

STRATEGIC ASSET MANAGEMENT PLAN

INFRASTRUCTURE ASSETS OF MUSWELLBROOK SHIRE

ROADS

BRIDGES & CULVERTS

FOOTPATHS

PUBLIC SHELTERS

KERB AND GUTTER

STORMWATER

WATER AND SEWERAGE

RECREATIONAL

OPEN SPACES

LANDFILLS

COUNCIL BUSINESSES

COMMUNITY

BUILDINGS



**These assets
underpin service
delivery and provide
economic, public
health, recreational
and social benefits**



Council must account and plan for all the life-cycle costs of the assets under its ownership, and ensure that any new assets proposed can be afforded over the long term.

Councils must report on the condition of their assets in their annual financial statements in line with the Local Government Code of Accounting Practice and Financial Reporting.

The majority of Council's infrastructure assets are well maintained within budgetary constraints.



**muswellbrook
shire council**

Document Control

Authorisation Details:

Authorised by:	Council
Minute No:	
Date:	16 March 2022
Review timeframe:	12 Months
Department:	Asset Management
Document Owner:	Chief Engineer

Details History:

Version No.	Date changed	Modified by	Amendments made
1	13 June 2017	Dilip	Document Prepared
2	16 March 2022	Peter Chambers	Document Revised, clarifications made, strategy and data updated

Table of Contents

1. Executive Summary	5
2. How Council Provides the Best Possible Value for Money	7
3. Technical Analysis, Planning and Management of Infrastructure	7
3.1 Categories of Technical Analysis, Planning and Management	7
4. Aligning Infrastructure and Financial Planning	8
4.1 Asset Valuation and Depreciation	8
4.2 10 Year Expenditure Projections	8
4.3 Asset Maintenance Shortfall and Renewal Backlog	8
5. Risk Management	9
5.1 Relationship between Risk and Asset Management Systems	9
5.2 Managing Critical Assets.....	10
6. The Asset Management System	12
6.1 Asset Management Steering Committee	12
6.2 Roles, Responsibilities and Resourcing.....	12
6.3 AM System Operation, Control, Monitoring and Audit.....	12
6.4 Review and Improvement	12
Appendix 1 – Asset Management Information Register	13
Appendix 2 – Charter of the Asset Management Steering Committee	14

This page intentionally left blank

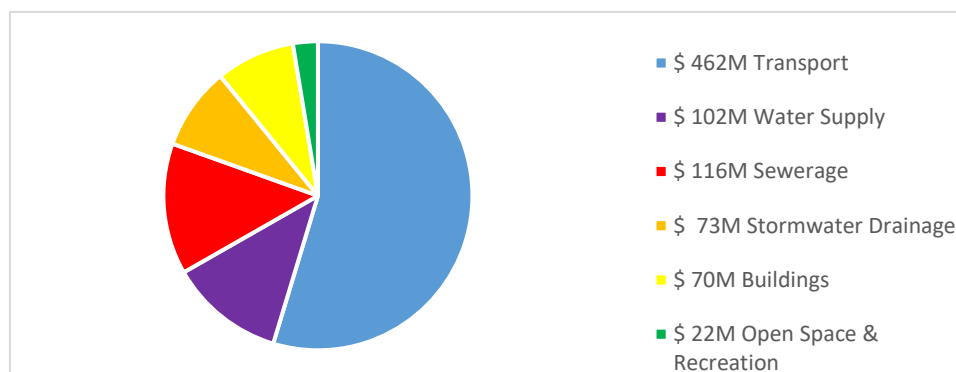
1. Executive Summary

The Strategic Asset Management Plan (SAMP) is one of three plans covering each major resource type (finance, people and assets) considered under Council's Resourcing Strategy.

The SAMP establishes a framework for Council to achieve the objectives of its Asset Management Policy to provide the best possible value from activities related to the management of infrastructure assets and to continually improve Council's asset management practices.

