



Greater Hume Shire

simply greater



Greater Hume Transport Asset Management Plan

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Asset Management for Small, Rural or Remote Communities Practice Note

The Institute of Public Works Engineering Australia.

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1. EXECUTIVE SUMMARY

Context

Council provides a road network in partnership with the Roads and Maritime Services to ensure that Greater Hume has an extensive transport network that is accessible, safe and efficient for motorists, cyclists and pedestrians.

The challenge is to maintain the road network when faced with natural disasters (floods, fire etc), changing use (increased haulage of grain, logging, etc) and the general aging of the network.

The Transport Service

The transport network comprises:

- National Highways (Hume Freeway)
- State Roads (Olympic Hwy, Riverina Hwy and Little Billabong/Tumbarumba Rd) funded and maintained by the Roads and Maritime Services with Council being contracted to maintain sections of MR78 (Olympic Hwy) and MR284 (Little Billabong/Tumbarumba Rd). It is noted that Council has the responsibility for the maintenance of the area outside the trafficable lanes of state roads within the urban areas
- All other local and regional roads are maintained by Council

Road Hierarchy

CLASS	DESCRIPTION	RESPONSIBLE AUTHORITY	CONSTRUCTION STANDARD
Class 1	National Highways	RMS	11m overall seal
Class 2	State Roads	RMS	9m overall seal
Class 3	Regional Roads	GHSC	8m overall seal
Class 4	Local Sealed Roads	GHSC	7m overall seal
Class 5	Gravel Roads (Major)	GHSC	8m overall gravel
Class 6	Gravel Roads (Minor)	GHSC	6m overall gravel
Class 7	Formed Roads	GHSC	6m overall formation
Class 8	Non-Formed Roads	GHSC	N/A

- Bridges and Major Culverts
- Footpaths and Kerb and Channel

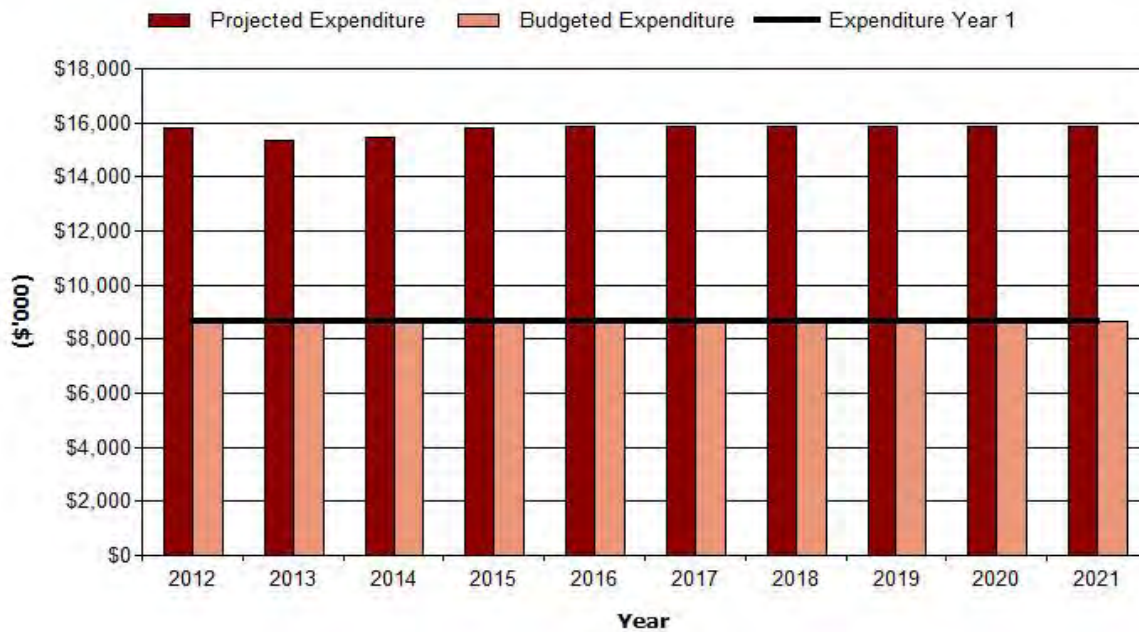
Council's infrastructure assets (including roads, bridges, culverts, footpaths and kerb and gutter) have a current replacement value of \$240.2 million.

What does it Cost?

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 \$15,592,000 per year.

Council's estimated available funding for this period is \$8,502,000 per year which is 55% of the cost to provide the service. This is a funding shortfall of 45% per year. Projected and budgeted expenditure are shown in the graph below.

Greater Hume SC - Projected and Budget Expenditure for (TransportV1S1)



Greater Hume SC >> Table 6.1 Sustainability of Service Delivery for (TransportV1S1)

Executive Summary - What does it cost?

Cost over 10 years	\$155,919
Cost per year	\$15,592
Available funding over 10 years	\$85,020
Funding per year	\$8,502
Funding shortfall	-\$7,090
Percentage of cost	55%

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

Life Cycle Cost [depreciation + ops. and maint. exp year 1]	\$11,146
Life Cycle Exp. [capital renewal exp. + ops + mtce exp. yr 1]	\$8,502
Life Cycle Gap [life cycle expenditure - life cycle cost [-ve = gap]	-\$2,644
Life Cycle Sustainability Indicator [life cycle expenditure / LCC]	76.30%

Medium Term (10 yrs) Sustainability

10 yr Ops, Maint & Renewal Projected Expenditure	\$15,592
10 yr Ops, Maint & Renewal Planned (Budget) Exp	\$8,502
10 yr Funding Shortfall [10 yr proj. exp. - planned (Budget) exp.]	-\$7,090
10 yr Sustainability Indicator [10 yr planned exp. / proj. exp.]	55%

Short Term (5 yrs) Sustainability

5 yr Ops, Maint & Renewal Projected Expenditure	\$15,497
5 yr Ops, Maint & Renewal Planned (Budget) Exp	\$8,502
5 yr Funding Shortfall [5 yr proj. exp. - planned (budget) exp.]	-\$6,995
5 yr Sustainability Indicator [5 yr planned exp. / proj. exp.]	55%

AIFMG Financial Sustainability Indicator

8. NPV Budget Expenditure / NPV Projected Expenditure	25%
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Councils' present funding levels are insufficient to continue to provide existing services at proposed levels in the medium term.

What we will do

Council plans to provide Transport services for the following:

- Operation, maintenance, renewal and upgrade of Roads, Bridges, Footpaths and K&G. to meet service levels set by council in annual budgets.

• Major renewals/upgrades	Original Budget 2011/2012	FORECAST 2012/2013	FORECAST 2013/2014
• Urban Streets Construction - R2R	\$420,000	\$250,000	\$483,000
• Urban Streets Construction Program			
• Urban Streets Reseal Program	\$50,000	\$30,000	\$100,000
• Coppabella Road	\$437,500	\$3,062,500	
• Rural Road Construction Program	\$100,000		
• Rural Road Construction Program - R2R	\$620,000	\$350,000	
• Rural Roads Local - Reseals	\$465,000	\$500,000	\$450,000
• Regional Block Grant Capital Program	\$958,520	\$1,075,000	\$1,174,200
• Regional Roads Repair Program	\$710,960	\$728,730	\$746,950
• Rural Local Roads - Gravel (Resheeting)	\$520,000	\$575,000	\$600,000
• Bridges / Major Culverts – R2R	\$50,000	\$300,000	
• Footpaths	\$60,000	\$15,000	\$60,000
• Kerb and Channel	\$105,000	\$120,000	\$120,000

What we cannot do

Council does not have enough funding to provide all services at the desired service levels or provide new services. Works and services that cannot be provided under present funding levels are:

- Upgrading of existing assets
- Construction of new assets

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:

- Failure to maintain existing Roads and Bridges to a safe and serviceable standard
- Failure to inspect existing Roads and Bridges
- Major weather events that will destroy roads and stop projects

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

- Documenting all inspections and complaints
- Prioritising all works required
- Ensuring sufficient funding to maintain the essential infrastructure

The Next Steps

The actions resulting from this asset management plan are:

- Develop service levels for all assets covered in this plan
- Develop risk register for all assets covered in this plan
- Develop works programs to maintain all assets covered in this plan
- Develop asset management strategy for all assets covered in this plan
- Develop lifecycle management plans for all assets covered in this plan

Questions you may have

What is this plan about?

This asset management plan covers the infrastructure assets that serve the Greater Hume Shire Community's transport needs. These assets include roads, bridges and footpaths throughout the council area that enable people to travel safely throughout the shire.

What is an Asset Management Plan?

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

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

Why is there a funding shortfall?

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

Many of these assets are approaching the later years of their life and require replacement, service levels from the assets are decreasing and maintenance costs are increasing.

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

What options do we have?

Resolving the funding shortfall 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 trade-offs 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. Consulting with the community to ensure that transport services and costs meet community needs and are affordable,
7. Developing partnership with other bodies, where applicable to provide services;
8. Seeking additional funding from governments and other bodies to better reflect a 'whole of government' funding approach to infrastructure services.
9. Consider making an application for a special rating variation to increase the quantum of funds available for asset management.

What happens if we don't manage the shortfall?

It is likely that council will have to reduce service levels in some areas, unless new sources of revenue are found. For Roads and Bridges, the service level reduction may include reduced level in grading and maintenance on roads and reduced tonnage limits on roads and bridges as they age.



What can we do?

