



# Greater Hume Shire

simply greater



## Greater Hume Stormwater Asset Management Plan

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Front Cover: *left to right*

*First Row:* Adams Street, Jindera – grate and headwall; Munro Street, Culcairn – open drain; Jindera – older style stone headwall *Second Row:* Federal Street, Culcairn – grate and open high flow drain; view through an under road culvert; Creek Street, Jindera – erosion control under pedestrian bridge; Creek Street, Jindera – pollution control supports with grate removed *Third Row:* Federation Street, Culcairn – view south towards the creek; Adams Street, Jindera – grate and headwall.

**Asset Management for Small, Rural or Remote Communities Practice Note**

The Institute of Public Works Engineering Australia.

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## Table of Contents

1. Executive Summary .....	1
2. Introduction .....	5
2.1 Background .....	5
2.2 Goals and Objectives of Asset Management .....	5
2.3 Plan Framework .....	7
2.4 Core and Advanced Asset Management .....	7
2.5 Community Consultation .....	7
3. Levels of Service .....	8
3.1 Customer Research and Expectations .....	8
3.2 Legislative Requirements .....	8
3.3 Current Levels of Service .....	8
3.4 Desired Levels of Service .....	9
4. Future Demand .....	10
4.1 Demand Forecast .....	10
4.2 Changes in Technology .....	10
4.3 Demand Management Plan .....	10
4.4 New Assets for Growth .....	11
5. Lifecycle Management Plan .....	12
5.1 Background Data .....	12
5.2 Risk Management Plan .....	14
5.3 Routine Maintenance Plan .....	14
5.4 Renewal/Replacement Plan .....	16
5.5 Creation/Acquisition/Upgrade Plan .....	17
5.6 Disposal Plan .....	19
6. Financial Summary .....	20
6.1 Financial Statements and Projections .....	20
6.2 Funding Strategy .....	23
6.3 Valuation Forecasts .....	23
6.4 Key Assumptions made in Financial Forecasts .....	25
7. Asset Management Practices .....	26
7.1 Accounting/Financial Systems .....	26
7.2 Asset Management Systems .....	26
7.3 Information Flow Requirements and Processes .....	27
7.4 Standards and Guidelines .....	27
8. Plan Improvement And Monitoring .....	28
8.1 Performance Measures .....	28
8.2 Improvement Plan .....	28
8.3 Monitoring and Review Procedures .....	28
References .....	29
Appendices .....	30
Appendix A Maintenance Response Levels of Service .....	31
Appendix B Abbreviations .....	32
Appendix C Glossary .....	33

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# 1. Executive Summary

## Context

Council provides a stormwater drainage network to minimise flooding of roads and urban areas. Due to the inconsistent nature of rainfall we have based the capacity on history and what we can afford, accepting that peak storms will exceed the capacity of our system and trying to keep the outcomes to a level that can be dealt with.

Following the extended drought, the last two wet years have highlighted the lack of maintenance. By improving our drainage system we can reduce the costs to maintain our roads system and minimise private property flooding.

Flood studies are being carried out by the state government and local councils and the data recorded will contribute to the information used to plan for the most appropriate infrastructure to minimise flooding and damage from high intensity rainfall.

## The Stormwater Drainage Service

The stormwater drainage network comprises:

- Stormwater Pipes
- Stormwater Pits / Headwalls
- Open Channels
- Other drainage structures

These infrastructure assets have a current replacement value of \$6,794,024

## What does it Cost?

There are two key indicators of cost to provide the stormwater drainage service.

The life cycle cost being the average cost over the lifecycle of the asset, and

The total maintenance and capital renewal expenditure required to deliver existing service levels in the next ten years covered by council's long term financial plan.

The projected cost to provide the services covered by this Asset Management Plan includes operations, maintenance, renewal and upgrade of existing assets over the 10 year planning period is \$812,000 or \$81,200 per year.

Council's estimated available funding for this period is \$799,000 or \$80,000 per year which is 98% of the cost to provide the service. This is a funding shortfall of \$1,200 per year. Projected and budgeted expenditure are shown in the table below.

**Greater Hume SC >> Table 6.1 Sustainability of Service Delivery for (StormwaterV1S4)**

**Executive Summary - What does it cost?**

Cost over 10 years	<b>\$812</b>
Cost per year	<b>\$81</b>
Available funding over 10 years	<b>\$799</b>
Funding per year	<b>\$80</b>
Funding shortfall	<b>-\$1</b>
Percentage of cost	<b>98%</b>

**Life Cycle Cost (long term)'(\$000)**

Life Cycle Cost [depreciation + ops. and maint. exp year 1]	<b>\$142</b>
Life Cycle Exp. [capital renewal exp. + ops + mtce exp. yr 1]	<b>\$75</b>
Life Cycle Gap [life cycle expenditure - life cycle cost [-ve = gap]	<b>-\$67</b>
Life Cycle Sustainability Indicator [life cycle expenditure / LCC]	<b>53%</b>

**Medium Term (10 yrs) Sustainability**

10 yr Ops, Maint & Renewal Projected Expenditure	<b>\$81</b>
10 yr Ops, Maint & Renewal Planned (Budget) Exp	<b>\$80</b>
10 yr Funding Shortfall [10 yr proj. exp. - planned (Budget) exp.]	<b>-\$1</b>
10 yr Sustainability Indicator [10 yr planned exp. / proj. exp.]	<b>98%</b>

**Short Term (5 yrs) Sustainability**

5 yr Ops, Maint & Renewal Projected Expenditure	<b>\$79</b>
5 yr Ops, Maint & Renewal Planned (Budget) Exp	<b>\$78</b>
5 yr Funding Shortfall [5 yr proj. exp. - planned (budget) exp.]	<b>-\$1</b>
5 yr Sustainability Indicator [5 yr planned exp. / proj. exp.]	<b>99%</b>

Council's present funding includes repairs to infrastructure damaged in the flooding over the last two years and has not been included in the calculations for this AMP as they are one off funding to repair damage caused by exceptional events.

