

LIVERPOOL PLAINS SHIRE COUNCIL



SEWER

ASSET MANAGEMENT PLAN



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ABBREVIATIONS

AAAC	Average annual asset consumption
AMP	Asset management plan
ARI	Average recurrence interval
BOD	Biochemical (biological) oxygen demand
CRC	Current replacement cost
CWMS	Community wastewater management systems
DA	Depreciable amount
DoH	Department of Health
EF	Earthworks/formation
IRMP	Infrastructure risk management plan
LCC	Life Cycle cost
LCE	Life cycle expenditure
MMS	Maintenance management system
PCI	Pavement condition index
RV	Residual value
SS	Suspended solids
vph	Vehicles per hour

GLOSSARY

Annual service cost (ASC)

An estimate of the cost that would be tendered, per annum, if tenders were called for the supply of a service to a performance specification for a fixed term. The Annual Service Cost includes operating, maintenance, depreciation, finance/ opportunity and disposal costs, less revenue.

Asset class

Grouping of assets of a similar nature and use in an entity's operations (AASB 166.37).

Asset condition assessment

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

Asset management

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

Assets

Future economic benefits controlled by the entity as a result of past transactions or other past events (AAS27.12).

Property, plant and equipment including infrastructure and other assets (such as furniture and fittings) with benefits expected to last more than 12 month.

Average annual asset consumption (AAAC)*

The amount of a local government's asset base consumed during a year. This may be calculated by dividing the Depreciable Amount (DA) by the Useful Life and totalled for each and every asset OR by dividing the Fair Value (Depreciated Replacement Cost) by the Remaining Life and totalled for each and every asset in an asset category or class.

Brownfield asset values**

Asset (re)valuation values based on the cost to replace the asset including demolition and restoration costs.

Capital expansion expenditure

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

Capital expenditure

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

Capital funding

Funding to pay for capital expenditure.

Capital grants

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

Capital investment expenditure

See capital expenditure definition

Capital new expenditure

Expenditure which creates a new asset providing a new service to the community that did not exist beforehand. As it increases service potential it may impact revenue and will increase future operating and maintenance expenditure.

Capital renewal expenditure

Expenditure on an existing asset, which returns the service potential or the life of the asset up to that which it had originally. It is periodically required expenditure, relatively large (material) in value compared with the value of the components or sub-components of the asset being renewed. As it reinstates existing service potential, it has no impact on revenue, but may reduce future operating and maintenance expenditure if completed at the optimum time, eg. resurfacing or resheeting a material part of a road network, replacing a material section of a drainage network with pipes of the same capacity, resurfacing an oval. Where capital projects involve a combination of renewal, expansion and/or upgrade expenditures, the total project cost needs to be allocated accordingly.

Capital upgrade expenditure

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

expenditures, the total project cost needs to be allocated accordingly.

Carrying amount

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

Class of assets

See asset class definition.

Component

An individual part of an asset which contributes to the composition of the whole and can be separated from or attached to an asset or a system.

Cost of an asset

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

Current replacement cost (CRC)

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

Current replacement cost "As New" (CRC)

The current cost of replacing the original service potential of an existing asset, with a similar modern equivalent asset, i.e. the total cost of replacing an existing asset with an as NEW or similar asset expressed in current dollar values.

Cyclic Maintenance**

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

Depreciable amount

The cost of an asset, or other amount substituted for its cost, less its residual value (AASB 116.6)

Depreciated replacement cost (DRC)

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

Depreciation / amortisation

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

Economic life

See useful life definition.

Expenditure

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

Fair value

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

Greenfield asset values **

Asset (re)valuation values based on the cost to initially acquire the asset.

Heritage asset

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

Impairment Loss

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

Infrastructure assets

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

Investment property

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

- (a) use in the production or supply of goods or services or for administrative purposes; or
- (b) sale in the ordinary course of business (AASB 140.5)

Level of service

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

Life Cycle Cost **

The life cycle cost (LCC) is average cost to provide the service over the longest asset life cycle. It comprises annual maintenance and asset consumption expense, represented by depreciation expense. The Life Cycle Cost does not indicate the funds required to provide the service in a particular year.

Life Cycle Expenditure **

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

Loans / borrowings

Loans result in funds being received which are then repaid over a period of time with interest (an additional cost). Their primary benefit is in 'spreading the burden' of capital expenditure over time. Although loans enable works to be completed sooner, they are only ultimately cost effective where the capital works funded (generally renewals) result in operating and maintenance cost savings, which are greater than the cost of the loan (interest and charges).

Maintenance and renewal gap

Difference between estimated budgets and projected expenditures for maintenance and renewal of assets, totalled over a defined time (eg 5, 10 and 15 years).

Maintenance and renewal sustainability index

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

Maintenance expenditure

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

Materiality

An item is material if its omission or misstatement could influence the economic decisions of users taken on the basis of the financial report. Materiality depends on the size and nature of the omission or misstatement judged in the surrounding circumstances.

Modern equivalent asset.

A structure similar to an existing structure and having the equivalent productive capacity, which could be built using modern materials, techniques and design. Replacement cost is the basis used to estimate the cost of constructing a modern equivalent asset.

Non-revenue generating investments

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

Operating expenditure

Recurrent expenditure, which is continuously required excluding maintenance and depreciation, eg power, fuel, staff, plant equipment, on-costs and overheads.

Pavement management system

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

Planned Maintenance**

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

PMS Score

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

Rate of annual asset consumption*

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

Rate of annual asset renewal*

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

Rate of annual asset upgrade*

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

Reactive maintenance

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

Recoverable amount

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

Recurrent expenditure

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

Recurrent funding

Funding to pay for recurrent expenditure.

Rehabilitation

See capital renewal expenditure definition above.

Remaining life

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

Renewal

See capital renewal expenditure definition above.

Residual value

The net amount which an entity expects to obtain for an asset at the end of its useful life after deducting the expected costs of disposal.

Revenue generating investments

Investments for the provision of goods and services to sustain or improve services to the community that are expected to generate some savings or revenue to offset operating costs, eg public halls and theatres, childcare centres, sporting and recreation facilities, tourist information centres, etc.

Risk management

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

Section or segment

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

Service potential

The capacity to provide goods and services in accordance with the entity's objectives, whether those objectives are the generation of net cash inflows or the provision of goods and services of a particular volume and quantity to the beneficiaries thereof.

Service potential remaining*

A measure of the remaining life of assets expressed as a percentage of economic life. It is also a measure of the percentage of the asset's potential to provide services that is still available for use in providing services (DRC/DA).

Strategic Management Plan (SA)**

Documents Council objectives for a specified period (3-5 yrs), the principle activities to achieve the objectives, the means by which that will be carried out, estimated income and expenditure, measures to assess performance and how rating policy relates to the Council's objectives and activities.

Sub-component

Smaller individual parts that make up a component part.

Useful life

Either:

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

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

Value in Use

The present value of estimated future cash flows expected to arise from the continuing use of an asset and from its disposal at the end of its useful life. It is deemed to be depreciated replacement cost (DRC) for those assets whose future economic benefits are not primarily dependent on the asset's ability to generate new cash flows, where if deprived of the asset its future economic benefits would be replaced.

Source: DVC 2006, Glossary

Note: Items shown * modified to use DA instead of CRC
Additional glossary items shown **

1. EXECUTIVE SUMMARY

What Council Provides

Council provides a Sewer network to enable to provide safe, effective and resource efficient and environmentally responsible sewerage schemes in townships and villages within the Shire.

- Two Sewer Treatment Plants with over 57924 metres of sewage pipes and 9 sewage pump stations located between Quirindi and Werris Creek.

What does it Cost?

There are two key indicators of cost to provide the Water and Sewer service.

- The life cycle cost being the average cost over the life cycle of the asset, and
- The total maintenance and capital renewal expenditure required to deliver existing service levels in the next 10 years covered by Council's long term financial plan.

The life cycle cost to provide the sewer service is estimated at \$1,326,850 per annum. Council's planned life cycle expenditure for year 1 of the asset management plan is \$1,201,800 which gives a life cycle sustainability index of 90%.

The total maintenance and capital renewal expenditure required to provide the Sewer service the in the next 10 years is estimated at \$5,815,900. This is an average of \$581,590 per annum.

Council's maintenance and capital renewal expenditure for year 1 of the asset management plan of \$525,200 giving a 10 year sustainability index of 90%.

Plans for the Future

Council plans to operate and maintain the water and sewer network to achieve the following strategic objectives.

1. Ensure the Sewer network is maintained at a safe and functional standard as set out in this asset management plan.

2. To provide safe, effective and resource efficient and environmentally responsible sewerage schemes to townships within the Shire.
3. To ensure that Council's business activities operate at no cost to Council and generate sufficient revenue to provide the appropriate level of services, taking into account community service obligations for each business unit.

Measuring our Performance

Quality

Sewer assets will be maintained in a reasonably usable condition. Defects found or reported that are outside our service standard will be repaired. See our maintenance response service levels for details of defect prioritisation and response time.

Function

Our intent is that an appropriate Sewer network is maintained in partnership with other levels of government and stakeholders to provide safe, effective and resource efficient and environmentally responsible sewerage schemes to townships within the Shire.

Sewer asset attributes will be maintained at a safe level and associated signage and equipment be provided as needed to ensure public safety. We need to ensure key functional objectives are met:

Safety

We inspect all Sewer Assets regularly and prioritise and repair defects in accordance with our inspection schedule to ensure they are safe.

The Next Steps

This actions resulting from this asset management plan are:

- Analyse available performance data
- Document detailed condition rating of facility assets
- Document risk analysis
- Compile a more detailed 5 year renewals plan
- Employ an Administration Officer to improve data capture and analysis efficiencies.

2. INTRODUCTION

2.1 Background

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

The asset management plan is to be read with the following associated planning documents:

Liverpool Plains Shire Council Corporate Plan 2010-2011

Liverpool Plains Shire Council Asset Management Policy

Liverpool Plains Shire Council Sewer and Water Management Plan 2011

This asset management plan covers the following infrastructure assets:

Table 2.1. Assets covered by this Plan

Asset category	Dimension	Replacement Value (\$)
Treatment plants	2	\$5,753,783
Trunk mains	6279 m	\$2,724,391
Mains	47826	\$12,384,162
Rising Mains	3819	\$1,026,406
Pump Stations	9	\$3,838,276
Manholes and Equipment	869	\$1,793,616
TOTAL		\$27,520,634

Key stakeholders in the preparation and implementation of this asset management plan are:

- Residents/ Community
- Commercial/ Industrial Customers
- Council Staff
- State and Federal Government
- Environment
- Downstream Water Users
- Developers
- Tourists
- Department of Water & Energy (DWE)
- Department of Environment & Climate Change (DECC)

2 Goals and Objectives of Asset Management

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

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

- Taking a life cycle approach,
- Developing cost-effective management strategies for the long term,
- Providing a defined level of service and monitoring performance,
- Understanding and meeting the demands of growth through demand management and infrastructure investment,
- Managing risks associated with asset failures,
- Sustainable use of physical resources,
- Continuous improvement in asset management practices.¹

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

Council's vision is:

That Liverpool Plains Shire area achieves higher levels of growth and generates improved quality of life through expanded opportunities for economic and social development being realised within an environmentally and financially sustainable framework.

Council's mission is:

To achieve the Liverpool Plains Shire Council vision through a proactive community focus delivering best value and practice services that are recognised by the community and our peers for their quality and positive impact on development.

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

Table 2.2. Council Goals and how these are addressed in this Plan

Focus Areas	Objective
Environment	To protect and enhance environmental values and provide for sustainable growth and development
Social	To facilitate access to a range of Services and facilities, recognising the importance of social well being and ensuring a safe, inclusive and equitable community
Economic	To facilitate economic growth through the provision of quality services, strategies and infrastructure for the betterment of the community
Governance	To provide leadership and effective decision making, sound financial and resource management, To undertake the role of advocacy and promote communication and consultation, To provide a safe working environment and value teamwork in all that we do

2.3 Plan Framework

Key elements of the plan are

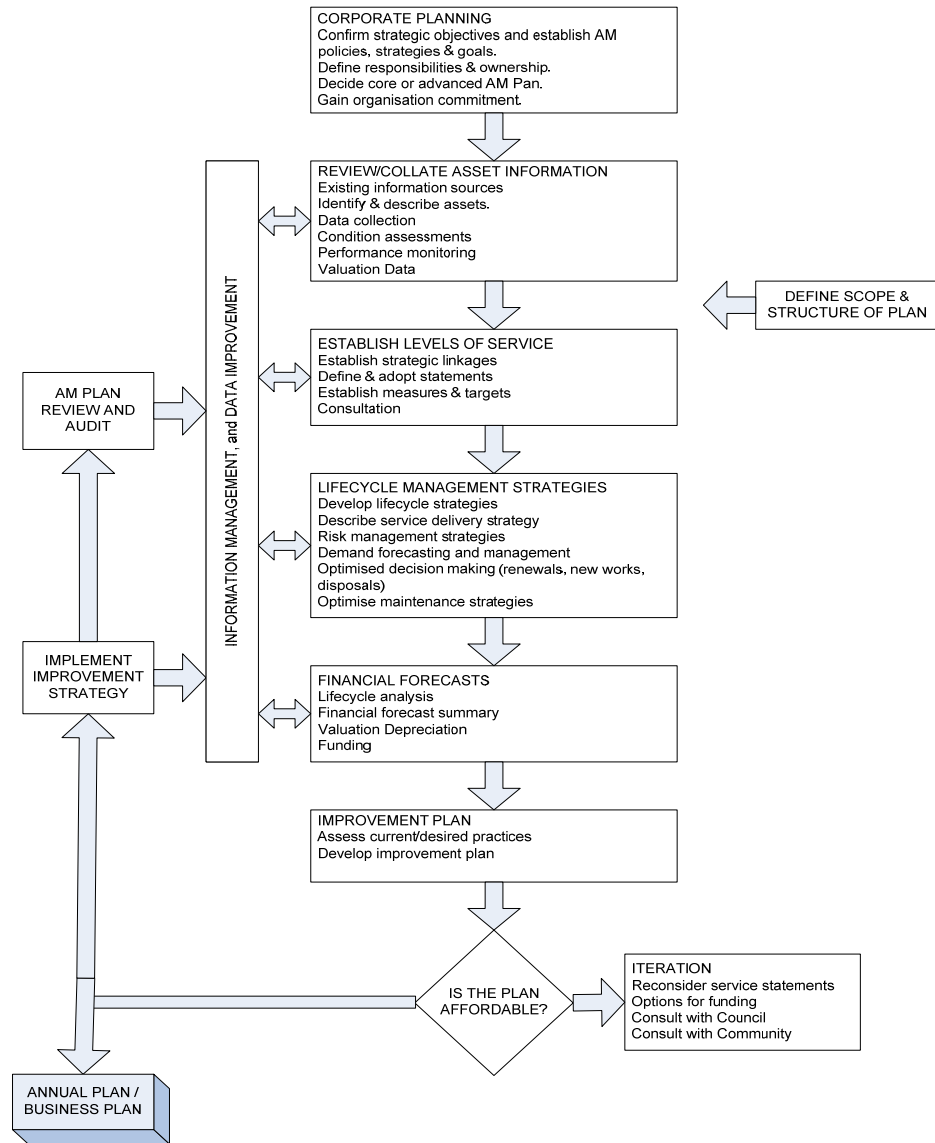
- Levels of service – specifies the services and levels of service to be provided by council.
- Future demand – how this will impact on future service delivery and how this is to be met.

