoring level of odour near WWTP & lagoon storage	No reported incidents
Function	Septic Tank Cleaning	Septic Tank Cleaning Program	100% of Septic Tanks cleaned on a 6 yearly cycle
Safety	Planned renewal if WHS component	Planned Renewal Works	As and where required as identified and planned from periodic visual inspection
	Treated Water Quality	Compliance to Reclaimed Water Guidelines	Number of samples taken meet DOH & EPA guidelines

In addition to these, Council's Licence Agreement conditions in terms of operating the CWMS System require that CGVC contractor provide a monthly monitoring program to ensure that the water quality meets the Health Department and EPA Requirements.

A detailed analysis of the water quality monitoring program and sampling requirements are stored in Council's Electronic Document Management System.

3 Future Demand

3.1 Demand Forecast

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

The impact of these trends are regularly examined and demand management strategies are recommended as a technique to modify demand without compromising customer expectation.

The Population Projections by Local Government Area predicts the Estimated Resident Population will increase as follows:

- There is predicted to be stronger growth in Clare Township, with a probable population of up to 5,000 people by 2030
- There is also potential scope for stronger growth with available land at Riverton.

In forecasting on the future integration of land use and Community Wastewater Management System (CWMS) planning, the following are reviewed:

- Land use effluent disposal demand
- Effluent reuse
- Irrigation
- Urban Boundary Growth
- Opportunities for provision of reuse water to Council open space and recreation parks.

Demand factor trends and impacts on service delivery are summarised in Table 3.1.

Table 3.1 Demand Factors, Projections and Impact on Services

Demand drivers	Present position	Projection	Impact on services
Population	9,097 (Strategic Plan Information 2016)	9585 by 2027	A review needs to be undertaken to confidently determine ccapacity currently exists to accommodate potential future demand from zoned residential land.
Demographics	Average growth rate of 2.6% per year between 2011-2027.	Future growth rate will depend on timing of rezoning and servicing of additional land located in existing townships not connected to be investigated.	It is anticipated a future growth rate of around 2.6% per year (within existing towns) will have negligible impact on existing services (within the 10 year planning timeframe for this IAMP) primarily because this growth is based on infill aligned with existing infrastructure. The additional revenue from this growth could offset renewal and rehabilitation costs for existing infrastructure across the Council area.

3.2 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. Council will determine the ability of the existing systems to manage increased requirements. Opportunities identified to date for demand management are shown in Table 3.2. Further opportunities will be developed in future revisions of this asset management plan.

Council will undertake modelling in respect to future population projections and future housing demand. A lot yield analysis will be undertaken to project the ultimate number of lots within areas and applied 15 years of dwelling approvals (how long the supply might last in each town). Naturally there are many unknowns – e.g. when supply is exhausted where will that unmet demand 'go'; would it 'transfer' to other towns requiring new CWMS service.

Table 3.2 Demand Management Plan

Service Activity	Demand Management Plan
Wastewater Collection	Investigate Capacity assessment of each pump station Evaluation of impact of new allotments on existing infrastructure. Assess Developer contributions per Council policy. Negotiated developer system augmentations where required.
Wastewater Treatment, Storage and Reuse	Review capacity assessment of wastewater harvesting facilities Capacity assessment of wastewater treatment processes, transfer and storage of treated wastewater. Evaluation of impact of new irrigation areas Plan to incorporate any identified growth of treated effluent demand for irrigation.
Trade Waste Discharge	Increased stormwater inflow into the wastewater network. These impacts will be minimised by applying strict water quality discharge limits on all trade waste connections to the system.
Stormwater inflow	Focused flow monitoring of system and smoke testing targeted areas. Public education plays a significant role in the minimisation of rainwater inflow into the wastewater network. Increasing community awareness on the effects of the excessive inflow rates will help in reducing the number of faulty private drains and illegal stormwater connections.

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

4 Life Cycle Management

Initial capital cost constitutes a significant up-front cost and often dominates the decision-making process when acquiring new assets. However, the ongoing recurrent expenditures (including depreciation) usually represent a high portion of the total life-cycle costs of many assets. It is important that they be included in the financial analysis undertaken to evaluate asset investment options.

The life cycle management plan details how Council plans to manage and operate the assets at the agreed levels of service (defined in Section 2) while optimising life cycle costs.

Asset maintenance “levels of service” provide for the day-to-day maintenance programs to ensure that the asset operations are safe within practical constraints, maintain to perform targets for day-to-day use and is managed and maintained to minimise environmental risk and protection of residents.

To minimise environmental impacts the following actions are identified:

- Reducing hydraulic loading on the collection system and treatment plant
- Continuation of asset augmentation
- Better knowledge of the wastewater collection system, its condition and performance
- Reduced energy costs.

4.1 Background Data

Clare & Gilbert Valleys Council operates three CWMS systems in the townships of Clare, Riverton and Saddleworth. The Clare system was originally constructed in 1974, the Riverton system was constructed in 1971 and the Saddleworth system was constructed in 1969. All three systems have been extended and upgraded since original construction. The assets covered by this asset management plan are shown in Table 1.1.

The age profile of the assets shown by Current Replacement Cost (CRC) included in this plan is shown in Figure 4.1.

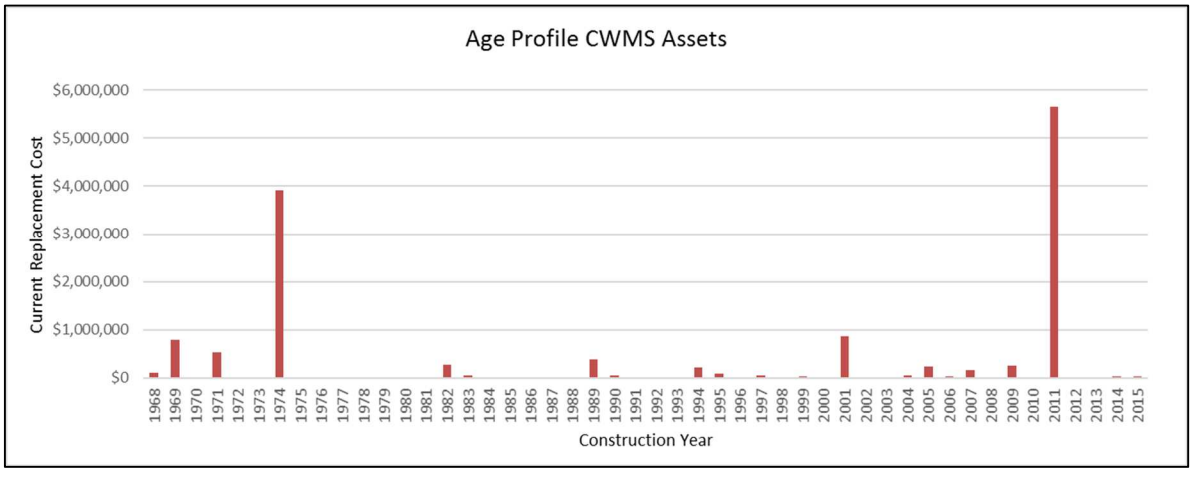


Figure 4.1 CWMS Asset Age Profile

4.1.1 Wastewater Treatment Assets

A summary of the wastewater treatment assets in each system is provided in Table 4.1.

Table 4.1 Wastewater Treatment Schemes Summary

CWMS System	Commission Date	Population Served	Hydraulic Design Capacity (kL/day)	Pollutant design capacity (kg/day)	Average daily BOD load (kg/day)	Average Daily Inflow (ML/d)	Storage lagoon volume (ML)
Clare	1974 (upgraded 2011)	4500	550	130	106	0.45	25ML + 120ML
Saddleworth	1969 (upgraded 2011)	500	80	20	15	0.07	Approx. 25ML
Riverton	1971 (upgraded 2011)	800	170	39	20	0.15	29.4ML

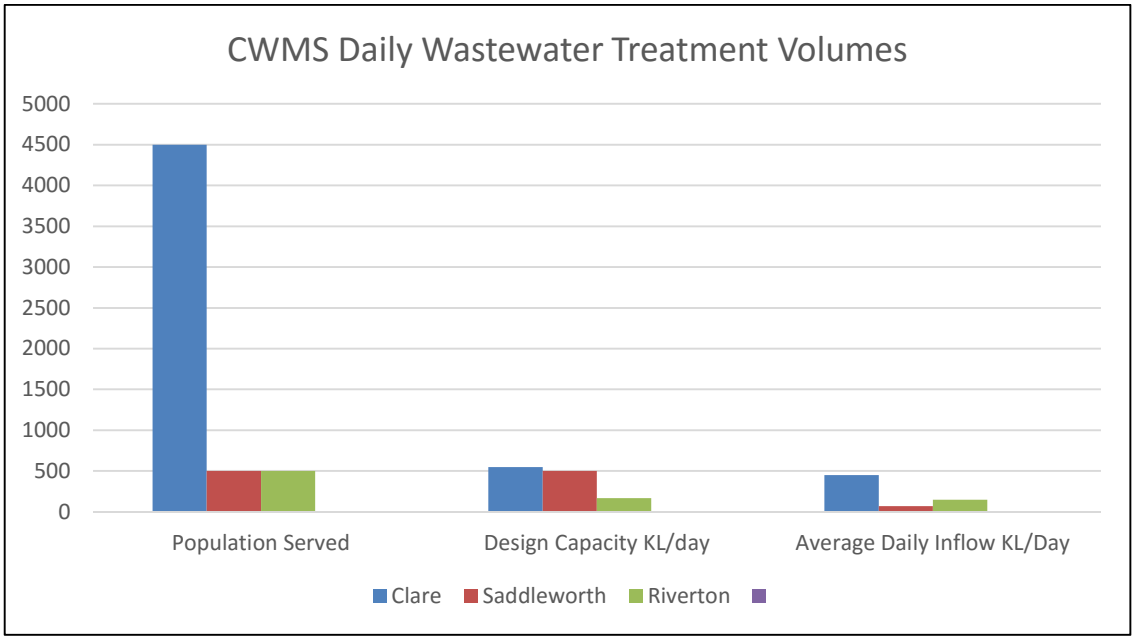


Figure 4.2 CWMS Daily Wastewater Treatment Volumes

4.1.2 Pumping Station Assets

A summary of the pumping station assets in each system is provided in Table 4.2.

Table 4.2 Pumping Stations Summary

CWMS Pump Station	Pumping Units	Pump Power/ Capacity	Pump Head	Average Daily Inflow (ML/day)	Average Daily Flow (ML/day)
Blyth Rd, Clare	2 x Asea above ground.	2.2kW each pump.	not measured	not metered	not metered
Toyota Corner Clare	2 x Asea above ground	2.2kW each pump.	not measured	not metered	not metered
Stanley St, Clare	2 x submersible	Unknown	not measured	not metered	not metered
Catford Garden, Clare	2 x Asea above ground.	2.2kW each pump.	not measured	not metered	not metered
Clare Aquatic Centre, Clare	Dreno AT80/2/173.C257	8.7kW each pump.	20L/sec@ 22mH	not metered	not metered
Caravan Park Barrier Highway, Riverton	2 x above ground.	6.3kW each pump.	not measured	not metered	not metered

4.1.3 Wastewater Reuse Summary

Treated wastewater from the three CWMS systems is approved for reuse according to the criteria outlined in Table 4.3.

Table 4.3 Treated Wastewater Reuse Approval Criteria

CWMS System	Irrigation Area	System Description	BOD_5 Mean Value	Suspended Solids (SS) (Mean)	Thermo-tolerant Coliform (e-coli) Count	Sodium Adsorption Ratio
Clare	Clare Golf Club	Spray Irrigation	< 20 mg/L	< 30 mg/L	< 100/100 mL	not measured
Clare	Clare Oval	Spray Irrigation	< 20 mg/L	< 30 mg/L	< 100/100 mL	not measured
Clare	Kirribilly Vineyard	Drip Irrigation	< 20 mg/L	< 30 mg/L	< 100/100 mL	not measured
Saddleworth	Town Oval	Sub Surface Irrigation	< 20 mg/L	< 30 mg/L	< 100/100 mL	not measured
Riverton	Town Oval	Sub Surface Irrigation	< 20 mg/L	< 30 mg/L	< 100/100 mL	not measured

Treated wastewater reuse pump details are provided in Table 4.4 below.

Table 4.4 Treated Wastewater Reuse Pumping Assets

CWMS System	Pump Details	Pump Location	Pump power/ Capacity (kW, 3Ph)	Pump Head
Clare	Lowara SV1604	WWTP	4kW	3.5L/sec @ 38.5mH
Clare	Lowara SV4606	WWTP	22kW	10L/sec @ 117.5mH
Saddleworth	Lowara SV1604	WWTP	4kW	5L/sec @ 42mH
Riverton	Lowara SV6005	WWTP	15kW	13L/sec @ 65mH

4.1.4 CWMS System Asset Capacity

Council's services are generally provided to meet design standards where these are available. Council's performance in the delivery of treated wastewater services is monitored through key performance indicators.

Level of Service (LoS) statements provide measurable performance indicators, describing the means of delivering treated wastewater services to achieve the desired outcomes. The key service areas are:

- Capability of service
- Service sustainability
- Quality of service (responsiveness)
- Cost effectiveness
- Customer service/customer satisfaction.

One of the most important service sustainability indicators is the likely occurrence of high rainfall inflows into the wastewater network. Other significant service sustainability measures are the numbers of blockages and dry weather discharges from the wastewater network.

Council's services are generally provided to meet design standards where these are available. Locations where deficiencies in service performance are known are detailed in Table 4.5. These deficiencies have been identified by Council Works Officers.

Table 4.5 Known Service Performance Deficiencies

Location	Service Deficiency
Township Earthenware Gravity Pipes	Earthenware gravity lines in sections of Clare, Riverton and Saddleworth require regular camera inspections to monitor condition, with some faulty drains replaced or repaired.
Gravity Pipes	Effluent infiltration/inflow involves the entry of surface water and groundwater into a wastewater collection system, causing hydraulic overloading of the system. This can result in: • Surging of manholes and house connections, causing effluent to flow over properties, with potential public health impacts • Overflow of effluent from wet wells and bypassing of treatment plants, causing environmental and public health problems • Overloading of the treatment processes, causing a deterioration in effluent quality • Excessive pumping costs and increased pump wear; and premature and expensive system augmentations.

4.1.5 Condition Monitoring of CWMS Assets

Limited asset condition information is available. CCTV data of gravity pipes will determine the condition of the existing network and assist with determining replacement priorities. Pump station condition is indicated below.

The remaining life of all CWMS assets is currently measured from the date of construction and the estimated useful life of each asset type. As further asset condition information becomes available this will be included. Condition will be measured using a 0-100 rating system as detailed in Table 4.6.

Table 4.6 Asset Condition Scores

Condition Rating	Description
0	Very good: <5 years old, no sign of deterioration
25	Good: >5 years old, no sign of deterioration
50	Poor: > 5 years old, signs of deterioration
75	Due for recondition/replacement
100	Immediate recondition/replacement required

The condition of the CWMS assets is monitored in accordance with the methodology outlined in Table 4.7.

