Drainage and Flood Mitigation Asset Management Plan

April 2025

Version No. 4

1 – IPWEA, 2011, IIMM, p2.22

How to use this Plan

This Asset Management Plan (AMP) is a tactical document to support Councils understanding of its Drainage and Flood Mitigation Assets, service levels, risks and to provide operational and capital expenditure forecasts that will deliver the community outcomes detailed in the Community Strategy 2025-2035. The AMP is set out in the following format to support easy navigation of its contents such that specific information can be readily identified to suit the reader's need.

- Executive Summary
  This provides an overview suitable for obtaining a high-level understanding of the key issues and outcomes of the AMP. This is intended for senior decision makers and is supported by the detail in the following sections that make up the body of the AMP.

- Section 1 - Introduction
  This section is the introduction that defines the plan's purpose, its scope and how the AMP aligns with corporate objectives and goals. It 'sets the scene' for the AMP and how it relates to the wider organisational plan framework.

- Section 2 – Data Details
  Defines the AMP's data inputs and assumptions. It includes the Asset Summary, Prior Year Infrastructure Delivery, Asset Age, Asset Condition Assessment Criteria, Results Summary, Asset profiling, Hierarchy, Useful Life and Data confidence ratings.

- Sections 3,4, and 5 – AMP Inputs (Service levels, Risk and Growth)
  Defines Councils' service levels, current risks and demand considerations that have been used in developing this AMP. This is the basis on which the following sections have been developed.

- Sections 6,7,8,9 and 10 - 10-year forecasts
  Provides the detailed 'output' of the AMP development process with forecasts over a 10-year horizon of the works required to maintain the current service levels, mitigate identified risks and cater for service growth and increased demand.

- Sections 11,12 and 13 – Financial forecasts
  Focus on the financial aspects of the delivering these service levels including anticipated 'financial sustainability' performance. This section is particularly relevant to inform decision making and guide continual improvement in both the AMP and achieving corporate goals.

- Section 14 – Findings and Recommendations
  Provides a summary of the key issues and actions to be considered by Council. It includes a statement on the reliability and confidence of information to also be considered.

- Section 15-AMP Improvement Plan
  Provides an action plan improve future iterations of the AMP, particularly the improvement of the plan's accuracy and reliance as a decision-making tool.

- Appendices
  Information which is required in the AMP as reference is in the appendices. It also includes detailed works programs for new and renewal capital works that align with funding requirements and are to be aligned with short to medium term detailed operational planning.

1 – IPWEA, 2011, IIMM, p2.22

Document Control

Distribution / Stakeholder list

All key stakeholders are to be included on the distribution list.

Name	Initial	Date	Title/Business Unit
Jack Terblanche			Exec Manager Planning & Compliance
Mark Dowling			Deputy General Manager
Greg Stewart			Exec Manager Engineering & Operations
Kate Stephens			Manager Finance

- *Stakeholders are initial the final document to indicate that the report has been signeted and reviewed.*

Revision History

Document Version	Date	Comments	Author	Reviewer
1	15/1/22	Initial Draft	David Webb	Mark Dowling
2	16/06/22	Revision	David Webb	Mark Dowling
3	1/4/2023	Revision/Update	David Webb	Mark Dowling
4	3/4/2025	Revision/Update	David Webb	Mark Dowling

Certification

As the Principal officer/Asset Custodian responsible for preparing this AMP, I certify that if:

- Has been on a series of assumptions and the best available data at the time;
- Provides a rationale for and underpins the renewal funding as specified in the related 10-year service financial forecasts; and
- Provides a strong platform from which to continue asset management advancement by identifying several areas for further improvement.

Principal Officer (if applicable):_____ Signature:_____

Asset Custodian:_____ Signature_____

Date:_____

1 – IPWEA, 2011, IIMM, p2.22

Contents

1 – IPWEA, 2011, IIMM, p2.22

1 – IPWEA, 2011, IIMM, p2.22

1 – IPWEA, 2011, IIMM, p2.22

Executive Summary

Purpose

The purpose of this Asset Management Plan (AMP) is to consolidate Councils understanding of its Drainage and Flood Mitigation Assets, service levels, risks and to provide operational and capital expenditure forecasts that will deliver the community outcomes detailed in the Community Strategic Plan 2025-2035.