¹ IIMM 2006 Sec 1.1.3, p 1.3

- Life cycle management – how Council will manage its existing and future assets to provide the required services
- Financial summary – what funds are required to provide the required services.
- Asset management practices
- Monitoring – how the plan will be monitored to ensure it is meeting Council's objectives.
- Asset management improvement plan

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

Road Map for preparing an Asset Management Plan
 Source: IIMM Fig 1.5.1, p 1.11



2.4 Core and Advanced Asset Management

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

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

3. LEVELS OF SERVICE

3.1 Customer Research and Expectations

Liverpool Plains Shire Council sought to examine community attitudes and satisfaction with a broad range of issues that will assist with the development of council's future plans.

To facilitate this Micromex Research was contracted to develop a survey template that enabled council to effectively analyse trends and attitudes within the community.

A sample size of 200 Residents was examined in April 2009.

Table 3.1. Community Satisfaction Survey Levels

Performance Measure	Satisfaction Level				
	Very Satisfied	Fairly Satisfied	Satisfied	Somewhat satisfied	Not satisfied
5.2.5. Community satisfaction with asset management			√		
Satisfaction with Sewage Management	39.8%	42.1%	13.2%	1.3%	3.6%

Council uses this information in developing the Strategic Management Plan and in allocation of resources in the budget.

3.2 Legislative Requirements

Council has to meet many legislative requirements including Australian and State legislation and State regulations. These include:

Table 3.2. Legislative Requirements

Legislation	Requirement
Local Government Act	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery.
NSW Guidelines for Best Practice Management of Water And Sewerage 2004	Guidelines for the effective and efficient delivery of water and sewerage services, including strategic business planning incorporating asset management.
NSW Code of Practice Plumbing and Drainage 2006	Based on Australian Std AS/NZS 3500:2003 Plumbing and Drainage, this code provides plumbing and drainage solutions.

Environmental Planning and Assessment Act 1979	Requires Council to prepare Local Environment Plans (LEPs) and Development Control Plans (DCPs) and to carry out environmental assessment for all activities and environmental impact statements for designated activities.
Protection of the Environment Administration Act 1993 and Protection of the Environment Operations Act 1997	Council is required to exercise due diligence to avoid environmental impact.
Work Health and Safety Act and Regulations, 2012	Council is required to provide a safe working environment and supply equipment to ensure safety.

3.3 Current Levels of Service

Council has defined service levels in two terms.

Community Levels of Service relate to how the community receives the service in terms of safety, quality, quantity, reliability, responsiveness, cost/efficiency and legislative compliance.

Supporting the community service levels are operational or technical measures of performance developed to ensure that the minimum community levels of service are met. These technical measures relate to service criteria such as:

Service Criteria

- Quality
- Quantity
- Availability
- Safety

Technical measures may relate to

- Satisfaction with service
- Number of residents
- Distance from a dwelling to a service
- Number of injury accidents

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

Table 3.3. Current Service Levels

Key Performance Measure	Level of Service	Performance Measure Process	Performance Target	Current Performance
COMMUNITY LEVELS OF SERVICE				
Quality	Provide safe method of collection and disposal of wastewater	Annual satisfaction survey	90% reporting satisfied or higher satisfaction levels for CWMS service	81.9%(April 2009)
	Provide safe method of collection and disposal of wastewater	Customer service requests	Less than 5 per month	3
Function	Ensure that CWMS service meets Department of health approval conditions	Approval conditions compliance	Less than 1 non-compliance event per year/ system	0
Safety	Provide safe suitable stormwater drainage system free from hazards	Number of wastewater discharge to the environment events	Less than 2 per annum	2
TECHNICAL LEVELS OF SERVICE				
Condition	Provide appropriate CWMS services to meet user requirements	Service maintenance requests response	85% of planned and reactive service requests are completed within agreed performance limits	75%
	Provide appropriate CWMS services to meet user requirements	Planned and reactive maintenance distribution	More than 60% of maintenance expenditure is through the planned maintenance system	10%
	Provide appropriate CWMS to meet user requirements	Average age of CWMS assets	80% of assets less than 90% of useful life. Less than 5% greater than 95% of useful life	75% 3%
Function	Provide CWMS services to meet community requirements	Effluent discharge quality	Treated effluent discharge meets DECC approval conditions, BOD <20mg/L SS <30 mg/L ,10mg/L Oil and Grease.	18.7mg/L 82.4mg/L 3.0mg/L
Availability	Ensure CWMS services are available to all occupied properties	Number of properties able to connect to CWMS services	CWMS services are available to 95% of residential and commercial properties	97%
Cost Effectiveness	Provide CWMS services in cost effective manner	CWMS operating and maintenance cost \$/connection/yr	\$350	\$350
Safety	Provide safe suitable CWMS services, free from Hazards	Insurance claim History	Less than 1 per month	0 (2008)

3.4 Desired Levels of Service

At present, indications of desired levels of service are obtained from various sources including the 2009 Customer Satisfaction survey, residents' feedback to Councillors and staff, service requests and correspondence. Council has yet to quantify desired levels of service. This will be done in future revisions of this asset management plan.

4. FUTURE DEMAND

4.1 Demand Forecast

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

Demand factor trends and impacts on service delivery are summarised in Table 4.1.

Table 4.1. Demand Factors, Projections and Impact on Services

Demand factor	Present position	Projection	Impact on services
Connections	1973	2466	LOW

4.2 Changes in Technology

Technology changes are forecast to have little effect on the delivery of services covered by this plan.

4.3 Demand Management Plan

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

Opportunities identified to date for demand management are shown in Table 4.3. Further opportunities will be developed in future revisions of this asset management plan.

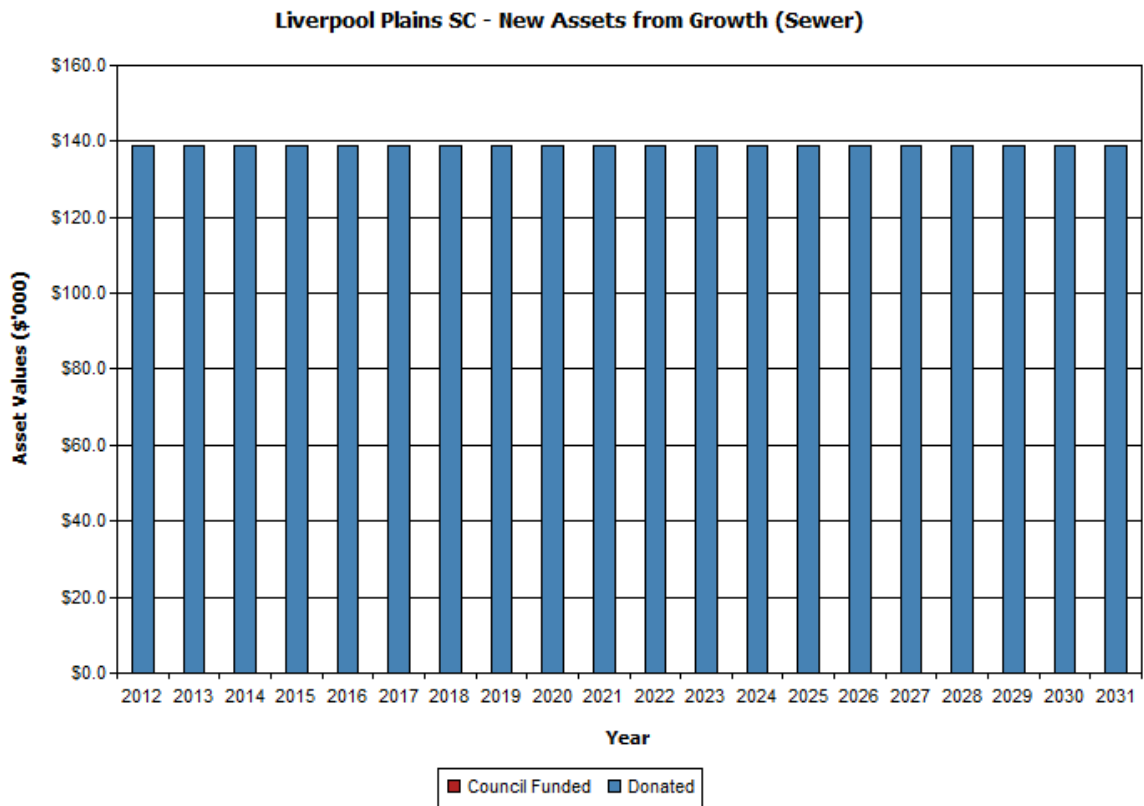
Table 4.3. Demand Management Plan Summary

Service Activity	Demand Management Plan
CWMS	Development areas to be identified that will maximise use of existing CWMS assets without major upgrade

4.4 New Assets from Growth

The new assets required to meet growth will be acquired from land developments and constructed by Council. The new asset values are summarised in Fig 1.

Fig 1. New Assets from Growth



Acquiring these new assets will commit council to fund ongoing operations and maintenance costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operating and maintenance costs.

5. LIFECYCLE MANAGEMENT PLAN

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

5.1 Background Data

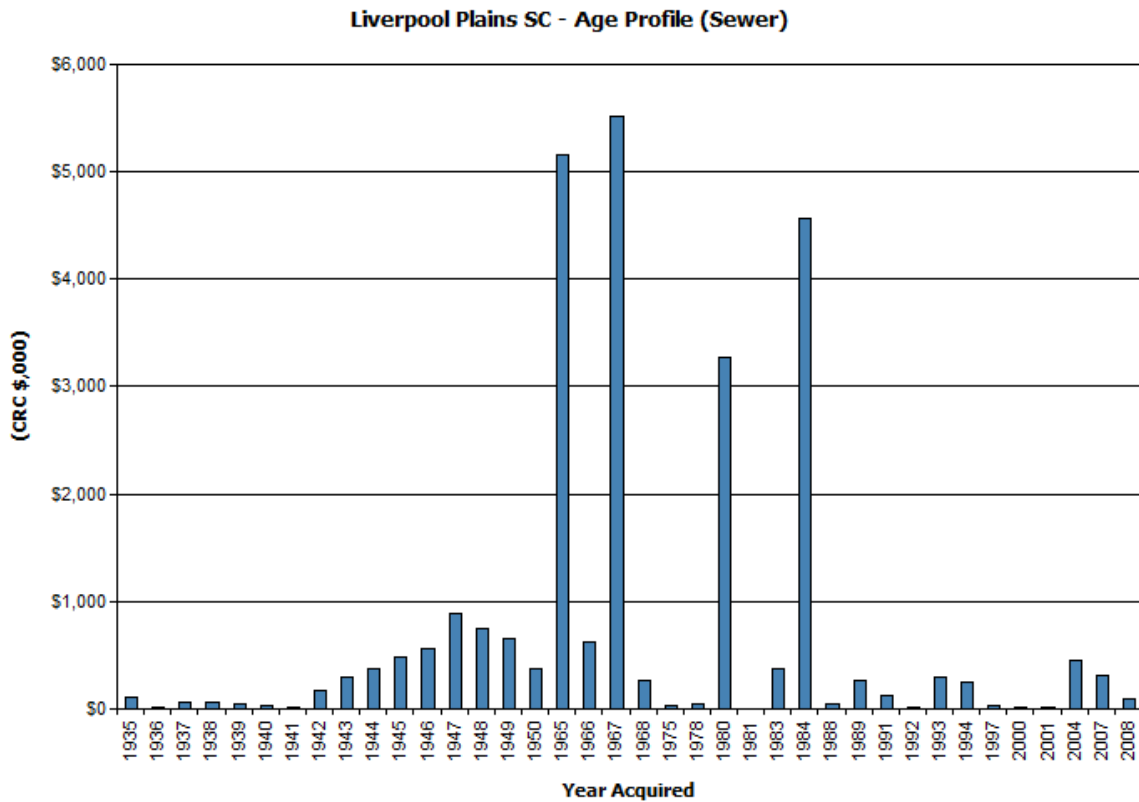
5.1.1 Physical parameters

The assets covered by this asset management plan are shown below.

Treatment plants	2
Trunk mains	6279 m
Mains	47826
Rising Mains	3819
Pump Stations	9
Manholes and Equipment	869

The age profile of Council's assets is shown below.

Fig 2. Asset Age Profile



5.1.2 Asset capacity and performance

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

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

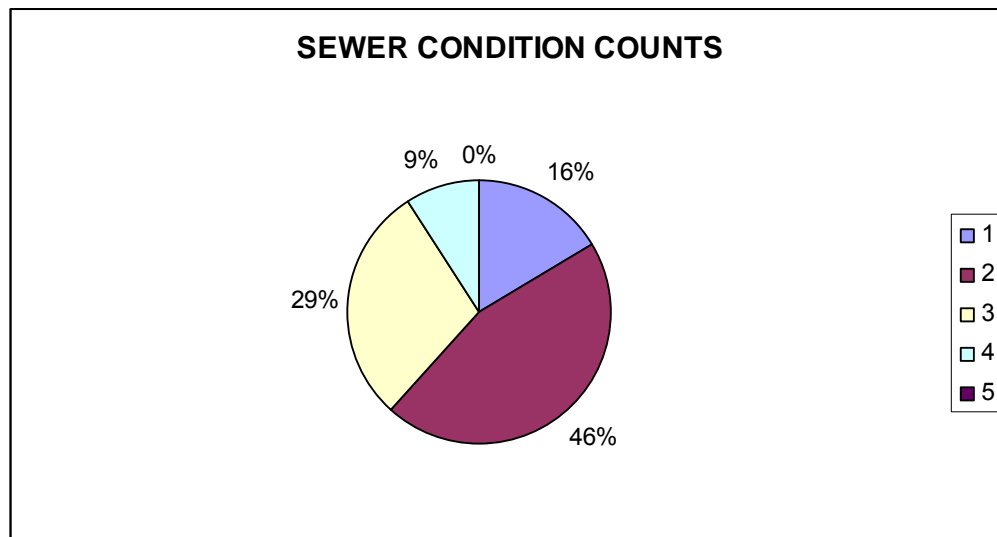
Table 5.1.2. Known Service Performance Deficiencies

Location	Service Deficiency
Sewage Treatment - Quirindi	Current treatment capacity is adequate however tertiary effluent quality parameters are outside of the DECC's requirements for Total Suspended Solids
Sewage Treatment – Werris Ck	Tertiary effluent quality parameters are outside of the DECC's requirements for Total Suspended Solids

5.1.3 Asset condition

The condition profile of Council's assets is shown below.

Fig 3. Asset Condition Profile



Condition is measured using a 1 – 5 rating system.²

Rating	Description of Condition
1	Excellent condition: Only planned maintenance required.
2	Very good: Minor maintenance required plus planned maintenance.
3	Good: Significant maintenance required.
4	Average: Significant renewal/upgrade required.
5	Poor: Unserviceable.

² IIMM 2006, Appendix B, p B:1-3 ('cyclic' modified to 'planned')

5.1.4 Asset valuations

The value of assets as at 2012 covered by this asset management plan is summarised below. Assets were last revalued at July 2011. Assets are valued at greenfield rates.