Table 4.7 Asset Condition Monitoring Methodology

Service Objective	Activity Measure Process	Current Performance	Methodology
Periodic visual assessment and servicing of access points	Routine removal and inspection of access lids	Access to all reported blockages available within the 4 hour timeframe	Undertaken by specialist pipeline maintenance and inspection contractor in addition to Council staff on a cyclical program
Periodic visual assessment to determine condition and function of drains	CCTV inspection and drain flushing	85% of network inspected at intervals of not more than 6 years	Undertaken by specialist pipeline maintenance and inspection contractor in addition to Council staff on a cyclical program
Targeted Maintenance identified as part of periodic inspection	Targeted Maintenance	As and where required	Undertaken by specialist pipeline maintenance and inspection contractor in addition to Council staff

4.1.6 Pump Station Condition Assessment

The following general comments about Clare & Gilbert Valleys CWMS pump station assets are provided taking into account compliance assessment. All major pump station assets were inspected and evaluated with a condition rating from 1 to 5 strictly in accordance with the assessment criteria below to ensure uniformity. The condition grades of 1 to 5 are summarised as:

1 Excellent Condition: Only planned maintenance required

2 Good Condition: Minor maintenance plus planned maintenance required

3 Fair Condition: Significant maintenance required

4 Poor Condition: Significant renewal/rehabilitation required

5: Very Poor Condition: Asset has failed or is beyond rehabilitation, immediate replacement or major overhaul required

The pump station asset condition assessment is summarised in Table 4.8.

Table 4.8 Pump Station Assets Condition Data

CWMS Pump Station	Cabinet & Stn Exterior	Wet Well/Tank	Valves & Manifold	Guide Rails & Chains	Pump 1	Pump 2	Pump 3	Level Control	Overall Condition
Clare-PS1 Blyth Rd	3	3	4	NA	2	2		2	3
Clare-PS2 Main North Rd (Toyota)	2	3	4	NA	5	4		2	4
Clare-PS3 Recreation Centre	4	2	2	1	2	2		2	2
Clare-PS4 WWTP Balance Tank	2	3	3	4	2	2	3	2	
Clare-PS5 Stanley Rd	4	2	4	2	2	2		2	2
Clare-PS6 Caravan Park	2	3	2	NA	4	5		2	4
Riverton-PS1 End of Town	4	3	2	NA	3	3		3	3
Saddleworth-PS1 WWTP	3	2	2	2	2	2		2	2

Quarterly visual inspections of the condition of the sludge blanket within each pump station will be programmed with mandatory biannual pump-outs to be conducted to minimise the accumulation of septic solids.

4.2 Asset Valuation

The value of the CWMS assets recorded in the asset register as at 1 July 2016 and addressed in this asset management plan is summarised in Table 4.8 below. Assets were last revalued at 1 July 2010.

Table 4.9 CWMS Asset Valuation Summary

Current Replacement Cost	$13,947,981
Written Down Value	$9,314,540
Annual Depreciation Expense	$245,448

Note: The Depreciation expense shown is the 2016/2017 forecast as reported at the 1 July 2016 valuation.

The current rate of consumption (annual depreciation/depreciable amount) for CWMS assets is 1.8 %. This indicates that on average, over the life of an asset, 1.8 % of the depreciable amount is consumed annually. The translation of this consumption rate into renewals is subject to a decision on funding, service level determination and asset condition.

4.3 Risk Management

An assessment of risks associated with service delivery from infrastructure assets will identify 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 to address non-acceptable risks.

Risks that are assessed as 'Extreme' and 'High' and those risks where there is an estimated residual risk after the selected treatment plan is operational are identified in the Infrastructure Risk Management Plan. These risks are reported to management and Council.

Limited assessment of the risks associated with the service delivery of the Clare & Gilbert Valleys Council CWMS systems including wastewater collection, treatment, storage and reuse has been undertaken by Council. This plan does not include a formal risk assessment however the following risks have been identified for further consideration in future iterations of this plan.

Table 4.10 Critical Risks and Treatment Plans

Service or Asset at Risk	What can Happen	Risk Rating (EX, H)	Risk Treatment Plan	Residual Risk *
Treatment Plant	Discharge to environment from inadequacy capacity	High	Upgrade plant capacity / emergency flow storages	Low
Effluent Lines	Blockage	High	Program regular flushing of line and inspections	Low
Pump Station	Collapse of septic pits	High	Program regular inspections and replacement where required	Low
Effluent lines	Infrastructure damaged by excavation	High	Add GIS CWMS data to Dial Before You Dig service	Low
Pump Station	Pump failure	High	Upgrade telemetry monitoring, emergency response plan, determine requirement for emergency generator, emergency portable pump	High
Program Effluent Lines	Broken lines	High	Emergency response plan for clean-up, Emergency Line Shutdown as required	Low
Effluent Lines	Deterioration of existing pipes	High	Systematic cleaning and inspection of drain and replace or repair when required	High

4.4 Required Expenditure

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 medium term financial planning period, this provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

4.4.1 Routine Operations and Maintenance

Operations include regular activities to provide services such as public health, safety and amenity, e.g. pipe cleansing and monitoring and water testing. Operations activities affect service levels including quality and function through frequency of pipe inspections, water quality testing and provision of reuse water to irrigators.

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.

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, e.g. Lagoon repair, 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 listed to be implemented subject to funding allocation and recorded. 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 manhole and inspection point replacement, etc. This work falls below the capital/maintenance threshold but may require a specific budget allocation.

The actual operating and maintenance costs for the past few years is provided in Table 4.11 below.

Table 4.11 Operations and Maintenance Costs

CWMS Operations & Maintenance Annual Costs	2012-13	2013-14	2014-15	2015-16	2016-17 Budget
Clare - Plant Maintenance Contract	$35,405	$38,504	$37,277	$34,591	$39,000
Clare - Other Plant Maintenance	$72,578	$121,171	$137,430	$96,732	$120,000
Clare - Council Other Maintenance	$79,343	$33,659	$39,757	$77,877	$77,880
Clare - Network Flushing *(Budget Transferred from Capital)*	$0	$0	$0	$0	$120,600
Clare - Electricity	$44,968	$50,528	$47,722	$46,427	$52,000
Clare - Other Operating Costs*	$50,929	$37,224	$46,302	$50,699	$62,422
Riverton - Plant Maintenance Contract	$17,702	$17,551	$18,638	$18,868	$20,000
Riverton - Other Plant Maintenance	$10,558	$18,393	$11,317	$11,633	$17,000
Riverton - Council Other Maintenance	$10,627	$15,146	$55,605	$18,258	$15,190
Riverton - Network Flushing	$0	$0	$0	$0	$32,500
Riverton - Electricity	$15,648	$11,859	$10,166	$11,573	$14,000
Riverton - Other Operating Costs*	$28,760	$28,145	$33,554	$36,515	$42,166
Saddleworth - Plant Maintenance Contract	$17,702	$20,194	$18,638	$18,868	$20,000
Saddleworth - Other Plant Maintenance	$14,746	$7,597	$14,566	$21,656	$15,000
Saddleworth - Council Other Maintenance	$14,466	$26,869	$16,315	$4,789	$15,000
Saddleworth - Network Flushing	$0	$0	$0	$0	$20,000
Saddleworth - Electricity	$21,700	$9,395	$9,582	$8,373	$9,000
Saddleworth - Other Operating Costs*	$50,749	$41,299	$42,619	$48,684	$52,956
Total Operations	**$212,754**	**$178,450**	**$189,945**	**$202,271**	**$232,544**
Total Maintenance	**$273,127**	**$299,084**	**$349,543**	**$303,272**	**$512,170**

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 Asset Management Plan and service risks considered in the Infrastructure Risk Management Plan.

Assessment and prioritisation of reactive maintenance is undertaken by Council staff and contractors and reported to Council as required.

4.4.2 Operations and Maintenance Strategies

Council 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
- Undertaking cost-benefit analysis to determine the most cost-effective split between planned and unplanned maintenance activities (50 – 70% planned desirable as measured by cost)
- Maintaining 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
- Reviewing current and required skills base and implementing workforce training and development to meet required operations and maintenance needs
- Reviewing asset utilisation to identify underutilised assets and appropriate remedies, and over utilised assets and customer demand management options
- Maintaining a current hierarchy of critical assets and required operations and maintenance activities
- Developing and regularly review appropriate emergency response capability
- Review management of operations and maintenance activities to ensure Council is obtaining best value for resources used.

Maintenance includes reactive (unplanned), planned and specific maintenance work activities. Assessment and prioritisation of reactive maintenance is undertaken by operational staff using experience and judgement.

The current operation expenditure has been based on the 2016/17 budget for Council operating costs and electricity costs for each CWMS system. The projected operation expenditure is based on the current 2016/17 operation budget and an additional operation cost of $120,000 per annum to allow for a dedicated CWMS officer.

The current maintenance expenditure is based on the 2016/17 budget for maintenance works including network flushing. The projected maintenance expenditure is based on an average of the last four years of actual costs and the current 2016/17 budget for maintenance works. An additional maintenance allowance for network flushing has also been included for the 2021-22 and 2022-23 financial years based on a review of the CWMS systems recently undertaken by Council.

Table 4.12 Projected Operations and Maintenance Expenditure

Financial Year	Operations	Maintenance	Operations & Maintenance
2016-17	$232,544	$512,170	$744,714
2017-18	$352,544	$312,819	$665,363
2018-19	$352,544	$312,819	$665,363
2019-20	$352,544	$312,819	$665,363
2020-21	$352,544	$312,819	$665,363
2021-22	$352,544	$467,819	$820,363
2022-23	$352,544	$382,819	$735,363
2023-24	$352,544	$312,819	$665,363
2024-25	$352,544	$312,819	$665,363
2025-26	$352,544	$312,819	$665,363
Total	**$3,405,440**	**$3,552,541**	**$6,957,981**

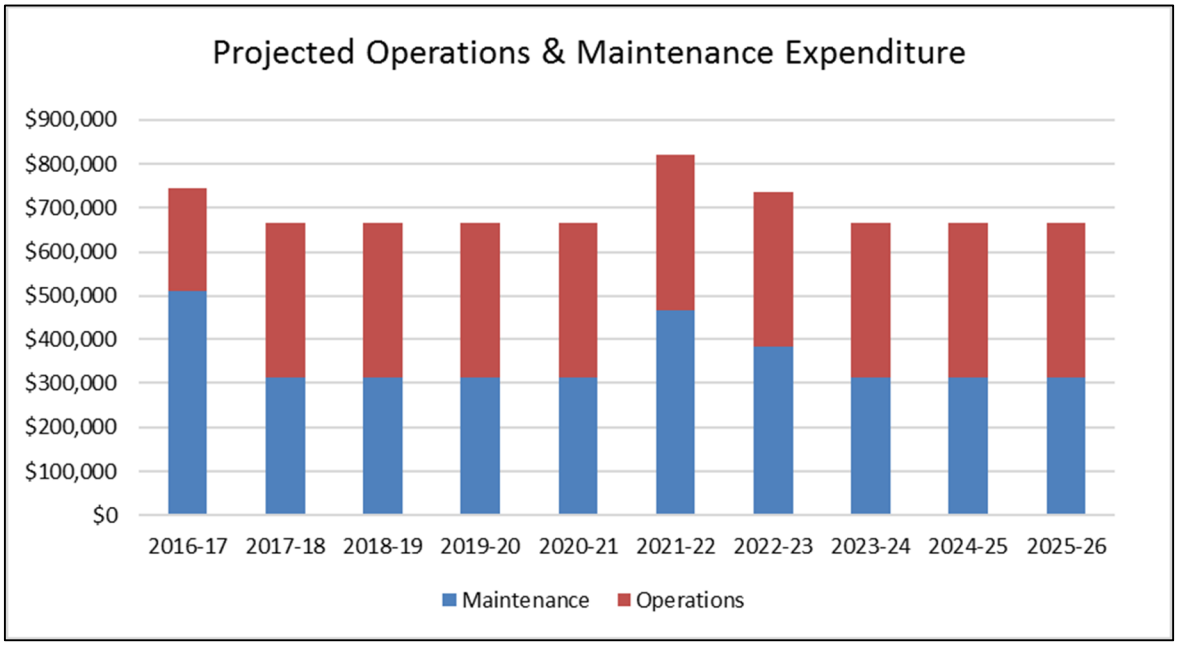


Figure 4.3 Projected Operations & Maintenance Expenditure

The current and future operation and maintenance expenditure has been grouped across the three towns and has been grouped across the collection network, the wastewater treatment and the reuse systems. In future iterations of the asset management plan it may be appropriate to identify operation and maintenance expenditure separately for the three towns and separately for the collection, treatment and reuse systems in each town. All expenses are shown in 2016/17 financial year dollar values.

4.4.3 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, Council can target and refine investigative activities, maintenance plans and capital expenditure plans at the appropriate time.

Operations and maintenances 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 4.13.

Table 4.13 **Critical *Assets and Service Level Objectives***

Critical Assets	Critical Failure Mode	Operations & Maintenance Activities
Lagoon	Loss of treatment capacity	Continuous lagoon monitoring for operational performance including corrective maintenance as required and within budget allocations
Reticulation Network	Uncontrolled discharge to environment	Continuous network monitoring for operational performance including corrective maintenance as required and within budget allocations
Pump Station	Uncontrolled discharge to environment	Continuous pump station monitoring for operational performance including corrective maintenance as required and within budget allocations
Waste Water Treatment Plant	Release of non-compliant treated effluent	Continuous treatment plant monitoring for operational performance including corrective maintenance as required and within budget allocations
Reuse water distribution network	Inability to dispose of treated effluent	Continuous reuse network monitoring for operational performance including corrective maintenance as required and within budget allocations

4.4.4 Capital Renewal

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

Generally the method used to develop the renewal plan uses the asset register data to project the renewal costs for renewal years using acquisition year and useful life, this equates to the expiry date generated from Council's asset management system.

Council have undertaken a review of the CWMS systems and have developed cost estimates for capital renewal works required in the next five years. These cost estimates are summarised in Table 4.14 below.

Table 4.14 CWMS Assets Identified for Renewal

CWMS System	Asset Group	Renewal Cost Estimate	Estimated Renewal Year
Clare	Blyth Rd Pump Station	$22,500	2017-18
Clare	Main Rd (Toyota) Pump Station	$45,000	2017-18
Clare	Recreation Centre Pump Station	$10,000	2017-18
Clare	Stanley Rd Pump Station	$25,000	2017-18
Clare	Caravan Park Pump Station	$52,000	2017-18
Riverton	Pump Station (End of Town)	$45,000	2017-18
Saddleworth	Pump Station	$10,000	2017-18
Clare *(2016/17 Budget for flushing of Clare network transferred to operating budget)*			
Clare	Pipes & Pits	$100,000	2017-18
Clare	Pipes & Pits	$5,000	2020-21
Riverton	Pipes & Pits	$50,000	2018-19
Saddleworth	Pipes & Pits	$50,000	2017-18
Total		**$414,500**	

4.4.5 Capital New/Upgrade and Acquisition

New/upgrade expenditure is major work that creates a new asset that did not previously exist, or works which upgrade or improve an existing asset beyond its existing capacity. They may result from growth, social or environmental needs. Assets may also be acquired at no cost to the Council from land development.

Council have undertaken a review of the CWMS systems and have developed cost estimates for the required capital upgrade works. The cost estimates for identified capital upgrade requirements are summarised in Table 4.15 below.

Potential future upgrade works identified by Council include a future CWMS Scheme for Auburn Township and upgrade of the mains line Clare South from the Clare Caravan Park.