Current funding levels are sufficient in the short and medium terms but will be insufficient to continue to provide existing services at current levels in the long term when the existing infrastructure starts to reach the end of its life.

## Plans for the future

Council plans to operate and maintain Stormwater services to achieve the following strategic objectives:

- Maintain, renew and upgrade of stormwater system to safe and functional levels set in this Asset Management Plan.
- Ensure that capital renewal funding for stormwater drainage is maintained.
- Provide rapid response to stormwater problems.

## Managing the Risks

There are risks associated with providing the service and not being able to complete all identified activities and projects. We have identified major risks as:

- The risk of blockages causing flooding
- Extreme rain events damaging infrastructure
- Undermining causing pipe collapse and holes appearing in roadways

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

- Regular inspections and prompt action to problems found
- Ensuring funding is available to repair defects found
- Trained skilled staff or contractors available to execute repairs

## The Next Steps

The actions resulting from this asset management plan are:

- Obtain Council approval for this asset management plan
- Maintain and develop Geographical Information System / Asset Register regarding stormwater drainage assets.
- Develop criteria for risk assessment and treatment
- Assess asset capacity and condition rating
- Develop an education and consultation framework
- Communicate public responsibilities with respect to environmental care
- Optimise maintenance programs

## Questions you may have ...

### What is this plan about?

This asset management plan covers the infrastructure assets that serve the Greater Hume's stormwater drainage needs. These assets include open drains, stormwater pipes and box culverts, grated pits, side entry pits, junction pits and other structures within the system throughout the Council area that enable stormwater to drain away causing minimal damage or inconvenience.

### What is an Asset Management Plan?

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

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

### **Why is there a funding shortfall?**

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

When these assets are approaching the later years of their life and require replacement, services from the assets will be decreasing and maintenance costs will increase.

Councils' present funding levels are sufficient to continue to provide existing services at current levels in the short to medium term.

### **What options do we have?**

Resolving the funding shortfall in the long term involves several steps:

1. Improving asset knowledge so that data accurately records the asset inventory, how assets are performing and when assets are not able to provide the required service levels,
2. Improving our efficiency in operating, maintaining, replacing existing and constructing new assets to optimise life cycle costs,
3. Identifying and managing risks associated with providing services from infrastructure,
4. Making tradeoffs between service levels and costs to ensure that the community receives the best return from infrastructure,
5. Identifying assets surplus to needs for disposal to make saving in future operations and maintenance costs
6. Developing partnership with other bodies, where available to provide services;
7. Seeking additional funding from governments and other bodies to better reflect a 'whole of government' funding approach to infrastructure services.

### **What can we do?**

Council can develop options and priorities for future stormwater drainage services with costs of providing the services, consult with the community to plan future services to match the community services needs with ability to pay for services and maximise benefit to the community for costs to the community.

### **What can you do?**

Council will be pleased to consider your thoughts on the issues raised in this asset management plan and suggestions on how Council may change its stormwater drainage services to ensure that the appropriate level of service can be provided to the community within available funding.

## 2. Introduction

### 2.1 Background

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

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

- Transport Asset Management Plan
- Community Strategic Plan Greater Hume 2030.

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

Table 2.1: Assets covered by this Plan

Asset category	Dimension	Replacement Value
Grated Pits	84	\$100,800
Junction Pits	62	\$75,300
Side Entry Pits	200	\$242,100
Box Culverts	2,504 metres	\$1,690,723
Pipe Culverts	14,929 metres	\$4,558,287
Open Drains	25,363 metres	\$126,814
<b>TOTAL</b>		<b>\$6,794,024</b>

### 2.2 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.<sup>1</sup>

The goal of this asset management plan is to:

- Document the services/service levels to be provided and the costs of providing the service,
- Communicate the consequences for service levels and risk, where desired funding is not available, and
- Provide information to assist decision makers in balancing - service levels, costs and risks to provide services in a financially sustainable manner.

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

Council's vision is:

Living in an idyllic rural landscape that sets us apart, we draw on our passion and location to maintain a model community for people of all ages whilst building an economy that abounds with opportunities.

A number of key aspects are being sought in the vision statement; namely:

*Draw on our passion* – we cannot afford to expect someone else to always work on our behalf to achieve all that we seek; we must draw on the passion we have for our community and each other and be involved.

*Maintain a model community for people of all ages* – if we work together, we can maintain a community that looks after our people as well as our farmland and natural beauty. We can be a community that others aspire to be like.

*An economy that abounds with opportunities* – we must be proactive in taking advantage of our location, particularly near Albury / Wodonga and to a lesser extent Wagga Wagga, to grow an economy that is diverse and offers our community the chance to build a career here.

Council's mission is:

*To provide quality leadership through service and management that meets the needs of all communities, enhances their wellbeing and develops opportunities through community involvement.*

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<sup>1</sup> IPWEA, 2006, *IIMM* Sec 1.1.3, p 1.3.

Relevant goals and objectives and how these are addressed in this asset management plan are shown in Table 2.2.

Table 2.2: Organisation Goals and how these are addressed in this Plan

Goal	Objective	How Goal and Objectives are addressed in AMP
Community strategic plan Greater Hume 2030 5.2.8	Provide and maintain a suitable stormwater drainage network including an adequate kerb and gutter network.	This AMP details what the stormwater drainage network consists of and what we need to do to maintain the system and how to address the deficiencies

## 2.3 Plan Framework

Key elements of the plan are

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

## 2.4 Core and Advanced Asset Management

The stormwater drainage asset management plan is prepared as a first cut ‘core’ asset management plan in accordance with the International Infrastructure Management Manual<sup>2</sup>. 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.

## 2.5 Community Consultation

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

<sup>2</sup> IPWEA, 2006.