Current Replacement Cost	\$27,520,634
Depreciable Amount	\$21,057,304
Depreciated Replacement Cost	\$25,710,338
Annual Depreciation Expense	\$418,728

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

Asset Consumption	1.985%
Asset renewal	0.66%
Annual Upgrade/expansion	0.98%

From this we can see that renewal and upgrade do not meet consumption this means that we need to spend more on renewal and upgrade and expansion.

Table 5.3. . Risk Management Plan

An assessment of risks³ associated with service delivery from infrastructure assets has identified critical risks to 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.

Critical risks, being those assessed as ‘Very High’ – requiring immediate corrective action and ‘High’ – requiring prioritised corrective action identified in the infrastructure risk management plan are summarised in Table 5.2.

Table 5.2. Critical Risks and Treatment Plans

Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan
Collection reticulation	Release to the environment of sewage	H	Implementation of Pollution Reduction Program 100
Sewerage Treatment Plants	Untreated Sewage	H	Operation procedures and monitoring programs. Regular assessment of performance and long term augmentation strategies to cater for growth and increase treatment standards.
Sewerage Pump Stations	Loss of power	H	Upgrade switch boards to accommodate generator input and implement telemetry monitoring.

5.3 Routine Maintenance Plan

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

Table 5.3.1.Maintenance plan

Maintenance includes reactive, planned and cyclic maintenance work activities.

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

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

Cyclic maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, building roof replacement, etc. This work generally falls below the capital/maintenance threshold.

Maintenance expenditure trends are shown in Table 5.3.1

Table 5.3.1. Maintenance Expenditure Trends

Year	Maintenance Expenditure		
	Reactive	Planned	Cyclic
2005/06	\$46,600	\$120,000	\$90,000
2006/07	\$80,800	\$85,000	\$90,000
2007/08	\$180,600	\$120,000	\$140,000
2008/09	\$131,000	\$120,000	\$120,000
2009/10	\$148,194	\$160,000	\$180,000

Planned maintenance work is 60% of total maintenance expenditure.

Maintenance expenditure levels are considered to be adequate to meet required service levels. Future revision of this asset management plan will include linking required maintenance expenditures with required service levels.

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

5.3.2 Standards and specifications

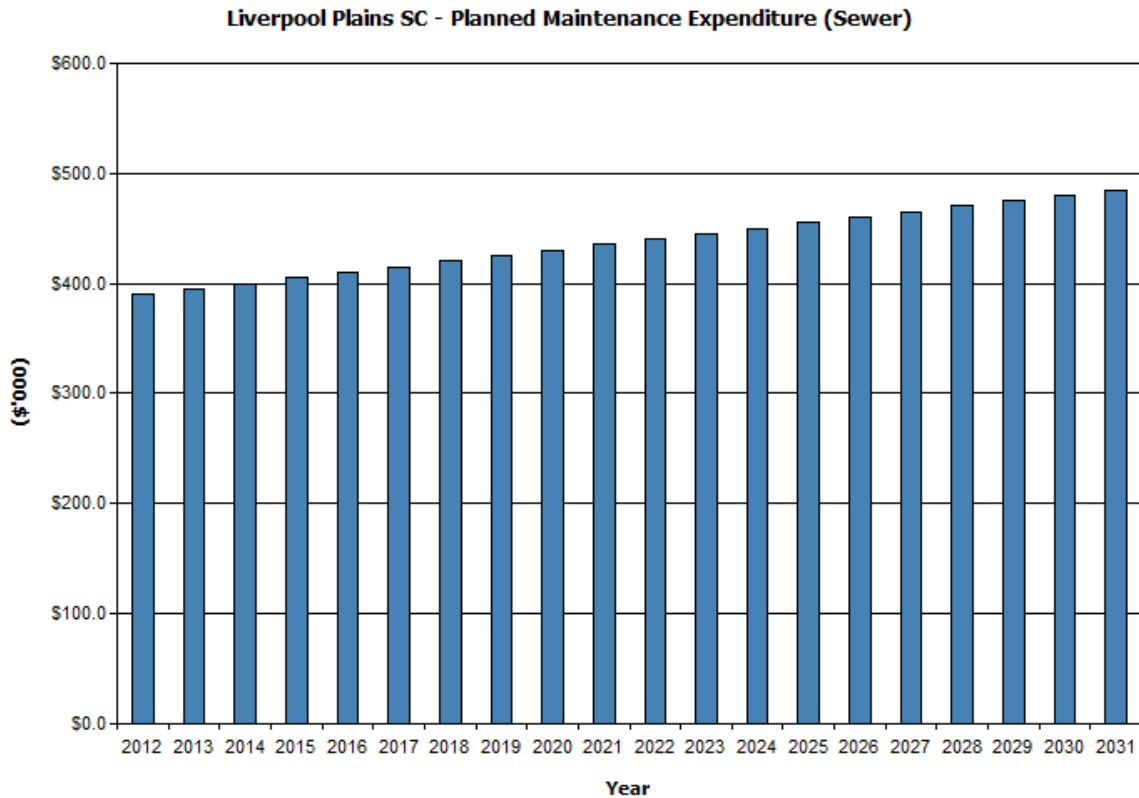
Maintenance work is carried out in accordance with the following Standards and Specifications.

- NSW Code of Practice for Plumbing & Drainage
- AUS-SPEC D11 & C401

5.3.3 Summary of future maintenance expenditures

Future maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Fig 4. Note that all costs are shown in current 2009 dollar values.

Fig 4. Planned Maintenance Expenditure



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

Maintenance is funded from Council's operating budget and grants where available. This is further discussed in Section 6.2.

5.4 Renewal/Replacement Plan

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

5.4.1 Renewal plan

Assets requiring renewal are identified from estimates of remaining life obtained from the asset register worksheets on the 'Planned Expenditure template'. Candidate proposals are inspected to verify accuracy of remaining life estimate and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed in Table 5.4.1.

Table 5.4.1 Renewal Priority Ranking Criteria

Criteria	Weighting
Break History	50
Age	30
Material	10
Failure Consequence	10
Total	100%

Renewal will be undertaken using 'low-cost' renewal methods where practical. The aim of 'low-cost' renewals is to restore the service potential or future economic benefits of the asset by renewing the assets at a cost less than replacement cost.

Examples of low cost renewal include pipeline relining and proactive high pressure pipe cleaning programs.

5.4.2 Renewal standards

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

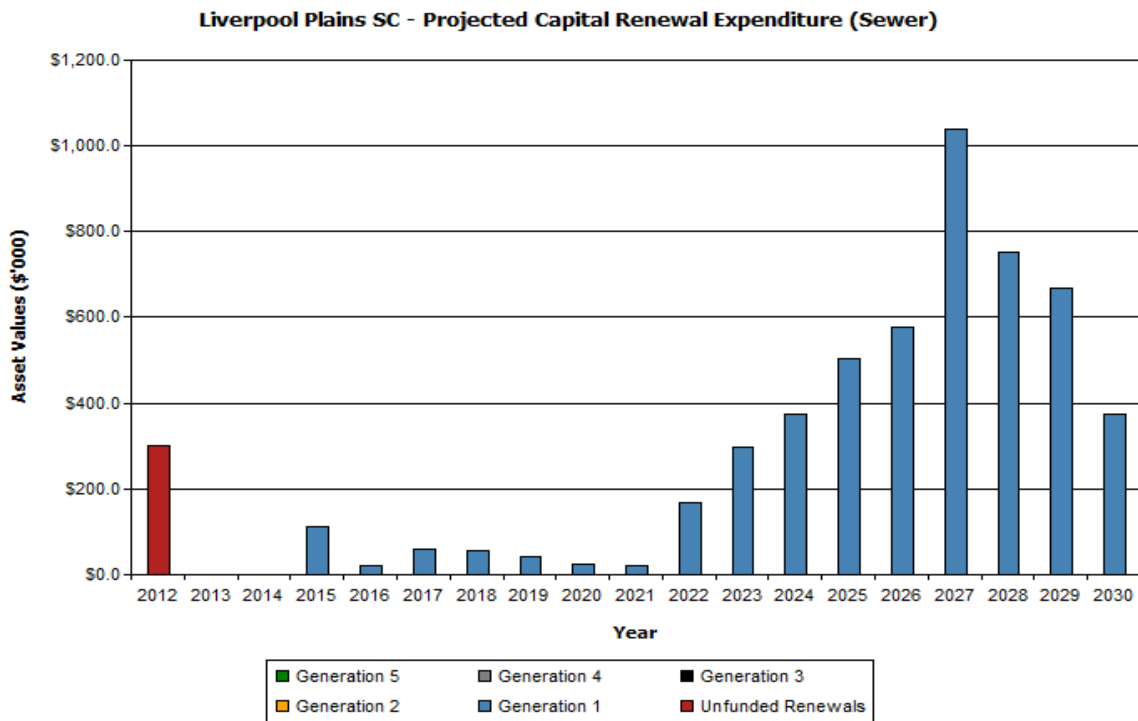
AUS-SPEC

5.4.3 Summary of future renewal expenditure

Projected future renewal expenditures are forecast to increase over time as the asset stock ages. The costs are summarised in Fig 5. Note that all costs are shown in current 2009 dollar values.

The projected capital renewal program is shown in Appendix B.

Fig 5. Projected Capital Renewal Expenditure



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

Renewals are to be funded from Council's capital works program and grants where available. This is further discussed in Section 6.2.

5.5 Creation/Acquisition/Upgrade Plan

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

5.5.1 Selection criteria

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

Table 5.5.1 New Assets Priority Ranking Criteria

Criteria	Weighting
Regulatory Change (includes environmental criteria)	60%
Community Expectation	30%
Security of Supply	10%
TOTAL	100%

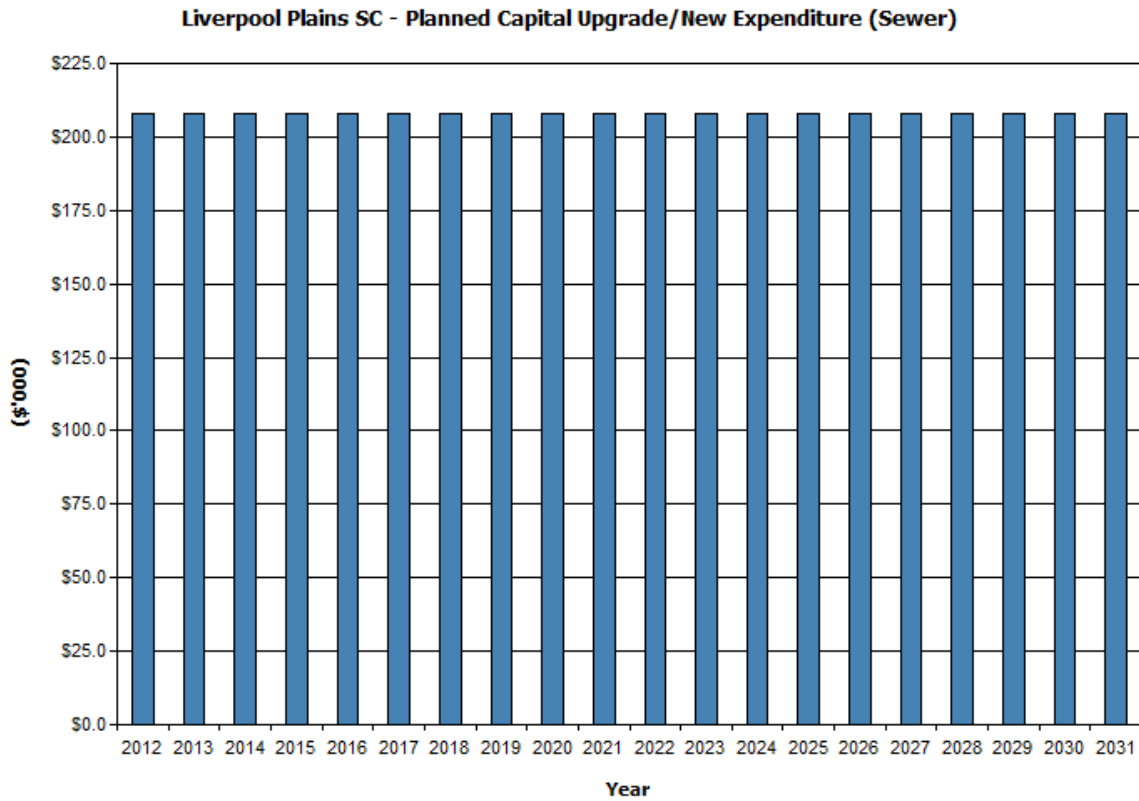
5.5.2 Standards and specifications

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

5.5.3 Summary of future upgrade/new assets expenditure

Planned upgrade/new asset expenditures are summarised in Fig 6. The planned upgrade/new capital works program is shown in Appendix C. All costs are shown in current 2012 dollar values.

Fig 6. Planned Capital Upgrade/New Asset Expenditure



New assets and services are to be funded from Council’s capital works program and grants where available. This is further discussed in Section 6.2.

5.6 Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.6. These assets will be further reinvestigated to determine the required levels of service and see what options are available for alternate service delivery, if any.

Table 5.6 Assets identified for Disposal

Asset	Reason for Disposal	Timing	Cashflow from disposal
NONE			

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

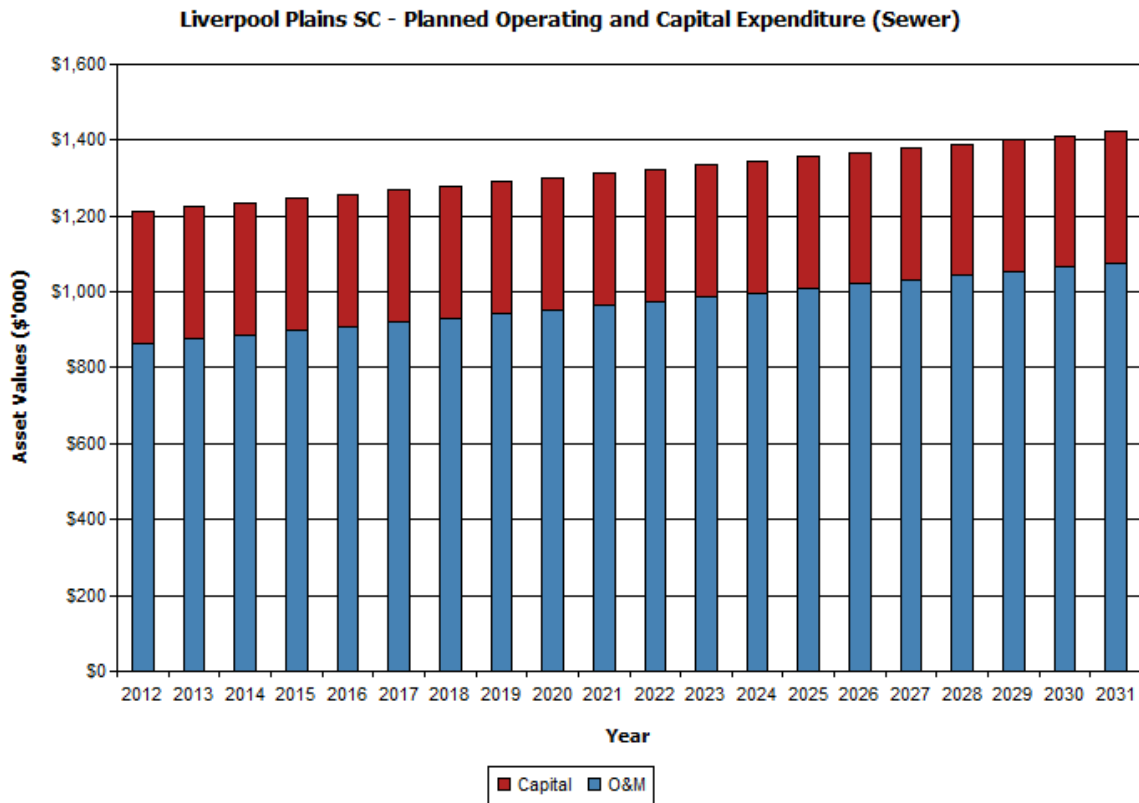
6. FINANCIAL SUMMARY

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

6.1 Financial Statements and Projections

The financial projections are shown in Fig 7 for planned operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets).