Table 4.15 CWMS Assets Upgrade

CWMS System	Asset Group	2017-18 Upgrade Cost Estimate	2018-19 Upgrade Cost Estimate
Clare	Blyth Rd Pump Station	$75,000	$10,000
Clare	Main Rd (Toyota) Pump Station	$11,500	$50,000
Clare	Recreation Centre Pump Station	$24,500	$10,000
Clare	Stanley Rd Pump Station	$15,000	$50,000
Clare	Caravan Park Pump Station	$12,500	$50,000
Clare	WWTP Balance Tank	$250,000	$10,000
Clare	Wastewater Treatment Plant		$20,000
Riverton	Riverton Wastewater Pump Station		$10,000
Riverton	Wastewater Treatment Plant		$20,000
Riverton	Irrigation		$120,000
Saddleworth	Saddleworth Wastewater Pump Station		$10,000
Saddleworth	Wastewater Treatment Plant		$20,000
	SCADA Main System		$50,000
	2 Mobile Generators	$70,000	
Total		**$458,500**	**$430,000**

4.4.6 Projected Capital Renewal and Upgrade Expenditure

The cost estimates for the identified capital renewal works have been used to determine the projected capital renewal expenditure for the 10 year planning period.

The cost estimates for the identified capital upgrade works have been used to determine the projected capital upgrade expenditure for the next three years between 2016-17 and 2018-19. An allowance of $150,000 per year for upgrade works has been included for the seven years between 2019-20 and 2025-26.

A summary of the projected renewal expenditure and the projected upgrade expenditure for the 10 year planning period is provided in Table 4.16 and Figure 4.3 below.

Details of the capital renewal and upgrade works that have been identified by Council during the recent review are provided in Appendix B.

Table 4.16 Projected Asset Renewal & Upgrade Expenditure

Financial Year	Projected Renewal Expenditure	Projected Upgrade Expenditure
2016-17	$0	$0
2017-18	$359,500	$458,500
2018-19	$50,000	$430,000
2019-20	$0	$150,000
2020-21	$5,000	$150,000
2021-22	$0	$150,000
2022-23	$0	$150,000
2023-24	$0	$150,000
2024-25	$0	$150,000
2025-26	$0	$150,000
Total	**$414,500**	**$1,938,500**

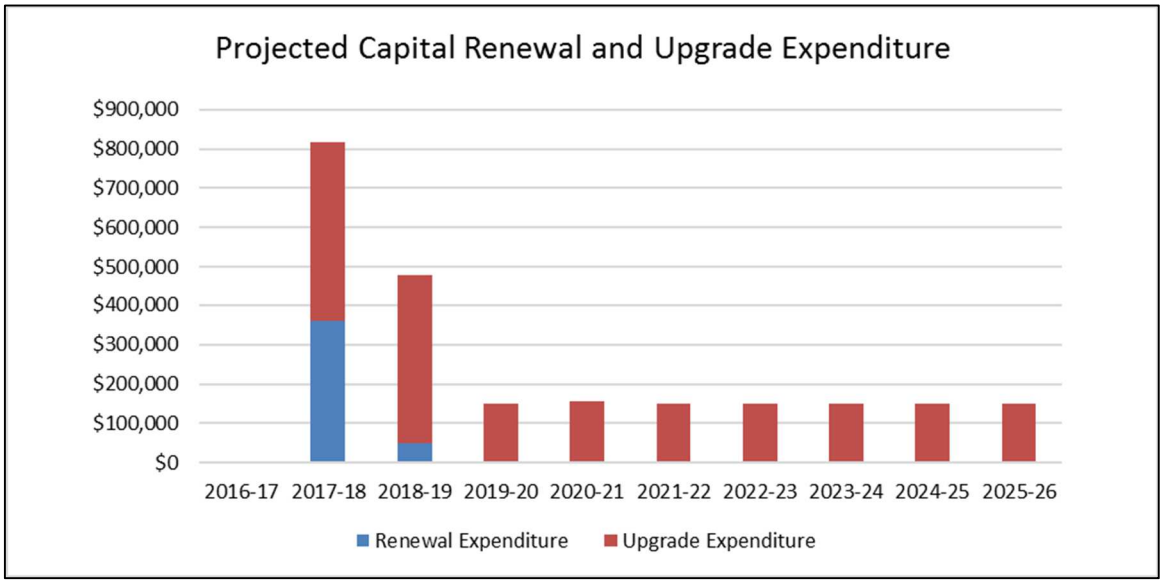


Figure 4.4 Projected Capital Renewal and Upgrade Expenditure

4.4.7 Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. Council has not identified any CWMS infrastructure assets to be disposed in the 10 year planning period (medium term).

4.4.8 Financial Projections

The financial projections for projected operating (operations and maintenance), capital renewal, and capital upgrade and estimated budget funding are shown in Table 4.17 and Figure 4.5.

Table 4.17 Operating and Capital Expenditure

Financial Year	Operations & Maintenance	Capital Renewal	Capital Upgrade	Estimated Total Expenditure
2016-17	$744,714	$0	$0	$744,714
2017-18	$665,363	$359,500	$458,500	$1,483,363
2018-19	$665,363	$50,000	$430,000	$1,145,363
2019-20	$665,363	$0	$150,000	$815,363
2020-21	$665,363	$5,000	$150,000	$820,363
2021-22	$820,363	$0	$150,000	$970,363
2022-23	$735,363	$0	$150,000	$885,363
2023-24	$665,363	$0	$150,000	$815,363
2024-25	$665,363	$0	$150,000	$815,363
2025-26	$665,363	$0	$150,000	$815,363
Total	**$6,957,981**	**$414,500**	**$1,938,500**	**$9,310,981**

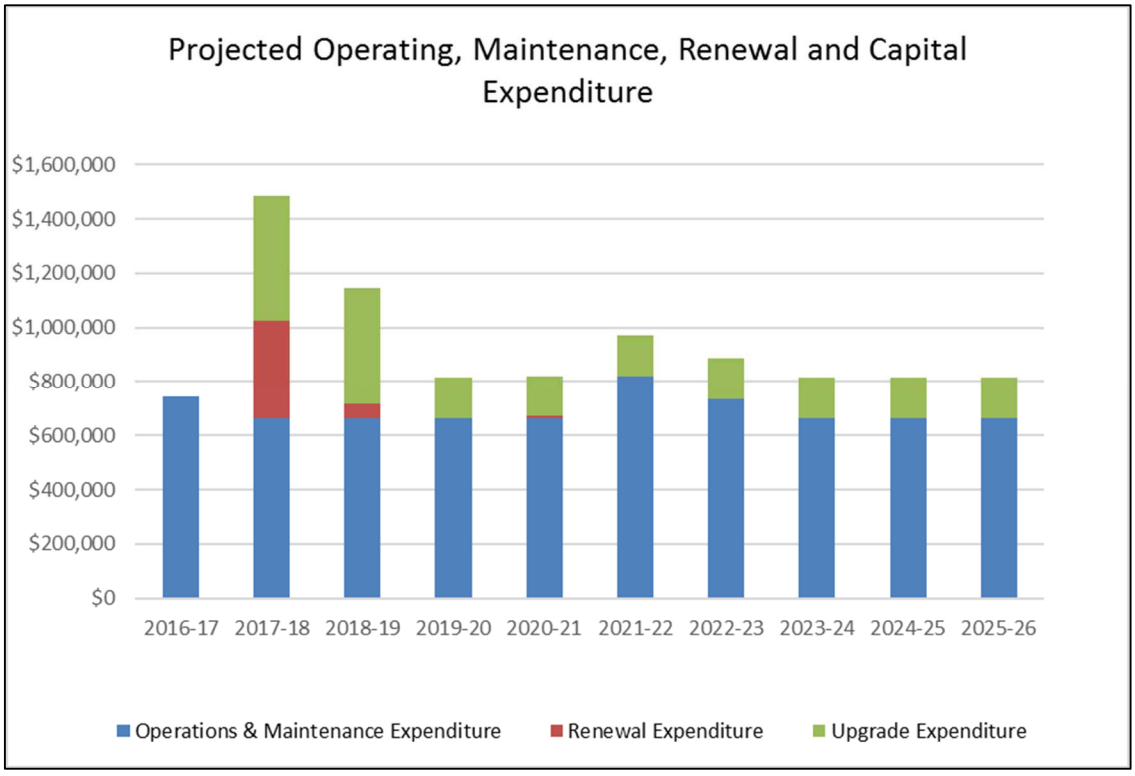


Figure 4.5 Projected Operating and Capital Expenditure over the Medium Term (10 Years)

The average projected operations, maintenance and capital expenditure required over the 10 year planning period is $931K per year.

5 Plan Improvement and Monitoring

The following tasks have been identified for improving future versions of the plan. Council should assign responsibilities and resources to these tasks as part of the endorsement of the plan.

Table 5.1 Tasks Identified for improving future versions of the plan

Task No.	Task	Responsibility
1.	Review accuracy and currency of the existing asset register through development of spatial data to confirm location and extent of the pipe and collection node network and the irrigation assets.	Council Administration
2.	Undertake a risk assessment workshop in order to develop a risk register and identify critical risks and a treatment plan for inclusion in future iterations of the plan.	Council Administration
3.	Undertake a condition review and potentially a condition assessment of the collection pipe and node network to assess end of life of the collection systems.	Council Administration
4.	Investigate emergency pump station capacity during prolonged power outages.	Council Administration
5.	Digitise CWMS asset in GIS and update Conquest resister.	
6.	Review irrigation agreements including performance outputs.	Council Administration

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

This plan is current as of May 2017 and due for revision and updating in May 2020.

6 References

IPWEA, 2006, *NAMS.PLUS3 Asset Management*, Institute of Public Works Engineering Australia, Sydney, www.ipwea.org

IPWEA, 2011, Asset Management for Small, Rural or Remote Communities Practice Note, Institute of Public Works Engineering Australia, Sydney, www.ipwea.org

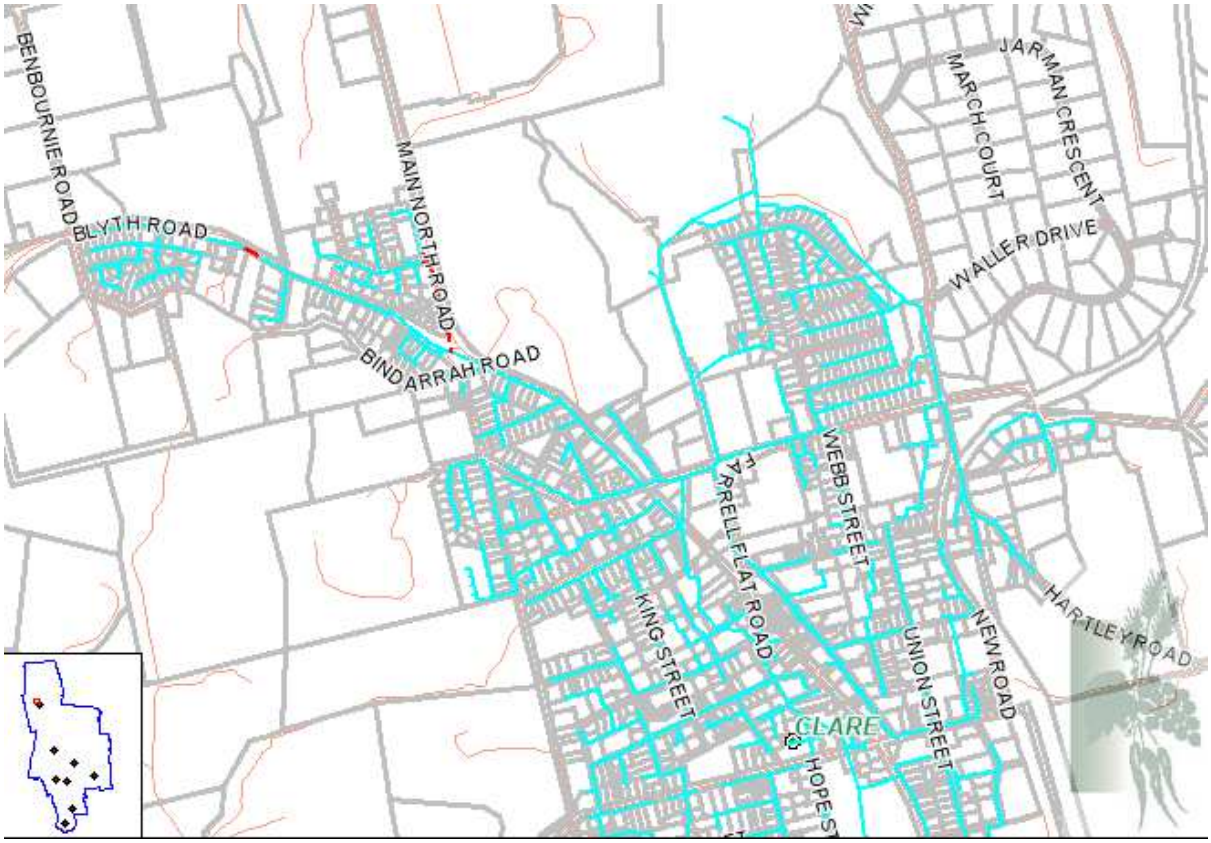
Clare Gilbert Valleys Council Condition & Compliance Report (Pump Station) 2016

Appendix A

Township CWMS Network Plans

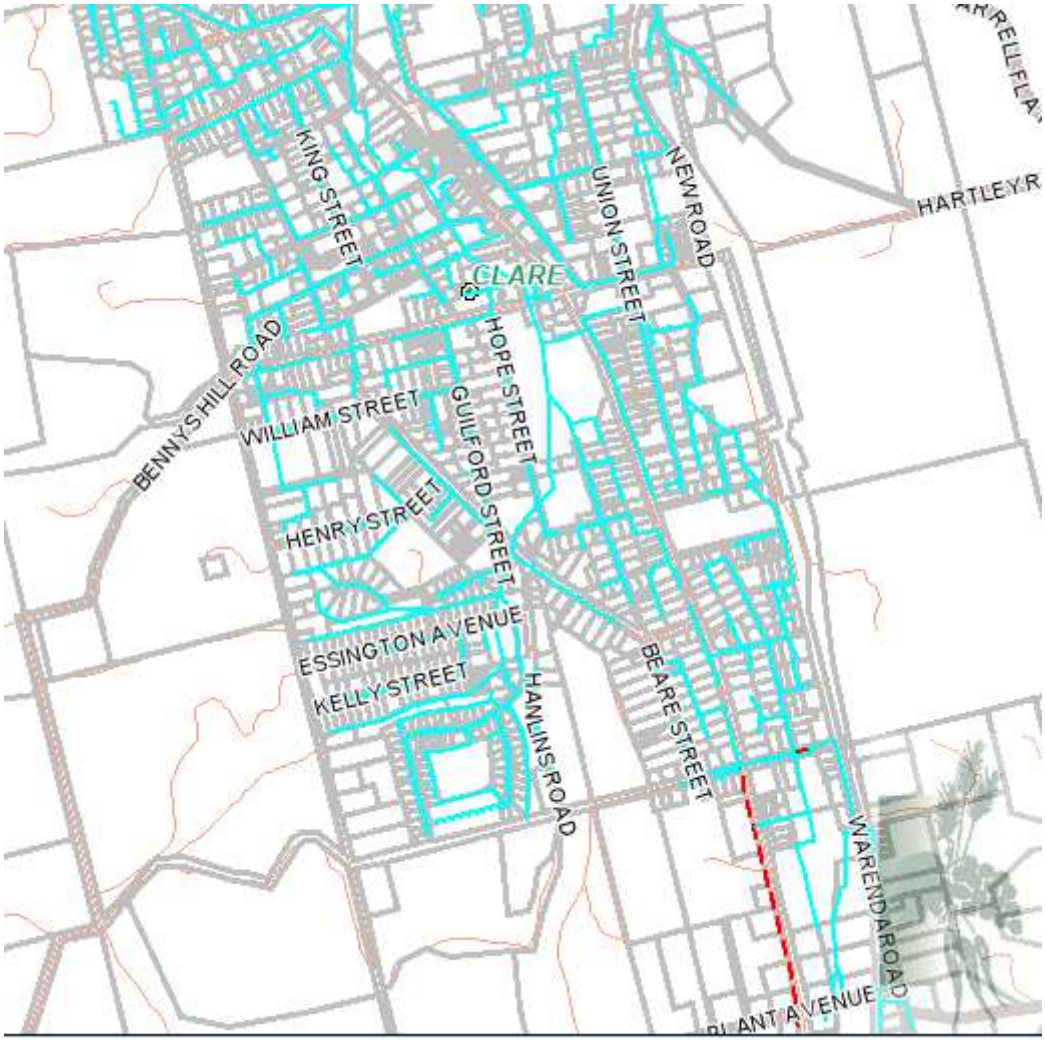
(Note: Red lines indicate rising mains, Blue lines indicate gravity mains)