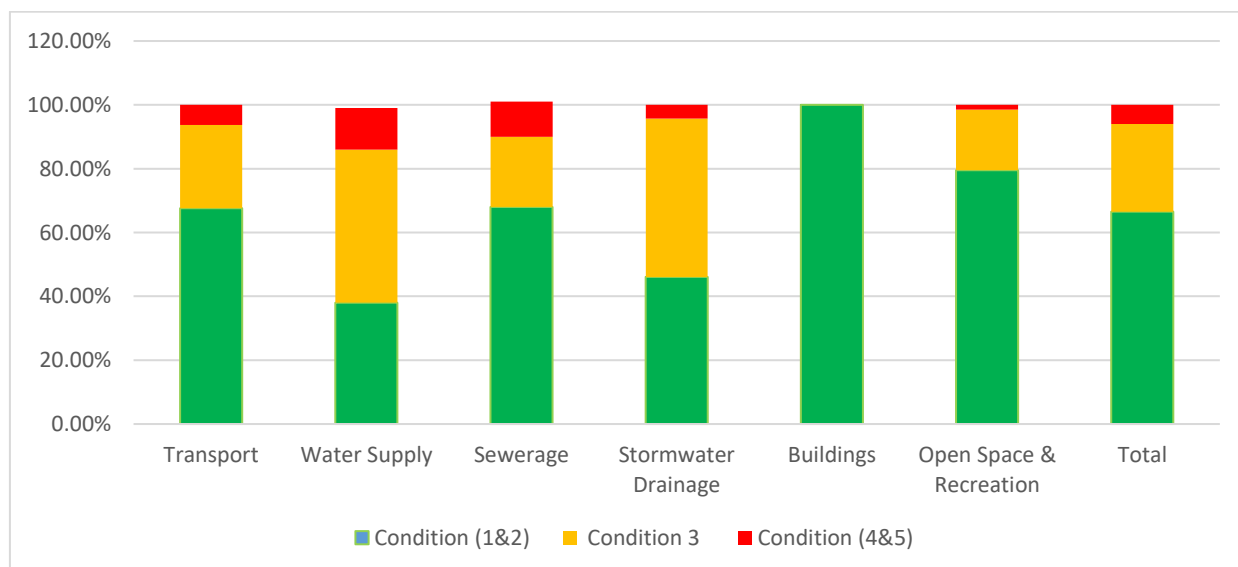
The way assets are managed is critical to Council's financial sustainability. Many key inputs to the *Fit for the Future* infrastructure ratios, used to benchmark performance, are defined by the asset condition and the expenditure on asset renewal and maintenance.

Council's infrastructure assets have a replacement value of approximately \$845M. The chart below shows the value (\$M) of each of the six major asset classes.



This does not include investment properties, plant and equipment, or land.

The chart below shows the condition of assets in each class. While transport and building assets are in generally good condition, a significant proportion of water and sewerage assets are near the end of, or have exceeded, their useful life. Confidence level for most of these items is medium to high, however more investigation is necessary to be more confident with stormwater asset condition.



In order to sustainably maintain an increasing portfolio of assets delivered by development or Council projects in a condition to meet the requirements of the community, Council's approved

budgets should be sustained to enable satisfactory asset management outcomes, for example, proactive rural road table drain maintenance can prevent significant structural damage over time that may require more expensive heavy patching or reconstruction works.

The SAMP provides a systematic approach to managing assets, based on the principles of ISO 55000: Asset Management, that strategically considers the life cycle of Council assets to achieve the best value for money outcomes over the ten year SAMP period. The SAMP aligns its activities with the objectives of the Community Strategic Plan and provides consistency with the Long Term Financial Plan to enable forward planning of capital and renewal programs to ensure that assets are fit for purpose, verified by regular asset condition audits, and establishes a framework for continual asset management improvement.

As part of meeting its regulatory requirements, Council undertakes regular condition assessments for a proportion of each asset type to collect and monitor data relating to infrastructure, and regularly undertakes valuations of assets to meet auditing requirements. Council also undertakes annually a Special Schedule 7 valuation of identified classes of assets.