Fig 7. Planned Operating and Capital Expenditure



Note that all costs are shown in current 2009 dollar values.

6.1.1 Sustainability of service delivery

There are two key indicators for financial sustainability that have been considered in the analysis of the services provided by this asset category, these being long term life cycle costs and medium term costs over the 10 year financial planning period.

Long term - Life Cycle Cost

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the longest asset life. Life cycle costs include maintenance and asset consumption (depreciation expense). The annual average life cycle cost for the services covered in this asset management plan is \$1,201,800.

Life cycle costs can be compared to life cycle expenditure to give an indicator of sustainability in service provision. Life cycle expenditure includes maintenance plus capital renewal expenditure. Life cycle

expenditure will vary depending on the timing of asset renewals. The life cycle expenditure at the start of the plan is \$1,120,500.

A gap between life cycle costs and life cycle expenditure gives an indication as to whether present consumers are paying their share of the assets they are consuming each year. The purpose of this Sewer asset management plan is to identify levels of service that the community needs and can afford and develop the necessary long term financial plans to provide the service in a sustainable manner.

The life cycle gap for services covered by this asset management plan is \$81,300 per annum. The life cycle sustainability index is 93%

Medium term – 10 year financial planning period

This asset management plan identifies the estimated maintenance and capital expenditures required to provide an agreed level of service to the community over a 20 year period for input into a 10 year financial plan and funding plan to provide the service in a sustainable manner.

This may be compared to existing or planned expenditures in the 20 year period to identify any gap. In a core asset management plan, a gap is generally due to increasing asset renewals.

Fig 8 shows the projected asset renewals in the 20 year planning period from the asset register. The projected asset renewals are compared to planned renewal expenditure in the capital works program and capital renewal expenditure in year 1 of the planning period as shown in Fig 8. Table 6.1.1 shows the annual and cumulative funding gap between projected and planned renewals.

Fig 8. Projected and Planned Renewals and Current Renewal Expenditure

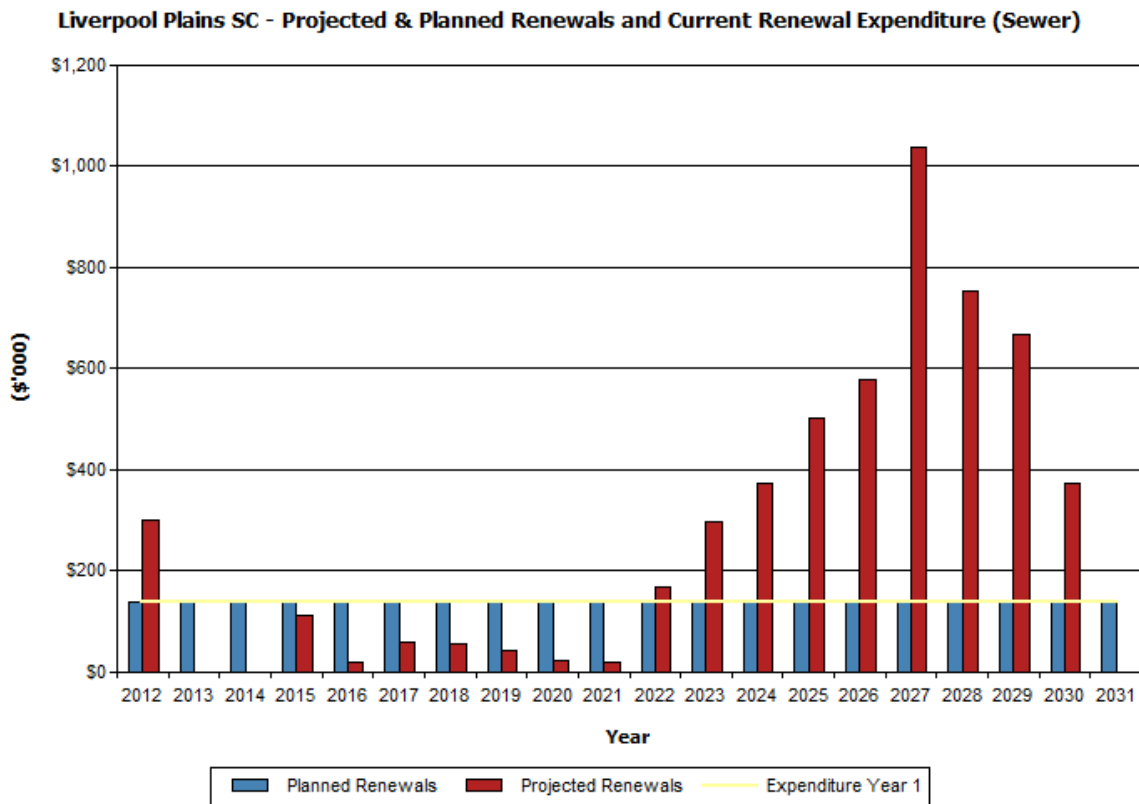


Table 6.1.1 shows the gap between projected and planned renewals.

Table 6.1.1 Projected and Planned Renewals and Expenditure Gap (\$ '000)

Year	Projected Renewals	Planned Renewals	Renewal Funding Gap	Cumulative Gap
2012	\$299.70	\$140.00	\$159.70	\$159.70
2013	\$0.00	\$140.00	-\$140.00	\$19.70
2014	\$0.00	\$140.00	-\$140.00	-\$120.30
2015	\$112.97	\$140.00	-\$27.03	-\$147.33
2016	\$20.00	\$140.00	-\$120.00	-\$267.33
2017	\$60.57	\$140.00	-\$79.43	-\$346.77
2018	\$55.72	\$140.00	-\$84.28	-\$431.05
2019	\$43.44	\$140.00	-\$96.56	-\$527.61
2020	\$24.58	\$140.00	-\$115.42	-\$643.03
2021	\$20.00	\$140.00	-\$120.00	-\$763.03
2022	\$168.14	\$140.00	\$28.14	-\$734.89
2023	\$296.65	\$140.00	\$156.65	-\$578.24
2024	\$374.94	\$140.00	\$234.94	-\$343.30
2025	\$503.77	\$140.00	\$363.77	\$20.48
2026	\$577.97	\$140.00	\$437.97	\$458.44
2027	\$1,038.63	\$140.00	\$898.63	\$1,357.07
2028	\$753.48	\$140.00	\$613.48	\$1,970.55
2029	\$667.06	\$140.00	\$527.06	\$2,497.62
2030	\$374.70	\$140.00	\$234.70	\$2,732.31
2031	\$0.00	\$140.00	-\$140.00	\$2,592.31

Providing services in a sustainable manner will require matching of projected asset renewals to meet agreed service levels with planned capital works programs and available revenue.

A gap between projected asset renewals, planned asset renewals and funding indicates that further work is required to manage required service levels and funding to eliminate any funding gap.

Council will manage the 'gap' by developing this asset management plan to provide guidance on future service levels and resources required to provide these services.

Council's long term financial plan covers the first 10 years of the 20 year planning period. The total maintenance and capital renewal expenditure required over the 10 years is \$5,252,000.

This is an average expenditure of \$525,200. Estimated maintenance and capital renewal expenditure in year 1 is \$500,200. The 10 year sustainability index is 95%

6.2 Funding Strategy

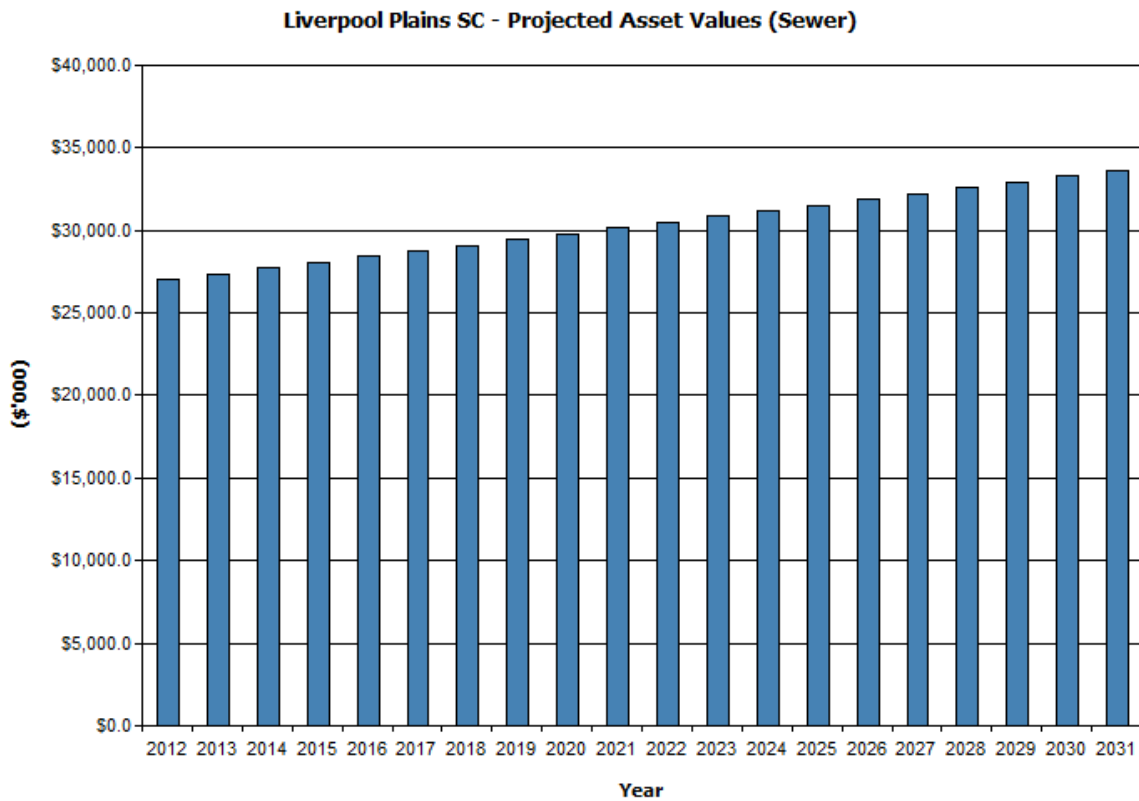
Projected expenditure identified in Section 6.1 is to be funded from Council's operating and capital budgets. The funding strategy is detailed in the Council's 10 year long term financial plan.

Achieving the financial strategy will require revision of Councils backlog works ranking within grant subsidy to occur under the NSW Governments Country Towns Water and Sewerage Scheme.

6.3 Valuation Forecasts

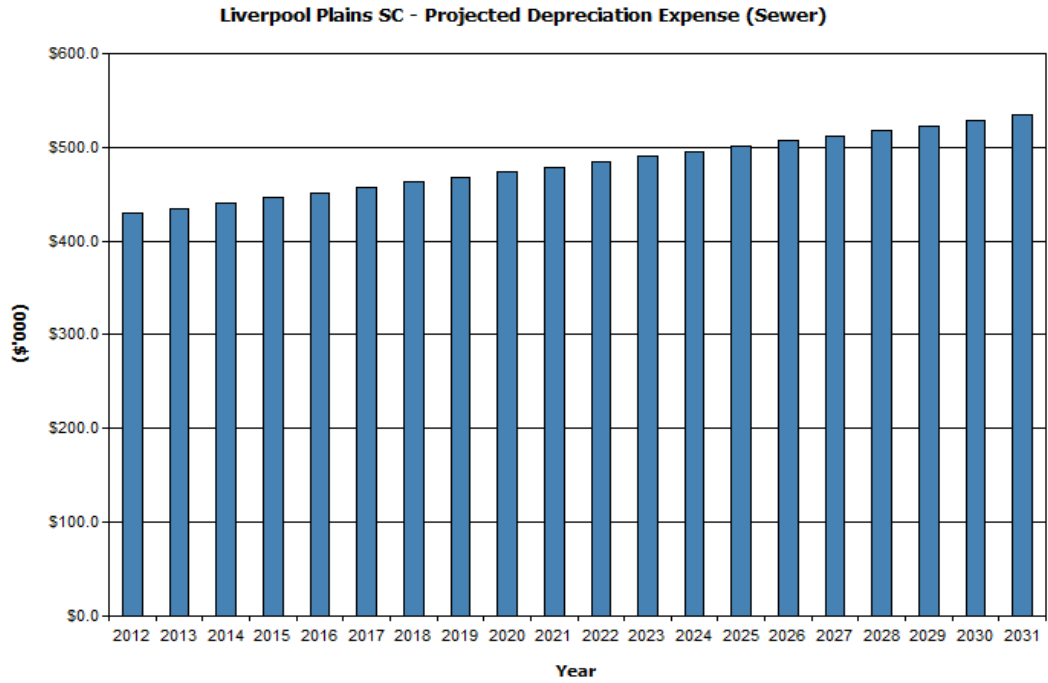
Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. Fig 9 shows the projected replacement cost asset values over the planning period in current 2009 dollar values.

Fig 9. Projected Asset Values



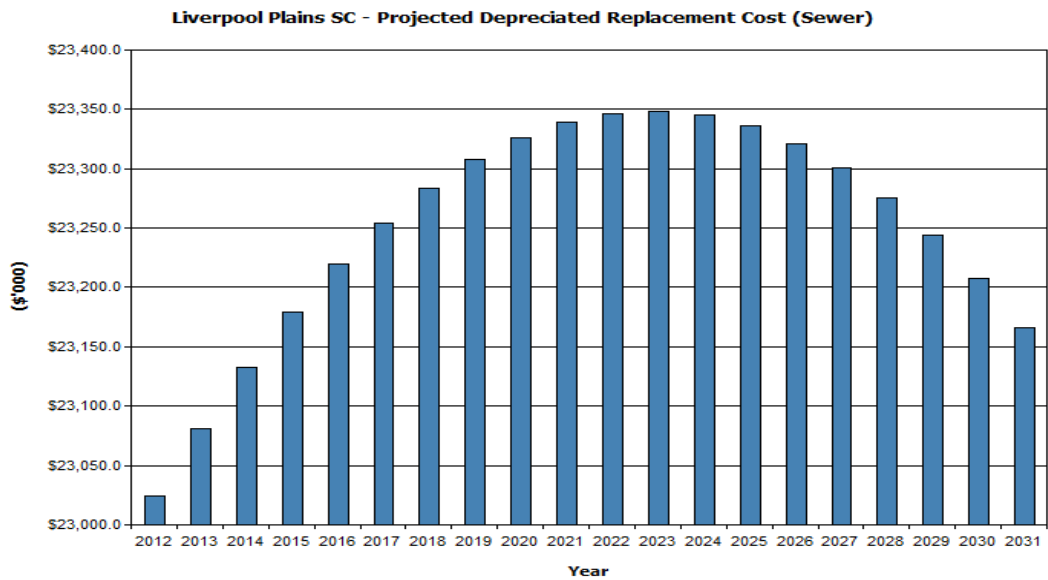
Depreciation expense values are forecast in line with asset values as shown in Fig 10.