CLARE NORTH



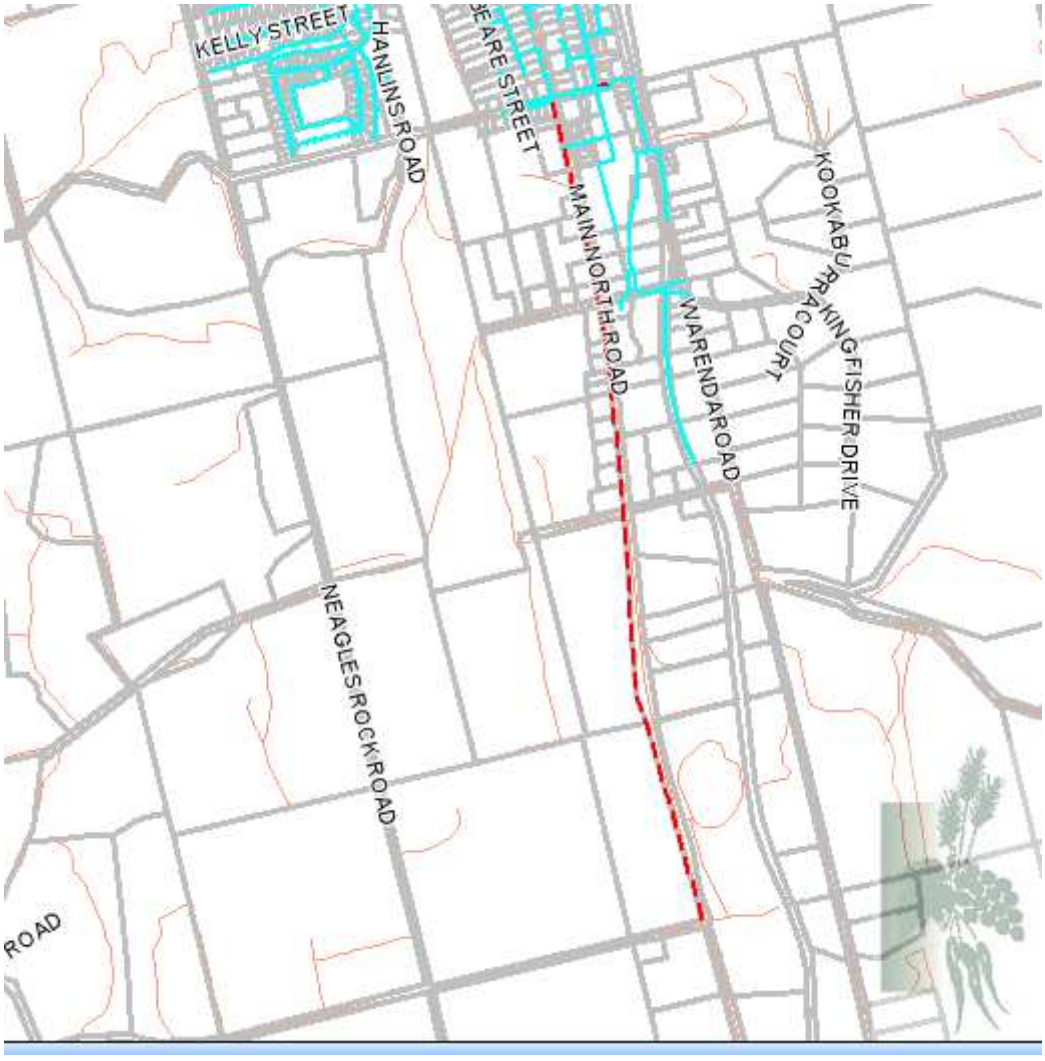
CLARE CENTRAL

(Note: Red lines indicate rising mains, Blue lines indicate gravity mains)



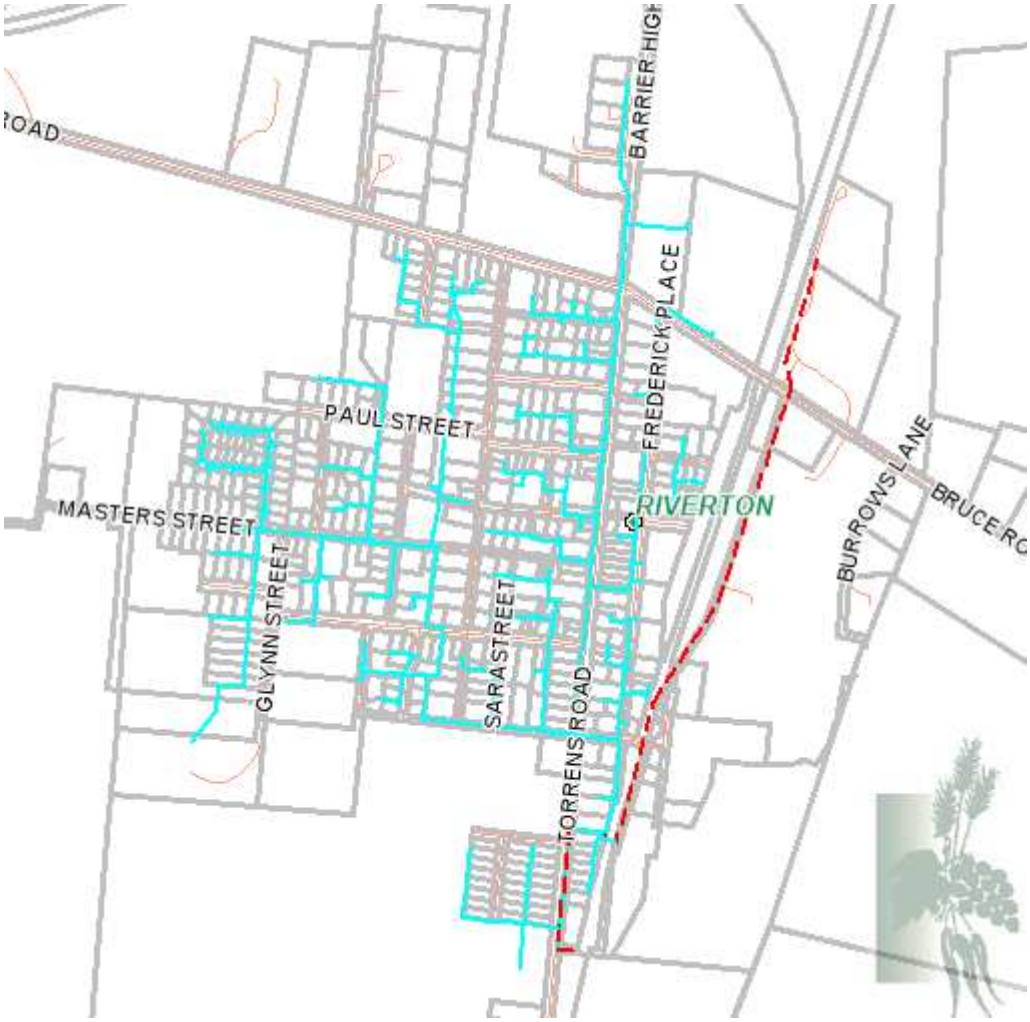
CLARE SOUTH

(Note: Red lines indicate rising mains, Blue lines indicate gravity mains)



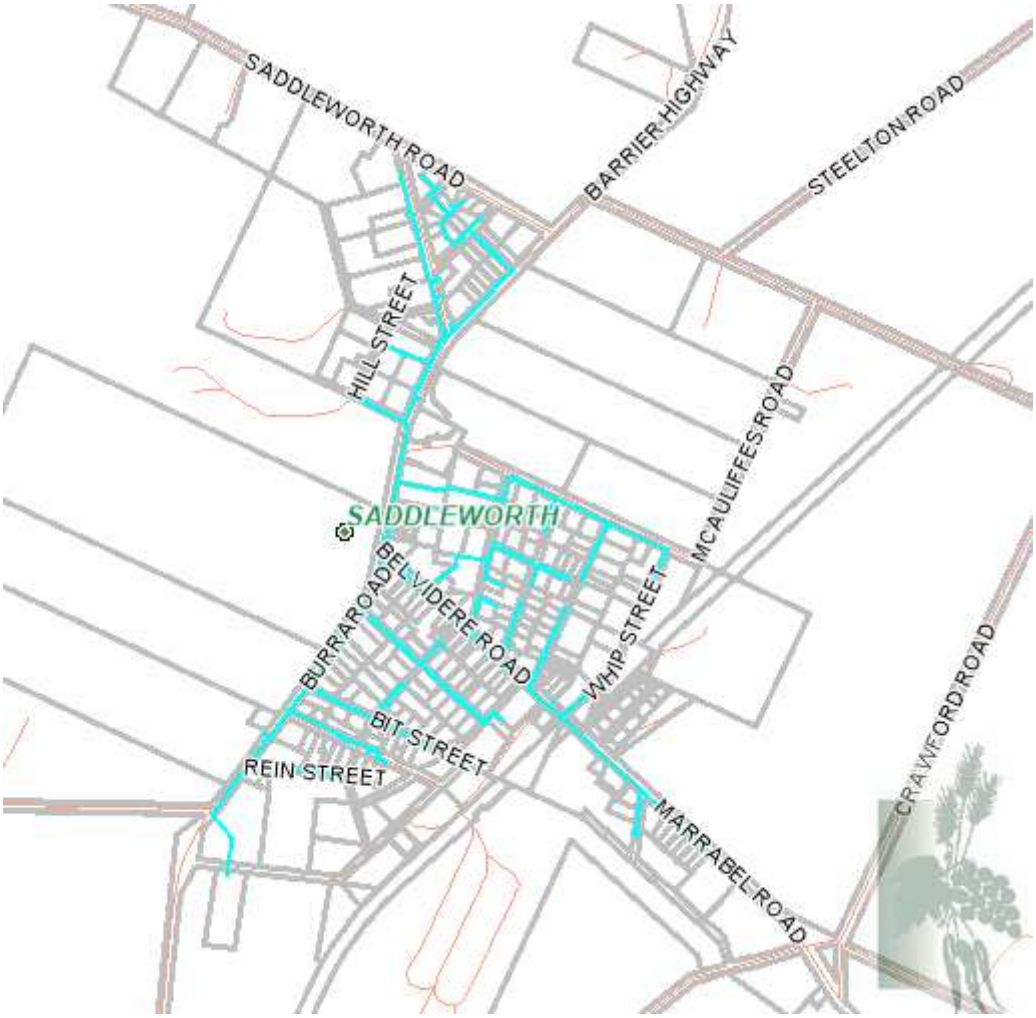
RIVERTON

(Note: Red lines indicate rising mains, Blue lines indicate gravity mains)



SADDLEWORTH

(Note: Blues lines indicate gravity lines)



Appendix B

CWMS System Review by Council

CWMS System Review by Council

Clare Wastewater Pump Stations

Clare C-PS1 Blyth Road Pump Station

1. The existing Multi-trode level probes decommissioned and removed. A hydrostatic level sensor supplied, installed and programmed to primarily control the pump station and raise high level alarms.
2. Two independent digital float switches supplied and installed within the wet-well and programmed for automatic alarm raising and emergency pump control when the level within the wet well reaches the specified high-level.
3. The existing communications equipment at this station investigated and repaired as required. If repairing the existing equipment is not impractical, needs to be replaced with a new unit. New unit needs to be priced at the time of installation.
4. Supply and install 3 appropriate indicator globes to replace the blown globes within the switchboard.
5. Supply and install 2 isolation valves to replace the existing leaking valves
6. Reinstate the area immediately around the pump station with a compacted rubble base to provide a safe working environment for operators. Spread and compact rubble to required levels and width.
7. Supply and install compliant safety signage on the pump station switchboard cabinet and wet-well access lid including station identification information.
8. Cut out and remove existing manhole access lid and replace with a new HDG lockable checker plate access lid with a hinged safety grate.
9. Repair existing pumping equipment weather shield.
10. Supply and install buried Siemens magnetic flow meter
    a. Transmitter installed within new side-mounted cabinet.
11. Supply and install emergency storage system.
12. Acquire land for emergency storage

Items	Est Cost	Yr
Pump Up Grade	$22,500	2017/18
Flow Meter	$15,000	2017/18
Emergency Storage & Acquire land	$60,000	2017/18
Total	$97,500	

Clare C-PS2 Toyota (Main Rd) Pump Station

1. The existing non-compliant electrical switchboard and cabinet decommissioned and removed. A new compliant electrical switchboard will be supplied, installed and commissioned to completely replace the existing switchboard. The switchboard will be contained in a small cabinet and e mounted within the existing shed.
2. Supply and install adequate battery backup system to provide the communication equipment with 8 hours of stand time.
3. Supply and install 3G communication equipment for alarm alert.
4. The existing level float switches decommissioned and removed. A hydrostatic level sensor supplied, installed and programmed to primarily control the pump station and alert high level alarms.
5. Two independent digital float switches shall be supplied and installed within the wet-well and programmed for automatic alarm raising and emergency pump control if the level within the wet well reaches the specified high-level.
6. Supply and install 2 isolation valves to replace the existing leaking valves.
7. Decommission and remove the existing deteriorated belt driven pumps. Supply and install 2 Mono EZ Strip positive displacement pumps to replace the existing pumps.
8. Supply and install compliant safety signage on the pump station switchboard cabinet and wet-well access lid including station identification information.
9. Cut out and remove existing manhole access lid and replace with a new HDG lockable checker plate access lid with a hinged safety grate.
10. Supply and install Siemens magnetic flow meter within pump manifold a. Transmitter to be installed within shed or new switchboard. Assumed that this installation will be conducted when switchboard is replaced.
11. Supply and install emergency storage system.