Council can develop options and priorities for future transport 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 or reduce its transport services mix 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 Transport AMP achieves this by setting standards, service levels and programmes that Council will develop and deliver. The standards and service levels have been set in accordance with user needs, regulations, industry practice and legislative codes of practice.

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

GHSC Road Strategy

DLG Integrated Planning Mandates 2009

Greater Hume Shire Council Delivery Program 2012/13 – 2015/16

Greater Hume Shire Council Community Strategic Plan 2011— 2020

This Transport AMP covers the following infrastructure assets which are summarised in Table 2.1
Regional Roads MR125, MR211, MR331, MR370, MR384 and MR547

Local Sealed Roads

Local Unsealed Roads

Footpaths

Bridges

Kerb and Channel

The 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
Regional Roads	284km	\$52,992,214
Rural Sealed Roads	646 km	\$81,633,418
Rural Unsealed Roads	1021 km	\$37,627,248
Urban Sealed Roads	88 km	\$14,334,148
Urban Unsealed Roads	15 km	\$936,214
Bridges and Major Culverts	64 Bridges, 95 Box Culverts and 18 Pipe Culverts	\$42,682,961
Footpaths	20.4 km concrete path 5km gravel path	\$2,177,792
Kerb and Channel	81 km	\$7,787,167
TOTAL		\$240,171,162

Data extracted from "practical" councils finance system and "BizeAsset" councils asset management system

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.¹

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 trading off 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:

Greater Hume Shire will be a prosperous rural Shire with vibrant sustainable communities, offering excellent quality of life, and supported by a thriving agricultural, commercial and industrial base that capitalizes on the unique opportunities available through the highest standards of ethics, service and efficiency.

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.

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

¹ IPWEA, 2006, *IIMM* Sec 1.1.3, p 1.3.

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

Goal	Outcome	Strategy
Progressive leadership, good governance, efficient and effective service	Effective strategic management planning and performance management	Develop, implement and maintain Council's Risk Management Plan, policies and procedures
	Skilled, committed and professional staff in a safe and supportive environment	Ensure safe work practices through compliance with Occupational, Health and Safety and Risk Management policies and procedures
	Financial sustainability and accountable performance management	Provide financial services to support Council's operations and to meet sustainable planning, reporting and accountability requirements
	Leading edge information and communications service that support efficient operations and service delivery	Provide an efficient, accurate, secure and user friendly record keeping system

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

2.4 Core and Advanced Asset Management

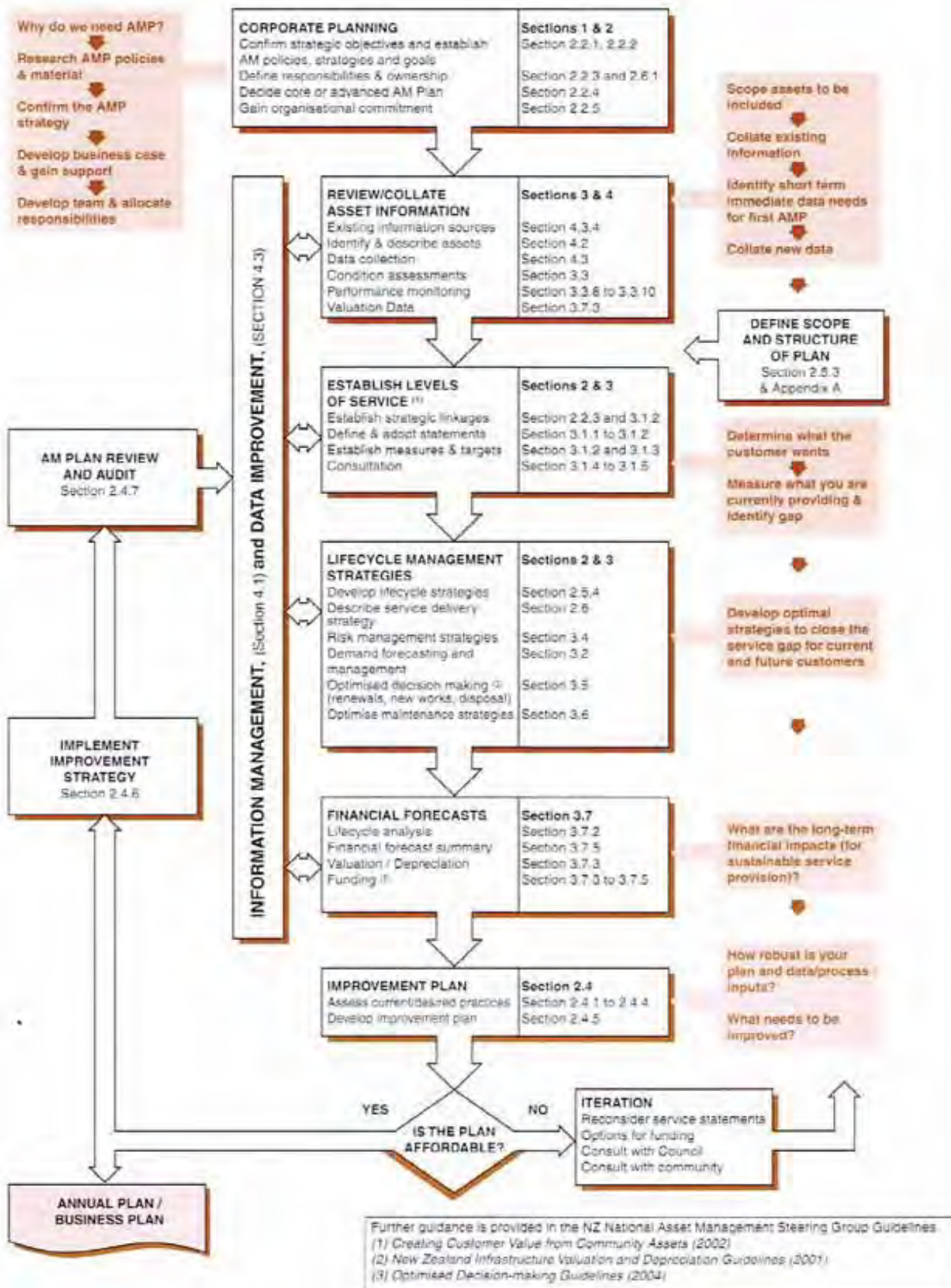
This asset management plan is prepared as a first cut 'core' asset management plan in accordance with the International Infrastructure Management Manual². It is prepared to meet minimum legislative and organisational requirements for sustainable service delivery and long term financial planning and reporting. Core asset management is a 'top down' approach where analysis is applied at the 'system' or 'network' level.

In some instances, available data on asset attributes and service levels, documented risks, valuations, detailed works programs and the like, are incomplete. A vital ingredient of the Asset Management Plan is the Improvement Plan (Section 8). Incorporation of the task outcomes into revisions of the Asset Plan will lead to refinements and improved accuracy in the data and the Plan with which asset custodians can be confident in their primary role as managers of the assets.

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

2.5 Community Consultation

This 'core' asset management plan is prepared to facilitate community consultation initially through feedback on public display of draft asset management plans prior to adoption by 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.



Fig

2.2 Road Map for Preparing an Asset Management Plan Source: IIMM Fig 1.5.1, p1.111

3. LEVELS OF SERVICE

3.1 Customer Research and Expectations

Council has not carried out any research on customer expectations. A customer satisfaction survey will be undertaken in the first half of 2012 which will inform future updates of the Asset Management Plan

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.
National Asset Management Framework Legislation 2010	Focuses on long term financial sustainability and provides a mandate to have long term strategy, financial statements and annual reporting mechanisms. AM plans are likely to be audited.
DLG Integrated Planning NSW	Key requirement is to integrated community plans with operational and delivery plans.
Roads Transport (Safety and Traffic Management) Act 1993	Facilitates the adoption of nationally consistent road rules in NSW, the Australian Road Rules. It also makes provision for safety and traffic management on roads and road related areas including alcohol and other drug use, speeding and other dangerous driving, traffic control devices and vehicle safety accidents
Work Health and Safety Act And regulations	Aims to secure the health, safety and welfare of people at work. It lays down general requirements which must be met at places of work in New South Wales. The provisions of the Act cover every place of work in New South Wales. The Act covers self-employed people as well as employees, employers, students, contractors and other visitors.
The Protection of the Environment Operations Act 1997 (POEO Act)	Is the key piece of environment protection legislation administered by Department of the Environment and Climate Change (DECC). The POEO Act enables the Government to set out explicit protection of the environment policies (PEPs) and adopt more innovative approaches to reducing pollution.
Disability Discrimination Act	Sets out the responsibilities of Council and staff in dealing with access and use of public infrastructure.

Legislation	Requirement
Australian Accounting Standards.	<p>Sets out the financial reporting standards relating to infrastructure assets. Standards of particular relevance to Infrastructure Assets include:</p> <ul style="list-style-type: none"> • AASB116 Property, Plant & Equipment — prescribes requirements for recognition and depreciation of property, plant and equipment assets • AASB136 Impairment of Assets — aims to ensure that assets are carried at amounts that are not in excess of their recoverable amounts • AASB1021 Depreciation of Non-Current Assets — specifies how depreciation is to be calculated • AAS1001 Accounting Policies — specifies the policies that Council is to have for recognition of assets and depreciation • AASB1041 Accounting for the reduction of Non-Current Assets — specifies the frequency and basis of calculating depreciation and revaluation basis used for assets • AAS1015 Accounting for acquisition of assets — method of allocating the value to new assets on acquisition
Australian Standards	<p>Including:</p> <ul style="list-style-type: none"> • Australian Standard 1742.3-1996 — Manual of uniform traffic control devices - Traffic control devices for works on roads • Guide to Traffic Engineering Practice (part 14 Bicycles) • Manual of Uniform Traffic Control Devices — Part 3 - Traffic Control Devices for Works on Roads • Integrated Asset Management Guidelines for Road Networks APR202: 2002 Austroads • AS/NZS 4360:2004 Risk Management • HB 4360:2004 Risk Management Guidelines — Companion to AS/NZS 4360:2004

3.3 Current Levels of Service

Council is developing defined service levels at two terms.