Regular condition inspections of critical infrastructure, such as bridges and road assets, are carried out to identify any strategic maintenance and renewal requirements in order to maximise serviceable asset life and to minimise risks and disruptions to Council and the community.

As a component of ongoing improvements to asset management, Council has recently completed a review of the Road Asset Management Plan in order to program and deliver investment, maintenance and renewal of its road assets projected for the next 10 year period. Similarly, following the completion of its Water and Wastewater Revaluation in 2021-2022, this asset class and stormwater drainage will form the key focus for Council's subsequent Asset Management Plans. All Asset Management Plans are informed by agreed Levels of Service determined through regular engagement with the local community and complementary technical assessments.

On completion of each significant revaluation, the Asset Management Register and geographic information system (GIS) are updated to deliver ongoing improvements to Council's data and asset management tools.

2. How Council Provides the Best Possible Value for Money

In order to deliver effective and sustainable outcomes in asset management (AM), it is important that asset management documentation should be free of unnecessary complexity in order to facilitate understanding and implementation of its objectives. Council's Asset Management Policy focuses on Council *providing the best possible value from activities related to its infrastructure assets*.

Council's discrete asset management plans, the four year Delivery Plan and annual Operational Plan detail the practical priorities and associated resourcing required to achieve the objectives of the Strategic Asset Management Plan.

The Strategic Asset Management Plan describes the application of the AM system based on the principles in ISO 55000. The AM Steering Committee is the primary means by which the organisation monitors and reviews the implementation and improvement of the AM system.

3. Technical Analysis, Planning and Management of Infrastructure

Council's AM Steering Committee manages and monitors the implementation and improvement of Council's AM system.

Council's discrete Asset Management Plans specify the activities, resources and timescales required to achieve Council's AM objectives as provided in the Delivery Plan and Operational Plan.

3.1 Categories of Technical Analysis, Planning and Management

Council undertakes a process of data sourcing and management, condition assessments, analysis and ongoing review of processes and systems to inform the objectives of the Asset Management Plans.

Documentation to support the Asset Management Plans incorporate hierarchies of asset classes, including technical analysis, planning and management systems as detailed below. These are regularly reviewed to ensure the objectives of the Strategic Asset Management Plan are achieved.

- *Asset registers* are the building blocks for the AM system, identifying all assets, including component parts, as well as location, quantities, materials, condition, age, remaining service life and other attributes.
- *Asset hierarchies* are a means of prioritising resources and the effort required to appropriately maintain assets, for example, differentiating between very busy roads and those serving only a few properties).
- *Asset condition assessments* use a variety of methods from visual inspections of buildings to automated laser/video assessments of roads to assess the condition of assets and their remaining functional service life.
- *Needs analysis and strategies* identify both the needs of the community and the performance that is required from infrastructure assets to meet the agreed level of service, usually expressed in terms of quality or condition, functionality and capacity. Needs analysis considers the deterioration of assets, growth in demand, and changes in community needs and expectations.
- *Performance modelling* predicts expected deterioration in the performance of assets over time.

- *Asset valuations* consider both the 'fair value' of an asset, that is, what it would be worth to sell on the open market, as required by accounting standards, and the expected service life of the asset. This information, coupled with asset condition information, enables Council to determine the current fair value of its assets and annual depreciation, that is, how much of an asset's value is being consumed each year.
- *Capital works programs* identify the priorities for future works based on the Operational Plan, Asset Management Plans and consideration of recent condition assessments, and draw on a range of asset data, including the asset hierarchy. Justification for the works is identified, prioritised and detailed, including an estimated cost for undertaking the works.
- *Operations and Maintenance Management Plans/Systems* are the means by which Council ensures complex assets, such as water treatment plants, are performing satisfactorily, that they are being managed sustainably, including asset renewal and replacement as required, and that risks are appropriately managed.
- *Procedural Documents* are the means by which Council controls critical processes in the AM system, such as the design and management of projects, the methodology for the collection and storage of data, and ongoing assessment methodologies related to the performance of Council's infrastructure.