Cost for works listed above:

Items	Est Cost	Yr
Pump Up Grade	$45,000	2017/18
Flow Meter	$11,500	2017/18
Emergency Storage Estimate	$40,000	2018/19
Total	$96,500	

Clare C-PS3 Recreation Centre Pump Station

1. Supply and install globe to replace the blown “pump 2 run” indicator light within the switchboard.
2. Supply and install a new lockable access handle for the switchboard cabinet to replace the faulty locking mechanism.
3. Clean up rust inside pump station opening – Grout under cast iron access cover.
4. Supply and install new HDG safety grate system to replace the existing installed grate
5. Supply and install compliant safety signage on the pump station switchboard cabinet and wet-well access lid including station identification information.
6. Pump out intruded stormwater within the valve chamber.
7. Supply and install Siemens magnetic flow meter within pump manifold o Transmitter to be installed within new side-mounted cabinet.
8. Supply and install buried Siemens magnetic flow meter o Allowance has been made for asphalt removal and reinstatement
9. Transmitter to be installed within new side-mounted cabinet
10. Assumed that this installation will be conducted when switchboard is replaced
11. Flow meter to be housed within trafficable concrete pit for ease of future access
12. Flow meter to be installed in series with a dismantling joint to allow for future removal

Note: Emergency storage system not required at this station

Cost for works listed above:

Item	Est Cost	Yr
Pump Up Grade	$10,000	2017/18
Flow Meter	$24,500	2017/18
Total	$34,500	

C-PS4 Clare WWTP Balance Tank

Storm water infiltration to the wastewater system appears to have increased from when the treatment plant commenced operation. Infiltration was assessed and the conclusion was drawn that to try and abate its inflow would not be cost effective. Modifications to the treatment plant operation have been undertaken over the years, however it is now at a stage that no further adjustments can be made to improve operations. The recommendation is to balance the peak flows by installing an inflow balance tank at the final pump station site to retain large inflows and release it into the system at a controlled rate.

1. A 300kL concrete tank installed adjacent the existing pump station
2. One of the pump station's existing pump units to be used to pump excess peak flow directly into the balance tank. An actuated valve will control back flow as required.
3. The Clare treatment plant PLC will be reprogrammed to automate this operation
4. Supply and install an emergency generator connection facility to enable the station to be powered by a temporary generator in the event of a significant power failure.
5. Decommission and remove the 6 existing highly corroded galvanised steel pump guide rails. Supply and install 6 new 316 grade stainless steel rails grade.
6. Supply and install compliant safety signage on the pump station switchboard cabinet and wet-well access lid including station identification information.
7. Refer to balance tank pricing for emergency storage cost estimation

Items	Est Cost	Yr
Pump Up Grade & Balance Emergency Tank	$250,000	2017/18
Total	$250,000	

Clare C-PS5 Stanley Road Pump Station

1. The existing Multi-trode level probes decommissioned and removed. A hydrostatic level sensors supplied, installed and programmed to primarily control the pump station and raise high level alarms.
2. Two independent digital float switches supplied and installed within the wet-well and programmed for automatic alarm alert and emergency pump control when level within the wet well reaches the specified high-level.
3. Supply and install phase failure relays and surge arrestors to protect the currently non-compliant switchboard from irregular incoming power and current flows.
4. Supply and install 4 appropriate indicator globes to replace the blown globes within the switchboard.
5. Decommission and remove existing corroded isolation valve and check valve assembly within the valve chamber. Supply and install 2 isolation valves and 2 check valves to replace the existing valves with fittings and pipe work to suit.
6. Remove existing damaged section of the valve chamber checker plate lid. Supply and install replacement lid section. Council to supply master keyed lock.
7. Pump out intruded stormwater within the valve chamber.
8. Supply and install compliant safety signage on the pump station switchboard cabinet and wet-well access lid including station identification information.
9. Supply and install buried Siemens magnetic flow meter o Transmitter to be installed within new side-mounted cabinet
10. Supply and install emergency storage system

Cost for works listed above:

Item	Est Cost	Yr
Pump Up Grade	$25,000	2017/18
Flow Meter	$15,000	2017/18
Emergency Storage Estimate	$40,000	2018/19
Total	$80,000	

Clare C-PS6 Caravan Park Pump Station

1. The existing non-compliant electrical switchboard and cabinet decommissioned and removed. A new compliant electrical switchboard will be supplied, installed and commissioned to completely replace the existing switchboard. The switchboard will be contained in a small cabinet and will be mounted within the existing shed.
2. Supply and install 3G communication equipment for alarm alert.
3. Supply and install adequate battery backup system to provide the communication equipment with 8 hours of stand time.
4. The existing float switches will be decommissioned and removed. A hydrostatic level sensor will be supplied, installed and programmed to primarily control the pump station and raise high level alarms.
5. Two independent digital float switches shall be supplied and installed within the wet-well and programmed for automatic alarm raising and emergency pump control if the level within the wet well reaches the specified high-level.
6. Decommission and remove the existing deteriorated belt driven pumps. Supply and install 2 Mono EZ Strip positive displacement pumps to replace the existing pumps.
7. Decommission and remove any unused equipment within the control building to clear room for the new switchboard.
8. Supply and install compliant safety signage on the pump station switchboard cabinet and wet-well access lid including station identification information.
9. Cut out and remove existing manhole access lid and replace with a new HDG lockable checker plate access lid with a hinged safety grate.
10. Supply and install Siemens magnetic flow meter within pump manifold.
11. Transmitter installed within shed or new switchboard. Assumed that this installation will be conducted when switchboard is replaced.
12. Supply and install emergency storage system

Cost for works listed above:

Item	Est Cost	Yr
Pump Up Grade	$52,000	2017/18
Flow Meter	$12,500	2017/18
Emergency Storage Estimate	$40,000	2018/19
Total	$104,500	

Riverton Wastewater Pump Station

1. The existing Multi-trode level probes decommissioned and removed. A hydrostatic level sensor supplied, installed and programmed to primarily control the pump station and raise high level alarms.
2. Two independent digital float switches supplied and installed within the wet-well and programmed for automatic alarm raising and emergency pump control if the level within the wet well reaches the specified high-level.
3. Supply and install 4 appropriate indicator globes to replace the blown globes within the switchboard.
4. Supply and install phase failure relays and surge arrestors to protect the currently non-compliant switchboard from irregular incoming power and current flows.
5. Supply and install RCD protected power outlet within the control shed.
6. Decommission and remove the existing deteriorated belt driven pumps. Supply and install 2 Mono EZ Strip positive displacement pumps to replace the existing pumps.
7. Cut back the trees that are growing over the control shed roof causing it to bow significantly.
8. Supply and install compliant safety signage on the pump station switchboard cabinet and wet-well access lid including station identification information.
9. Cut out and remove existing manhole access lid and replace with a new HDG lockable checker plate access lid with a hinged safety grate.
10. Up grade control shed security.

Note: Emergency storage system not likely required needs further assessment.

Cost for works listed above:

Total	$45,000	2017/18

Saddleworth Wastewater Pump Station

1. Reinstate the area immediately around the pump station with a compacted rubble base to provide a safe working environment for operators.
2. Reinstate the entire eroded site base with compacted rubble to prevent future erosion. spread rubble and compact
3. Supply and install compliant safety signage on the pump station switchboard cabinet and wet-well access lid including station identification information.
4. Existing magnetic flow meter installed at treatment plant
5. Emergency storage system not likely required

Cost for works listed above:

Total	$10,000	2017/18

Network Flushing (maintenance)

Township	2021/22	2022/23
Clare	$155,000	
Riverton		$45,000
Saddleworth		$25,000
Total	$155,000	$70,000

Mobile Generators

(2) $70,000 in 2017/18

Pipe & Pits Network Renewal/Augmentation

Township	2017/18	2018/19	2019/20	2020/21
Clare	$100,000			$5,000
Riverton		$50,000		
Saddleworth	$50,000			
Total	$150,000	$50,000		$5,000

SCADA System and Additional Riverton Irrigation

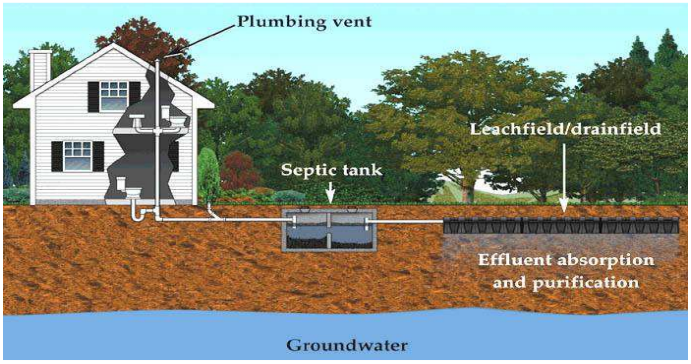
SCADA System Upgrade Elements	Cost Estimate Rationale	Upgrade Cost Estimate	Year
Main system design and set up (software, radio, PLC set up)	$50K for set up of the main system	$50,000	2018/19
SCADA set up at each wastewater pump station	$10K per PS x 8 PSs	$80,000	2018/19
SCADA set up at each wastewater treatment plant	$20K per WWTP x 3 WWTPs	$60,000	2018/19
Riverton on land irrigation	$120K	$120,000	2018/19
Total		**$310,000**	

Appendix C

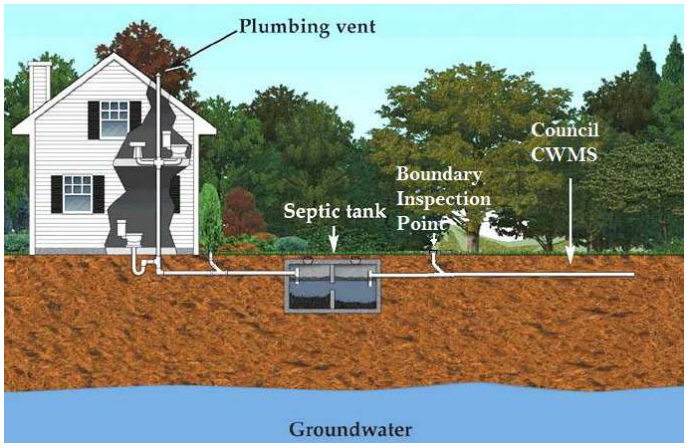
Community Waste Water System (CWMS) Overview

What is

Household Connection

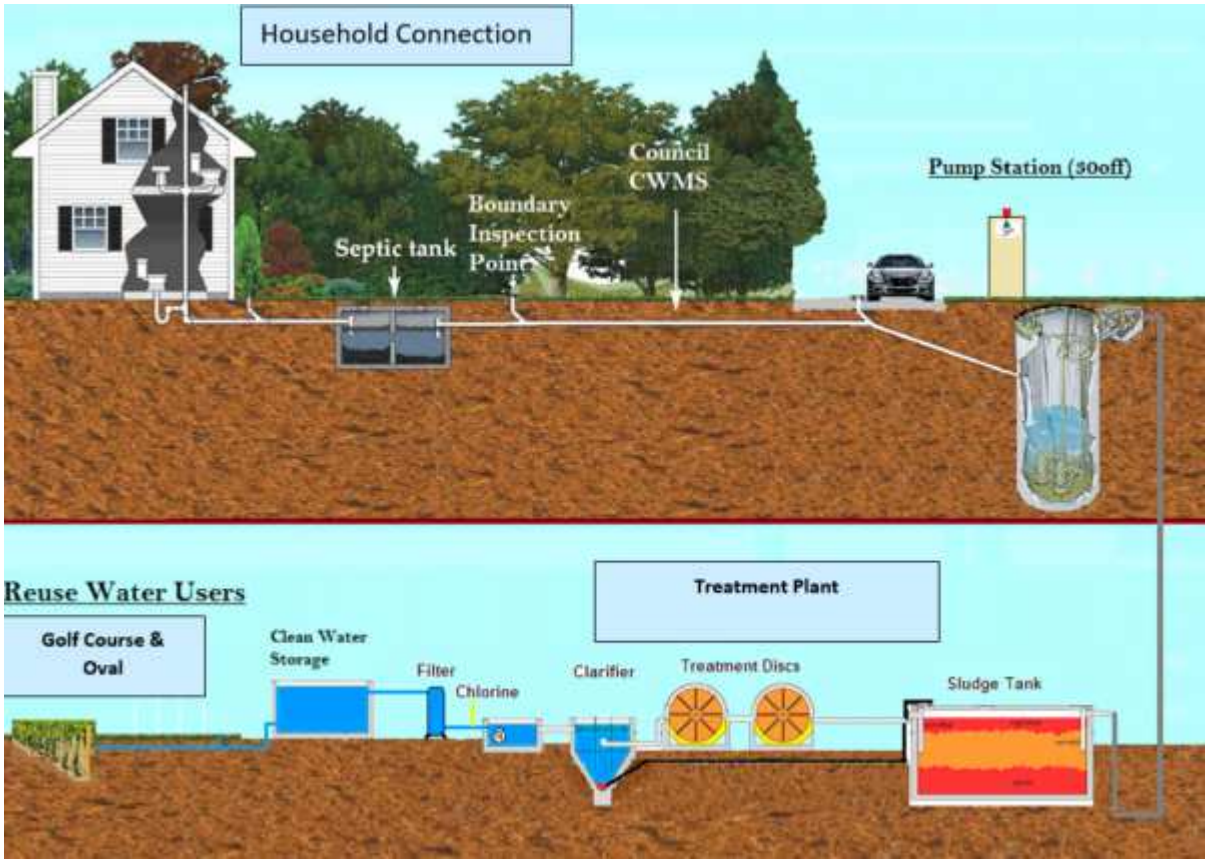


Typical Onsite Septic
Relies on Effluent Soaking into ground (Not connected to CWMS)



CWMS Septic
Effluent Flows out of the tank into the CWMS network via boundary Inspection Point

The Treatment Process



- Collection and treatment of all effluent from Septic Tanks.
- Desludging of Septic Tanks on regular basics approximately every 5 years.