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

In April 2012 IRIS Research undertake a community survey on behalf of Council. The survey is based on a gap analysis:- that is determining the importance rating of a particular service and the determining the satisfaction level, thus providing a service gap that can be analysed.

The larger the gap between importance and satisfaction, the larger the gap between Council's performance in the provision of a service and residents' expectations.

Of the nine services rated as priority 1 maintenance of sealed roads was the highest priority (largest gap), maintaining towns streets fourth highest priority and maintaining unsealed roads of the fifth highest priority.

The results of the community survey indicate that Council's determination to commence work on a special rating variation to increase spending on road maintenance, resealing and gravel resheeting is supported by the wider community.

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 opening hours, cleansing frequency, mowing frequency, etc.
- Maintenance – the activities necessary to retain assets as near as practicable to its original condition (eg; road patching, unsealed road grading, building and 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 road resurfacing and pavement reconstruction, pipeline replacement and building component replacement),
- Upgrade – the activities to provide a higher level of service (eg; widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (eg; a new library).

Council is documenting current service levels with the road hierarchy and preparing desired levels required to maintain the road network in the appropriate condition to ensure service levels are adequate and whole of life costs are kept to a minimum. Proposed design and service levels are included in Appendix A.

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, 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

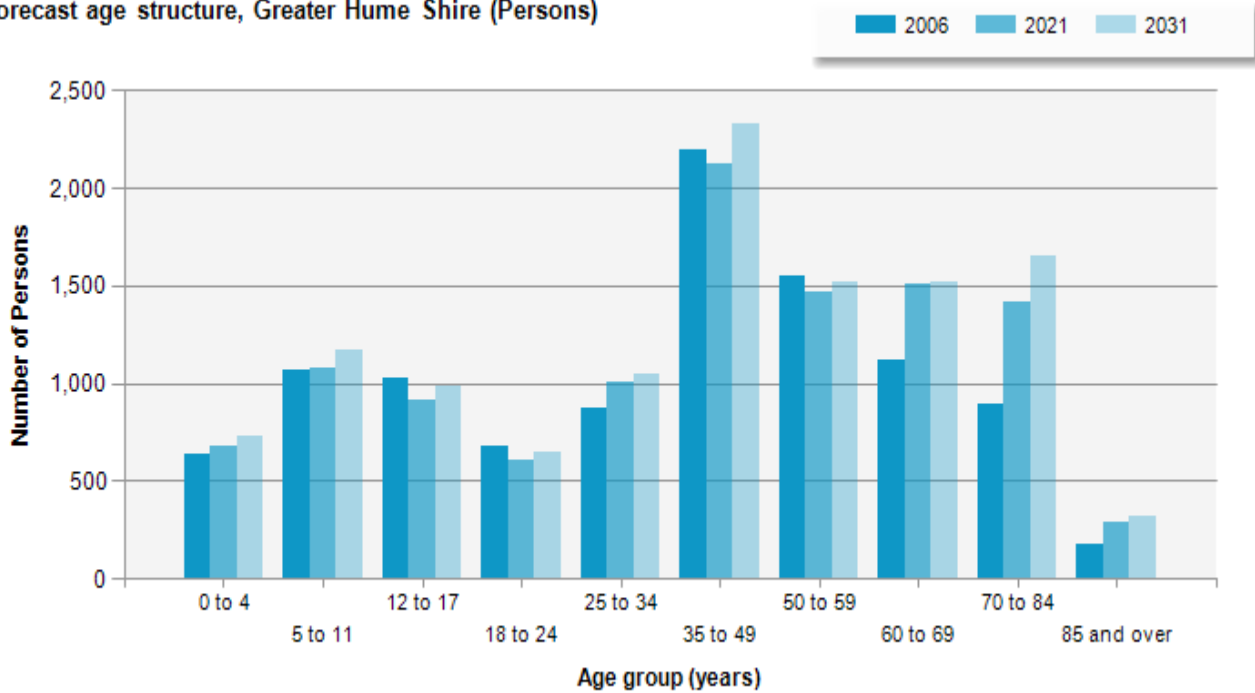
Factors affecting demand include population change, changes in demographics, seasonal factors, vehicle ownership, consumer preferences and expectations, economic factors, agricultural practices, environmental awareness, etc.

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
Population	10,447 (ABS Cat No 3218.0 as at 30 June 2011). The population increased by 2.15% between the 2006 and 2011 censuses.	Greater Hume's population is expected to grow over the next 10 years Future growth is likely to occur as a result of Council initiatives such as continued attraction to rural lifestyle	Minor impact as road congestion increases
Demographics	Increase in ageing population 65+ represents 16.8% of the population and has increased by 3.3% since 1981. Whereas the overall population is static to a 0.43% increase	The number of aged over 65 will continue to increase. This is consistent with the national trend towards an ageing population and longer life expectancy	Increase in demand for safe, multi-use footpaths linking CBD and other infrastructure Increased demand for accessibility for mobility impaired.

Forecast age structure, Greater Hume Shire (Persons)



Data extracted from Greater Hume Shire population forecasts – Forecast id®2011

4.2 Changes in Technology

Technology changes are forecast to affect the delivery of services covered by this plan. Technological changes, more particularly those related to climate change, energy consumption patterns and water usage are forecast to have some effect on service delivery.

Table 4.2. Changes in Technology and Forecast effect on Service Delivery

Technology Change	Effect on Service Delivery
Increased tonnage allowed on Semi-trailers and B-doubles	Increased maintenance costs due to impact from increased weight.
Introduction of new machinery for road maintenance	Reduced costs, increased productivity \$ OH&S
Asset data capture by video inspection and the transformation onto Councils GIS	Spatial location and condition of assets able to be verified from GIS reducing the need for reactive inspections
Road renewal treatments Increase residual life and decreased lifecycle costs	Improvements in road design and pavement materials Increased resheet/ seal life
Closures within country rail system	Increased heavy vehicles used to transport primary production.

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. 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 aquatic centres and libraries that may be in another council area or public toilets provided in commercial premises.

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.

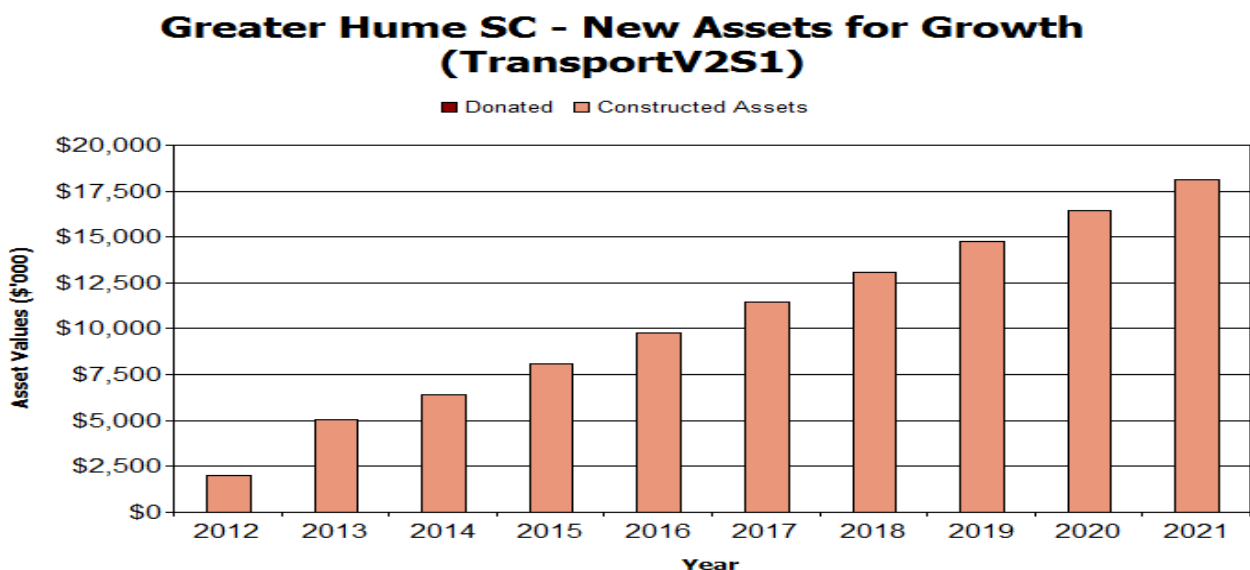
Table 4.3: Demand Management Plan Summary

Service Activity	Demand Management Plan
Community Engagement	Engage with the community to identify justifiable community needs from other expectations and consider only community needs consistent with Council's policies
Customer Requests	Analyse customer requests to optimise the use and performance of existing road services and look for non-asset based solutions to meet demand for services
Traffic load and volume control	Improved road and pavement performance through road mass restrictions and reducing traffic volumes
Explanatory marketing and education campaigns	Help modify community behaviour through explanatory marketing and education campaigns

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. 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 should be 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 (referred to in Section 3) while optimising life cycle costs. To undertake life cycle asset management, means considering all management options and strategies as part of the asset lifecycle, from planning to disposal. The objective of managing the assets in this manner is to look at long- term cost impacts (or savings) when making asset management decisions. Fig 5.1 below provides a graphical representation of the asset lifecycle including each of the stages an asset passes through during its life.