Fig 10. Projected Depreciation Expense



The depreciated replacement cost (current replacement cost less accumulated depreciation) will vary over the forecast period depending on the rates of addition of new assets, disposal of old assets and consumption and renewal of existing assets. Forecast of the assets' depreciated replacement cost is shown in Fig 11.

Fig 11. Projected Depreciated Replacement Cost



6.4 Key Assumptions made in Financial Forecasts

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

Key assumptions made in this asset management plan are:

- Capital Works expenditure is indexed by 3.5% pa,
- Wages and Contributions to Council are indexed at 3% pa,
- Zero Dividend return to Council, and
- Energy and other utility costs are indexed by 3.5% pa.

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

- Refining the required renewal expenditure based upon improved data within the asset register,
- Provision of modelling and reporting capabilities within the asset register,
- Trending actual planned and reactive maintenance expenditure, and
- Investigate asset renewal profile and depreciation calculations.

7. ASSET MANAGEMENT PRACTICES

7.1 Accounting/Financial Systems

As well as complying with Australian Accounting Standards, Liverpool Plains Shire Council must comply with The Local Government Act and various other issued guidance such as “Circulars to Councils” from the Department of Local Government. The Department of Local Government has an Asset Accounting Manual that Council complies with. In addition to this accounting standard AASB 116 – “Property, Plant and Equipment” is the significant regulatory requirement relevant to accounting for assets.

The Council uses Authority software provided by Civica and Assetic for all asset accounting purposes. In addition to acquisition, disposal, revaluation and depreciation transactions, the system also tracks expenditure on maintenance and capital renewal projects via a Work Order system. Where appropriate, these costs are then transferred by journal to the Assetic Asset Register. The Authority system is controlled by the Corporate & Business Services Division of Council, with the Director being Mike Urquhart and the Chief Financial Officer Jackie Farley.

Accountabilities and responsibilities are divided between Corporate & Business Services and the asset owner (responsibility area) according to function. The asset owners provide information on the relevant assets and identify expenditure with the relevant Work Orders. Corporate & Business Services staff creates the records within the Asset Register and process expenditure to work orders or direct to the Asset Register where appropriate.

ASB 116 revaluation requirements and asset management planning have identified shortcomings in this approach, which was revised during 2009/10. This will constitute one component of Asset Accounting Policy and Procedures which were developed during 2009/10.

7.2 Asset Management Systems

- Authority - customer billing, water meter register and customer water consumption information
- Assetic – Asset Register
- Predictor- Asset management system
- Tr@cer Weeds- Asset capture software
- Financial System - Authority

7.3 Information Flow Requirements and Processes

The key information flows *into* this asset management plan are:

- The asset register data on size, age, value, remaining life of the network;
- The unit rates for categories of work/material;
- The adopted service levels;
- Projections of various factors affecting future demand for services;
- Correlations between maintenance and renewal, including decay models;
- Data on new assets acquired by council.

The key information flows *from* this asset management plan are:

- The assumed Works Program and trends;
- The resulting budget, valuation and depreciation projections;
- The useful life analysis.

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

7.4 Standards and Guidelines

- Liverpool Plains Shire Council Asset Management Policy, 2.19
- Liverpool Plains Shire Sewer Management Policy

8. PLAN IMPROVEMENT AND MONITORING

8.1 Performance Measures

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

- The degree to which the required cashflows identified in this asset management plan are incorporated into council's long term financial plan and Strategic Management Plan;
- The degree to which 1-5 year detailed works programs, budgets, business plans and organisational structures take into account the 'global' works program trends provided by the asset management plan;

8.2 Improvement Plan

The asset management improvement plan generated from this asset management plan is shown in Table 8.2.

Table 8.2 Improvement Plan

Task No	Task	Responsibility	Resources Required	Timeline
1.	Condition assessment of facility assets	WSM		
2.	Analyse available performance data	WSM		
3.	Document more detailed rating of facility assets.	WSM		
4.	Document risk analysis	WSM		
5.	Compile a more detailed 5 year renewals plan	WSM		
6.	Employ an Administration Officer to improve data capture and analysis efficiencies	WSM		
7.	Update the water Supply Asset Policy and Procedure Manual to incorporate the AIM System	WSM		
8.	Complete a profile of the accuracy of water meters to determine the acceptable economic life based on cost/benefit analysis.	WSM		
9.	Develop Council specific reference rates for all assets, including new electrical and mechanical items, based on local experience and actual construction cost data.	WSM		
10.	Condition assessment of facility assets	WSM		

8.3 Monitoring and Review Procedures

This asset management plan will be reviewed during annual budget preparation and amended to recognise any changes in service levels and/or resources available to provide those services as a result of the budget decision process.

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

REFERENCES

Liverpool Plains Shire Council, 'Strategic Management Plan 2010 – 2011,

Liverpool Plains Shire Council, 'Annual Plan and Budget.

DVC, 2006, 'Asset Investment Guidelines', 'Glossary', Department for Victorian Communities, Local Government Victoria, Melbourne,
<http://www.dvc.vic.gov.au/web20/dvclgv.nsf/allDocs/RWP1C79EC4A7225CD2FCA257170003259F6?OpenDocument>

IPWEA, 2011, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au

APPENDICES

Appendix A Projected 20 year Capital Renewal Works Program

Appendix B Assets Detail List

APPENDIX A

Liverpool Plains SC >> Renewal Program (Sewer)

UID	Asset ID	Sub		From	To	Rem	Planned	Renewal	Useful
		Category	Asset Name			Life	Renewal	Cost	Life
						(Years)	Year	(\$)	(Years)
22623033	WCK SPS 1	OTHER	WCK SEWER PUMP STN 1	0	1	0	2012	\$163,200	30
22623005	QDI SPS 2 PMP1	P_E	QDI SEWER PUMP STN 2	0	1	0	2012	\$7,250	25
22623006	QDI SPS 2 PMP2	P_E	QDI SEWER PUMP STN 2	0	1	0	2012	\$7,250	25
22623009	QDI SPS 3 PMP1	P_E	QDI SEWER PUMP STN 3	0	1	0	2012	\$15,000	25
22623010	QDI SPS 3 PMP2	P_E	QDI SEWER PUMP STN 3	0	1	0	2012	\$15,000	25
22623013	QDI SPS 4 PMP1	P_E	QDI SEWER PUMP STN 4	0	1	0	2012	\$10,000	25
22623014	QDI SPS 4 PMP2	P_E	QDI SEWER PUMP STN 4	0	1	0	2012	\$10,000	25
22623017	QDI SPS 5 PMP1	P_E	QDI SEWER PUMP STN 5	0	1	0	2012	\$15,000	25
22623018	QDI SPS 5 PMP2	P_E	QDI SEWER PUMP STN 5	0	1	0	2012	\$15,000	25
22623021	QDI SPS 6 PMP1	P_E	QDI SEWER PUMP STN 6	0	1	0	2012	\$6,250	25
22623022	QDI SPS 6 PMP2	P_E	QDI SEWER PUMP STN 6	0	1	0	2012	\$6,250	25
22623025	QDI SPS 7 PMP1	P_E	QDI SEWER PUMP STN 7	0	1	0	2012	\$7,250	25
22623026	QDI SPS 7 PMP2	P_E	QDI SEWER PUMP STN 7	0	1	0	2012	\$7,250	25
22623035	WCK SPS 1 PMP1	P_E	WCK SEWER PUMP STN 1	0	1	0	2012	\$7,500	25
22623036	WCK SPS 1 PMP2	P_E	WCK SEWER PUMP STN 1	0	1	0	2012	\$7,500	25
Subtotal								\$299,700	
22623285	251	MAINS	ABBOTT ST (QR)	0	48	3	2015	\$11,881	80
22623291	257	MAINS	CROMARTY ST (QR)	0	9.3	3	2015	\$2,302	80
22623284	250	MAINS	DALLEY ST (QR)	0	18.6	3	2015	\$4,604	80
22623282	248	MAINS	HILL ST (QR)	0	15.5	3	2015	\$3,837	80

22623290	256	MAINS	HILL ST (QR)	0	24	3	2015	\$5,940	80
22623281	247	MAINS	HILL ST (QR)	0	32.7	3	2015	\$8,094	80
22623283	249	MAINS	RAILWAY AVE (QR)	0	39.1	3	2015	\$9,678	80
22623286	252	MAINS	RAILWAY AVE (QR)	0	83.9	3	2015	\$20,767	80
22623288	254	MAINS	STATION ST (QR)	0	15.3	3	2015	\$3,787	80
22623289	255	MAINS	STATION ST (QR)	0	24.9	3	2015	\$6,163	80
22623287	253	MAINS	STATION ST (QR)	0	64.3	3	2015	\$15,916	80
22624418	399	Manholes	Dewhurst St (QR)	0	1	3	2015	\$2,000	80
22624421	400	Manholes	Dewhurst St (QR)	0	1	3	2015	\$2,000	80
22624425	406	Manholes	Dewhurst St (QR)	0	1	3	2015	\$2,000	80
22624415	396	Manholes	Dewhurst St (QR)	0	1	3	2015	\$2,000	80
22624416	397	Manholes	Dewhurst St (QR)	0	1	3	2015	\$2,000	80
22624414	395	Manholes	Henry St (QR)	0	1	3	2015	\$2,000	80
22624412	393	Manholes	Henry St (QR)	0	1	3	2015	\$2,000	80
22624411	392	Manholes	Hill St (QR)	0	1	3	2015	\$2,000	80
22624417	398	Manholes	Hill St (QR)	0	1	3	2015	\$2,000	80
22624413	394	Manholes	Hogath Ln (QR)	0	1	3	2015	\$2,000	80
Subtotal								\$112,969	
22624431	412	Manholes	Dewhurst St (QR)	0	1	4	2016	\$2,000	80
22624452	431	Manholes	Dewhurst St (QR)	0	1	4	2016	\$2,000	80
22624441	421	Manholes	Henry St (QR)	0	1	4	2016	\$2,000	80
22624442	422	Manholes	Henry St (QR)	0	1	4	2016	\$2,000	80
22624449	429	Manholes	Henry St (QR)	0	1	4	2016	\$2,000	80
22624444	424	Manholes	Pryor St (QR)	0	1	4	2016	\$2,000	80
22624445	425	Manholes	Pryor St (QR)	0	1	4	2016	\$2,000	80
22624426	407	Manholes	Thomas St (QR)	0	1	4	2016	\$2,000	80
22624427	408	Manholes	Thomas St (QR)	0	1	4	2016	\$2,000	80
22624428	409	Manholes	Thomas St (QR)	0	1	4	2016	\$2,000	80
Subtotal								\$20,000	
22623622	592	MAINS	GEORGE ST (QR)	0	27.3	5	2017	\$11,807	80
22623620	590	MAINS	GEORGE ST (QR)	0	66.5	5	2017	\$28,760	80

22624455	434	Manholes	Henry St (QR)	0	1	5	2017	\$2,000	80
22624453	432	Manholes	Henry St (QR)	0	1	5	2017	\$2,000	80
22624454	433	Manholes	Hill St (QR)	0	1	5	2017	\$2,000	80
22624456	435	Manholes	Hill St (QR)	0	1	5	2017	\$2,000	80
22624457	436	Manholes	Hill St (QR)	0	1	5	2017	\$2,000	80
22624458	437	Manholes	Hill St (QR)	0	1	5	2017	\$2,000	80
22624461	440	Manholes	Hill St (QR)	0	1	5	2017	\$2,000	80
22624459	438	Manholes	Lee Ave (QR)	0	1	5	2017	\$2,000	80
22624462	442	Manholes	Pryor St (QR)	0	1	5	2017	\$2,000	80
22624463	443	Manholes	Pryor St (QR)	0	1	5	2017	\$2,000	80
Subtotal								\$60,567	
22624015	985	MAINS	GEORGE ST (QR)	0	12.4	6	2018	\$3,069	80
22624016	986	MAINS	GEORGE ST (QR)	0	14.6	6	2018	\$3,614	80
22624014	984	MAINS	GEORGE ST (QR)	0	26	6	2018	\$6,436	80
22624018	988	MAINS	GEORGE ST (QR)	0	36.9	6	2018	\$9,133	80
22624013	983	MAINS	HILL ST (QR)	0	13.9	6	2018	\$3,441	80
22624017	987	MAINS	HILL ST (QR)	0	3.3	6	2018	\$817	80
22624050	1020	MAINS	HILL ST (QR)	0	34.8	6	2018	\$8,614	80
22624038	1008	MAINS	NORTH AVE (QR)	0	2.4	6	2018	\$594	80
22624475	456	Manholes	Dewhurst St (QR)	0	1	6	2018	\$2,000	80
22624469	449	Manholes	Dewhurst St (QR)	0	1	6	2018	\$2,000	80
22624471	450	Manholes	Hill St (QR)	0	1	6	2018	\$2,000	80
22624466	446	Manholes	Hill St (QR)	0	1	6	2018	\$2,000	80
22624467	447	Manholes	Pryor St (QR)	0	1	6	2018	\$2,000	80
22624468	448	Manholes	Pryor St (QR)	0	1	6	2018	\$2,000	80
22624464	444	Manholes	Pryor St (QR)	0	1	6	2018	\$2,000	80
22624465	445	Manholes	Pryor St (QR)	0	1	6	2018	\$2,000	80
22624483	464	Manholes	Railway Ave (QR)	0	1	6	2018	\$2,000	80
22624484	465	Manholes	Railway Ave (QR)	0	1	6	2018	\$2,000	80
Subtotal								\$55,717	
22623427	397	MAINS	NOWLAND AVE (QR)	0	51.6	7	2019	\$12,772	80

22623426	396	MAINS	SNAPE ST (QR)	0	43.1	7	2019	\$10,668	80
22624486	467	Manholes	Dewhurst St (QR)	0	1	7	2019	\$2,000	80
22624487	468	Manholes	Hill St (QR)	0	1	7	2019	\$2,000	80
22624492	474	Manholes	Hill St (QR)	0	1	7	2019	\$2,000	80
22624493	475	Manholes	Hill St (QR)	0	1	7	2019	\$2,000	80
22624490	471	Manholes	Hill St (QR)	0	1	7	2019	\$2,000	80
22624494	476	Manholes	North Ave (QR)	0	1	7	2019	\$2,000	80
22624495	477	Manholes	North Ave (QR)	0	1	7	2019	\$2,000	80
22624488	469	Manholes	Pryor St (QR)	0	1	7	2019	\$2,000	80
22624485	466	Manholes	Railway Ave (QR)	0	1	7	2019	\$2,000	80
22624491	472	Manholes	Railway Ave (QR)	0	1	7	2019	\$2,000	80