### 3. Levels of Service

#### 3.1 Customer Research and Expectations

Council has not carried out any research on customer expectations. This will be investigated for future updates of the asset management plan as required.

#### 3.2 Legislative Requirements

Council has to meet many legislative requirements including Australian and State legislation and State regulations. Relevant legislation is shown in Table 3.2.

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.
The Protection of the Environment Operations Act 1997 (POEO Act)	Is the key piece of environment protection legislation that enables the Government to set out explicit protection of the environment policies (PEPs) and adopt more innovative approaches to reducing pollution.
Australian Accounting Standards	Sets out the financial reporting standards relating to infrastructure
Australian Standards	Including AS3500.3-1990 National Plumbing Drainage Code – Stormwater Drainage AS/NZS 4360:2004 Risk Management

#### 3.3 Current Levels of Service

Council will define service levels in two terms.

##### Community Levels of Service

Relate to the service outcomes that the community wants in terms of safety, quality, quantity, reliability, responsiveness, cost effectiveness and legislative compliance.

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

Quality	How good is the service?
Function	Does it meet users' needs?
Safety	Is the service safe?

## Technical Levels of Service

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

Technical service measures are linked to annual budgets covering:

- Operations – the regular activities to provide services such as cleansing frequency, etc.
- Maintenance – the activities necessary to retain an assets as near as practicable to its original condition (eg structure repairs),
- Renewal – the activities that return the service capability of an asset up to that which it had originally (eg frequency and cost of pipeline replacement and component replacement),
- Upgrade – the activities to provide a higher level of service (eg replacing a pipeline with a larger size) or a new service that did not exist previously.

### 3.4 Desired Levels of Service

At present, indications of desired levels of service are obtained from various sources including residents' feedback to Councillors and staff via service requests and correspondence and inspections by Council staff. 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, consumer 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
Population	Greater Hume Shire population 10,423 people. (Source: ABS 30 March 2012)	Greater Hume's population is expected to grow over the next 10 years as a result of Councils initiatives to attract to the rural lifestyle.	Minor impact as development continues.
Demographics	Increase in aging population 65+ represents 16.8% of the population and has increased 3.3% since 1981. Whereas the overall population is static to a 0.43% increase	The number of residents aged over 65 will continue to increase. This is consistent with the national trend toward an aging population and longer life expectancy.	Minor impact
Climate	The end of an extended drought two years ago has meant dealing with flood damage and problems that lay dormant during the drought	The problems from the flooding have been rectified and the stormwater drainage system is back to an acceptable level. The knowledge gained will be applied to ensure the next floods have minimal impact.	Future decisions to be based on knowledge gained.

### 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

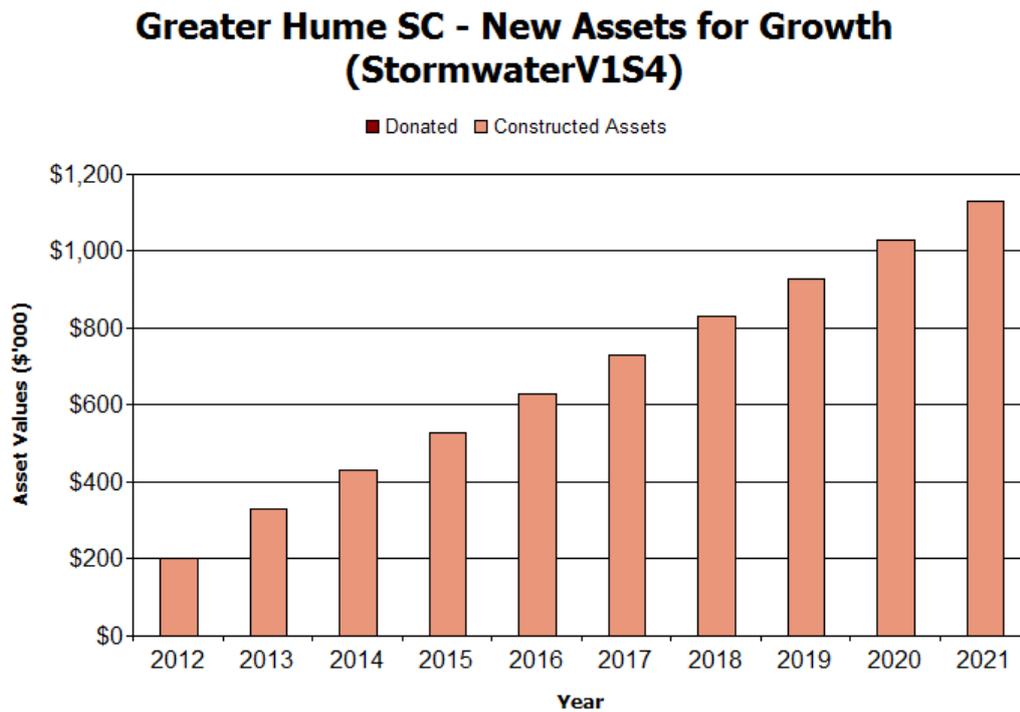
Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices include non-asset solutions, insuring against risks and managing failures.

Non-asset solutions focus on providing the required service without the need for the council to own the assets. Examples of non-asset solutions include providing services from existing infrastructure such as improving overland flow paths on private land.

#### 4.4 New Assets for Growth

The new assets required to meet growth will be acquired free of cost from land developments and constructed/acquired by Council via grants. The new contributed and constructed asset values are summarised in Figure 1.

Figure 1: New Assets for 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 operations 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.

Graphical representation of the asset lifecycle.