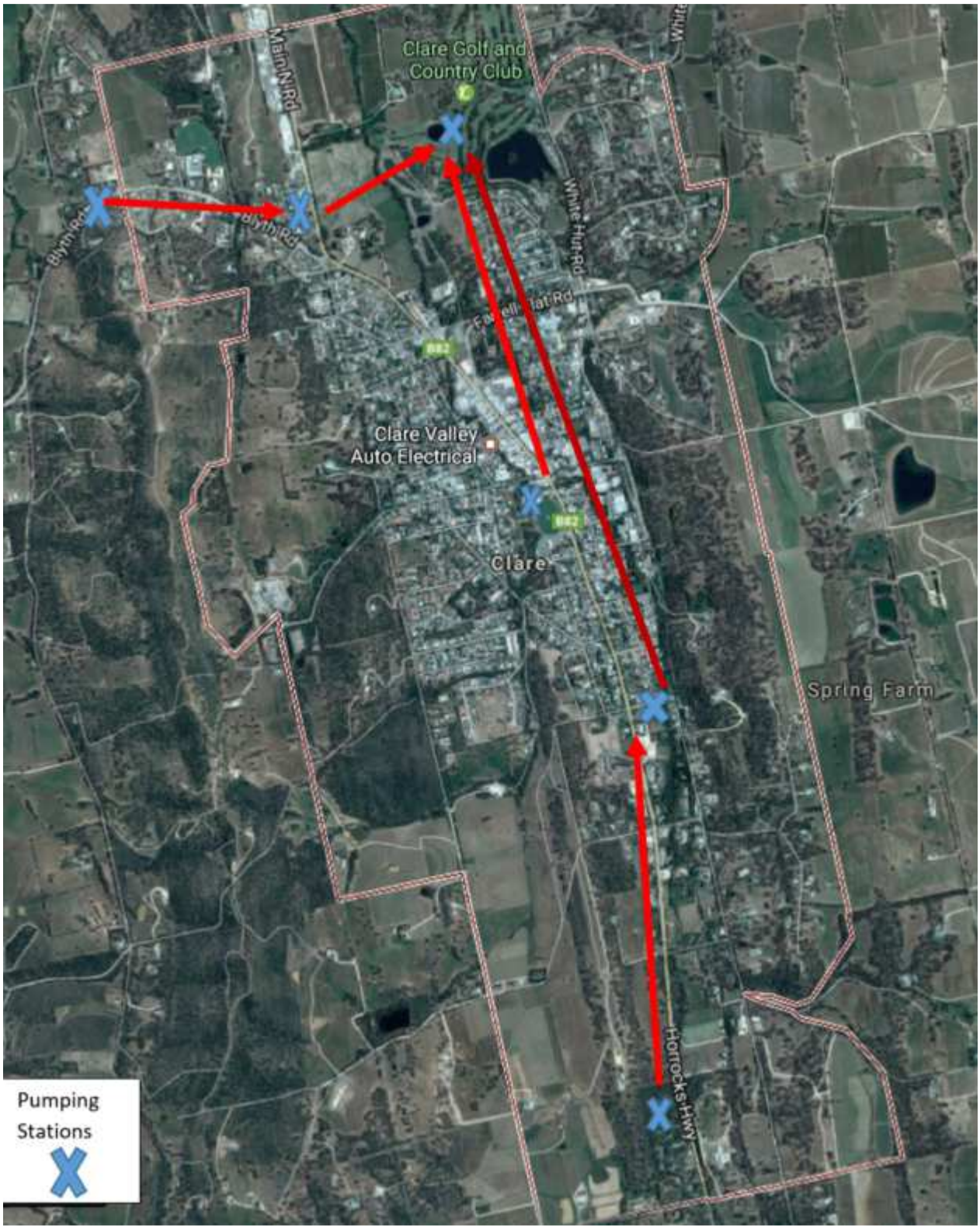
Treatment Plants

Clare Treatment Plant

Saddleworth Treatment Plant

Riverton Treatment Plant

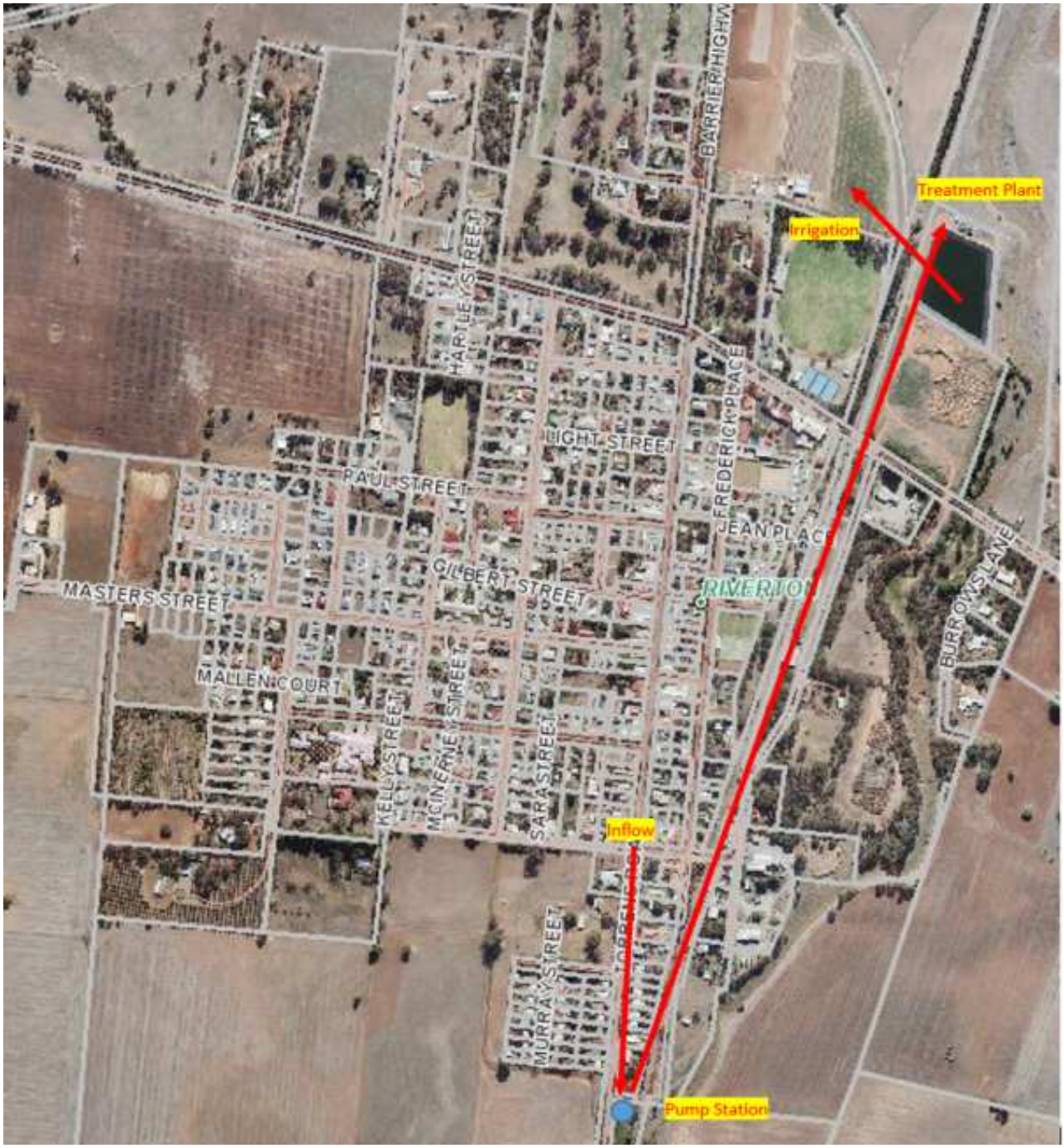
Clare Pump Station Locations



Clare Treatment & Irrigation Process

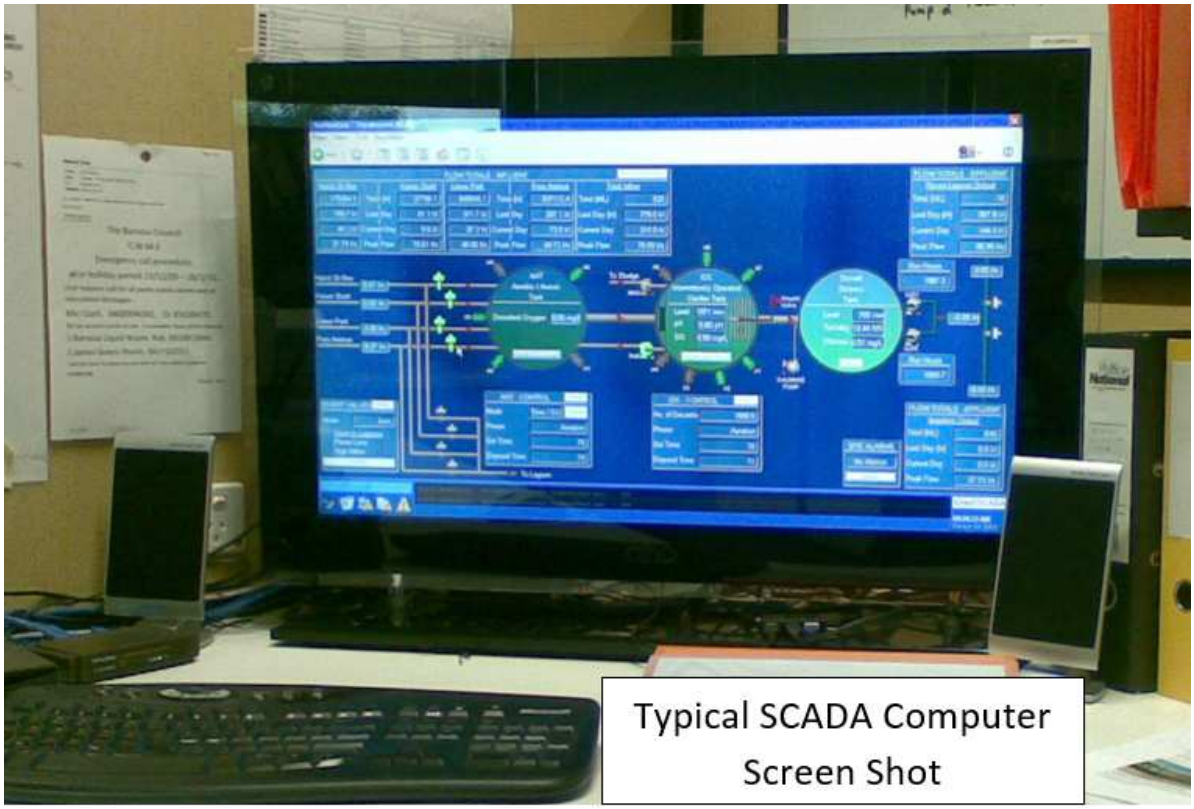
Saddleworth Treatment & Irrigation Process

Riverton Treatment & Irrigation Process

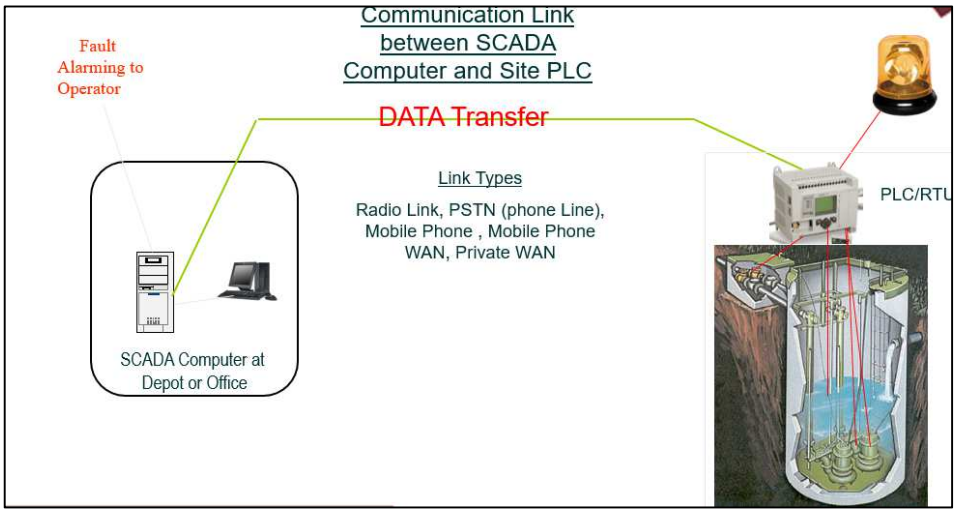


Proposed Monitoring CWMS
Supervisory Control And Data Acquistion (SCADA) System

Typical Office Monitoring Control System



A SCADA System



Asset Management Plan

Buildings & Structures

Clare & Gilbert Valleys Council

June 2017

CLARE & GILBERT
VALLEYS COUNCIL

Contents

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1 Introduction

1.1 Context

Over the past few years Council has been rationalising its inventory of Council owned and controlled buildings and structures to ensure value for money to ratepayers and the wider community. This plan has been developed based on those principles.

The plan has been developed using the most up to date information currently held by Council including;

- data from the valuation of "Land, Buildings, Structures and Site Improvements" undertaken by Maloney Field Services for financial reporting purposes as at 1 July 2014;
- assumptions adopted by council in a review of its community building assets on 24 April 2014; and
- outcomes of inspections carried out by Mace Engineering Services Pty Ltd determining the structural integrity, fire and safety compliance, disability access and egress of specific buildings. (Additional buildings will be carried out following the publication of this plan and be incorporated into further iterations)

1.2 Background

Clare & Gilbert Valleys Council is situated to the north of Adelaide in South Australia and includes the towns of Clare, Riverton, Saddleworth and Auburn and villages of Stockport, Tarlee, Rhynie, Manoora, Marrabel, Waterloo, Mintaro, Penwortham, Leasingham, Watervale and Sevenhill. The Council has a population of 8,749 (2011 Census). Tarlee, situated in the southern area of the Council, is 85km north of Adelaide and the main Council office in Clare is 140km north of Adelaide.

Council own and manage over 200 different building assets and structures, varying in nature from small shelters and sheds, playgrounds and memorials, to large recreational facilities and iconic historically significant buildings.

Table 1.1 and Figure 1.1 show the distribution of Council's "Building and Structures" by Function. While the recreation function contains the largest number of assets, the majority of value is held within community services. This is due to the large number of smaller structures in recreation compared to the large community historic institute buildings utilised for community services.

Table 1.1 Buildings and Structures of the Council by Function

Function	Replacement Cost
Community Services	26,824,510
Recreation	18,681,540
Culture	5,391,364
Economic Development	1,137,884
Depot & Administration	4,967,640
Environment	944,402
Business Undertakings	957,034
Total	**$58,904,374**

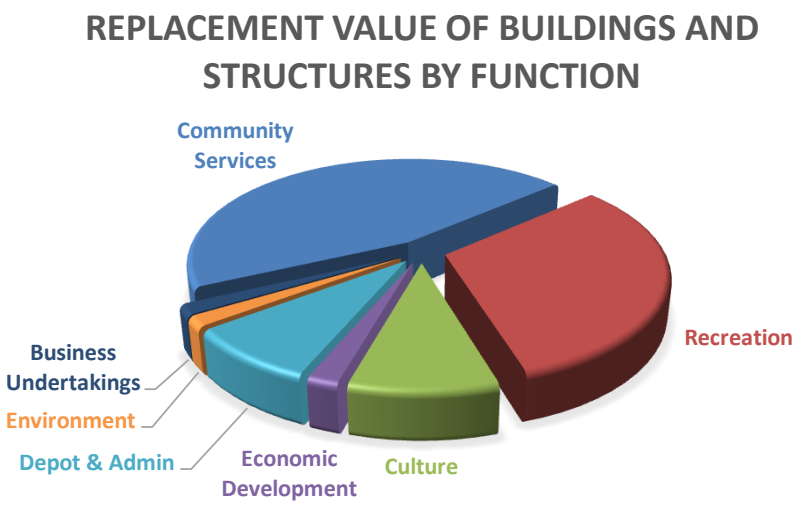

Figure 1.1 Distribution of Replacement Value of Building and Structures by Function as at 2016

Table 1.2 and Figure 1.2 provide an overview of the distribution of Council's Buildings and Structures by location. With the concentration of population within the township of Clare, it is consistent that it comprises approximately 50% of the value of the assets.