4. Aligning Infrastructure and Financial Planning

Council's assets are strategically managed to ensure Council's financial sustainability.

It is important to ensure the Strategic Asset Management Plan aligns with the Long Term Financial Plan (LTFP) and Council's annual approved budgets. Two key areas are discussed below.

4.1 Asset Valuation and Depreciation

The valuation of assets is carried out on the basis of 'fair value', that is, what an asset is worth on the open market. Asset condition describes how far the asset has progressed through its useful life, that is, how much of the asset value has been consumed. The cost of asset depreciation (consumption) is calculated based on the value consumed each year as the asset deteriorates, that is, the asset value divided by its service life.

Asset value estimates undergo periodic review to ensure robust asset management principles are followed and that currency of information is maintained.

4.2 10 Year Expenditure Projections

Council forecasts its revenues and expenditure over 10 years through the Long Term Financial Plan (LTFP). It is important that financial estimates contained within Council's Asset Management Plans are consistent with those contained in the LTFP.

4.3 Asset Maintenance Shortfall and Renewal Backlog

The NSW Government's *Local Government Code of Accounting Practice and Financial Reporting (the "Code")* defines the method of calculating infrastructure performance measures that must be reported in Special Schedule 7 (SS7) of Council's annual financial statements. Special Schedule 7 contains important *Fit for the Future* benchmarks.

Required maintenance is defined as funding 'sufficient to ensure assets don't fail prematurely and can be kept in a functional state for community use'.

Council's approach has been to base required maintenance estimates either on:

- Current maintenance methodologies, including regular inspections and condition assessments of Council assets, for example, roads and drainage systems, parks and reserves; or






- Benchmark figures, where available, such as data from panel contracts, quotations and tendered projects as well as comparison of data from similar local Councils and application of relevant geographical distance factors and characteristics.

Ongoing review of data from inspections, condition assessment tracking and renewal estimates from recent projects ensure a higher level of confidence of expected future renewal planning expenditure and related interventive maintenance.

In terms of renewal **backlog**, the *Code* requires Council to report on the cost to bring assets:

1. to a “satisfactory” condition (defined as a minimum of condition 3, that is, fair). See example of Road Condition below from the Draft Road Asset Management Plan); and/or
2. to an “agreed” or “accepted” level of service (defined as the intervention level set by Council, based on condition)

See below an example of different road conditions encountered through scheduled asset condition inspections:

Condition 1 - New	Condition 2 - Good	Condition 3 - Fair	Condition 4 - Poor	Condition 5 - Very Poor
				
Ogilvie St, Denman	St Heliers St, Muswellbrook	Merino St – Denman	Palace St – Denman	Hill St, near bridge st intersection
Asset Life Consumed < 2years	Asset Life Consumed < 5years	Asset Life Consumed > 10 years	Asset Life Consumed > 20 years	Asset Life Consumed > 25 years
No Pavement or Surface distress	No pavement distress, low level of ravelling	Moderate roughness, rutting and Ravelling	High pavement roughness, potholes, cracks	High roughness, potholes, cracking and ravelling
Reference: IPWEA, Condition Assessment and Asset Performance guidelines, Road Pavement Assets (Visual Assessment) Practice Note 9				

5. Risk Management

5.1 Relationship between Risk and Asset Management Systems

Council’s AM Policy identifies three perspectives in relation to providing the ‘best possible value’ to the community in relation to assets:

1. performance;
2. sustainability; and
3. risk/resilience.

Council’s Risk Management system underpins its Asset Management system.

Risks identified at the corporate level, through the corporate risk register, will impact the management of assets and the implementation of the AM system through operational and capital

works programs driven by risk management as a high priority. Detailed technical analysis and planning are driven by the need to quantify and manage risk.

The 'front line' of risk management is the physical operations and management areas, for example, identifying and repairing defects on the road network and managing the storage, treatment and distribution of drinking water as prescribed in the NSW Guidelines for Drinking Water Management Systems.

Some risks can only be treated adequately by undertaking capital works. Where a project is included in the capital works program for reasons related to risk, this will be noted in the justification for the carrying out of the works.