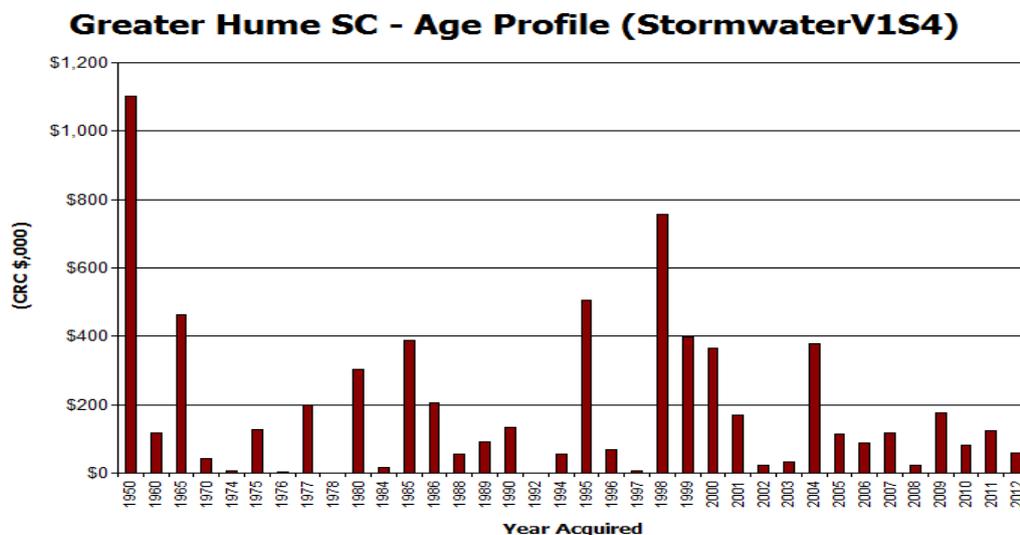
### 5.1 Background Data

#### 5.1.1 Physical parameters

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

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

Figure 2: Asset Age Profile



*Ages to the best of our knowledge*

### 5.1.2 Asset capacity and performance

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

### 5.1.3 Asset condition

Accurate asset condition information is not currently available and replacement predictions are done using estimated age of the infrastructure.

### 5.1.4 Asset valuations

The value of assets recorded in the asset register as at 30-6-2012 covered by this asset management plan is shown below.

Current Replacement Cost	\$6,794,024
Depreciable Amount	\$6,667,000
Depreciated Replacement Cost	\$4,906,063
Annual Depreciation Expense	\$66,670

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

Asset Consumption (Depreciation/Depreciable Amount)	1.0%
Asset renewal (Capital renewal exp/Depreciable amount)	0%
Annual Upgrade/New (Capital upgrade exp/Depreciable amount)	3.0%
Annual Upgrade/New (Including contributed assets)	3.0%

Council is currently renewing assets at 0% of the rate they are being consumed and increasing its asset stock by 3.0% each year. Renewal will increase as assets reach the end of their lives.

To provide services in a financially sustainable manner, Council will need to ensure that it is renewing assets at the rate they are being consumed over the medium-long term and funding the life cycle costs for all new assets and services in its long term financial plan.

### 5.1.5 Asset hierarchy

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

Council's service hierarchy is shown in Table 5.1.5.

Table 5.1.5: Asset Service Hierarchy

Service Hierarchy	Service Level Objective
Pipes and Box Culverts	Capacity to service all but extreme events
Pits	Clean as needed to maintain capacity
Open drains	Clean as needed to maintain capacity

## 5.2 Risk Management Plan

An assessment of risks associated with service delivery from infrastructure assets will identify critical risks that could result in loss or reduction in service from infrastructure assets or a 'financial shock' to the organisation. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, then 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

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Associated Costs
Blocked pits and Pipes	Road and property flooded	H	Inspection and maintenance program	Budgeted maintenance
Scouring at pipe outlets	Erosion and loss of headwalls	H	Inspection and maintenance program	Budgeted maintenance
Drainage pipes under roads	Scouring caused by hole in pipe resulting in road collapse	VH	Inspection and prompt reactive maintenance program	Budgeted maintenance

## 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.

### 5.3.1 Maintenance plan

Maintenance includes reactive, planned and specific maintenance work activities.

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

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

Specific maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repairing pits or headwalls, replacement of individual damaged pipes, etc. This work generally falls below the capital/maintenance threshold but may require a specific budget allocation.

Current maintenance expenditure levels are considered to be inadequate 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 operational staff using experience and judgement.

### 5.3.2 Standards and specifications

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

- Greater Hume Shire Council's specifications, standard operating procedures and safe work method statements
- AS/NZS 3500.3.2003 Plumbing and Drainage Part 3: Stormwater Drainage

### 5.3.3 Summary of future operations and maintenance expenditures

Future operations and maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Figure 4. Note that all costs are shown in 2010 dollar values.

Figure 4: Projected Operations and Maintenance Expenditure

### Greater Hume SC - Projected Operations and Maintenance Expenditure (StormwaterV1S4)



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 the 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 one of three methods provided in the 'Expenditure Template'.

- Method 1 uses Asset Register data to project the renewal costs for renewal years using acquisition year and useful life, or
- Method 2 uses capital renewal expenditure projections from external condition modelling systems (such as Pavement Management Systems), or
- Method 3 uses a combination of average *network renewals* plus *defect repairs* in the *Renewal Plan* and *Defect Repair Plan* worksheets on the '*Expenditure template*'.

Method 1 was used for this asset management plan.

The ranking criteria used to determine priority of identified renewal proposals is detailed in Table 5.4.1.

Table 5.4.1: Renewal Priority Ranking Criteria

Criteria	Weighting
Structural Integrity	30%
Function	30%
Safety	30%
Service	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; Re-lining of pipes to extend their lives.

#### 5.4.2 Renewal standards

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

- Greater Hume Shire Council's specifications, standard operating procedures and safe work method statements
- AS/NZS 3500.3.2003 Plumbing and Drainage Part 3: Stormwater Drainage
- Manufacturer's guidelines as applicable.