The plan will support informed decision making, guide Long Term Financial Planning budget requirements and provide a path to further improve the accuracy and confidence in future iterations of this plan.

Scope

This Asset Management Plan (AMP) covers the Drainage and Flood Mitigation Assets (the Assets) that support the delivery of services to the Hay Shire Council (Council) Community. It has been prepared based on the International Infrastructure Management Manual (IIMM) the recognised guideline for asst management in Australia.

The AMP uses data available within Council in 2024 including Council's audited financial asset register, based on revaluations undertaken by APV in 2024. Where possible, the financial register has been supplemented by historical condition data.

The Assets

The Drainage and Flood Mitigation Assets are valued at $22.70M and are apportioned into asset categories as detailed in Table 1 below.

Table 1: Drainage and Flood Mitigation Assets Summary

Asset Type	*Replacement Value (June 2024)*
Rural Culvert	$6,490,541
Stormwater Pipe	$13,135,761
Stormwater Pit	$2,991,874
Urban Culvert	$80,063
Flood Levee System	$0
Total	*$22,698,239*

Council is currently undertaking a flood study which will include developing plans to construct licensed levee systems within the Shire. The current unlicensed levees have not been valued or included in Councils asset register.

Asset Condition

The majority of the Drainage and Flood Mitigation Assets are in satisfactory condition and do not require any immediate attention other than routine maintenance. However, Council's asset data indicates that its stormwater pipes are on average well into their current life cycle due to the age of the network. Further analysis and assessment is been carried out to assess the remaining life of these assets.

1 – IPWEA, 2011, IIMM, p2.22

The majority 90% of the poor and very poor assets are rural culverts.

Council's Long-Term Financial Plan (LTFP) has allocated funding for Drainage and Flood Mitigation Capital expenditure as shown in Table 2 Long Term Financial Plan below. In preparing this plan is has been assumed that Current levels of operation and maintenance funding will continue.

Council's LTFP fully funds the Drainage and Flood Mitigation new/upgrade, asset renewals. Operations and maintenance programs.

Table 2: Long Term Financial Plan

Financial Year Ending	*Operations & Maintenance*	*Renewals*	*Total*
2025/26	110,000	$55,000	$166,000
2026/27	111,500	$30,000	$141,500
2027/28	$113,037	$75,000	$188,037
2028/29	$114,613	$85,000	$199,613
2029/30	$116,229	$55,000	$171,229
2030/31	$117,884	$55,000	$172,884
2031/32	$119,501	$5,000	$125,501
2032/33	$121,321	$5,000	$126,321
2033/34	$123,104	$5,000	$128,104
2034/35	$124,932	$5,000	129,932
Total	$1,172,121	$492,500	$1,664,621

The 10-year expenditure forecast for the delivery of Drainage and Flood Mitigation services is $1.66M or $166K per annum. This figure is fully funded in the LTFP.

10-year Expenditure Forecasts

Based on the analysis of Council's expenditure requirements for asset renewal, operations and maintenance there is sufficient funding in the Long-Term Financial Plan to sustain current service levels.

However, the issue for the Council and community is that he current levee systems in place in the Shire are not licensed with a flood study currently underway to determine the way forward. It is likely that a substantial amount of construction works will be required some of which may quality for funding. Councils' contributions for the works have not been included in the LTFP which will need to be further considered when full details of the required works are known.

Asset Valuations

Table 3: Asset Valuations

	Replacement Value	Accumulated Depreciation	Fair Value	Depreciation Expense
Rural Culvert	$6,490,541	$2,394,822	$4,095,719	$73,701
Stormwater Pipe	$13,135,761	$6,745,702	$6,390,059	$130,746
Stormwater Pit	$2,991,874	$689,897	$2,301,976	$32,692
Urban Culvert	$80,063	$33,673	$46,390	$951
Flood Levee Systems	$0	$0	$0	$0
Total	*$22,698,239*	*$9,864,095*	*$12,834,145*	*$238,092*

1 – IPWEA, 2011, IIMM, p2.22

Introduction

Purpose

The purpose of this Asset Management Plan (AMP or Plan) is to:

- Consolidate Hay Shire Council's (Council's) understanding of its assets within the Drainage and Flood Mitigation asset class
- Document levels of Service and risk
- Provide short and medium – term capital works plans
- Support informed decision making and guide Long-Term Financial Planning budget requirements
- Provide a plan to work towards improved accuracy and confidence in future iterations of this Plan.