Subtotal								\$43,440	
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22623428	398	MAINS	NOWLAND AVE (QR)	0	18.5	8	2020	\$4,579	80
22624500	482	Manholes	Dewhurst St (QR)	0	1	8	2020	\$2,000	80
22624505	488	Manholes	Dewhurst St (QR)	0	1	8	2020	\$2,000	80
22624510	493	Manholes	Dewhurst St (QR)	0	1	8	2020	\$2,000	80
22624507	490	Manholes	Hill St (QR)	0	1	8	2020	\$2,000	80
22624508	491	Manholes	Hill St (QR)	0	1	8	2020	\$2,000	80
22624509	492	Manholes	Hill St (QR)	0	1	8	2020	\$2,000	80
22624496	478	Manholes	North Ave (QR)	0	1	8	2020	\$2,000	80
22624497	479	Manholes	North Ave (QR)	0	1	8	2020	\$2,000	80
22624499	480	Manholes	North Ave (QR)	0	1	8	2020	\$2,000	80
22624504	487	Manholes	Railway Ave (QR)	0	1	8	2020	\$2,000	80

Subtotal								\$24,579	
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22624520	506	Manholes	Abbott St (QR)	0	1	9	2021	\$2,000	80
22624521	507	Manholes	Abbott St (QR)	0	1	9	2021	\$2,000	80
22624522	508	Manholes	Abbott St (QR)	0	1	9	2021	\$2,000	80
22624512	498	Manholes	Dewhurst St (QR)	0	1	9	2021	\$2,000	80
22624515	500	Manholes	Dewhurst St (QR)	0	1	9	2021	\$2,000	80
22624516	502	Manholes	Hill St (QR)	0	1	9	2021	\$2,000	80
22624517	503	Manholes	Hill St (QR)	0	1	9	2021	\$2,000	80

22624511	497	Manholes	North Ave (QR)	0	1	9	2021	\$2,000	80
22624518	504	Manholes	Railway Ave (QR)	0	1	9	2021	\$2,000	80
22624519	505	Manholes	Railway Ave (QR)	0	1	9	2021	\$2,000	80
								Subtotal	\$20,000
22623305	272	MAINS	CHURCH AVE (QR)	0	10.1	10	2022	\$2,500	80
22623537	507	MAINS	DALLEY ST (QR)	0	21.4	10	2022	\$5,297	80
22623536	506	MAINS	DALLEY ST (QR)	0	53.9	10	2022	\$13,341	80
22623535	505	MAINS	DALLEY ST (QR)	0	70.5	10	2022	\$17,450	80
22623306	273	MAINS	GEORGE ST (QR)	0	15	10	2022	\$3,713	80
22623302	269	MAINS	GEORGE ST (QR)	0	29.5	10	2022	\$7,302	80
22623534	504	MAINS	HILL ST (QR)	0	33	10	2022	\$8,168	80
22623304	271	MAINS	HILL ST (QR)	0	34.5	10	2022	\$8,539	80
22623303	270	MAINS	HILL ST (QR)	0	38.6	10	2022	\$9,554	80
22623310	277	MAINS	INDUSTRIAL DR (QR)	0	3.5	10	2022	\$866	80
22623309	276	MAINS	INDUSTRIAL DR (QR)	0	49	10	2022	\$12,128	80
22623308	275	MAINS	JOHNS AVE (QR)	0	15.3	10	2022	\$3,787	80
22623307	274	MAINS	JOHNS AVE (QR)	0	18.3	10	2022	\$4,530	80
22623531	501	MAINS	NORTH AVE (QR)	0	24.6	10	2022	\$6,089	80
22623530	500	MAINS	NORTH AVE (QR)	0	3.4	10	2022	\$842	80
22623532	502	MAINS	NORTH AVE (QR)	0	37.1	10	2022	\$9,183	80
22623533	503	MAINS	NORTH AVE (QR)	0	83.6	10	2022	\$20,693	80
22623538	508	MAINS	STATION ST (QR)	0	57.2	10	2022	\$14,158	80
22624526	511	Manholes	Abbott St (QR)	0	1	10	2022	\$2,000	80
22624530	518	Manholes	Abbott St (QR)	0	1	10	2022	\$2,000	80
22624528	513	Manholes	Abbott St (QR)	0	1	10	2022	\$2,000	80
22624531	519	Manholes	Hill St (QR)	0	1	10	2022	\$2,000	80
22624533	520	Manholes	Hill St (QR)	0	1	10	2022	\$2,000	80
22624534	521	Manholes	Hill St (QR)	0	1	10	2022	\$2,000	80
22624523	509	Manholes	Hill St (QR)	0	1	10	2022	\$2,000	80
22624525	510	Manholes	Hill St (QR)	0	1	10	2022	\$2,000	80
22624527	512	Manholes	North Ave (QR)	0	1	10	2022	\$2,000	80
22624529	517	Manholes	Tebbutt St (QR)	0	1	10	2022	\$2,000	80

								Subtotal	\$168,141	
22623314	281	MAINS	ABBOTT ST (QR)	0	5.2	11	2023	\$1,287	80	
22623545	515	MAINS	ABBOTT ST (QR)	0	56.5	11	2023	\$13,985	80	
22623311	278	MAINS	BREEZA ST (QR)	0	18.9	11	2023	\$4,678	80	
22623319	287	MAINS	EAST ST (QR)	0	4.9	11	2023	\$1,213	80	
22623547	517	MAINS	HILL ST (QR)	0	41.4	11	2023	\$10,247	80	
22623543	513	MAINS	HILL ST (QR)	0	47.2	11	2023	\$11,683	80	
22623546	516	MAINS	HILL ST (QR)	0	52.2	11	2023	\$12,921	80	
22623548	518	MAINS	HILL ST (QR)	0	69.5	11	2023	\$17,203	80	
22623551	521	MAINS	HILL ST (QR)	0	69.8	11	2023	\$17,277	80	
22623549	519	MAINS	HILL ST (QR)	0	75.6	11	2023	\$18,713	80	
22623317	285	MAINS	NOWLAND AVE (QR)	0	12.7	11	2023	\$3,144	80	
22623542	512	MAINS	NOWLAND AVE (QR)	0	60.6	11	2023	\$15,000	80	
22623321	289	MAINS	NOWLAND AVE (QR)	0	70.2	11	2023	\$17,376	80	
22623320	288	MAINS	NOWLAND AVE (QR)	0	93	11	2023	\$23,019	80	
22623316	283	MAINS	PERKINS ST (QR)	0	27.3	11	2023	\$6,757	80	
22623550	520	MAINS	RAILWAY AVE (QR)	0	46.6	11	2023	\$11,534	80	
22623539	509	MAINS	STATION ST (QR)	0	19.5	11	2023	\$4,827	80	
22623315	282	MAINS	STATION ST (QR)	0	7	11	2023	\$1,733	80	
22623544	514	MAINS	TEBBUTT ST (QR)	0	15.2	11	2023	\$3,762	80	
22623540	510	MAINS	TEBBUTT ST (QR)	0	24.5	11	2023	\$6,064	80	
22623312	279	MAINS	TEBBUTT ST (QR)	0	25.6	11	2023	\$6,337	80	
22623313	280	MAINS	TEBBUTT ST (QR)	0	5.7	11	2023	\$1,411	80	
22623541	511	MAINS	TEBBUTT ST (QR)	0	59.6	11	2023	\$14,752	80	
22623318	286	MAINS	UNDERWOOD ST (QR)	0	17.8	11	2023	\$4,406	80	
22623322	290	MAINS	WERRIS CREEK RD (QR)	0	118	11	2023	\$29,183	80	
22623323	291	MAINS	WERRIS CREEK RD (QR)	0	73.3	11	2023	\$18,143	80	
22624545	536	Manholes	Abbott St (QR)	0	1	11	2023	\$2,000	80	
22624546	538	Manholes	Abbott St (QR)	0	1	11	2023	\$2,000	80	
22624559	550	Manholes	Centre St (QR)	0	1	11	2023	\$2,000	80	
22624560	551	Manholes	Centre St (QR)	0	1	11	2023	\$2,000	80	

22624538	527	Manholes	Hill St (QR)	0	1	11	2023	\$2,000	80
22624535	522	Manholes	Nowland Ave (QR)	0	1	11	2023	\$2,000	80
22624539	529	Manholes	Nowland St (QR)	0	1	11	2023	\$2,000	80
22624557	549	Manholes	Nowland St (QR)	0	1	11	2023	\$2,000	80
22624536	523	Manholes	Tebbutt St (QR)	0	1	11	2023	\$2,000	80
22624537	524	Manholes	Tebbutt St (QR)	0	1	11	2023	\$2,000	80

Subtotal								\$296,653	
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22623561	531	MAINS	ABBOTT ST (QR)	0	40	12	2024	\$9,901	80
22623554	524	MAINS	ABBOTT ST (QR)	0	73.6	12	2024	\$18,217	80
22623562	532	MAINS	ABBOTT ST (QR)	0	75.5	12	2024	\$18,688	80
22623559	529	MAINS	ABBOTT ST (QR)	0	80.3	12	2024	\$19,876	80
22623560	530	MAINS	ABBOTT ST (QR)	0	85.5	12	2024	\$21,163	80
22623327	295	MAINS	CANSDALL ST (QR)	0	21.8	12	2024	\$5,396	80
22623328	296	MAINS	CANSDALL ST (QR)	0	38.2	12	2024	\$9,455	80
22623325	293	MAINS	HAWKER ST (QR)	0	22.8	12	2024	\$5,643	80
22623336	304	MAINS	HAWKER ST (QR)	0	30.5	12	2024	\$7,549	80
22623337	305	MAINS	HAWKER ST (QR)	0	31.9	12	2024	\$7,896	80
22623324	292	MAINS	HAWKER ST (QR)	0	39.7	12	2024	\$9,827	80
22623326	294	MAINS	HAWKER ST (QR)	0	44.9	12	2024	\$11,114	80
22623335	303	MAINS	HAWKER ST (QR)	0	67.9	12	2024	\$16,807	80
22623334	302	MAINS	HAWKER ST (QR)	0	73	12	2024	\$18,069	80
22623564	534	MAINS	HILL ST (QR)	0	35.4	12	2024	\$8,762	80
22623565	535	MAINS	HILL ST (QR)	0	65.3	12	2024	\$16,163	80
22623557	527	MAINS	NORTH AVE (QR)	0	3.8	12	2024	\$941	80
22623558	528	MAINS	NORTH AVE (QR)	0	41	12	2024	\$10,148	80
22623332	300	MAINS	NOWLAND AVE (QR)	0	64.8	12	2024	\$16,039	80
22623331	299	MAINS	NOWLAND AVE (QR)	0	66.1	12	2024	\$16,361	80
22623329	297	MAINS	NOWLAND AVE (QR)	0	79	12	2024	\$19,554	80
22623330	298	MAINS	NOWLAND AVE (QR)	0	90.2	12	2024	\$22,326	80
22623563	533	MAINS	STATION ST (QR)	0	20.6	12	2024	\$5,099	80
22623556	526	MAINS	STATION ST (QR)	0	26.2	12	2024	\$6,485	80
22623553	523	MAINS	STATION ST (QR)	0	48.9	12	2024	\$12,104	80

22623552	522	MAINS	STATION ST (QR)	0	58.2	12	2024	\$14,406	80
22623555	525	MAINS	STATION ST (QR)	0	74.7	12	2024	\$18,490	80
22623333	301	MAINS	WATERFORD ST (QR)	0	34.2	12	2024	\$8,465	80
22624563	554	Manholes	Centre St (QR)	0	1	12	2024	\$2,000	80
22624566	557	Manholes	Centre St (QR)	0	1	12	2024	\$2,000	80
22624568	559	Manholes	Centre St (QR)	0	1	12	2024	\$2,000	80
22624571	561	Manholes	Dewhurst St (QR)	0	1	12	2024	\$2,000	80
22624562	553	Manholes	Dewhurst St (QR)	0	1	12	2024	\$2,000	80
22624567	558	Manholes	Hawker St (QR)	0	1	12	2024	\$2,000	80
22624564	555	Manholes	Hawker St (QR)	0	1	12	2024	\$2,000	80
22624565	556	Manholes	Hawker St (QR)	0	1	12	2024	\$2,000	80
22624561	552	Manholes	Hawker St (QR)	0	1	12	2024	\$2,000	80
22624570	560	Manholes	Perkins St (QR)	0	1	12	2024	\$2,000	80
Subtotal								\$374,944	
22623579	549	MAINS	DALLEY ST (QR)	0	44.8	13	2025	\$11,089	80
22623578	548	MAINS	DALLEY ST (QR)	0	79.2	13	2025	\$19,604	80
22623347	315	MAINS	FAIRBURN ST (QR)	0	57.3	13	2025	\$14,183	80
22623340	308	MAINS	HAWKER ST (QR)	0	41.9	13	2025	\$10,371	80
22623341	309	MAINS	HAWKER ST (QR)	0	53.9	13	2025	\$13,341	80
22623338	306	MAINS	HAWKER ST (QR)	0	54.7	13	2025	\$13,539	80
22623343	311	MAINS	HAWKER ST (QR)	0	79.8	13	2025	\$19,752	80
22623339	307	MAINS	HAWKER ST (QR)	0	81.2	13	2025	\$20,099	80
22623349	317	MAINS	HAWKER ST (QR)	0	81.3	13	2025	\$20,123	80
22623344	312	MAINS	HAWKER ST (QR)	0	82.1	13	2025	\$20,321	80
22623342	310	MAINS	HAWKER ST (QR)	0	84	13	2025	\$20,792	80
22623345	313	MAINS	HAWKER ST (QR)	0	84.7	13	2025	\$20,965	80
22623348	316	MAINS	HAWKER ST (QR)	0	85.7	13	2025	\$21,212	80
22623576	546	MAINS	HILL ST (QR)	0	16.3	13	2025	\$4,035	80
22623573	543	MAINS	HILL ST (QR)	0	44.7	13	2025	\$11,064	80
22623569	539	MAINS	HILL ST (QR)	0	45.6	13	2025	\$11,287	80
22623577	547	MAINS	HILL ST (QR)	0	71.9	13	2025	\$17,797	80
22623570	540	MAINS	HILL ST (QR)	0	75.5	13	2025	\$18,688	80