Figure 5.1 Asset Lifecycle

5.1 Background Data

All infrastructure assets, which are the responsibility of Council, are being managed with a long-term view and a whole-of-life approach. That is to say, the assets are managed from installation, through various maintenance phases until renewal, disposal or upgrade is required.

This section reviews the processes required for the effective management, maintenance, renewal and upgrade of assets.

The lifecycle management plans outline for each asset class:

The objectives for the asset class.

Supporting data, including:

- key lifecycle management issues;
- physical parameters and values;
- asset capacity / performance;
- asset condition; and historical expenditure.

The management strategies to achieve the levels of service in the following work categories:

- operations and maintenance;
- renewals;
- and new works.

Council, as asset owner is committed to maintaining its assets to ensure stakeholders' desired levels of service are maintained at sustainable levels commensurate with affordable expectations. To meet this requirement, Council seeks to match funding levels, condition and community expectations.

Some of the key lifecycle issues are that:

- There is a need to investigate forward investment required for the upgrading of existing facilities.
- There has not been a recorded significant shortfall in expenditure in the previous decade.
- Provisions have been made to deal with demand for cyclical maintenance within the next 10 to 20 years.
- Potential development in formerly semi-urban areas may lead to increasing usage and demand which may prove to be beyond the pavement strengths and carriageway widths of existing roads and potentially overload stormwater and wastewater management systems.
- The research work on predictive modelling of deterioration needs to be continued, to enable understanding of asset component lives and justify planned increases in rehabilitation /expansion expenditure.

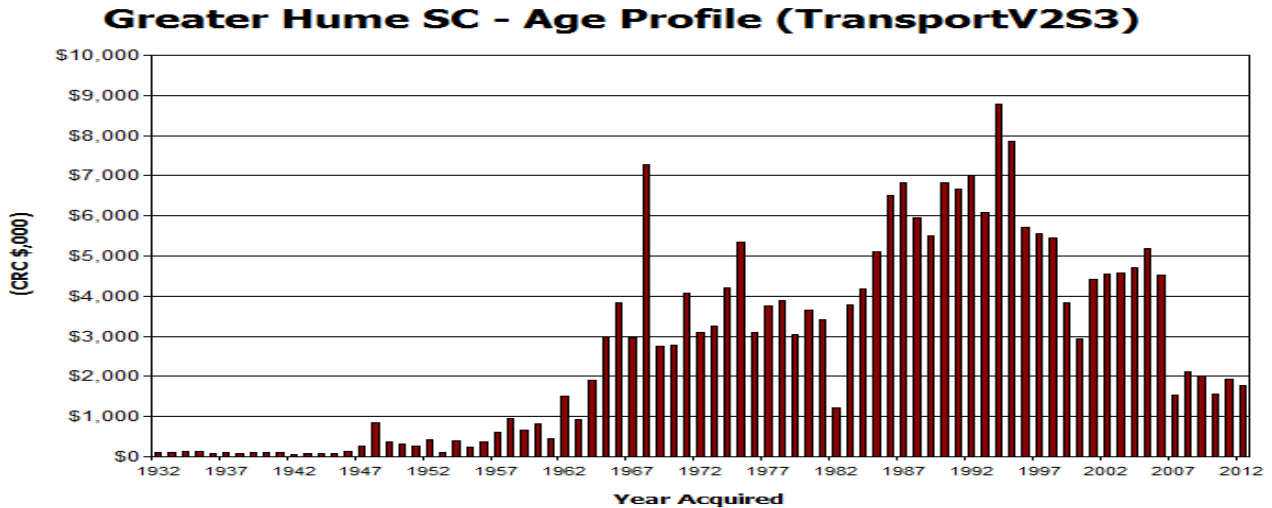
5.1.1 Physical parameters

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

These assets combine to provide transport and access corridors for the residents and visitors of the Greater Hume Shire

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

Figure 2: Asset Age Profile



Confidence in the age profile information is not high as we do not have accurate ages for roads. A more accurate age profile will be developed in future revisions of the asset management plan.

Plans showing some of the Transport Assets are included in the BizeAsset asset management system via links with some scanned plans and we have hard copies hanging in vertical files at the Culcairn office

5.1.2 Asset capacity and performance

Council's services should be 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
Road Resealing	Resealing has not been maintained as per proposed Road Strategy at 10 - 12 years for Regional Roads and 12 – 15 years for local roads.
Pavement Resheeting	Resheeting of unsealed local roads, as per proposed Road Strategy. There may be low trafficked local roads that have exceeded the recommended criteria
Kerb and Gutter	Kerb and guttering in urban areas still consists of some unformed drains, which do not meet the required level of service.
Footpaths	Some asphaltic concrete and paved footpaths are not providing a satisfactory level of surface and require upgrading to concrete. Some footpaths are unformed and require upgrading.

Asset condition

Condition Rating Methods

The condition rating methods adopted varies across the asset types. For roads and road-related assets, attributes and rating scales developed by the Roads and Traffic Authority, NSW and modified in-house, are used.

Bridges and major culverts were rated in house by using methods developed by the Roads and Traffic Authority,

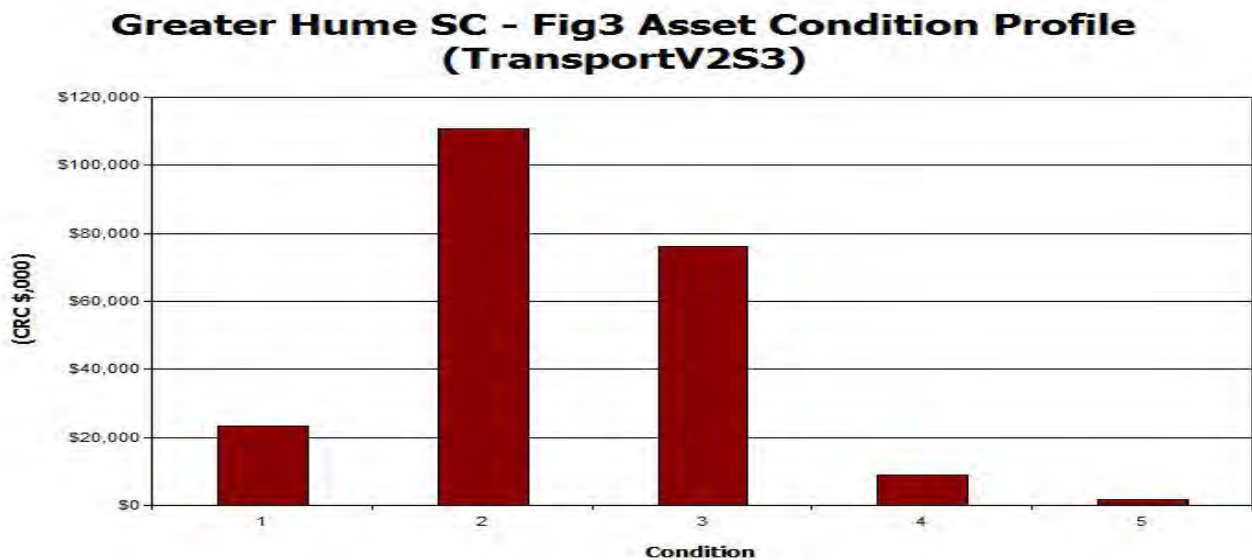
Other asset types are to have rating methodologies developed along similar lines. The systematic approach is in line with procedures outlined in IIMM (ref. 14).

Council's preferred practice is to re-rate assets every 3-5 years to ensure that those assets nearing the end of their life are not allowed to deteriorate beyond the intervention point at which relatively low-cost rehabilitation can be undertaken.

With each subsequent survey, a better picture of asset conditions will be developed.

The condition profile of assets included within this AM Plan is shown in Figure 3.

Figure 3: Asset Condition Profile



Condition is measured using a 1 – 5 rating system³ as detailed in Table 5.1.3.

Table 5.1.3: IIMM Description of Condition

Condition Rating	Description
1	Very good: Only planned maintenance required.
2	Good: Minor maintenance required plus planned maintenance.
3	Fair: Significant maintenance required plus planned maintenance.
4	Poor: Significant renewal/upgrade required.
5	Failing: Unserviceable, immediate replacement required.

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

5.1.4 Asset valuations

The value of depreciable assets recorded in the asset register as at 2012 covered by this asset management plan is shown below. Assets were last re-valued at 30-06-2010.

Value of Depreciable Assets	\$240,171,162
Depreciable Amount	\$240,171,162
Depreciated Replacement Cost	\$127,363,776
Annual Depreciation Expense	\$5,009,499

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)	2.08%
Asset renewal (Capital renewal exp/Depreciable amount)	0.98%
Annual Upgrade/New (Capital upgrade exp/Depreciable amount)	0.10%
Annual Upgrade/New (including contributed assets)	0.10%

Council is currently renewing assets at 47.2% of the rate they are being consumed and increasing its asset stock by 0.10% each year.

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 for roads is shown in Table 5.1.5.