5.2 Managing Critical Assets

The Integrated Planning and Reporting Guidelines require that the Asset Management Strategy identifies assets that are critical to its operations and outline risk management strategies for these assets.

ISO 55000 (clause 3.2.8) defines a critical asset as an asset having potential to significantly impact on the achievement of the organisation's objectives. Assets can be critical due to safety, environment or performance reasons, and can relate to legal, regulatory or statutory requirements, or because they provide services to critical and vulnerable customers. Examples of critical assets include:

- The Muswellbrook, Denman and Sandy Hollow water treatment plants and storage reservoirs; and
- The Muswellbrook and Denman recycled water treatment plants.

Council has established hierarchies for most asset categories that prioritise appropriate asset management efforts toward those assets with higher demand, and in most cases establish higher standards of performance, for example, proactive and responsive maintenance is undertaken as a higher priority.

Risk management strategies for the primary asset categories are outlined below.

Critical Asset	Primary Risks	Management Strategies
Water Supply	<ul style="list-style-type: none"> ▪ Supply problems due to severe drought. ▪ Supply problems due to turbidity or high sediment loads during peak events in the Hunter River. ▪ Failure to comply with the Australian Drinking Water Quality Guidelines. ▪ Failure of critical infrastructure (e.g. pumps) or loss of power leads to loss of supply. ▪ Infrastructure failure such as water main breaks leading to loss of supply. 	<ul style="list-style-type: none"> ▪ NSW Guidelines for Drinking Water Management Systems. ▪ Drought and Emergency Response Risk Management Plan. ▪ Maintain peak storage levels in reservoirs. ▪ Management Plans in place; criticality analysis undertaken on all assets and condition assessments underway with opportunities to improve redundancy and resilience identified (e.g., backup pumps, deployment of generators, etc.) ▪ Stop Valve renewal and installation. ▪ Arrangement with electricity supplier to ensure return of electricity to Council's critical assets is carried out as a high priority. ▪ Maintain an inventory of critical parts, which are held by Council and a range of external parties.
Sewerage	Release of untreated sewage or effluent to the environment due to a loss of power or failure from deterioration of infrastructure.	<ul style="list-style-type: none"> ▪ Carrying out of proactive jetter maintenance. ▪ Criticality analysis undertaken on all assets and condition assessments underway with opportunities to improve redundancy and resilience identified (e.g. backup pumps and generators, storage time in pump stations). ▪ Pollution incident response plans in place.
Roads, Bridges and other Transport	Safety issues arising from asset failures and/or other issues such as fallen trees, washed out bridges, flooded roads, deterioration of infrastructure.	Inspection systems in place with additional inspections undertaken where necessary (e.g. after a major storm event).
Playgrounds	Safety issues from damaged or broken equipment.	Inspection system in place to identify and appropriately respond to defects.
Sportsgrounds	Safety of users.	Appropriate inspections and maintenance carried out.
Aquatic Centres	Drowning, poor water quality leads to health issues.	Supervision in place, trained operators, appropriate equipment and maintenance.
Buildings	Business continuity in the event of a problem with the building.	<ul style="list-style-type: none"> ▪ Business continuity plans in place. ▪ Appropriate maintenance carried out.

6. The Asset Management System

The AM System is the set of interrelated or interacting elements of an organization to establish policies and objectives for AM, and processes to achieve those objectives (ISO 55000).

The planning, implementation, review and improvement of the AM system is described below.

6.1 Asset Management Steering Committee

The role of Council's Asset Management Steering Committee is to monitor and review implementation and improvement of the AM system to ensure Council's AM objectives are achieved. The terms of reference of the Asset Management Steering Committee are provided in Appendix 2 of the SAMP.

It is important to note that, in addition to monitoring and reviewing the AM system, the Committee provides an important cross-functional forum for planning and coordinating AM activities, including raising the awareness of sound asset management practice, and the provision of communication regarding asset management issues.