#### 5.4.3 Summary of projected renewal expenditure

Projected future renewal expenditures are forecast to increase over time as the asset stock ages.

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 capital works programs 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 estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed in Table 5.5.1.

Table 5.5.1 New Assets Priority Ranking Criteria

Criteria	Weighting
Insufficient Capacity	50%
Improved Quality – Public Health and Compliance Benefits	30%
Stormwater Drainage System Safety	20%

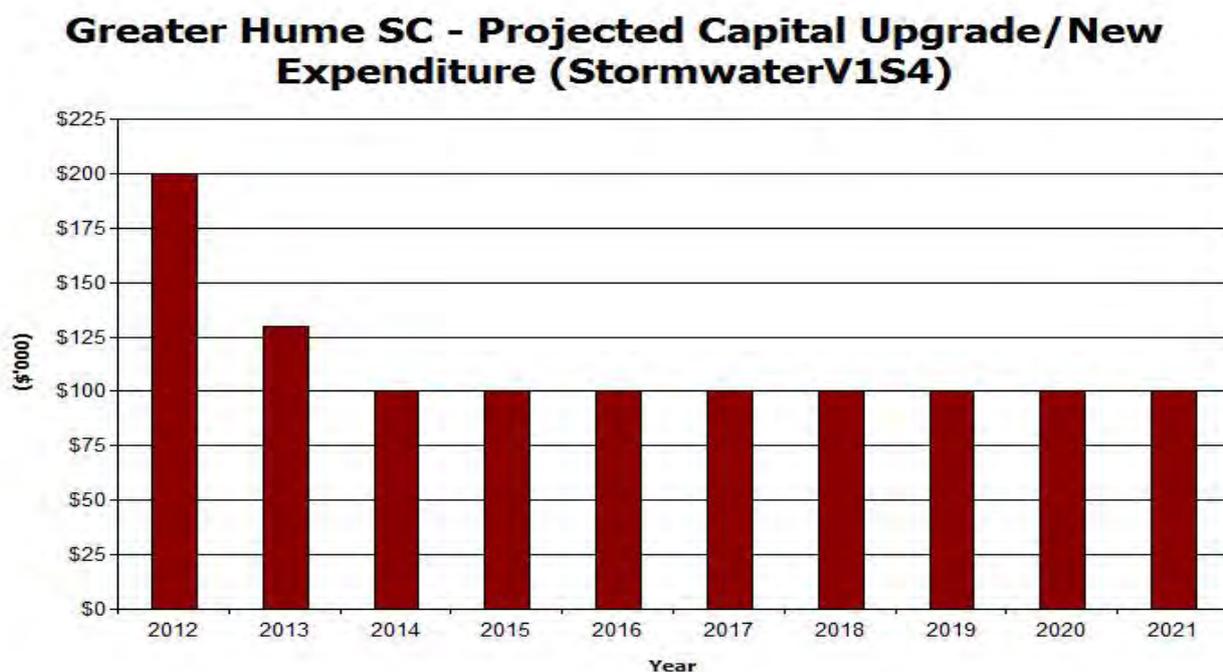
### 5.5.2 Standards and specifications

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 projected upgrade/new assets expenditure

Projected upgrade/new asset expenditures are summarised in Figure 6. The projected upgrade/new capital works program is shown in Councils long term financial budget. All costs are shown in current 2010 dollar values.

Figure 6: Projected Capital Upgrade/New Asset Expenditure



New assets and services are to be funded from 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.

At this stage council has no plans to dispose of any infrastructure.

## 6. Financial Summary

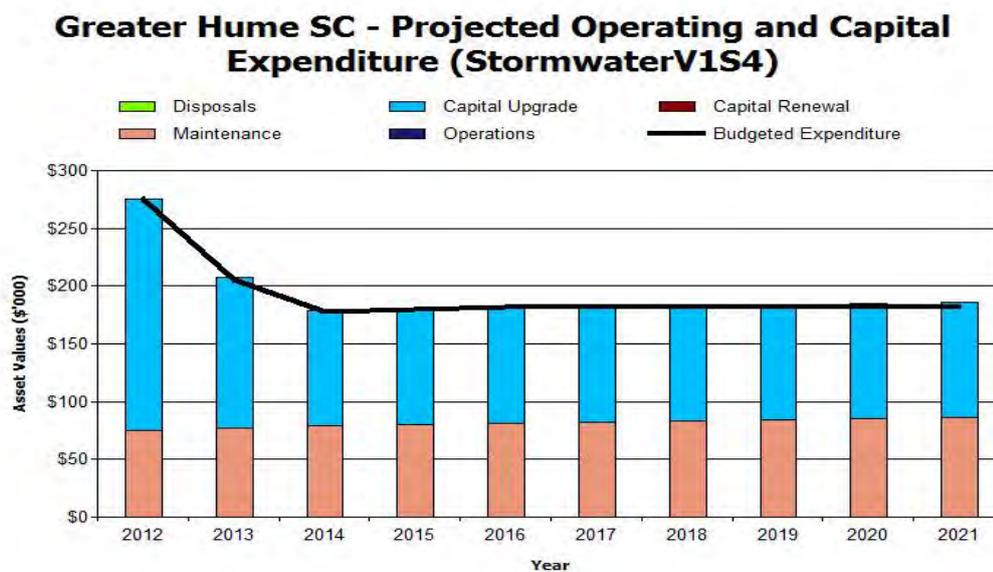
This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset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

### 6.1 Financial Statements and Projections

The financial projections are shown in Figure 7 for projected operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets), net disposal expenditure and estimated budget funding.

Note that all costs are shown in 2010 dollar values.

*Figure 7: Projected Operating and Capital Expenditure and Budget*



#### 6.1.1 Financial sustainability in service delivery

There are three 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/expenditures and medium term projected/budgeted expenditures over 5 and 10 years of the 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 operations and maintenance expenditure and asset consumption (depreciation expense). The life cycle cost for the services covered in this asset management plan is \$142,000 per year (operations and maintenance expenditure plus depreciation expense in year 1).