Table 1.2 Buildings and Structures of the Council by Location

Function	Replacement Cost
Auburn	4,949,332
Clare	29,288,986
Waterloo	7,780
Manoora	2,911,295
Marrabel	428,430
Mintaro	1,985,436
Rhynie	121,314
Riverton	9,030,033
Saddleworth	6,319,298
Stockport	1,175,316
Tarlee	2,172,258
Watervale	514,896
Total	**$58,904,374**

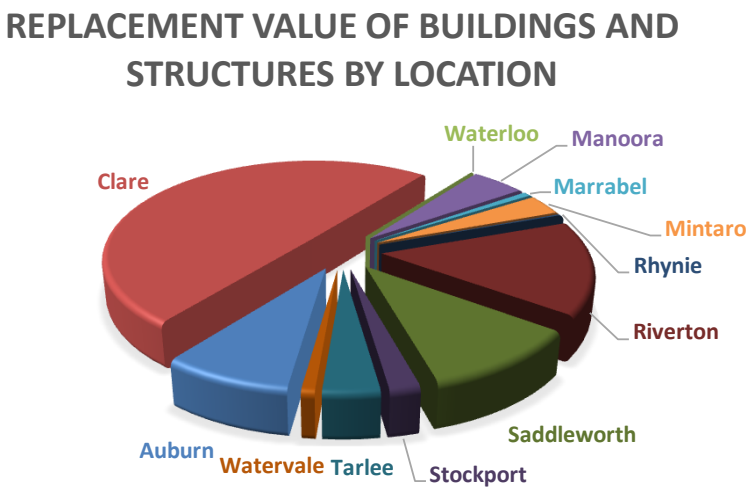

Figure 1.2 Distribution of Replacement Value of Building and Structures by Location as at 2016

1.3 Plan Framework

This Building infrastructure asset management plan is based on the fundamental structure of the IPWEA NAMS 3 Asset Management for Small, Rural or Remote Communities template.

The Clare & Gilbert Valleys Council provide services for the community in part through the provision of infrastructure assets. Council have acquired these assets directly through construction by Council staff or contractors and by inheritance from developers or other organisations.

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

- Taking a life cycle approach.
- Developing cost-effective management strategies for the long term.
- Providing a defined level of service and monitoring performance.
- Managing risks associated with asset failures.
- Sustainable use of physical resources.

Key elements of the plan are:

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

This asset management plan is prepared under the direction of Council's vision which is:

"Clare & Gilbert Valleys will be a harmonious and welcoming community living in an attractive and culturally rich rural environment, with first class facilities, innovative business and internationally recognised local produce and services"

It is also supports the outcomes of the Council's Strategic Plan 2020, including

- A healthy and active community supported by a range of tailored services and facilities;
- Distinctive heritage buildings protected and celebrated; and
- Council owned land and buildings are fulfilling a useful function and providing public value.

2 Levels of Service

To assist in this process of determining the level of service all buildings and structures are classified using the following categories

Category A	Crucial to Council Administration
Category B	Crucial to the community due to utilisation or cultural significance
Category C	Crucial to the community due to utilisation or cultural significance but managed by an external incorporated body.
Category D	Commercial property
Category Z	Property surplus to requirements. Services may be currently delivered from these buildings and structures. However, at the end of asset's life the service will cease or be delivered from another asset.

Figure 2.1 illustrates how the "Building and Structure" assets are distributed over these categories.

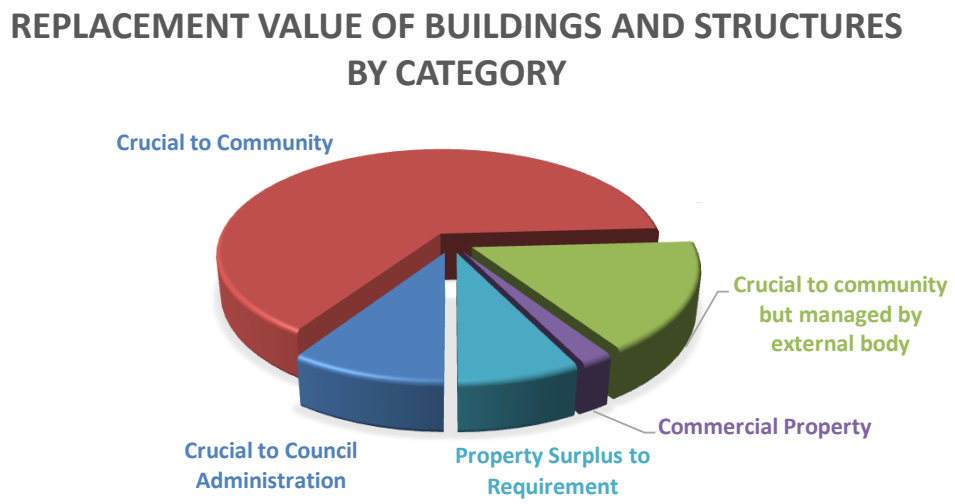

Figure 2.1 Distribution of Replacement Value of Building and Structures by Category as at 2016

Council has defined service levels according to "Community Levels of Service" and "Technical Levels of Service" and provides the level of service objective, performance measure process and service target in Table 2.1 and Table 2.2. These service levels apply only to Category A, B and D. Category Z assets which are surplus to requirements and Category C which are managed by external organisations have not been considered within this Asset Management Plan.

Community Levels of Service relate to the service outcomes that the community wants in terms of reliability, responsiveness, amenity and safety.

Table 2.1 *Community Levels of Service*

Key Performance Measure	Level of Service Objective	Performance Measure Process	Current Service Level	Target Service Level
Quality	Provision of "fit for purpose" and suitable buildings that maintain cultural significance and heritage elements of our region.	Customer feedback upgrade requests	Suitable for event functions and determined from findings in ongoing Building Risk Assessment	Continuing to meet the service delivery needs of the community
Function	Ensure buildings and structures are functional for their determined use.	User group development plans	Report from user group and management committees	Continuing to meet community expectations and are functional for capacity and use.
Capacity / Utilisation	Ensure buildings and structures meet community expectations and required levels of capacity and usage.	Customer complaints / requests	Buildings are currently utilised in accordance with community expectation. Potential for greater utilisation exists.	Buildings and structures meet capacity requirements. Asset stock maintained, renewed and upgraded to meet demand and growth.
Safety	Ensure buildings and structures are compliant and minimise risk to the community.	Customer complaints/requests Incident reports and near misses	Ensuring buildings are providing a safe environment for the community.	Continuing to minimise risk to the community.

Comment [SR1]: To
Building Assets to ma
Performance Measure

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

Table 2.2 *Technical Levels of Service*

Comment [SR2]: To Building Assets to ma Performance Measure

Key Performance Measure	Level of Service Objective	Performance Measure Process	Current Service Level	Target Service Level
Operations	Building interiors are clean and hygienic consistent with their use.	Ensuring clean and hygienic facilities meeting community expectations	All contracts in place	All contracts in place.
	Proactive maintenance carried out to ensure buildings continue to fulfil function.	Number of Customer complaints/requests	7 per year	0 per year
Compliance	Buildings and structures are compliant with all legislated safety requirements and risk to employee and community safety is mitigated to an acceptable level.	Building and structures inspection and risk assessment	Ongoing review and where compliance requests are varied.	Biennial inspection
Renewal	Assets are renewed at an optimal time in their life-cycle	Strategic Plan 2020 Asset sustainability ratio	83%	90-110%
Upgrade	Remove all gaps between desired service level and actual service level for performance.	Upgrade plans approved by Council and funded through Long Term Financial Plan.	Council has initiated structural condition reports	To be address within appropriate timeframe based structural condition reports and asset utilisation.

3 Future Demand

Council's building infrastructure supports its role as a service provider, together with the provision of spaces for community activities and recreation.

In 2015 Council conducted a review of building and structures to determine the future responsibilities for renewal, maintenance and upkeep, and new development. The review supported more autonomy for local communities in determining the future role, function and management of local facilities.

For new community initiatives for the provision of public infrastructure Council requires an asset sustainability report which describes how the asset will be managed, maintained and supported over the longer term. Future demand forecasts will consider changes to service delivery, the range and scope of services offered, technology changes, and what happens with the district's demographic profile and population.

3.1 Demand Forecast

Factors affecting demand include population change, changes in demographics, seasonal factors, vehicle ownership, consumer preferences and expectations, economic factors, changes in technology etc... Demand factor trends and impacts on service delivery are summarised in Table 3.1.

Table 3.1 Demand Factors, Projections and Impact on Services

Demand Driver	Present Position	Projection	Impact on Services
Demographics	Higher proportion of people aged 50-59 (15.3%) and 60-69 (13.26)	Steady Increase in aging population	Changing nature of services delivered from facilities. Mobility considerations
Community Programmes and Hall Hire	Building Facilities have several regular hirers	Regular Hirer numbers to be maintained.	No impact better asset utilisation
Environmental impacts	Buildings are constructed to withstand today's known environmental conditions and to meet today's environmental standards.	Greater requirements related to constructing buildings that are environmentally sustainable.	Higher costs associated with constructing buildings that are environmentally sustainable, e.g., water retention/recycling, solar energy etc.
Request for Sporting clubroom upgrades	Annual assessment by Council staff using a matrix which determines the recreation/community benefits & building requirements of each Clubroom	Clubs over time will approach Council requesting facility	Insufficient funds to improve every clubroom immediately.
Community Facilities	Ancillary facilities such as public toilets and shelters are located at regional and district open space.	Increased public expectation for additional ancillary facilities at local and neighbourhood reserves.	Requiring whole of Life cost assessment.

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Demand Drivers

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3.2 Demand Management Plan

Demand for a change in services including provision of new services will be managed through a combination of

- managing existing assets,
- upgrading of existing assets
- disposal of assets determined surplus to requirements
- providing new assets to meet demand.

4 Life Cycle Management

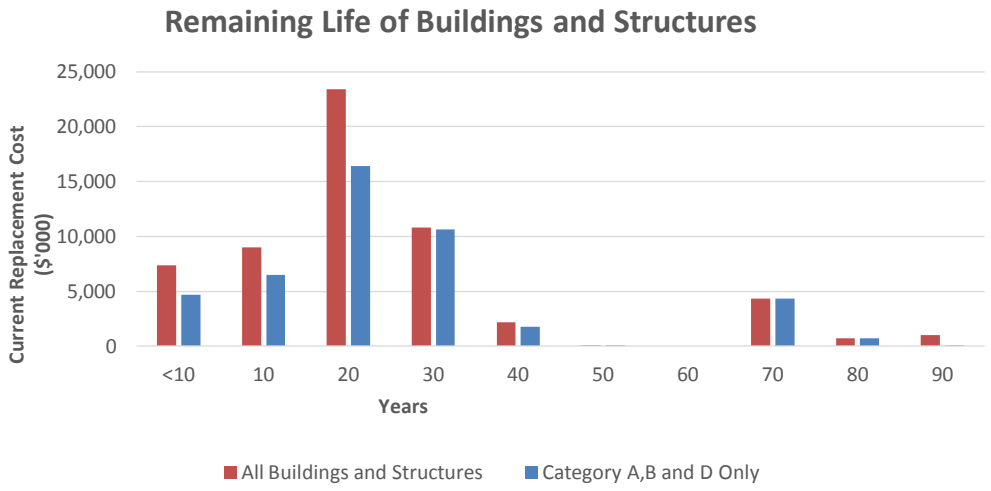
The life cycle management plan details how Council plans to manage and operate the assets as the agreed levels of service (defined in section 2) while optimising life cycle costs.

4.1 Background Data

Clare & Gilbert Valleys Council's building assets are located across the Council area. The assets covered by this asset management plan are shown in Table 1.2.

The remaining life profile of the assets shown by Current Replacement Cost (CRC) included in this plan is shown in Figure 4.1.

Figure 4.1 Building and Structures Remaining Life Profile by Replacement Value



While it is important for Council to know the age of its buildings and structures, it is more useful to understand the potential remaining within the asset (being its remaining useful life) and when that potential will be exhausted.

As can be seen by Figure 4.1 Council has a wide range of remaining lives of assets; however there is a definite peak of assets reaching the end of their lives in the 20 to 30-year time frame.

4.1.1 Asset Capacity

As part of the improvement plan for the asset management plan of Buildings and Structures, a review of intended use of individual assets will be undertaken.

4.1.2 Asset Condition

As part of the valuation carried out by Maloney Field Services as at 1 July 2014 condition data was provided. This condition is included in the plan as a reference to guide Council to determine and develop asset remediation and renewal. Identified buildings and structures have been inspected and reports prepared based on a detailed risk and structure assessments by Mace Engineering. This current version of the asset management plan where an assessment has been completed is identified in the plan. Annual updates will be undertaken for Council to determine budget allocation for remedial work and renewal. Once this body of work is completed remaining Life Profile will be reviewed to determine intended use and on building and structure assets.

The remaining life of all assets is measured by the current condition of the asset as a portion of the total standard useful life for the category of building asset.

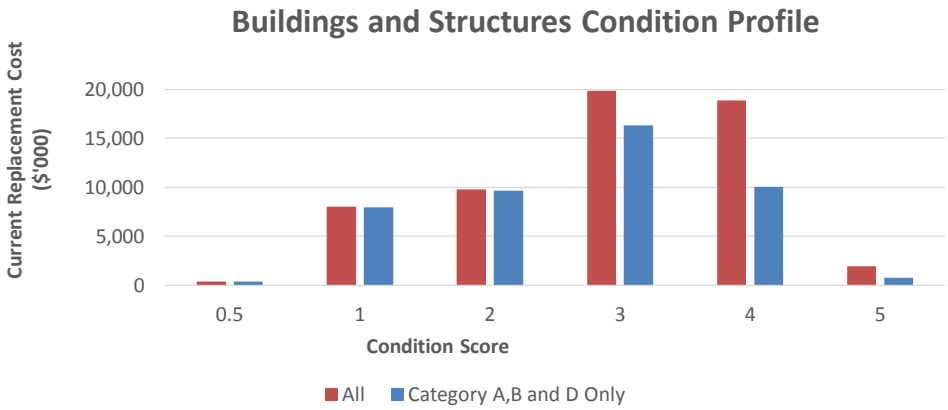
Table 4.1 Asset Condition Scores

Condition Rating	Description
0.5	New asset
1	New or as new condition
2	Very good condition/well maintained
3	Minor maintenance required
4	Substantial maintenance or restoration required
5	Very Poor - not serviceable

The scores reflective of a condition not serviceable also reflect assets which are approaching technical, style or legal obsolescence.

Figure 4.2 Building and Structures Condition Profile by Replacement Cost

(2014 Age Profile assessment)



The condition profile highlights the large value of assets currently classified as either “minor maintenance required” or “substantial maintenance or restoration required”. This is consistent with the remaining life profile in Figure 4.1.

The Council will review the building and structures with condition scores of 3 and above to determine what remedial works are required at these locations.

4.1.3 Asset Valuations

The values of the Building assets recorded in the asset register were reviewed as at 30 June 2016 and addressed in this asset management plan is shown in Table 4.2 below.

Table 4.2 Building Asset Valuation Summary

Current Replacement Cost/Depreciable Amount	$58,904,374
Written Down Value	$34,908,117

The current rate of consumption (annual depreciation/depreciable amount) for Building and Structure assets is 1.65 %. This indicates that on average, over the life of an asset, 1.65 % of

the depreciable amount is consumed annually. The translation of this consumption rate into renewal is subject to a decision on funding, service level determination and asset condition.

4.2 Risk Management

An assessment of the risks associated with the service delivery of the Clare & Gilbert Valleys Council's Building networks have been undertaken by Council. The risk assessment process identifies credible risks, considers the likelihood of an event occurring and assesses the impact or consequence that would be caused by an event occurring. A risk rating system using a risk matrix of likelihood versus impact has been developed and a risk treatment plan to address non-acceptable risk will be developed.

Critical risks assessed as being "Extreme" – requiring immediate corrective action and "High" – requiring prioritised corrective action will be identified and addressed in future revisions of the plan.