Table 5.1.5: Asset Service Hierarchy

Service Hierarchy	Service Level Objective
Class 3	access between major centres (Regional roads)
Class 4a	Sealed local road with >200 traffic score
Class 4b	Sealed local road with 80 - 200 traffic score
Class 5	Gravel local road with 40 - 80 traffic score
Class 6	Gravel road with 20 - 40 traffic score provide primary access to rural dwellings
Class 7	Formed road with <20 traffic score property access only
Class 8	Unformed roads (Green Lanes)

Roads with known and assumed traffic counts are used to calculate a “traffic score”. This traffic score is used to allocate each road to a class. The above factors are used with traffic volume being increased by 30% if the road is a school bus route, (50% if used by two buses) and a further 50% if a B-Double route. A special economic purpose, for example timber haulage, which is often associated with some external funding, may also cause an adjustment to the calculated road class.

5.2 Risk Management Plan

Council will develop an assessment of risks associated with service delivery from infrastructure assets that will identify critical risks that will result in loss or reduction in service from infrastructure assets or a ‘financial shock’ to the organisation. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan 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. Examples of risks 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
Footpaths	Tree roots causing trip hazards	H	Grind trip or replace path	\$70 / m2
Bridges	Overweight vehicle damage or flooding damage	H	Inspect bridges regularly and after heavy rainfall, ensure signage is appropriate and in serviceable condition and waterways are clear of snags that may damage the bridge.	Inspection costs and maintenance costs
Roads	Heavy rain can cause damage	H	Additional inspections after storm events	Inspection costs

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 vegetation clearing, open drain cleaning, etc. This work generally falls below the capital/maintenance threshold but may require a specific budget allocation. Actual past maintenance expenditure is shown in Table 5.3.1.

Table 5.3.1: Maintenance Expenditure Trends

Year	Maintenance Expenditure
2010/11	\$5,954,370
2011/12	\$7,182,115
2012/13	\$5,693,895

Current maintenance expenditure levels are not 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 operational staff using experience and judgement.

5.3.2 Standards and specifications

Maintenance work is currently carried out by operational staff using experience and judgement.

Standard Drawings and specifications are being implemented to ensure all works are done to the appropriate standard.

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 (TransportV2S1)



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 2 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
Fit with strategic longer-term plan objectives	30%
Percentage of useful life	25%
Traffic & pedestrian usage	25%
Number of service requests	20%
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 Grinding of footpath trips rather than replacing path, replacing sticker on faded sign rather than replace with new sign.

5.4.2 Renewal standards

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

- Greater Hume Shire Council Standard road designs
- Standards Association of Australia guidelines
- ARRB Sealed Local Roads Manual
- ARRB Unsealed Road Manual

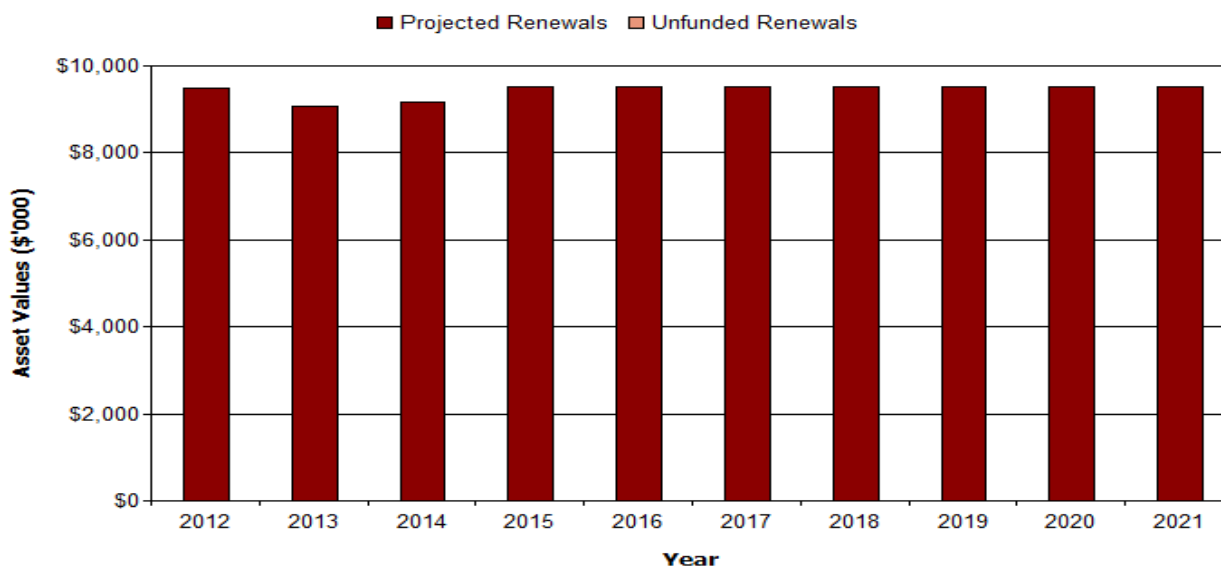
5.4.3 Summary of projected renewal expenditure

Projected future renewal expenditures are forecast to increase over time as the asset stock ages. The costs are summarised in Figure 5. Note that all costs are shown in 2010 dollar values. The values in figure 5 express what we need to spend, we currently spend approx 40% of this figure

The projected capital renewal program is in the GHSC Delivery Program 2012 – 2016

Figure 5: Projected Capital Renewal Expenditure

Greater Hume SC - Projected Capital Renewal Expenditure (TransportV1S1)



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.

Table 5.5.1: Upgrade/New Assets Priority Ranking Criteria

Criteria	Weighting
Fit with strategic longer-term plan objectives	30%
Cost benefit analysis	25%
Traffic & pedestrian usage	25%
No. service requests	20%
Total	100%

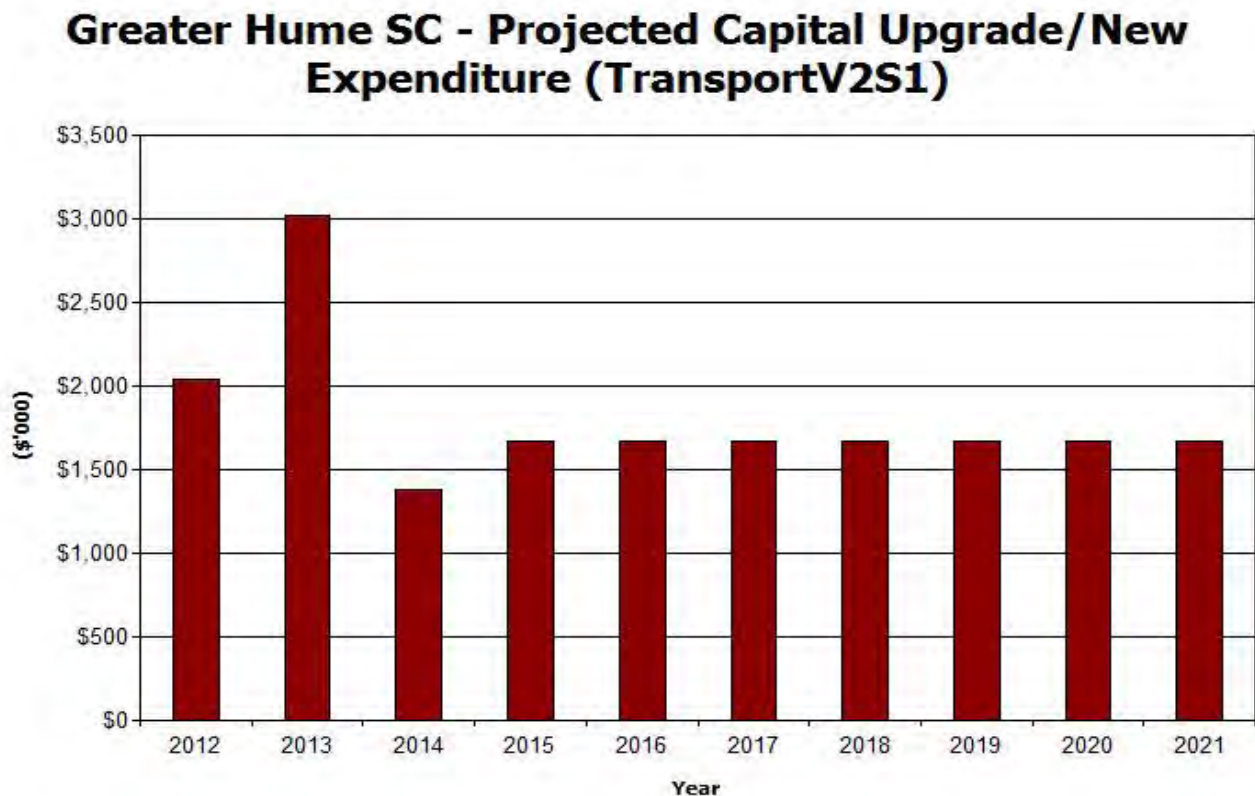
5.5.2 Standards and specifications

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 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 Appendix C. All costs are shown in current 2010 dollar values.

Figure 6: Projected Capital Upgrade/New Asset Expenditure
(\$'000)



New assets and services are to be funded from capital works program and grants where available. This is further discussed in Section 6.2. Figure 6 shows that council is only creating minimal new infrastructure that will not create maintenance problems into the future.

5.6 Disposal Plan

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

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

Table 5.6: Assets identified for Disposal

At this stage Council has no plans to dispose of any assets

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.