Life cycle costs can be compared to life cycle expenditure to give an indicator of sustainability in service provision. Life cycle expenditure includes operations, maintenance and capital renewal expenditure in year 1. Life cycle expenditure will vary depending on the timing of asset renewals. The life cycle expenditure at the start of the plan is \$75,000 (operations and maintenance expenditure plus budgeted capital renewal expenditure in year 1).

A shortfall between life cycle cost and life cycle expenditure is the life cycle gap.

The life cycle gap for services covered by this asset management plan is -\$67,000 per year (-ve = gap, +ve = surplus).

Life cycle expenditure is 52.9% of life cycle costs giving a life cycle sustainability index of 0.529

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

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

### *Medium term – 10 year financial planning period*

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

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

The projected operations, maintenance and capital renewal expenditure required over the 10 year planning period is \$81,000 per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$80,000 per year giving a 10 year funding shortfall of -\$1,000 per year and a 10 year sustainability indicator of 98%. This indicates that Council has 0.98 of the projected expenditures needed to provide the services documented in the asset management plan.

### Medium Term – 5 year financial planning period

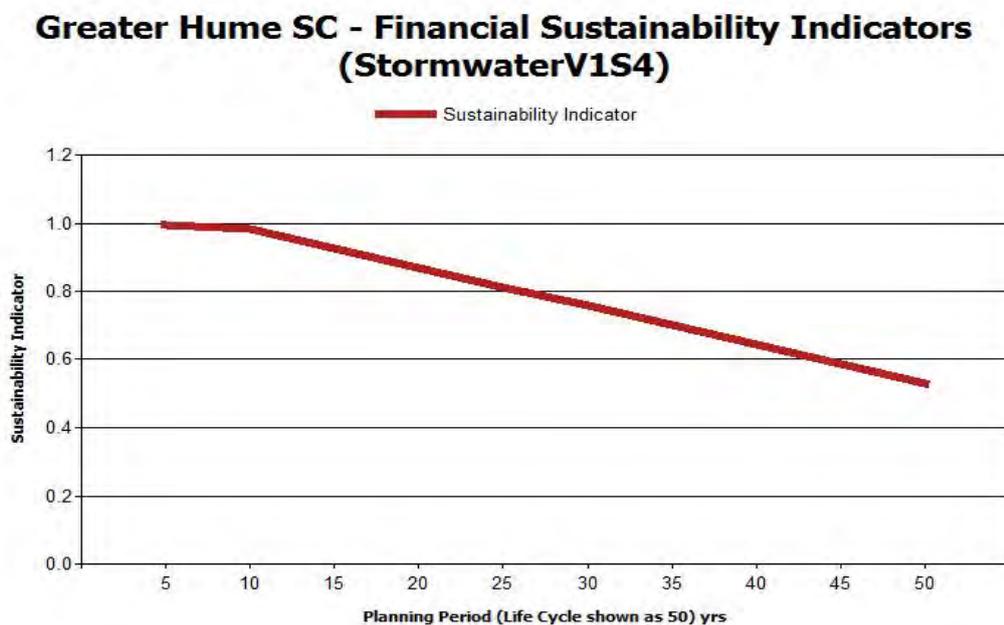
The projected operations, maintenance and capital renewal expenditure required over the first 5 years of the planning period is \$78,500 per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$77,800 per year giving a 5 year funding shortfall of \$700. This is 99% of projected expenditures giving a 5 year sustainability indicator of 0.99.

### Financial Sustainability Indicators

Figure 7A shows the financial sustainability indicators over the 10 year planning period and for the long term life cycle.

Figure 7A: Financial Sustainability Indicators



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

Because of the long life of the stormwater drainage assets renewals will not be needed until 2050 calculated on existing knowledge of instillation dates.

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.

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

### 6.1.2 Expenditure projections for long term financial plan

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

Expenditure projections are in current (non-inflated) values. Disposals are shown as net expenditures (revenues are negative).

Table 6.1.2: Expenditure Projections for Long Term Financial Plan (\$000)

Greater Hume SC >> Planned Expenditures for Long Term Financial Plan (StormwaterV1S4)					
Year End Jun-30	Total Operations Expenditure (\$'000)	Total Maintenance (\$'000)	Projected Capital Renewal (\$'000)	Planned Capital Upgrade/New (\$'000)	Net Disposals (\$'000)
2012	\$0.00	\$75.00	\$0.00	\$200.00	\$0.00
2013	\$0.00	\$77.21	\$0.00	\$130.00	\$0.00
2014	\$0.00	\$78.64	\$0.00	\$100.00	\$0.00
2015	\$0.00	\$79.75	\$0.00	\$100.00	\$0.00
2016	\$0.00	\$80.85	\$0.00	\$100.00	\$0.00
2017	\$0.00	\$81.95	\$0.00	\$100.00	\$0.00
2018	\$0.00	\$83.06	\$0.00	\$100.00	\$0.00
2019	\$0.00	\$84.16	\$0.00	\$100.00	\$0.00
2020	\$0.00	\$85.27	\$0.00	\$100.00	\$0.00
2021	\$0.00	\$86.37	\$0.00	\$100.00	\$0.00