22623575	545	MAINS	HILL ST (QR)	0	81.3	13	2025	\$20,123	80
22623571	541	MAINS	NORTH AVE (QR)	0	15.8	13	2025	\$3,911	80
22623574	544	MAINS	NORTH AVE (QR)	0	31.8	13	2025	\$7,871	80
22623572	542	MAINS	NORTH AVE (QR)	0	36.9	13	2025	\$9,133	80
22623431	401	MAINS	NOWLAND AVE (QR)	0	13.7	13	2025	\$3,391	80
22623432	402	MAINS	NOWLAND AVE (QR)	0	51.1	13	2025	\$12,648	80
22623430	400	MAINS	NOWLAND AVE (QR)	0	58.3	13	2025	\$14,430	80
22623429	399	MAINS	NOWLAND AVE (QR)	0	68.3	13	2025	\$16,906	80
22623346	314	MAINS	NOWLAND ST (QR)	0	65.3	13	2025	\$16,163	80
22623351	319	MAINS	PHILLIP ST (QR)	0	57.3	13	2025	\$14,183	80
22623350	318	MAINS	PHILLIP ST (QR)	0	78.3	13	2025	\$19,381	80
22623566	536	MAINS	STATION ST (QR)	0	23.9	13	2025	\$5,916	80
22623567	537	MAINS	STATION ST (QR)	0	37.8	13	2025	\$9,356	80
22623568	538	MAINS	STATION ST (QR)	0	61	13	2025	\$15,099	80
22624573	563	Manholes	Centre St (QR)	0	1	13	2025	\$2,000	80
22624603	596	Manholes	Dewhurst St (QR)	0	1	13	2025	\$2,000	80
22624572	562	Manholes	Dewhurst St (QR)	0	1	13	2025	\$2,000	80
22624605	599	Manholes	Dewhurst St (QR)	0	1	13	2025	\$2,000	80
22624602	595	Manholes	Nowland Ave (QR)	0	1	13	2025	\$2,000	80
22624604	597	Manholes	Nowland St (QR)	0	1	13	2025	\$2,000	80
22624597	590	Manholes	Nowland St (QR)	0	1	13	2025	\$2,000	80
22624598	591	Manholes	Nowland St (QR)	0	1	13	2025	\$2,000	80
22624599	592	Manholes	Nowland St (QR)	0	1	13	2025	\$2,000	80
22624600	593	Manholes	Nowland St (QR)	0	1	13	2025	\$2,000	80
22624601	594	Manholes	Nowland St (QR)	0	1	13	2025	\$2,000	80
22623034	WCK SPS 1 CB	P_E	WCK SEWER PUMP STN 1	0	1	13	2025	\$25,000	60
Subtotal								\$503,773	
22623440	410	MAINS	ALLNUTT ST (QR)	0	26.3	14	2026	\$6,510	80
22623444	414	MAINS	ALLNUTT ST (QR)	0	43.4	14	2026	\$10,742	80
22623441	411	MAINS	ALLNUTT ST (QR)	0	56.4	14	2026	\$13,960	80
22623438	408	MAINS	ALLNUTT ST (QR)	0	71.1	14	2026	\$17,599	80

22623442	412	MAINS	ALLNUTT ST (QR)	0	77.2	14	2026	\$19,109	80
22623443	413	MAINS	ALLNUTT ST (QR)	0	83.3	14	2026	\$20,618	80
22623355	323	MAINS	CENTRE ST (QR)	0	101	14	2026	\$24,950	80
22623354	322	MAINS	CENTRE ST (QR)	0	30.9	14	2026	\$7,648	80
22623353	321	MAINS	CENTRE ST (QR)	0	41.4	14	2026	\$10,247	80
22623352	320	MAINS	CENTRE ST (QR)	0	54.7	14	2026	\$13,539	80
22623356	324	MAINS	CENTRE ST (QR)	0	88.6	14	2026	\$21,930	80
22623434	404	MAINS	FERN ST (QR)	0	45.2	14	2026	\$11,188	80
22623435	405	MAINS	FERN ST (QR)	0	49.5	14	2026	\$12,252	80
22623436	406	MAINS	FERN ST (QR)	0	61.3	14	2026	\$15,173	80
22623437	407	MAINS	FERN ST (QR)	0	63.5	14	2026	\$15,718	80
22623446	416	MAINS	FERN ST (QR)	0	85.9	14	2026	\$21,262	80
22623365	333	MAINS	HAWKER ST (QR)	0	60.1	14	2026	\$14,876	80
22623364	332	MAINS	HAWKER ST (QR)	0	67.3	14	2026	\$16,658	80
22623362	330	MAINS	HAWKER ST (QR)	0	77.9	14	2026	\$19,282	80
22623363	331	MAINS	HAWKER ST (QR)	0	78.6	14	2026	\$19,455	80
22623361	329	MAINS	HAWKER ST (QR)	0	85.2	14	2026	\$21,089	80
22623433	403	MAINS	NOWLAND AVE (QR)	0	88	14	2026	\$21,782	80
22623360	328	MAINS	PERKINS ST (QR)	0	15.6	14	2026	\$3,861	80
22623358	326	MAINS	PERKINS ST (QR)	0	36.2	14	2026	\$8,960	80
22623357	325	MAINS	PERKINS ST (QR)	0	52.9	14	2026	\$13,094	80
22623359	327	MAINS	PERKINS ST (QR)	0	54.1	14	2026	\$13,391	80
22623590	560	MAINS	PRYOR ST (QR)	0	25.7	14	2026	\$6,361	80
22623592	562	MAINS	PRYOR ST (QR)	0	28.9	14	2026	\$7,153	80
22623588	558	MAINS	PRYOR ST (QR)	0	31.6	14	2026	\$7,822	80
22623589	559	MAINS	PRYOR ST (QR)	0	39.7	14	2026	\$9,827	80
22623593	563	MAINS	PRYOR ST (QR)	0	47.1	14	2026	\$11,658	80
22623591	561	MAINS	PRYOR ST (QR)	0	52.1	14	2026	\$12,896	80
22623585	555	MAINS	RAILWAY AVE (QR)	0	17	14	2026	\$4,208	80
22623584	554	MAINS	RAILWAY AVE (QR)	0	20.5	14	2026	\$5,074	80
22623586	556	MAINS	RAILWAY AVE (QR)	0	49.4	14	2026	\$12,227	80
22623587	557	MAINS	RAILWAY AVE (QR)	0	56.6	14	2026	\$14,010	80
22623439	409	MAINS	SPRING ST (QR)	0	69.5	14	2026	\$17,203	80

22623583	553	MAINS	STATION ST (QR)	0	16.4	14	2026	\$4,059	80
22623580	550	MAINS	STATION ST (QR)	0	29.4	14	2026	\$7,277	80
22623582	552	MAINS	STATION ST (QR)	0	38.1	14	2026	\$9,431	80
22623581	551	MAINS	STATION ST (QR)	0	53.8	14	2026	\$13,317	80
22623445	415	MAINS	YOUNG ST (QR)	0	8.3	14	2026	\$2,054	80
22624608	600	Manholes	Dewhurst St (QR)	0	1	14	2026	\$2,000	80
22624609	601	Manholes	Dewhurst St (QR)	0	1	14	2026	\$2,000	80
22624610	603	Manholes	Dewhurst St (QR)	0	1	14	2026	\$2,000	80
22624613	606	Manholes	Dewhurst St (QR)	0	1	14	2026	\$2,000	80
22624614	608	Manholes	Dewhurst St (QR)	0	1	14	2026	\$2,000	80
22624611	604	Manholes	Munro St (QR)	0	1	14	2026	\$2,000	80
22624612	605	Manholes	Munro St (QR)	0	1	14	2026	\$2,000	80
22624616	611	Manholes	Nowland Ave (QR)	0	1	14	2026	\$2,000	80
22624617	612	Manholes	Nowland Ave (QR)	0	1	14	2026	\$2,000	80
22624618	613	Manholes	Nowland Ave (QR)	0	1	14	2026	\$2,000	80
22624619	614	Manholes	Nowland Ave (QR)	0	1	14	2026	\$2,000	80
22624620	615	Manholes	Nowland Ave (QR)	0	1	14	2026	\$2,000	80
22623001	QDI SPS 1 PUMP1	P_E	QDI SEWER PUMP STN 1	0	1	14	2026	\$7,250	25
22623002	QDI SPS 1 PUMP2	P_E	QDI SEWER PUMP STN 1	0	1	14	2026	\$7,250	25

Subtotal								\$577,970	
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22623463	433	MAINS	ALLNUTT ST (QR)	0	10.4	15	2027	\$2,235	80
22623460	430	MAINS	ALLNUTT ST (QR)	0	37.8	15	2027	\$9,356	80
22623459	429	MAINS	ALLNUTT ST (QR)	0	55	15	2027	\$13,614	80
22623456	426	MAINS	ALLNUTT ST (QR)	0	71	15	2027	\$17,574	80
22623458	428	MAINS	ALLNUTT ST (QR)	0	79.1	15	2027	\$19,579	80
22623457	427	MAINS	ALLNUTT ST (QR)	0	79.2	15	2027	\$19,604	80
22623448	418	MAINS	CENTRE ST (QR)	0	23.2	15	2027	\$5,742	80
22623449	419	MAINS	CENTRE ST (QR)	0	92.6	15	2027	\$22,920	80
22623451	421	MAINS	CENTRE ST (QR)	0	92.9	15	2027	\$22,995	80
22623450	420	MAINS	CENTRE ST (QR)	0	95.7	15	2027	\$23,688	80
22623597	567	MAINS	CHURCH AVE (QR)	0	52.4	15	2027	\$12,970	80

22623598	568	MAINS	CHURCH AVE (QR)	0	88	15	2027	\$21,782	80
22623366	334	MAINS	CROSS ST (QR)	0	48.4	15	2027	\$11,980	80
22623605	575	MAINS	GEORGE ST (QR)	0	11.7	15	2027	\$2,896	80
22623382	350	MAINS	GEORGE ST (QR)	0	21.5	15	2027	\$6,930	80
22623604	574	MAINS	GEORGE ST (QR)	0	25	15	2027	\$6,188	80
22623606	576	MAINS	GEORGE ST (QR)	0	33.9	15	2027	\$8,391	80
22623603	573	MAINS	GEORGE ST (QR)	0	38.7	15	2027	\$9,579	80
22623379	347	MAINS	GEORGE ST (QR)	0	48.7	15	2027	\$21,062	80
22623599	569	MAINS	GEORGE ST (QR)	0	51.9	15	2027	\$22,446	80
22623601	571	MAINS	GEORGE ST (QR)	0	54.1	15	2027	\$23,397	80
22623600	570	MAINS	GEORGE ST (QR)	0	54.6	15	2027	\$23,613	80
22623602	572	MAINS	GEORGE ST (QR)	0	56.1	15	2027	\$24,262	80
22623380	348	MAINS	GEORGE ST (QR)	0	78.8	15	2027	\$25,399	80
22623381	349	MAINS	GEORGE ST (QR)	0	86.3	15	2027	\$27,816	80
22623383	351	MAINS	GEORGE ST (QR)	0	99.8	15	2027	\$32,168	80
22623452	422	MAINS	GROSS ST (QR)	0	73	15	2027	\$18,069	80
22623367	335	MAINS	HAWKER ST (QR)	0	69.7	15	2027	\$17,252	80
22623596	566	MAINS	HILL ST (QR)	0	21.2	15	2027	\$5,247	80
22623608	578	MAINS	HILL ST (QR)	0	21.8	15	2027	\$5,396	80
22623610	580	MAINS	HILL ST (QR)	0	26	15	2027	\$6,436	80
22623611	581	MAINS	HILL ST (QR)	0	38.8	15	2027	\$9,604	80
22623609	579	MAINS	HILL ST (QR)	0	59.4	15	2027	\$14,703	80
22623607	577	MAINS	LEE AVE (QR)	0	19.9	15	2027	\$4,926	80
22623453	423	MAINS	MUNRO ST (QR)	0	102	15	2027	\$25,247	80
22623454	424	MAINS	NOWLAND AVE (QR)	0	16.6	15	2027	\$4,109	80
22623455	425	MAINS	NOWLAND AVE (QR)	0	39	15	2027	\$9,653	80
22623371	339	MAINS	NOWLAND AVE (QR)	0	39.3	15	2027	\$12,667	80
22623369	337	MAINS	NOWLAND AVE (QR)	0	51.4	15	2027	\$12,723	80
22623370	338	MAINS	NOWLAND AVE (QR)	0	75.8	15	2027	\$24,432	80
22623595	565	MAINS	PRYOR ST (QR)	0	28	15	2027	\$6,931	80
22623594	564	MAINS	PRYOR ST (QR)	0	52	15	2027	\$12,871	80
22623368	336	MAINS	SINGLE ST (QR)	0	47.2	15	2027	\$11,683	80
22623447	417	MAINS	SPRING ST (QR)	0	64.7	15	2027	\$16,015	80

22623376	344	MAINS	STATION ST (QR)	0	34.3	15	2027	\$14,834	80
22623378	346	MAINS	STATION ST (QR)	0	53	15	2027	\$22,921	80
22623373	341	MAINS	STATION ST (QR)	0	74.1	15	2027	\$32,047	80
22623377	345	MAINS	STATION ST (QR)	0	80.1	15	2027	\$34,642	80
22623375	343	MAINS	STATION ST (QR)	0	80.3	15	2027	\$34,728	80
22623374	342	MAINS	STATION ST (QR)	0	83.4	15	2027	\$36,069	80
22623372	340	MAINS	STATION ST (QR)	0	85.3	15	2027	\$27,494	80
22623461	431	MAINS	YOUNG ST (QR)	0	21	15	2027	\$5,198	80
22623464	434	MAINS	YOUNG ST (QR)	0	25.8	15	2027	\$5,544	80
22623462	432	MAINS	YOUNG ST (QR)	0	4.7	15	2027	\$1,010	80
22624634	633	Manholes	Hawker St (QR)	0	1	15	2027	\$2,000	80
22624635	634	Manholes	Hawker St (QR)	0	1	15	2027	\$2,000	80
22624666	666	Manholes	Hawker St (QR)	0	1	15	2027	\$2,000	80
22624626	621	Manholes	Hawker St (QR)	0	1	15	2027	\$2,000	80
22624628	623	Manholes	Hawker St (QR)	0	1	15	2027	\$2,000	80
22624621	616	Manholes	Munro St (QR)	0	1	15	2027	\$2,000	80
22624622	617	Manholes	Nowland Ave (QR)	0	1	15	2027	\$2,000	80
22624623	619	Manholes	Nowland Ave (QR)	0	1	15	2027	\$2,000	80
22624625	620	Manholes	Nowland Ave (QR)	0	1	15	2027	\$2,000	80
22624629	624	Manholes	Snape St (QR)	0	1	15	2027	\$2,000	80
22623000	QDI SPS 1 CB	P_E	QDI SEWER PUMP STN 1	0	1	15	2027	\$27,000	60
22623004	QDI SPS 2 CB	P_E	QDI SEWER PUMP STN 2	0	1	15	2027	\$42,000	60
22623008	QDI SPS 3 CB	P_E	QDI SEWER PUMP STN 3	0	1	15	2027	\$27,000	60
22623012	QDI SPS 4 CB	P_E	QDI SEWER PUMP STN 4	0	1	15	2027	\$27,000	60
22623016	QDI SPS 5 CB	P_E	QDI SEWER PUMP STN 5	0	1	15	2027	\$25,000	60
Subtotal								\$1,038,633	
22623393	361	MAINS	CHURCH AVE (QR)	0	48.1	16	2028	\$27,475	80
22623613	583	MAINS	CHURCH AVE (QR)	0	51	16	2028	\$12,624	80
22623470	440	MAINS	COLLARENE RD (QR)	0	21	16	2028	\$5,198	80
22623465	435	MAINS	COLLARENE RD (QR)	0	52.9	16	2028	\$13,094	80