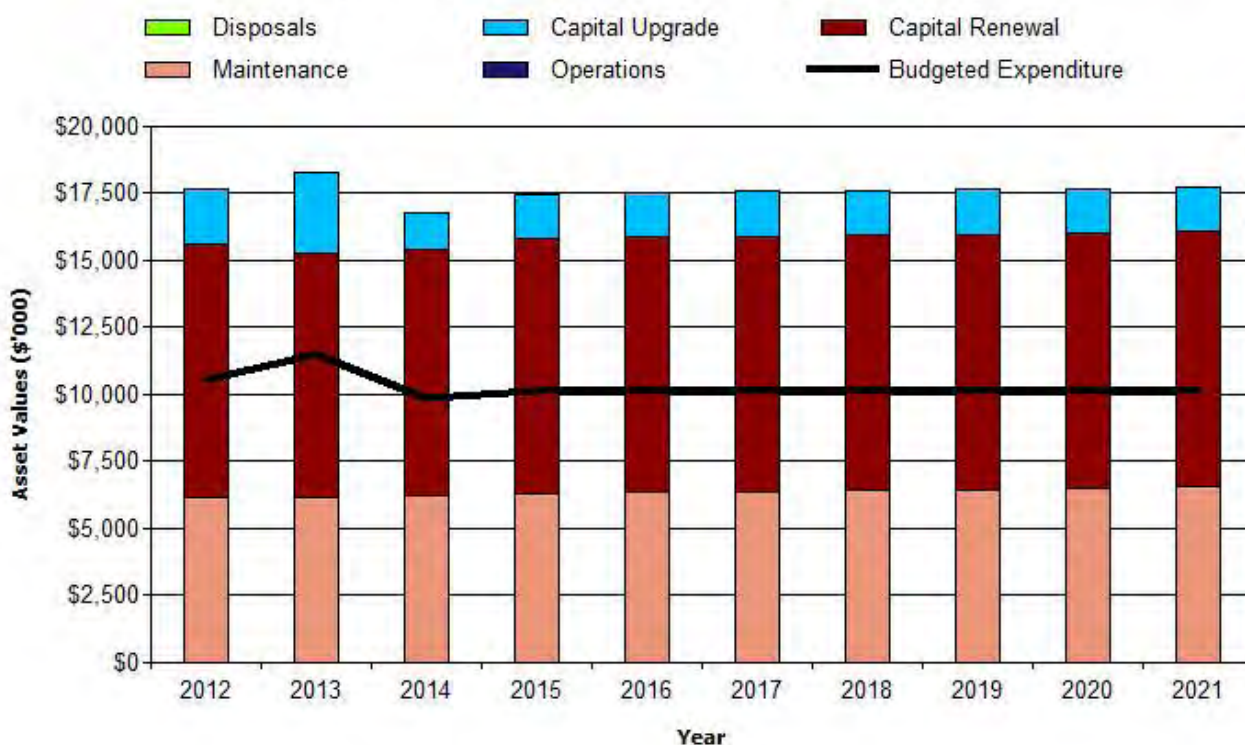
6.1 Financial Statements and Projections

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

Greater Hume SC - Projected Operating and Capital Expenditure (TransportV2S1)



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 (to be developed with service levels)

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 \$11,146,000 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 \$8,502,000 (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 -\$2,644,000 per year (-ve = gap, +ve = surplus).

Life cycle expenditure is 76.3% of life cycle costs giving a life cycle sustainability index of 0.76

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

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

Medium term – 10 year financial planning period

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

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

The projected operations, maintenance and capital renewal expenditure required over the 10 year planning period is \$15,592,000 per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$8,502,000 per year giving a 10 year funding shortfall of \$7,090,000 per year and a 10 year sustainability indicator of

0.55 This indicates that Council has 55% of the projected expenditures needed to provide the services documented in the asset management plan.

Medium Term – 5 year financial planning period

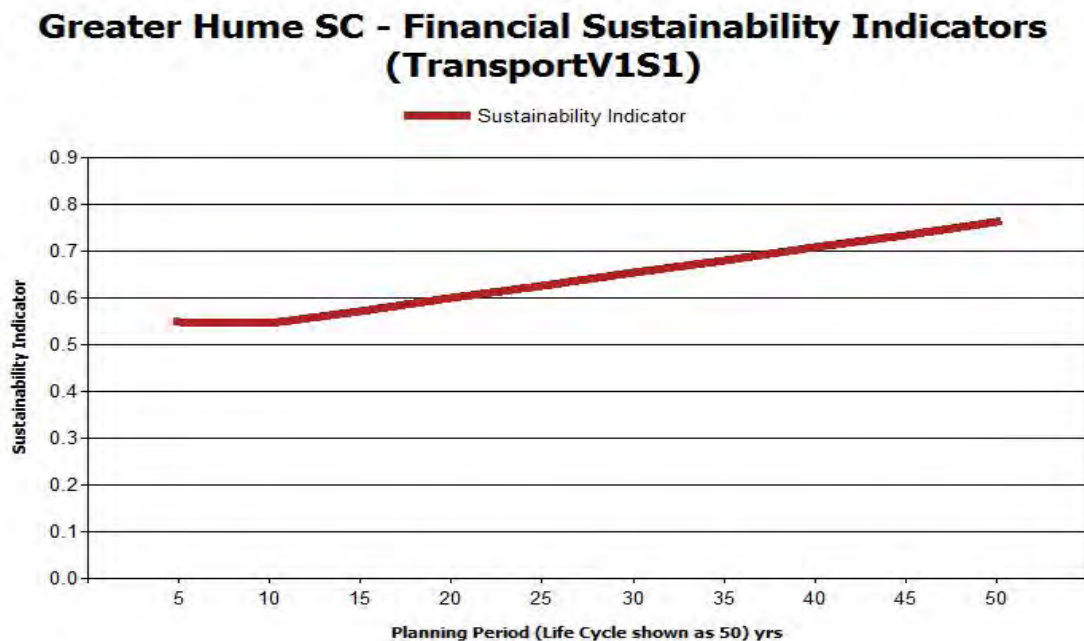
The projected operations, maintenance and capital renewal expenditure required over the first 5 years of the planning period is \$15,497,000 per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$8,502,000 per year giving a 5 year funding shortfall of \$6,995,000. This is 55% of projected expenditures giving a 5 year sustainability indicator of 0.55.

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.

Figure 8 shows the projected asset renewals in the 10 year planning period from Appendix B. The projected asset renewals are compared to budgeted renewal expenditure in the capital works program and capital renewal expenditure in year 1 of the planning period in Figure 8.