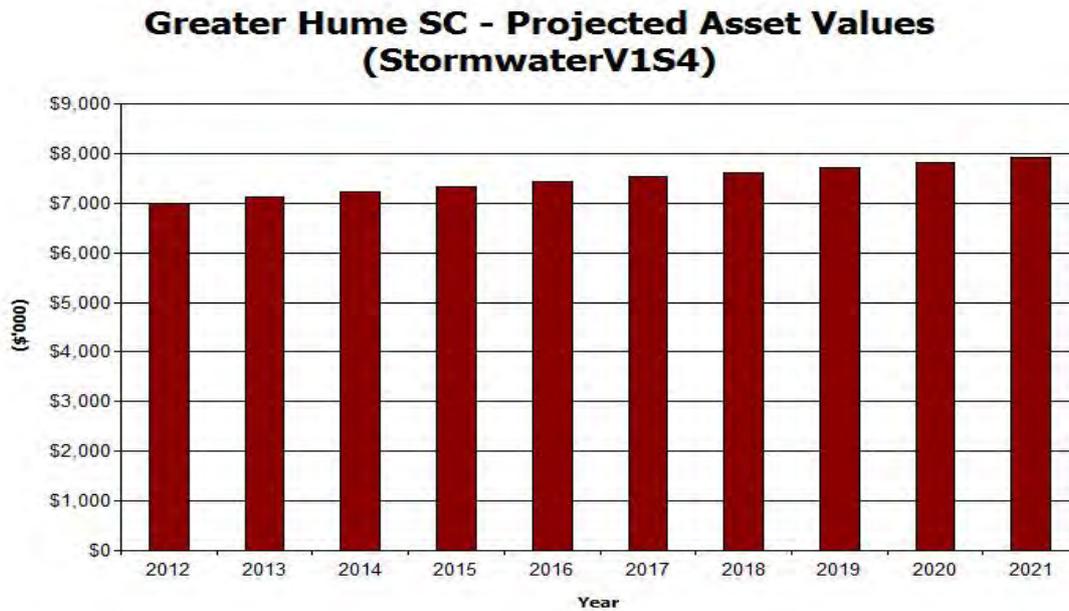
## 6.2 Funding Strategy

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

## 6.3 Valuation Forecasts

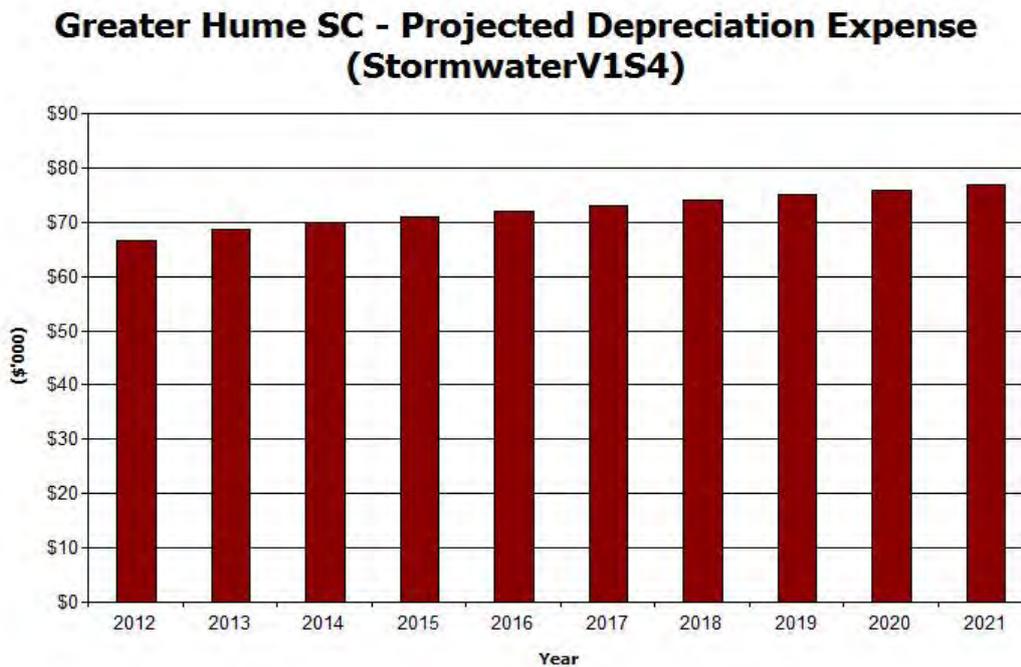
Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. Figure 9 shows the projected replacement cost asset values over the planning period in 2010 dollar values.

Figure 9: Projected Asset Values



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

Figure 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 Figure 11. The effect of contributed and new assets on the depreciated replacement cost is shown in the light colour bar.

Figure 11: Projected Depreciated Replacement Cost

### Greater Hume SC - Projected Depreciated Replacement Cost (StormwaterV1S4)



#### 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:

- The current levels of service will remain constant for the life of this plan
- The treatment and maintenance costs are based on councils current schedule of rates
- The useful life is, as stated.

## 7. Asset Management Practices

### 7.1 Accounting/Financial Systems

#### 7.1.1 Accounting and financial systems

Greater Hume Shire Council uses Civica PCS (Practical) as its primary accounting & financial system.

#### 7.1.2 Accountabilities for financial systems

The Chief Financial Officer is accountable for the financial system

#### 7.1.3 Accounting standards and regulations

AAS27, Financial reporting by Local Governments, Australian Accounting Standards, June 1996.

AASB1031, Materiality, Australian Accounting Standards Board, July 2004.

AASB116, Property, Plant and Equipment, Australian Accounting Standards Board, July 2004

#### 7.1.4 Capital/maintenance threshold

Council does not have a Capital/maintenance threshold Policy

#### 7.1.5 Required changes to accounting financial systems arising from this AM Plan

### 7.2 Asset Management Systems

#### 7.2.1 Asset management system

Greater Hume Shire Council uses BizeAsset as its asset management system.

#### 7.2.2 Asset registers

The asset register is located within the BizeAsset asset management system.

#### 7.2.3 Linkage from asset management to financial system

All links between the asset management system and the financial system are manual. These are not linked systems.

#### 7.2.4 Accountabilities for asset management system and data

The Manager Assets is accountable for maintaining, developing and updating the asset management system

### 7.2.5 Required changes to asset management system arising from this AM Plan

The continued updating and refining of the asset management system is required to improve the accuracy and reliability of the data, breaking the assets into components with different life expectancy and maintenance schedules and verifying the costs with actual costs when projects are completed.