22623467	437	MAINS	CROMARTY ST (QR)	0	15.3	16	2028	\$3,787	80
22623466	436	MAINS	CROMARTY ST (QR)	0	20.8	16	2028	\$5,148	80
22623476	446	MAINS	CROMARTY ST (QR)	0	32.3	16	2028	\$7,995	80
22623468	438	MAINS	CROMARTY ST (QR)	0	32.4	16	2028	\$8,020	80
22623473	443	MAINS	CROMARTY ST (QR)	0	39	16	2028	\$9,653	80
22623477	447	MAINS	CROMARTY ST (QR)	0	48.4	16	2028	\$11,980	80
22623474	444	MAINS	CROMARTY ST (QR)	0	88.4	16	2028	\$21,881	80
22623475	445	MAINS	CROMARTY ST (QR)	0	94.1	16	2028	\$23,292	80
22623389	357	MAINS	GEORGE ST (QR)	0	11.4	16	2028	\$4,930	80
22623390	358	MAINS	GEORGE ST (QR)	0	14.5	16	2028	\$6,271	80
22623388	356	MAINS	GEORGE ST (QR)	0	20.8	16	2028	\$6,704	80
22623385	353	MAINS	GEORGE ST (QR)	0	30.8	16	2028	\$9,927	80
22623614	584	MAINS	GEORGE ST (QR)	0	40.8	16	2028	\$10,099	80
22623386	354	MAINS	GEORGE ST (QR)	0	44.7	16	2028	\$14,408	80
22623387	355	MAINS	GEORGE ST (QR)	0	44.8	16	2028	\$14,440	80
22623617	587	MAINS	GEORGE ST (QR)	0	59.2	16	2028	\$25,603	80
22623384	352	MAINS	GEORGE ST (QR)	0	68.2	16	2028	\$21,982	80
22623391	359	MAINS	GEORGE ST (QR)	0	77.8	16	2028	\$33,647	80
22623619	589	MAINS	GEORGE ST (QR)	0	84.2	16	2028	\$36,415	80
22623618	588	MAINS	GEORGE ST (QR)	0	87.5	16	2028	\$37,842	80
22623629	599	MAINS	HENRY ST (QR)	0	26.9	16	2028	\$6,658	80
22623628	598	MAINS	HENRY ST (QR)	0	27.2	16	2028	\$6,733	80
22623612	582	MAINS	HENRY ST (QR)	0	32	16	2028	\$7,921	80
22623615	585	MAINS	HENRY ST (QR)	0	39.5	16	2028	\$9,777	80
22623627	597	MAINS	HENRY ST (QR)	0	43.7	16	2028	\$10,817	80
22623616	586	MAINS	HENRY ST (QR)	0	68.7	16	2028	\$17,005	80
22623394	362	MAINS	HILL ST (QR)	0	64.5	16	2028	\$36,842	80
22623396	364	MAINS	HILL ST (QR)	0	69.6	16	2028	\$47,328	80
22623397	365	MAINS	HILL ST (QR)	0	74	16	2028	\$42,269	80
22623395	363	MAINS	HILL ST (QR)	0	74	16	2028	\$50,320	80
22623626	596	MAINS	LEE AVE (QR)	0	61.2	16	2028	\$15,148	80
22623625	595	MAINS	LEE AVE (QR)	0	65.7	16	2028	\$16,262	80
22623472	442	MAINS	MUNRO ST (QR)	0	20.2	16	2028	\$5,000	80

22623471	441	MAINS	MUNRO ST (QR)	0	84.8	16	2028	\$20,990	80
22623469	439	MAINS	NOWLAND AVE (QR)	0	31.6	16	2028	\$7,822	80
22623624	594	MAINS	PRYOR ST (QR)	0	38.1	16	2028	\$9,431	80
22623392	360	MAINS	WILLIAM ST (QR)	0	69.5	16	2028	\$30,057	80
22623478	448	MAINS	YOUNG ST (QR)	0	75.5	16	2028	\$18,688	80
22624674	673	Manholes	Dewhurst St (QR)	0	1	16	2028	\$2,000	80
22624667	667	Manholes	Hawker St (QR)	0	1	16	2028	\$2,000	80
22624668	668	Manholes	Hawker St (QR)	0	1	16	2028	\$2,000	80
22624671	670	Manholes	Henry St (QR)	0	1	16	2028	\$2,000	80
22624672	671	Manholes	Henry St (QR)	0	1	16	2028	\$2,000	80
22624673	672	Manholes	Henry St (QR)	0	1	16	2028	\$2,000	80
22624669	669	Manholes	Hill St (QR)	0	1	16	2028	\$2,000	80
22624675	674	Manholes	Lee Ave (QR)	0	1	16	2028	\$2,000	80
22624676	675	Manholes	Pryor St (QR)	0	1	16	2028	\$2,000	80
22624677	676	Manholes	Pryor St (QR)	0	1	16	2028	\$2,000	80
22624678	677	Manholes	Pryor St (QR)	0	1	16	2028	\$2,000	80

Subtotal								\$753,480	
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22623698	668	MAINS	CHURCH AVE (QR)	0	19.5	17	2029	\$4,827	80
22623883	853	MAINS	CHURCH AVE (QR)	0	27.9	17	2029	\$6,906	80
22623656	626	MAINS	CHURCH AVE (QR)	0	71	17	2029	\$17,574	80
22623655	625	MAINS	CHURCH AVE (QR)	0	9.3	17	2029	\$2,302	80
22623405	373	MAINS	DAVIES ST (QR)	0	27.5	17	2029	\$18,700	80
22623630	600	MAINS	HENRY ST (QR)	0	16.3	17	2029	\$4,035	80
22623404	372	MAINS	HILL ST (QR)	0	150	17	2029	\$101,932	80
22623631	601	MAINS	HILL ST (QR)	0	15.6	17	2029	\$3,861	80
22623632	602	MAINS	HILL ST (QR)	0	34.8	17	2029	\$8,614	80
22623401	369	MAINS	HILL ST (QR)	0	35.1	17	2029	\$23,868	80
22623400	368	MAINS	HILL ST (QR)	0	37.1	17	2029	\$25,228	80
22623697	667	MAINS	HILL ST (QR)	0	37.5	17	2029	\$9,282	80
22623399	367	MAINS	HILL ST (QR)	0	50.8	17	2029	\$34,544	80
22623403	371	MAINS	HILL ST (QR)	0	55.8	17	2029	\$37,944	80
22623402	370	MAINS	HILL ST (QR)	0	58.1	17	2029	\$39,508	80

22623398	366	MAINS	HILL ST (QR)	0	75.3	17	2029	\$51,204	80
22623408	376	MAINS	JOHNS AVE (QR)	0	26.9	17	2029	\$6,658	80
22623406	374	MAINS	JOHNS AVE (QR)	0	44.3	17	2029	\$10,965	80
22623407	375	MAINS	JOHNS AVE (QR)	0	86.5	17	2029	\$21,410	80
22623484	454	MAINS	NOWLAND AVE (QR)	0	13.1	17	2029	\$3,243	80
22623485	455	MAINS	NOWLAND ST (QR)	0	60.4	17	2029	\$14,950	80
22623487	457	MAINS	NOWLAND ST (QR)	0	76.6	17	2029	\$18,960	80
22623489	459	MAINS	NOWLAND ST (QR)	0	80.9	17	2029	\$20,024	80
22623486	456	MAINS	NOWLAND ST (QR)	0	83.6	17	2029	\$20,693	80
22623488	458	MAINS	NOWLAND ST (QR)	0	86.9	17	2029	\$21,509	80
22623657	627	MAINS	THOMAS ST (QR)	0	44.8	17	2029	\$11,089	80
22623658	628	MAINS	THOMAS ST (QR)	0	71.4	17	2029	\$17,673	80
22623884	854	MAINS	THOMAS ST (QR)	0	81.9	17	2029	\$20,272	80
22623483	453	MAINS	YOUNG ST (QR)	0	37.4	17	2029	\$9,257	80
22623480	450	MAINS	YOUNG ST (QR)	0	47.9	17	2029	\$11,856	80
22623482	452	MAINS	YOUNG ST (QR)	0	61.7	17	2029	\$15,272	80
22623481	451	MAINS	YOUNG ST (QR)	0	73.1	17	2029	\$18,094	80
22623479	449	MAINS	YOUNG ST (QR)	0	80.2	17	2029	\$19,851	80
22623029	QDI SPS 8 PMP1	P_E	QDI SEWER PUMP STN 8	0	1	17	2029	\$7,480	25
22623030	QDI SPS 8 PMP2	P_E	QDI SEWER PUMP STN 8	0	1	17	2029	\$7,480	25

								Subtotal	\$667,065	
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22623418	387	MAINS	CANSELL ST (QR)	0	33.6	18	2030	\$8,317	80
22623412	381	MAINS	CENTRE ST (QR)	0	81.3	18	2030	\$20,123	80
22623413	382	MAINS	CENTRE ST (QR)	0	84	18	2030	\$20,792	80
22623887	857	MAINS	CHURCH AVE (QR)	0	28	18	2030	\$6,931	80
22623888	858	MAINS	CHURCH AVE (QR)	0	51.4	18	2030	\$12,723	80
22623492	462	MAINS	COX ST (QR)	0	68.5	18	2030	\$16,955	80
22623493	463	MAINS	COX ST (QR)	0	80.2	18	2030	\$19,851	80
22623895	865	MAINS	GEORGE ST (QR)	0	44.4	18	2030	\$14,311	80
22623889	859	MAINS	GEORGE ST (QR)	0	65.2	18	2030	\$16,138	80
22623411	380	MAINS	HAWKER ST (QR)	0	48.2	18	2030	\$11,930	80

22623891	861	MAINS	HENRY ST (QR)	0	26.1	18	2030	\$6,460	80
22623892	862	MAINS	HENRY ST (QR)	0	28.4	18	2030	\$7,030	80
22623890	860	MAINS	HENRY ST (QR)	0	37.2	18	2030	\$9,208	80
22623886	856	MAINS	HILL ST (QR)	0	7	18	2030	\$1,733	80
22623409	378	MAINS	JOHNS AVE (QR)	0	55.8	18	2030	\$13,812	80
22623494	464	MAINS	MILNER PDE (QR)	0	83	18	2030	\$26,753	80
22623410	379	MAINS	NOWLAND AVE (QR)	0	20.6	18	2030	\$5,099	80
22623414	383	MAINS	NOWLAND AVE (QR)	0	30.2	18	2030	\$7,475	80
22623415	384	MAINS	NOWLAND AVE (QR)	0	48.6	18	2030	\$12,029	80
22623416	385	MAINS	NOWLAND AVE (QR)	0	75.1	18	2030	\$18,589	80
22623490	460	MAINS	POLLOCK ST (QR)	0	24.5	18	2030	\$6,064	80
22623497	467	MAINS	POLLOCK ST (QR)	0	36.4	18	2030	\$11,732	80
22623491	461	MAINS	POLLOCK ST (QR)	0	38.3	18	2030	\$9,480	80
22623495	465	MAINS	POLLOCK ST (QR)	0	44.2	18	2030	\$14,247	80
22623496	466	MAINS	POLLOCK ST (QR)	0	45.1	18	2030	\$14,537	80
22623893	863	MAINS	PRYOR ST (QR)	0	11.4	18	2030	\$2,822	80
22623498	468	MAINS	PRYOR ST (QR)	0	35.4	18	2030	\$11,410	80
22623894	864	MAINS	PRYOR ST (QR)	0	38.9	18	2030	\$9,629	80
22623499	469	MAINS	PRYOR ST (QR)	0	74.2	18	2030	\$23,916	80
22623417	386	MAINS	SATCHELL ST (QR)	0	59	18	2030	\$14,604	80

Subtotal \$374,698

Program Total \$5,392,327.65

APPENDIX B

Asset ID	Asset Name	Amenity	Total Written Down Value (\$)	Total Replacement Value (\$)
QDI SEW TPL	QDI TREATMENT PLANT	QR	2698196	3332000
WCK SEW TPL	WCK TREATMENT PLANT	WC	1816644	2243372
QDI SPS 6 PMP1	QDI SEWER PUMP STN 6	PUMP1	4938	6250
QDI SPS 5 PMP1	QDI SEWER PUMP STN 5	PUMP1	6600	15000
QDI SPS 4 PMP1	QDI SEWER PUMP STN 4	PUMP1	7900	10000
QDI SPS 3 PMP1	QDI SEWER PUMP STN 3	PUMP1	11462	15000
QDI SPS 2 PMP2	QDI SEWER PUMP STN 2	PUMP2	3190	7250
QDI SPS 1 PUMP1	QDI SEWER PUMP STN 1	PUMP1	3190	7250
QDI SPS 7 PMP1	QDI SEWER PUMP STN 7	PUMP1	3190	7250

QDI SPS 8 PMP1	QDI SEWER PUMP STN 8	PUMP1	5909	7480
WCK SPS 1 PMP1	WCK SEWER PUMP STN 1	PUMP1	5925	7500
WCK SEW TPL CIV	WCK TREATMENT PLANT	WC(CIVIL)	467467	580000
QDI SEW TPL CIV	QDI TREATMENT PLANT	QR(CIVIL)	602872	748000
QDI SPS 1 PUMP2	QDI SEWER PUMP STN 1	PUMP2	3190	7250
QDI SPS 1	QDI SEWER PUMP STN 1	STRUCTURE	197403	312100
QDI SPS 6 PMP2	QDI SEWER PUMP STN 6	PUMP2	4938	6250
QDI SPS 6	QDI SEWER PUMP STN 6	STRUCTURE	121458	146600
QDI SPS 1 CB	QDI SEWER PUMP STN 1	CONTROL BOARD	16290	27000
QDI SPS 7 PMP2	QDI SEWER PUMP STN 7	PUMP2	5728	7250
QDI SPS 7	QDI SEWER PUMP STN 7	STRUCTURE	121458	146600
QDI SPS 6 CB	QDI SEWER PUMP STN 6	CONTROL BOARD	22623	27500
QDI SPS 7 CB	QDI SEWER PUMP STN 7	CONTROL BOARD	20567	25000
QDI SPS 2 PMP1	QDI SEWER PUMP STN 2	PUMP1	5728	7250
QDI SPS 2 CB	QDI SEWER PUMP STN 2	CONTROL BOARD	24480	27000
QDI SPS 2	QDI SEWER PUMP STN 2	STRUCTURE	197403	312100
QDI SPS 3 PMP2	QDI SEWER PUMP STN 3	PUMP2	11850	15000
QDI SPS 3 CB	QDI SEWER PUMP STN 3	CONTROL BOARD	22212	27000
QDI SPS 3	QDI SEWER PUMP STN 3	STRUCTURE	206448	326400
QDI SPS 4 PMP2	QDI SEWER PUMP STN 4	PUMP2	7900	10000
QDI SPS 4 CB	QDI SEWER PUMP STN 4	CONTROL BOARD	22212	27000
QDI SPS 4	QDI SEWER PUMP STN 4	STRUCTURE	94622	149600
QDI SPS 5 PMP2	QDI SEWER PUMP STN 5	PUMP2	11850	15000
QDI SPS 5 CB	QDI SEWER PUMP STN 5	CONTROL BOARD	20567	25000
QDI SPS 5	QDI SEWER PUMP STN 5	STRUCTURE	170775	270000
QDI SPS 8 PMP2	QDI SEWER PUMP STN 8	PUMP2	5909	7480
QDI SPS 8 CB	QDI SEWER PUMP STN 8	CONTROL BOARD	20567	25000
QDI SPS 8	QDI SEWER PUMP STN 8	STRUCTURE	135211	163200
WCK SPS 1 PMP2	WCK SEWER PUMP STN 1	PUMP2	5925	7500
WCK SPS 1 CB	WCK SEWER PUMP STN 1	CONTROL BOARD	20567	25000
WCK SPS 1	WCK SEWER PUMP STN 1	STRUCTURE	79424	163200
QUIRINDI	SEWER MAINS	PIPES	7980648	10845510
WERRIS CREEK	SEWER MAINS	PIPES	3491756	4790126
QUIRINDI	SEWER MAINS	MANHOLES	932452	1262000
WERRIS CREEK	SEWER MAINS	MANHOLES	374994	476000
Total			19994636	26668267