Figure 8: Projected and Budgeted Renewal Expenditure

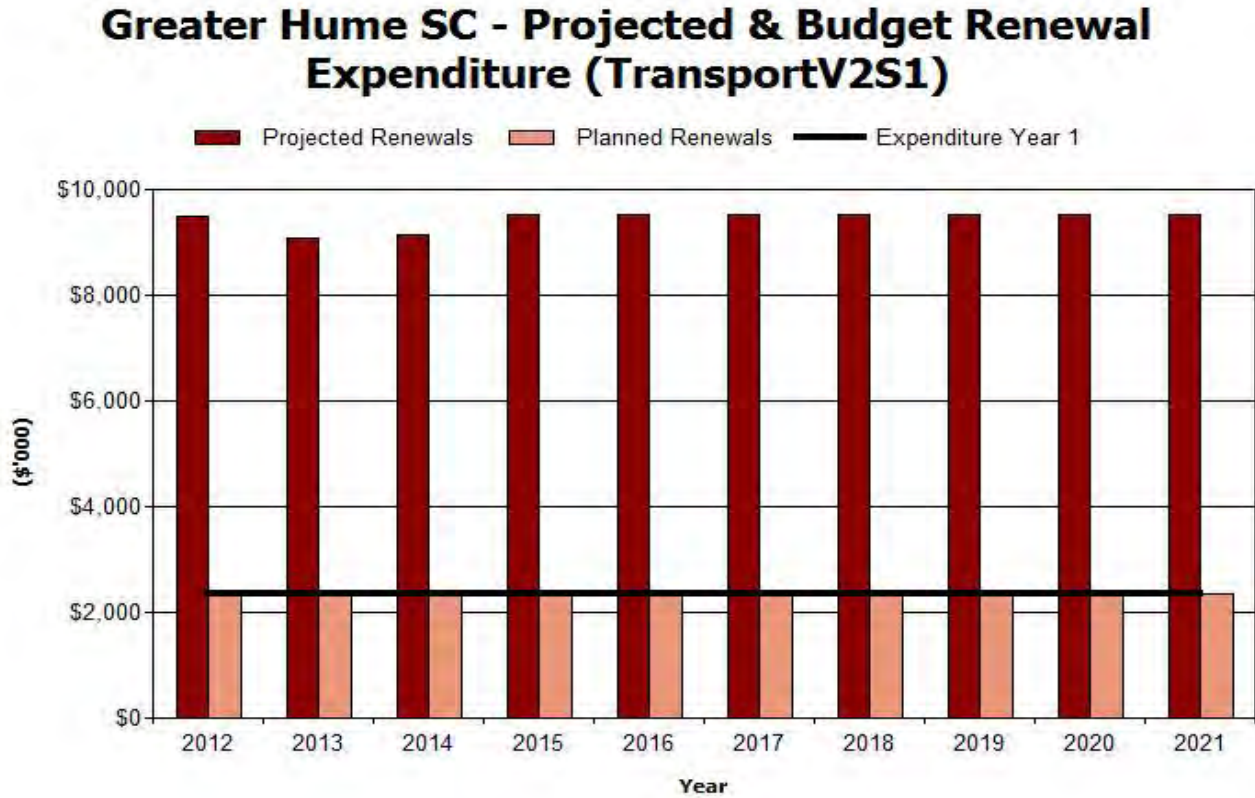


Table 6.1.1 shows the shortfall between projected and budgeted renewals

Table 6.1.1: Projected and Budgeted Renewals and Expenditure Shortfall

Greater Hume SC >> Asset Management Plan Table 6.1.1 (TransportV2S1)				
Year End	Projected	Planned	Renewal Funding	Cumulative
Jun-30	Renewal	Renewal	Difference	Difference
	(\$'000)	Budget	(- ve = Gap)	Difference
		(\$'000)	(\$'000)	(- ve = Gap
				(\$'000)
2012	\$9,488.00	\$2,908.49	-\$6,579.51	-\$6,579.51
2013	\$9,071.00	\$3,988.12	-\$5,082.89	-\$11,662.40
2014	\$9,155.00	\$2,352.08	-\$6,802.93	-\$18,465.32
2015	\$9,521.00	\$2,365.00	-\$7,156.00	-\$25,621.32
2016	\$9,521.00	\$2,365.00	-\$7,156.00	-\$32,777.32
2017	\$9,521.00	\$2,365.00	-\$7,156.00	-\$39,933.32
2018	\$9,521.00	\$2,365.00	-\$7,156.00	-\$47,089.32
2019	\$9,521.00	\$2,365.00	-\$7,156.00	-\$54,245.32
2020	\$9,521.00	\$2,365.00	-\$7,156.00	-\$61,401.32
2021	\$9,521.00	\$2,365.00	-\$7,156.00	-\$68,557.32

Note: a negative shortfall indicates a funding gap; a positive shortfall indicates a surplus for that year.

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)

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	\$7,182.12	\$9,488.00	\$2,038.50	\$0.00
2013	\$0.00	\$5,693.90	\$9,071.00	\$3,018.00	\$0.00
2014	\$0.00	\$5,823.50	\$9,155.00	\$1,382.00	\$0.00
2015	\$0.00	\$5,823.50	\$9,521.00	\$1,665.00	\$0.00
2016	\$0.00	\$5,823.50	\$9,521.00	\$1,665.00	\$0.00
2017	\$0.00	\$5,823.50	\$9,521.00	\$1,665.00	\$0.00
2018	\$0.00	\$5,823.50	\$9,521.00	\$1,665.00	\$0.00
2019	\$0.00	\$5,823.50	\$9,521.00	\$1,665.00	\$0.00
2020	\$0.00	\$5,823.50	\$9,521.00	\$1,665.00	\$0.00
2021	\$0.00	\$5,823.50	\$9,521.00	\$1,665.00	\$0.00

	LTFP Format									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Capital Expenditure on Renewal/Replacement of Existing Assets	\$9,488.00	\$9,071.00	\$9,155.00	\$9,521.00	\$9,521.00	\$9,521.00	\$9,521.00	\$9,521.00	\$9,521.00	\$9,521.00
Capital Expenditure on Upgrade/New Assets	\$2,038.50	\$3,018.00	\$1,382.00	\$1,665.00	\$1,665.00	\$1,665.00	\$1,665.00	\$1,665.00	\$1,665.00	\$1,665.00
Operations and Maintenance of Existing Assets	\$7,182.12	\$5,693.90	\$5,823.50	\$5,823.50	\$5,823.50	\$5,823.50	\$5,823.50	\$5,823.50	\$5,823.50	\$5,823.50
Operations and Maintenance of New Assets	\$0.00	\$52.09	\$129.21	\$164.52	\$207.07	\$249.61	\$292.16	\$334.70	\$377.25	\$419.79
Disposal of Surplus Assets	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

6.2 Funding Strategy

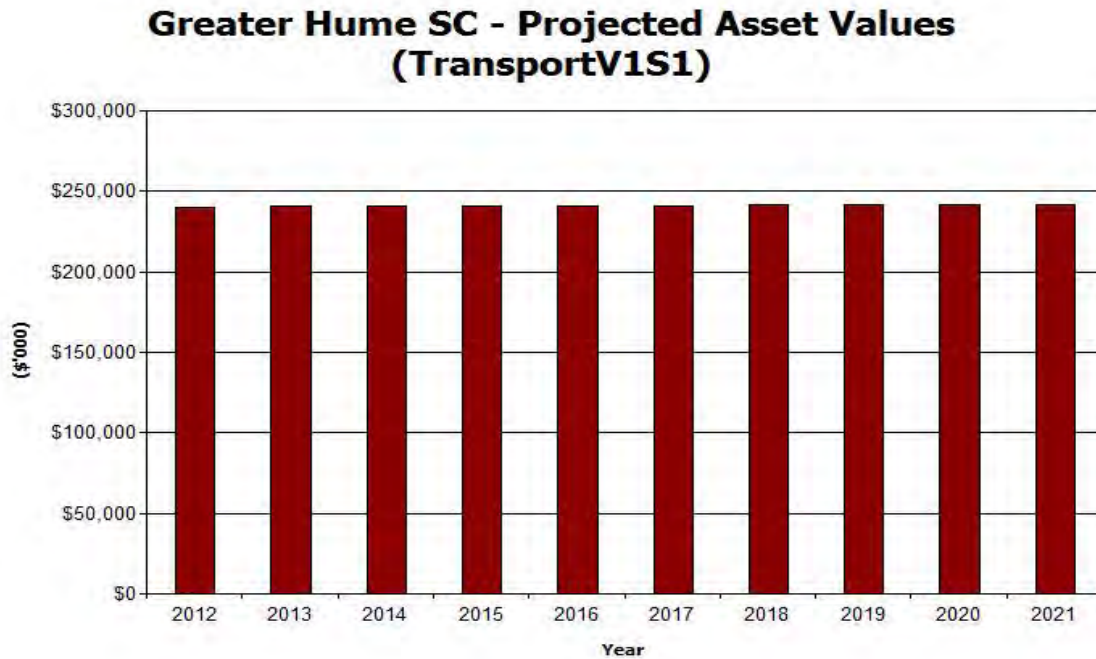
Projected expenditure identified in Section 6.1 is to be funded from future operating and capital budgets. The funding strategy is detailed in the organisation's 10 year long term financial plan.

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

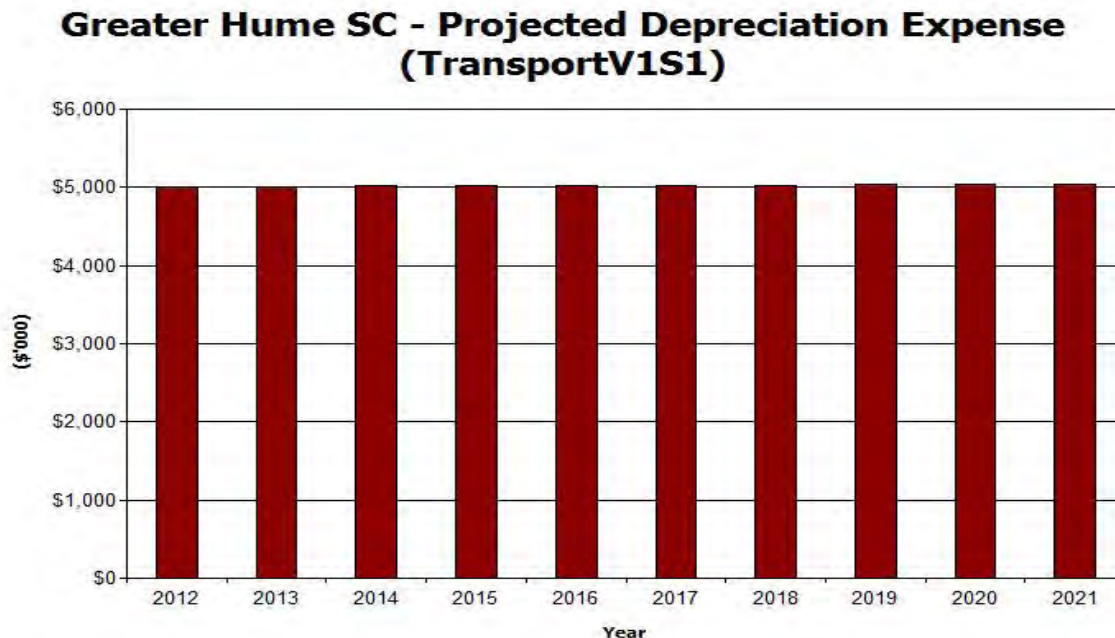
and donated to Council. Figure 9 shows the projected replacement cost asset values over the planning period in 2012 dollar values.