## 7.3 Information Flow Requirements and Processes

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

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

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

- The projected Works Program and trends,
- The resulting budget and long term financial plan expenditure projections,
- Financial sustainability indicators.

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

## 7.4 Standards and Guidelines

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

- AAS27, Financial reporting by Local Governments, Australian Accounting Standards, June 1996.
- AASB1031, Materiality, Australian Accounting Standards Board, July 2004.
- AASB116, Property, Plant and Equipment, Australian Accounting Standards Board, July 2004
- 2010-2013 Management Plan Greater Hume Shire Council
- International Infrastructure Management Manual, Institute of Public Works Engineering Australia, 2006
- Local Government Asset Accounting Manual, Department of Local

## 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 the organisation's long term financial plan and Community/Strategic Planning processes and documents,
- The degree to which 1-5 year detailed works programs, budgets, business plans and organisational structures take into account the 'global' works program trends provided by the asset management plan;

### 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	Update and improve data in asset register	Manager Assets	Staff time	ongoing
2	Condition rating using CCTV	Works Manager	Inspection budget	ongoing
3	Risk Management-develop risk management plan	Risk Manager	Staff time	
4	Refine job costing for reporting and managing purposes	Director Engineering Chief financial officer	Staff Time	ongoing
5	Valuation unit costs –review unit rates	Director Engineering	Staff Time	ongoing
6	Community consultation-acceptable levels of service	General manager	Staff Time	ongoing

### 8.3 Monitoring and Review Procedures

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

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

## References

- IPWEA, 2006, *International Infrastructure Management Manual*, Institute of Public Works Engineering Australia, Sydney, [www.ipwea.org.au](http://www.ipwea.org.au).
- IPWEA, 2008, *NAMS.PLUS Asset Management* Institute of Public Works Engineering Australia, Sydney, [www.ipwea.org.au/namsplus](http://www.ipwea.org.au/namsplus).
- IPWEA, 2009, *Australian Infrastructure Financial Management Guidelines*, Institute of Public Works Engineering Australia, Sydney, [www.ipwea.org.au/AIFMG](http://www.ipwea.org.au/AIFMG).
- IPWEA, 2011, *Asset Management for Small, Rural or Remote Communities* Practice Note, Institute of Public Works Engineering Australia, Sydney, [www.ipwea.org.au/AM4SRRC](http://www.ipwea.org.au/AM4SRRC).

## Appendices

Appendix A Maintenance Response Levels of Service

To be developed

Appendix B Abbreviations

Appendix C Glossary

**Appendix A Maintenance Response Levels of Service**

To be developed.

## Appendix B Abbreviations

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

## Appendix C Glossary

### Annual service cost (ASC)

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

### Asset

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

### Asset class

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

### Asset condition assessment

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

### Asset management (AM)

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

### Average annual asset consumption (AAAC)\*

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

### Borrowings

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

### Capital expenditure

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

### Capital expenditure - expansion

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

the provision of an oval or park in a new suburb for new residents.

### **Capital expenditure - new**

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

### **Capital expenditure - renewal**

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

### **Capital expenditure - upgrade**

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

### **Capital funding**

Funding to pay for capital expenditure.

### **Capital grants**

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

### **Capital investment expenditure**

See capital expenditure definition

### **Capitalisation threshold**

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

### **Carrying amount**

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

### **Class of assets**

See asset class definition

### **Component**

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

### **Cost of an asset**

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

### **Current replacement cost (CRC)**

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

### **Depreciable amount**

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

**Depreciated replacement cost (DRC)**

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

**Depreciation / amortisation**

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

**Economic life**

See useful life definition.

**Expenditure**

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

**Fair value**

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

**Funding gap**

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

**Heritage asset**

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

**Impairment Loss**

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

**Infrastructure assets**

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

**Investment property**

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

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

**Key performance indicator**

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

**Level of service**

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

## Life Cycle Cost

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

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

## Loans / borrowings

See borrowings.

## Maintenance

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

- **Planned maintenance**  
Repair work that is identified and managed through a maintenance management system (MMS). MMS activities include inspection, assessing the condition against failure/breakdown criteria/experience, prioritising scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.
- **Reactive maintenance**  
Unplanned repair work that is carried out in response to service requests and management/supervisory directions.

- **Significant maintenance**  
Maintenance work to repair components or replace sub-components that needs to be identified as a specific maintenance item in the maintenance budget.
- **Unplanned maintenance**  
Corrective work required in the short-term to restore an asset to working condition so it can continue to deliver the required service or to maintain its level of security and integrity.

## Maintenance and renewal gap

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

## Maintenance and renewal sustainability index

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

## Maintenance expenditure

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

## Materiality

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

**Modern equivalent asset**

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

**Net present value (NPV)**

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

**Non-revenue generating investments**

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

**Operations expenditure**

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

**Operating expense**

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

**Pavement management system**

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

**PMS Score**

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

**Rate of annual asset consumption**

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

**Rate of annual asset renewal**

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

**Rate of annual asset upgrade**

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

**Recoverable amount**

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

**Recurrent expenditure**

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

**Recurrent funding**

Funding to pay for recurrent expenditure.

**Rehabilitation**

See capital renewal expenditure definition above.

**Remaining useful life**

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

**Renewal**

See capital renewal expenditure definition above.

**Residual value**

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

**Revenue generating investments**

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

**Risk management**

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

**Section or segment**

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

**Service potential**

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

**Service potential remaining**

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

**Strategic Longer-Term Plan**

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

**Specific 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.

**Sub-component**

Smaller individual parts that make up a component part.

**Useful life**

Either:

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

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

**Value in Use**

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

entity would, if deprived of the asset, replace its remaining future economic benefits.

Source: IPWEA, 2009, Glossary