Scope

This AMP relates to the management of Drainage and Flood Mitigation Infrastructure assets (the Assets) which are recognised assets owned by Council. Assets in this class typically comprise of the following classes:

- Rural Culvert
- Stormwater Pipe
- Stormwater Pit
- Urban Culvert
- Levee

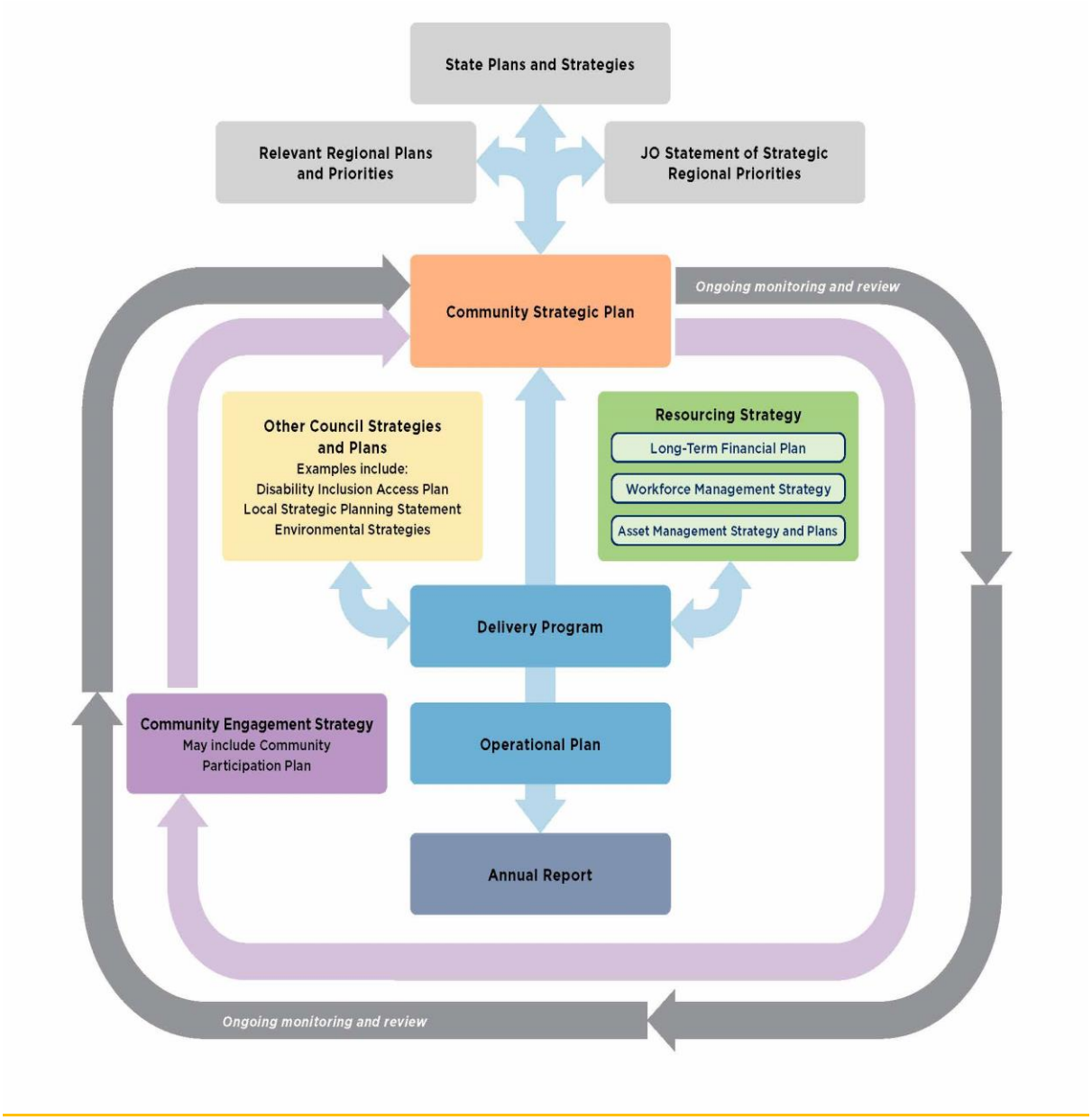
Corporate Context

In 2009 a new Integrated Planning Reporting (IP&R) framework for NSW local government was introduced. The IP&R framework requires councils to prepare a suit of long-term strategic documents, including a Community Strategic Plan, Resourcing Strategy and Delivery Plan Program, as well as an annual Operational Plan. Integration of these strategic documents is key to effective long-term planning and assist us in providing ratepayers with the best level of service that we can.