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

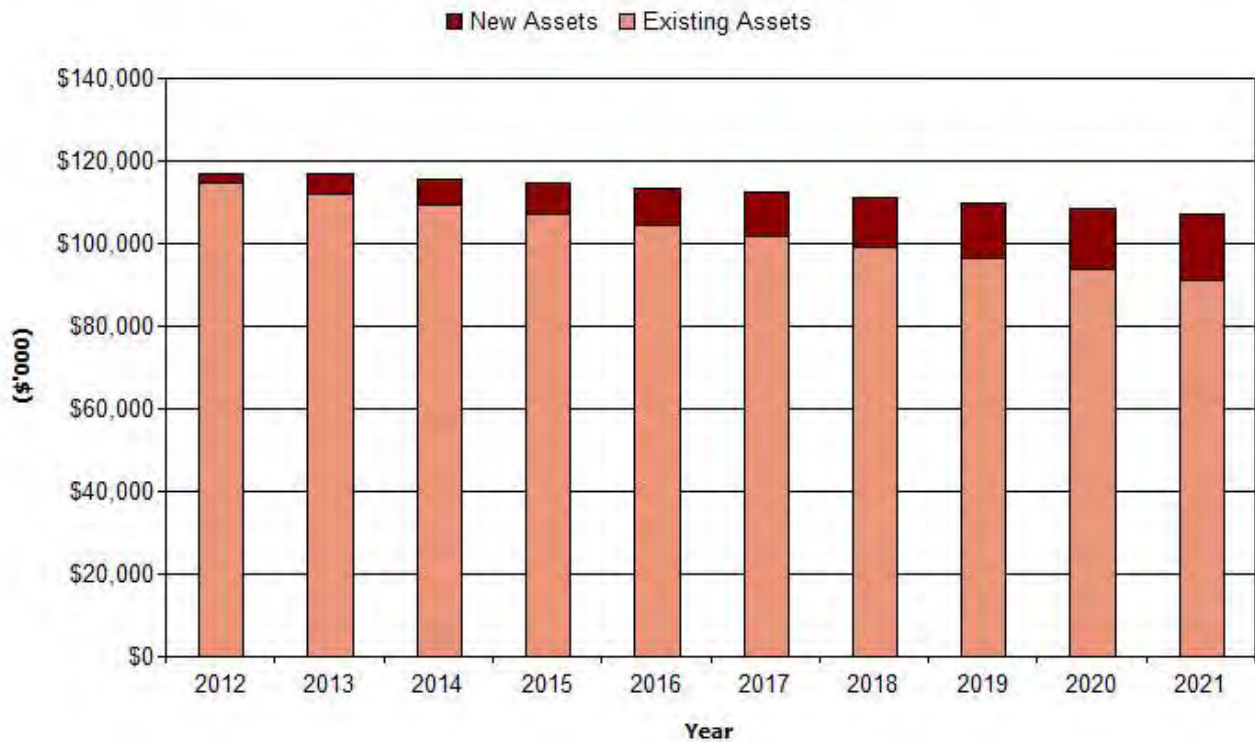


The depreciated replacement cost (current replacement cost less accumulated depreciation) will vary over the forecast period depending on the rates of addition of new assets, disposal of old assets and consumption and renewal of existing assets. Forecast of the assets' depreciated

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 (TransportV2S1)



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 presenting the information contained in the Asset Management Plan and in preparing forecasts of required operating and capital expenditure and asset values, depreciation expenses and carrying amount estimates, are detailed below. They are presented to enable readers to gain an understanding of the levels of confidence in the data behind the financial forecasts.

Key assumptions:

- Average useful lives and average remaining lives of the asset classes are based on current local knowledge and experience, historical trends and accepted industry practice. These need to be reviewed and the accuracy improved, based on regular re-assessment of asset deterioration.

- Reviews of the effective useful lives of assets and population / demographic changes have the potential for greatest variance in future cost predictions.
- Changes in development needs associated with the rate and location of growth and changes in the desired level of service and service standards from those identified in the Asset Management Plan, will both impact on future funding.
- Accuracy of future financial forecasts may be improved in future revisions of the Plan by the following actions:
 - Implementation of a Job costing system to incorporate continuously current unit rate data.
 - More refined condition rating data with more history for reference.
 - Greater degree of componentisation in the rating process.
 - Development of better degradation models through national research and development programs.
 - Development of better financial models through collaborative processes.
 - Implementation of an asset information system.
- Specific annual maintenance and renewal cost trends are detailed for each asset category in the relevant sections.

7. ASSET MANAGEMENT PRACTICES

7.1 Accounting/Financial Systems

7.1.1 Accounting and financial systems

Greater Hume Shire Council uses Practical (Civica) as its financial system

7.1.2 Accountabilities for financial systems

Rest with the Chief Financial Officer and the Director Corporate and Community Services

7.1.3 Accounting standards and regulations

Council works under Australian Accounting Standards and State Legislation/Regulations and Directives issued by the Local Government Department.

7.1.4 Capital/maintenance threshold

Council's capital threshold policy specifies a \$5,000 limit for expenditure that is expensed. Expenditure of over \$5,000 on an asset is to be classed as capital expenditure and capitalised against the asset.

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

Changes to accounting and financial systems identified as a result of preparation of this asset management plan are:

Identification of capital expenditures as renewal and upgrade/new,

Development of a single corporate asset register,

Linking of the customer service system to the corporate asset register to link requests to asset records,

Improved project cost accounting to record costs against the asset component and develop valuation unit rates

7.2 Asset Management Systems

7.2.1 Asset management system

Greater Hume Shire Council's asset system is managed in "BizeAsset" a system based on "MapInfo" a GIS desktop mapping program.

7.2.2 Asset registers

Greater Hume Shire Council has two asset registers one is stored in the Practical (Civica) financial system and the asset register in the "BizeAsset" asset management system was developed using the data from the Practical system combined with a report from GHD and updated via desktop investigations using aerial photography and onsite inspections as needed.

7.2.3 Linkage from asset management to financial system

All links between the Asset Management system and the Finance system are manual. These are not linked systems

7.2.4 Accountabilities for asset management system and data

The Asset Manager is responsible for the asset management system and the data is supplied by the Managers of the various assets and the finance department

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

Changes to asset management systems identified as a result of preparation of this asset management plan are:

Ongoing review of accuracy and currency of asset data,

Development of a single technical asset register as the corporate asset register,

Development of a works costing and maintenance management system to improve works planning and cost recording,

Improved project cost accounting to record costs against the asset component and develop valuation unit rates.

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 and 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:

- Asset Management Policy
- Annual Budget
- 2011-2015 Delivery Program
- 2010-2013 Management Plan
- GHSC draft Roads Strategy

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 cash flows 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	Valuation Unit Costs – review unit rates, derivations on a greenfield basis	DE	Staff Time	ongoing
2	Asset Information System – implement software package, providing asset deterioration and other tools	DE	Staff Time	ongoing
3	Risk Management – Refine, expand and document the risk management plan	DE	Staff Time	ongoing
4	Job costing system – develop system, incorporating current unit rates	DCCS / DE	Staff Time	ongoing
5	Document methodology and procedures for asset useful lives, unit rates, condition rating and scoring and depreciation calculations.	DE	Staff Time	ongoing
6	Population predictions – review projects based on latest available Census	DE	Staff Time	
7	Community Consultation – undertake targeted engagement with the community to resolve acceptable and achievable levels of service	GM	Staff Time Consultants	
8	Condition Rating – refine data collected and analysis processes, including greater levels of componentisation and achievable levels of service	DE	Staff Time	ongoing
9	Consider limiting the AMP time framework to 10 years, to coincide with the Long term financial plan	DCCS / DE	Staff Time	

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 4 years and is due for revision and updating within 2 years of each Council election.

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APPENDICES

Appendix A Maintenance Response Levels of Service

Appendix B Projected 10 year Capital Renewal Works Program
Refer to delivery program

Appendix C Planned Upgrade/Exp/New 10 year Capital Works Program
Refer to delivery program

Appendix D Abbreviations

Appendix E Glossary

Appendix A Maintenance Response Levels of Service

ROADS HEIRARCY – DESIGN AND SERVICE LEVELS					ATTACHMENT 5		
Category	3 Regional	4A	4B	5	6	7	8
Design Speed (km/hr)	100	100	80	80	80	60	unformed
Surface	sealed	sealed	sealed	gravel	gravel	formed	natural
Travel Lanes (number)	2	2	2	2	1	1	
Lane Width (metres)	3.5	3.5	3.5	3.5	4	4	
Formation Width (metres)	10	9	9	8	6	6	
Seal Width (metres)	8	7	7	n/a	n/a	n/a	
Sealed Shoulder	yes, 0.5m	yes	no	n/a	n/a	n/a	
Line Marking	edge and c/l	edge & c/l	c/l only	no	no	no	
Guideposts	yes	yes	yes	yes	culverts only	no	
Flood Protection	1 in 100 years	1 in 50 years	1 in 20 years	1 in 10 years	1 in 5 years	1 in 2 years	
Signs - Crests	yes	yes	yes	yes	no	no	
Signs - Curves	yes	yes	yes	yes	no	no	
Signs Speed Advisory	yes	yes	yes	no	no	no	
Clear Zone (metres)	6	6	4	4	4	4	
Vegetation Clearance - Height (metres)	5.5	5.5	4.6	4.6	4.6	4.6	
Shoulder Grass Spraying	yes	yes	yes	no	no	no	
Roadside Slashing	yes	yes	no	no	no	no	
Pothole Patching - Response Time	1 week	2 week	4 weeks	n/a	n/a	n/a	
Guidepost Defect - Response Time	1 month	2 month	4 month	6 months	n/a	n/a	
Sign Defect - Response Time	1 month	2 month	4 month	6 months	n/a	n/a	
Grading Frequency	n/a	n/a	n/a	6 months	12 months	as req	

Appendix B Projected 10 year Capital Renewal Works Program

Refer to delivery program

Appendix C Planned Upgrade/Exp/New 10 year Capital Works

Refer to delivery program

Appendix D 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
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

Appendix E Glossary

Annual service cost (ASC)

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

Asset

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

Asset 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

continue to deliver the required service or to 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 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

Relatively small (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

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