Table 4.3 details the cost of remediating those buildings with a completed risk assessment at the time of developing this asset management plan. Council will consider the cost of these remediation works in its 2017/18 budget deliberations.

Table 4.3 Completed Building Risk Reports and Associated Costs

Building	Remediation Works
Auburn RSL	$ 121,692
Manoora Hall	$ 225,150
Mintaro Hall	$ 152,220
Oval House – 156 Main North Road, Clare	Demolish
Riverton Hall	$ 194,240
Riverton RSL	$ 90,810
Saddleworth Hall	$ 175,690
Saddleworth RSL Hall	Demolish
Stockport Hall	$ 54,685
Tarlee Hall	$ 47,770
Watervale Institute	$ 102,800
Cost Estimate	**$1,165,057**

Table 4.3 also highlights that through this risk management process Council has determined Saddleworth RSL and the Oval House located at 156 Main North Road will be demolished.

Saddleworth RSL Building

The building at 14 Belvidere Road, Saddleworth is comprised in Certificate of Title 5501/786. It consists of stone building formally used for community purposes. On 16 May 2016, the adjoining commercial property was destroyed by fire. As a consequence, the Saddleworth RSL building sustained significant damage and was deemed unusable due to safety concerns. Council commissioned a structural engineering report for the property and obtained costs for restoration of the building from Rider Levett Bucknall. A public meeting was held in Saddleworth on 19 October endorsed the demolition of the building and clearance of this site.

At the meeting of Council of 21 November 2016 Council determined that the building be demolished and the site cleared.

Auburn Institute

The building Main North Road, Auburn is comprised in Certificate of Title 5483/425. The building is used for various community purposes. It was reported to Council that segments of the suspended ceiling had fallen and that a risk to public safety had been established if additional segments were to fall. The Main Hall was immediately closed.

Council commenced a structural engineering report for the property and obtained costs for restoration of the building from Rider Levett Bucknall. Council is working with the Auburn Community Development Committee to determine a resolution.

Council's Strategic Asset Management Advisory Committee at its 23 January 2017 meeting recommended that additional Risk Assessment of Buildings and Structures be provided to Council.

Priority buildings including –

- Clare Town Hall
- Valleys Lifestyle Centre
- Auburn RSL (completed)
- Watervale Institute (completed)
- Riverton RSL (completed)
- Riverton Recreation Ground
- Auburn Recreation Ground
- Mintaro Recreation Ground
- Manoora recreation Ground
- Saddleworth Recreation Ground
- Watervale Recreation Ground
- Marrabel Recreation Ground
- Stockport Recreation Ground

4.3 Required Expenditure

This asset management plan identifies the projected operations, maintenance and capital renewal expenditures required over a 10-year medium term financial planning period. This provides input into the 10-year Long Term Financial Plan aimed at providing the required services in a sustainable manner.

4.3.1 Routine Maintenance

Routine maintenance is the regular on-going work that is necessary to keep assets operating, including instances where portions of an asset fails and needs immediate repair to make the asset operational again. Maintenance includes reactive (unplanned), planned and specific maintenance work activities. Assessment and prioritisation of reactive maintenance is undertaken by operational staff using experience and judgement.

Council's current and future building infrastructure maintenance costs are based on the maintenance costs provided for the past four (4) years related to Category A, B and D items.

Table 4.4 Annual Maintenance Expenses

	2011/12	2012/13	2013/14	2014/15	Average
Building and Structures Infrastructure Maintenance	$215,000	$260,000	$227,000	$294,000	$249,000

Using the capability of Council's IT investment in IT Vision & Synergy a revised costing and reporting system to collect costs related to specific assets has been included within this management plan's improvement plan.

The average over the four (4) years has been used for this version of the asset management plan.

4.3.2 Capital Renewal

Renewal expenditure is major work which does not increase the asset's design capacity but restores, rehabilitates, replaces or renews an existing asset to or near its original service potential. Work over and above restoring an asset to original service potential is considered to be upgrade expenditure.

Due to the current inadequacy of council's building asset data, capital renewal expenditure has been based on recommendations from Council's risk assessment, where they have been completed. This renewal plan will be updated as further risk assessments are completed.

Additional renewal expenditure related to The Valleys during the anticipated Clare Valley Sport and Recreation Precinct is the only other renewal expenditure item.

Table 4.5 Required Capital Renewal Expenditure

Financial Year	Capital Renewal Expenditure
2016-17	49,200
2017-18	2,511,002
2018-19	331,910
2019-20	102,455
2020-21	225,150
2021-22	197,000
2022-23	197,000
2023-24	197,000
2024-25	197,000
2025-26	197,000
Total	4,204,717

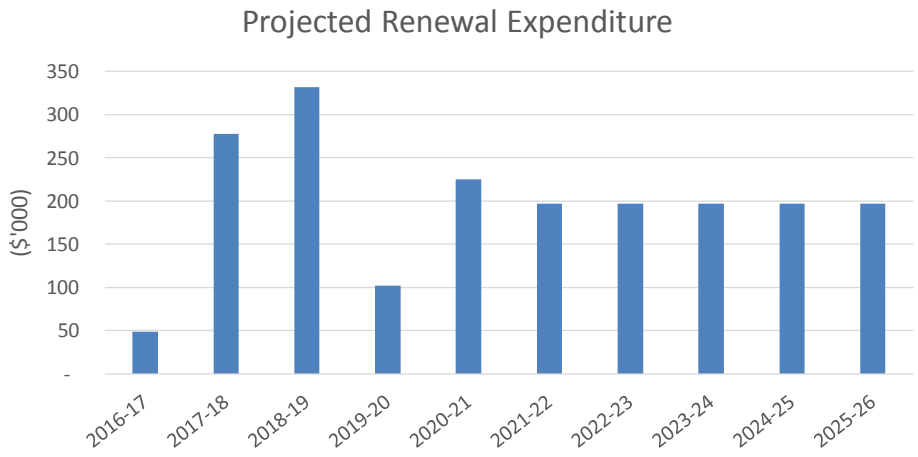


Figure 4.3 Building and Structures Infrastructure Projected Capital Renewal Expenditure

Table 4.6 Five Year Detailed Listing of Capital Renewal Expenditure

Asset Name	Sub - Category	Planned Renewal	Estimated Cost
Clare Town Hall	Fire Safety upgrade	2016-2017	$26,000
Riverton Community Hall	Roof Repairs	2016-2017	$10,100
	Safe Roof Access	2016-2017	$13,100
Sub - total			**$49,200**
Clare Town Hall (as per BFSC Report)	Removal of Rigging Loft & Disposal	2017-2018	$5,000
	Provision of smoke detection	2017-2018	$61,000
	Provide Emergency Lighting throughout building	2017-2018	$18,000
Riverton Community Hall	As per Risk Report refer Appendix One	2017-2018	$194,240
Sub - total			**$278,240**
Mintaro Institute	As per Risk Report refer Appendix One	2018-2019	$152,220
Saddleworth Hall	As per Risk Report refer Appendix One	2018-2019	$179,690
Sub - total			**$331,910**
Stockport Hall	As per Risk Report refer Appendix One	2019-2020	$54,685
Tarlee Hall	As per Risk Report refer Appendix One	2019-2020	$47,770
Sub - total			**$102,455**
Manoora Hall	As per Risk Report refer Appendix One	2020-2021	$225,150
Sub - total			**$225,150**

4.3.3 Capital New/Upgrade and Acquisition

New/upgrade expenditure is major work that creates a new asset that did not previously exist, or works which upgrade or improve an existing asset beyond its existing capacity. They may result from growth, social or environmental needs. Assets may also be acquired at no cost to the Council from land developments or through donations.

Council's first commitment is to ensure it current buildings are safe and accessible which is illustrated by its renewal expenditure detailed at point 4.3.2.

Council is however committed to the future improvement of its facilities. New and/or capital upgrade projects planned by the council (but subject to sourcing external funding) are detailed within Table 4.7.

Table 4.7 Planned Capital New and Upgrade

Financial Year	Item	Capital New/Upgrade
2017/18	The Valleys	$8,236,734
2017/18	Watervale Community and Sports Centre	$650,000
2017/18	Watervale Tennis Court	$231,000

4.3.4 Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. Council has identified a number of buildings and structures that it does not intend to replace and are surplus to the Council's requirements. Authority for the disposal of buildings including land is governed by legislation covering community land as defined by the Local Government Act.

4.3.5 Financial Projections

The financial projections are shown in Table 4.8 and Figure 4.3 for projected operating (maintenance) capital renewal, and estimated budget funding. Maintenance and Capital expenditure has been calculated based on reports to date and will need further consideration once Council has all the report on its buildings and structures.

Table 4.8 Maintenance and Capital Expenditure

Financial Year	Maintenance	Capital Renewal	Capital New/Upgrade	Total Expenditure Requirement
2016-17	249,000	49,200	-	298,200
2017-18	249,000	2,511,002	9,117,734	11,877,736
2018-19	249,000	331,910	-	580,910
2019-20	249,000	102,455	-	351,455
2020-21	249,000	225,150	-	474,150
2021-22	249,000	197,000	-	446,000
2022-23	249,000	197,000	-	446,000
2023-24	249,000	197,000	-	446,000
2024-25	249,000	197,000	-	446,000
2025-26	249,000	197,000	-	446,000
Total	**$2,490,000**	**$4,204,717**	**$9,117,734**	**$15,812,451**

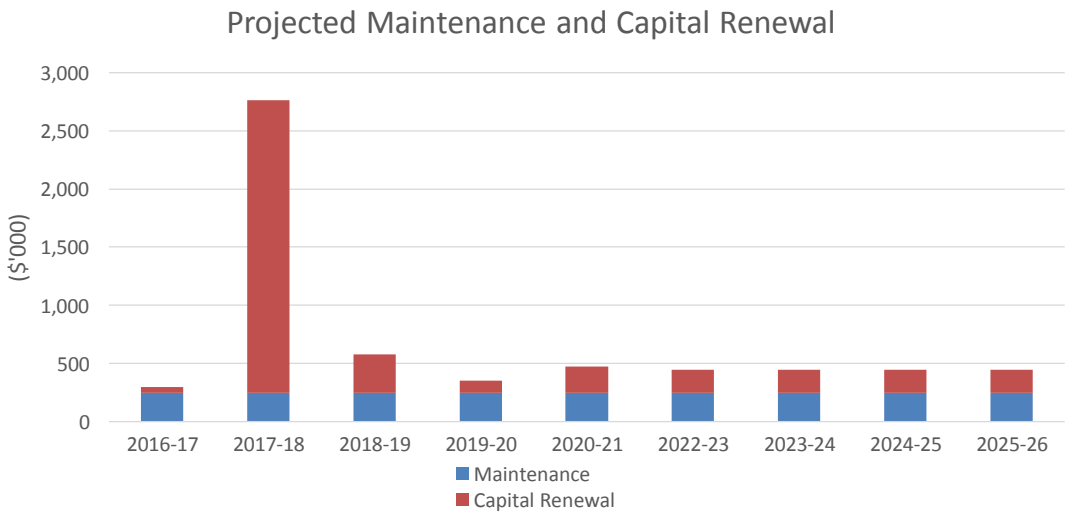


Figure 4.4 Projected Operating and Capital Renewal Expenditure

The average projected operations, maintenance and capital renewal expenditure required over the 10-year planning period is $669,472.

5 Plan Improvement and Monitoring

The following tasks have been identified for improving future versions of the plan

Table 5.1 Improving future versions of the plan

Task No.	Task	Responsibility	Timeline
1.	Review accuracy of current Building asset register including a review of the conditions assessments to assess end of life of the building and structures infrastructure assets.	Council Administration	Sept 2017
2.	Reassess categories of buildings and structures based on the service assessment, risk assessment and condition assessments.	Council Administration	Sept 2017
3.	Plan for assets considered as surplus to Council requirements. Development of disposal plan	Council Administration	Dec 2017
4.	Development of itemised maintenance program for buildings and structures	Council Administration	June 2018
5.	Development of itemised renewal/replacement program for buildings and structures	Council Administration	Dec 2018
6.	Development of itemised capital upgrade program for buildings and structures based on gap analysis from service assessment	Council Administration	Dec 2018
7.	Implementation of a new costing and reporting system to record operating and maintenance costs of specific buildings and structures	Council Administration	Dec 2018

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

6 References

IPWEA, 2006, *NAMS.PLUS3 Asset Management*, Institute of Public Works Engineering Australia, Sydney, www.ipwea.org

IPWEA, 2011, Asset Management for Small, Rural or Remote Communities Practice Note, Institute of Public Works Engineering Australia, Sydney, www.ipwea.org

Clare and Gilbert Valleys Council Structural Rectification Works, RLB, Rider Levett Bucknall

APPENDIX ONE

Risk Assessment Buildings & Structures – Remediation Expenditure

Risk Assessment Buildings and Structures - Remediation Expediture

Buildings	Design, Documentation etc	Alterations	Substructure	Staircases	Roof	External Walls	Windows	Walls, Doors & Finishes	Floor Finishes	Ceiling Finishes	Fitments & Plumbing	Roads, Footpaths, & Paved areas	Stormwater Drainage/Landscaping	Estimated Total
Manoora Hall	$ 83,000	$ 15,050	$ 7,890	$ 10,300	$ 23,710	$ 12,860	$ 13,650	$ 805	$ 22,565	$ 7,250	$ 9,850	$ 18,000	$ 220	$ 225,150
Mintaro Institute	$ 57,000	$ 45,620	$ 7,700			$ 11,200	$ 10,550	$ 3,100	$ 3,355	$ 2,225	$ 10,150	$ 1,320		$ 152,220
Riverton Communtiy Hall	$ 72,000	$ 33,145			$ 2,795	$ 41,225	$ 1,250	$ 4,045	$ 6,720	$ 9,110	$ 5,600	$ 14,850	$ 3,500	$ 194,240
Saddleworth Hall	$ 65,000	$ 3,645	$ 2,200	$ 4,500	$ 2,380	$ 42,060	$ 8,250	$ 8,600	$ 5,695	$ 2,460	$ 4,900	$ 22,500	$ 3,500	$ 175,690
Stockport Hall	$ 21,000	$ 1,720	$ 2,200		$ 875	$ 6,160	$ 2,400	$ 4,650	$ 5,980	$ 350	$ 4,550	$ 3,850	$ 950	$ 54,685
Tarlee Hall	$ 18,000	$ 2,210		$ 1,000	$ 7,220	$ 2,900		$ 3,060	$ 1,980	$ 5,725	$ 2,450	$ 2,275	$ 950	$ 47,770
Riverton RSL Hall	$ 33,000	$ 5,030	$ 12,000		$ 1,270	$ 23,400	$ 2,500	$ 2,910	$ 300	$ 3,560	$ 2,500	$ 3,950	$ 390	$ 90,810
Auburn RSL	$ 12,000	$ 81,763			$ 1,900	$ 100		$ 2,650		$ 3,130	$ 4,750	$ 15,200	$ 200	$ 121,693
Watervale Institute	$ 33,000	$ 51,940			$ 1,660	$ 300	$ 1,050	$ 5,200		$ 2,100	$ 1,750	$ 5,800		$ 102,800
Valleys Lifestyle Centre	$ 106,000	$ 50,138			$ 69,105			$ 9,795	$ 1,855	$ 87,575	$ 13,000	$ 1,200	$ 18,420	$ 357,088
														$ 1,522,146