Table 4 illustrates how the IP&R framework ensures that local planning and reporting is informed, relevant and responsive to community needs.

1 – IPWEA, 2011, IIMM, p2.22

Table 4: Integrated Planning & Reporting flow chart



Community Strategic Plan

The Community Strategic Plan is the highest-level plan that Council prepares. The purpose of the Plan is to identify our community's main priorities and aspirations for the future and to plan strategies for achieving these goals. In doing this, the planning process considers the issues and pressures that may impact the community and the level of resources that will realistically be available to achieve its aspirations.

Informed by extensive community and stakeholder consultation, the Hay Shire Council 2025-2035 Community Strategic Plan seeks to answer four key questions:

- Where are we now?

1 – IPWEA, 2011, IIMM, p2.22

- Where do we want to be in 10 years?
- How will we get there?
- How will we know when we have arrived?

At an operational level, the Community Strategic Plan is implemented through Council's Delivery Plan and annual Operations Plans, which outlines the activities and actions that are the responsibility of Council in achieving our shared vision.

Resourcing Strategy

The Hay Shire 2025-2035 Community Strategic Plan (CSP) provides vehicle for expressing our community 's long-term aspirations. However, the vision set out in this Plan will not be achieved without sufficient resources – time, money, assets and people – to carry them out.

The Resourcing Strategy comprises the following components:

- Asset Management Planning: Council's asset management planning is supported by a governance model that includes an Asset Management Policy, Asset Management Strategy, and individual Asset Management Plans for all assets under Council's control. The Asset Management Plans are based on 'whole of life' asset management from planning, purchase, operation, and maintenance - to disposal of assets. These plans support the Asset Management Strategy in forecasting community requirements and the capacity to meet them on a short -, medium -, and long-term basis.

- Long-Term Financial Planning: The Long-Term Financial Plan (LTFP) tests community aspirations as contained in the Community Plan against the financial realities of the delivering on those aspirations. The LTFP integrated with Hay Shire 2022-2032 CSP through the Delivery Program and one-year Operational Plan.

- Workforce Management Planning: The Workforce Management Plan addresses the human resourcing requirements of the Community Strategic Plan, including what people, skills, experience and expertise are required to achieve its strategic objectives.

1 – IPWEA, 2011, IIMM, p2.22

This AMP is prepared under the above hierarchy and direction of Council's mission, values goals and objectives.

Through consultation with government, community, business, and industry, we have developed a clear vision as to what we want the Hay Shire Council region to look like in 2032.

"We are people are resilient, healthy and safe, living together with a strong sense of community in a vibrant and prosperous economy "

The vision is designed to encourage commitment to our future and engender a sense of common purpose and responsibility in all stakeholders responsible for delivering Hay Shire 2022-2032.

In 2032, our community wants the Hay shire Council region to be:

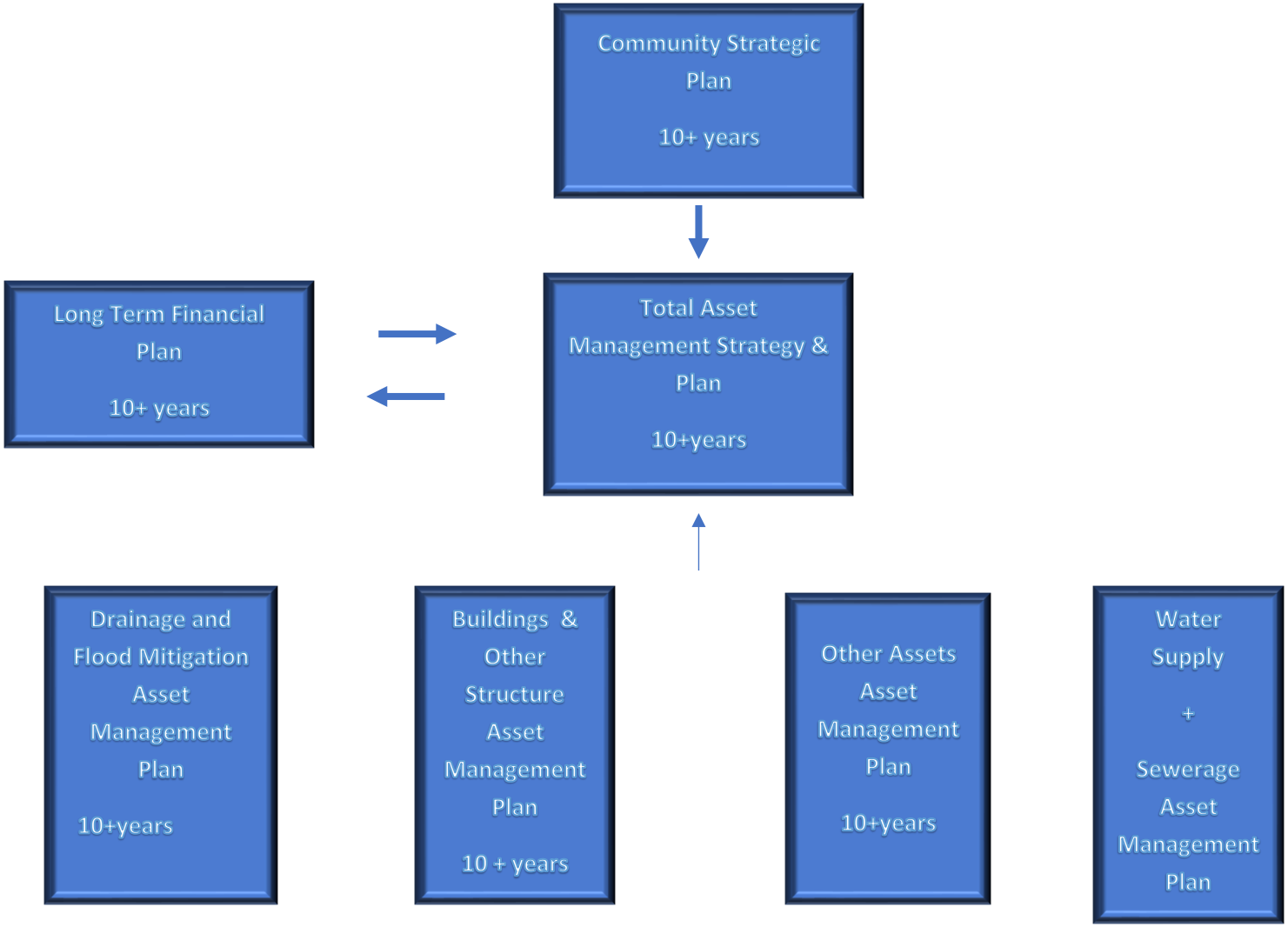
- Resilient
- Health & Safe
- Strong sense of community
- Vibrant & Prosperous economy

1 – IPWEA, 2011, IIMM, p2.22

Relationship to Other Asset Related Council Documents

This AMP aligns and should be read in conjunction with framework of Council documents as shown below:

Asset Management Document Hierarchy



1 – IPWEA, 2011, IIMM, p2.22

The table 5: below shows the key documents that support this AMP

Document	How Related	Reference
AMP Related Documents		
Asset Management Policy	The Asset Management Policy includes the defining principles of asset management within Council. This AMP supports such as by • Considering the entire life cycle of the assets • Supporting the development of cost-effective management strategies for the long term • Providing a defined level of service which can be monitored and used as the basis for aligning affordability with community aspirations • Understanding and meeting the demands of growth through demand management and asset investments. • Managing risk associated with the assets: and • Defining actions required to support continuous improvement in asset management practices.	
Condition Assessment Plan	Contains the methodologies, defect assessment procedures, and the condition rating system used to formally assess the structural integrity and appearance of assets.	
Service Level Agreement (including Maintenance Specifications)	Contains all maintenance and operational specification requirements for assets under this AMP.	
Risk Registers	Contains all identified asset related risks applicable to this AMP.	
Maintenance Manual	Contains design and construction details for new assets.	
Other Related Documents		
Land Development Guidelines	Contains design and construction details for new assets	Council Website
Others….		
External/Specialist Reports	Catchment Analysis, etc.	