6.2 Roles, Responsibilities and Resourcing

Monitoring the clarity of roles and responsibilities, as well as the qualifications and experience of staffing and of resources to support the implementation of the AM system is a responsibility of the AM Steering Committee, as is raising awareness of and communicating about AM issues. Designated Council Officers are classified as asset owners for each of the identified asset classes and are accountable for the appropriate management of assets in their area of responsibility.

6.3 AM System Operation, Control, Monitoring and Audit

Processes within the AM system must be planned, implemented and controlled. Where problems or potential problems with Council's assets, AM or AM system are identified, Council will take necessary actions to prevent or correct and control them, as well as eliminate the cause to avoid them recurring, and will review their effectiveness. The AM Steering Group is the forum responsible to review and discuss such issues.

ISO 55001 requires that internal audits are carried out at planned intervals to provide information to assist in the determination of whether the AM system conforms to Council's own requirements and those of ISO 55001, and whether it is effectively implemented and maintained.

6.4 Review and Improvement

In addition to providing a forum for the planning and coordination of prioritised AM improvements, a primary function of the AM Steering Committee is to provide management review of the AM system to ensure its continuing suitability, adequacy and effectiveness.

When appropriate, improvement actions will be identified in the Delivery Program and Operational Plan.

Appendix 1 – Asset Management Information Register

The table below provides an overview of key documents and sources of asset information.

Buildings and Recreation
GIS layer for buildings
GIS layer for other structures and depreciable land improvements
Maintenance Management System for Playgrounds
Finance
Asset Register
Roads
Asset register for sealed and unsealed roads
Automated condition data for sealed roads
Condition rating and future works programs for transport assets
Pavement Management System
Asset register for bridges
Asset register for storm water drainage
Maintenance Management System for roads
Water and Sewerage
FINMOD (financial modelling of future water supply infrastructure needs and operations)
GIS backend database
Service request management system
Plant asset register
Plant condition inspection records
Waste Management
Waste Management Strategy
Closure Plan

Appendix 2 – Charter of the Asset Management Steering Committee

Membership of the Corporate Asset Management Steering Committee

1. Chief Engineer (Chair)
2. Asset Management Engineer
3. Assets and Financial Accountant
4. Manager Governance
5. Information Services Team Leader
6. IS Applications Officer
7. Director Property and Place
8. Manager Roads, Drainage and Technical Services
9. Asset Manager Water and Wastewater
10. Operations Manager Water and Wastewater
11. Manager Waste
12. Director Corporate Services and Chief Financial Officer (optional)
13. Deputy General Manager (optional)

Charter of the Muswellbrook Shire Council Corporate Asset Management Steering Committee

The Corporate Asset Management Steering Committee (the “**Committee**”) provides strategic, practical leadership in all facets of asset management. The committee ensures the ongoing development and improvement of appropriate asset management systems, procedures and practice that will provide consistent guidance to management and staff in implementing sound standards of asset management throughout Council’s operations and activities.

The primary responsibilities of the Committee include:

1. develop and implement an asset management improvement strategy and action plan. Provide quarterly reports to MANEX regarding the progress of the implementation of the prioritised, funded elements of the action plan;
2. progressively develop and implement appropriate policies and procedures to ensure best practice asset management across the organisation that demonstrates value for money, and ensures asset management practice is appropriately integrated into Council’s financial, information technology, and reporting systems;
3. develop consistency in Council’s asset management plans to ensure they are essential documents that provide practical guidance in the formation of Council’s budgets and prioritised works programmes, and ensure that Council’s assets are managed to a best practice standard;
4. provide strategic oversight of the regular review of Council’s asset management plans. The review of each asset management plan is the responsibility of the individual designated asset owner;
5. provide strategic oversight of the integration of the asset management plans into Integrated Planning and Reporting Documents and the Long Term Financial Plan;
6. collaboration, and pooling of corporate expertise, in relation to asset management matters;

7. ensure asset information is regularly updated so that all asset information is current and accurate; and
8. strategically and consistently work towards improving Council's level of asset management maturity.