Stakeholder Input

Various stakeholders were considered in the preparation of this AMP who will have different roles in implementing its outcomes. These stakeholders and their role are shown in Table 5.

1 – IPWEA, 2011, IIMM, p2.22

Table 6: Key Stakeholders

Key Stakeholder	Role
Councillors	• Represent needs of community. • Allocate resources to meet Council's objectives in providing services while managing risks. • Ensure the organisation is financially sustainable • Custodians of the assets and services, providing the interface with the community regarding the levels of service, good governance, and management practices.
General Manager	• Manager organisation operational activities and future planning strategic direction.
Director Corporate & Community	• Long-Term Financial Plans and operational financial data • Defining information requirements for audit and reporting purposes
Director Corporate & Planning	• Manage delivery of the AMP and initiative. • Capital works projects planning and deliver. • Operational and service levels, data information and analysis.
Community and Ratepayers	• User of services • Source of funding
State and Commonwealth Government	• Active in the management of assets and services across the region.
Council Staff	• Directly involved with the renewal, maintenance and operation of the net work and the management framework, both operationally and financially. • Delivery of operations plans informed by this AMP.
Emergency Services	• Respond to community needs and emergency situations.

Legislative Requirements

Council is required to meet many legislative requirements including Federal and State legislation and regulations. Key relevant legislation is shown in Table 7.

Table 7: Legislative Requirements

Legislation	Requirement
Local Government Act NSW (1993)	**8B Principles of sound financial management** The following principles of sound financial management apply to councils: (c) Councils should heave effective financial and asset management, including sound policies and processes for the following: (i) Performance management and reporting, (ii) Asset maintenance and enhancement **403 Resourcing strategy** (1) A Council must have a long-term strategy (called its **"resourcing strategy")** for the provision of the resources

1 – IPWEA, 2011, IIMM, p2.22

	required to implement the strategies established by the community Strategic Plan that the Council is responsible for. (2) The resourcing strategy is to include long-term financial planning, workforce management planning and asset management planning.
Roads Act 1993	Sets out the rights for the use of public roads, confers certain road related functions on road authorities and regulated the carrying out of various activities.
Work Health and Safety Act 2011	Sets out an employee's obligations to provide a safe work environment for all users, including processes and documents.
Environment Planning & Assessment Act 1979	Encourages the proper management, development and conservation of natural and artificial resources, for the purpose of promoting the social and economic welfare of the community and better environment.
Civil Liability Amendment Personal Responsibility Act 2002	Sets out a road authority's responsibility in the development and implementation of appropriate inspection and maintenance programs subject to the availability of financial and other resources.
Native Vegetation Act	The responsibilities and powers of Council in providing protection for native vegetation.
Australian Accounting Standards	AASB116, AASB1031 Accounting rules setting out Council requirements for maintaining accounting standards and the financial reporting of assets.

This Drainage and Flood Mitigation AMP contributes to supporting Council's legislative requirements.

Plan Maturity

This AMP is targeted at a first cut, 'core-level' AMP as defined in the International Infrastructure Management Manual. Detailed information is in Table 8 below.

Core level AMP's are developed to meet minimum legislative and organisational requirements and provide basic technical management outputs, including:

- Statements on current levels or aspirational levels of service
- Forward asset flow programs
- Associated cash flow

Table 8: Core Level Asset Management Capabilities

AM Category	Core Assessment requirements
Asset Management Plans	• Plan contains basic information on assets, service levels, planned works, and financial forecasts (5-10years) and future improvements. • The plan also includes executive summary, description of services and key/critical assets, top-down condition and performance description of supporting AM processes, 10-year financial forecasts, and 3-year AM improvements plan.

Other "Core" Assessment requirements that can be included in the AMP include the following:

Risk Management	• Risk framework developed • Critical assets and high risks identified

1 – IPWEA, 2011, IIMM, p2.22

	• Documented risk management strategies for critical assets and high risks
Quality Management	• Defined quality policy and basic Quality Management System • All critical activity processes documented.
Levels of Service and Performance Management	• Customer groups defined, and requirements informally understood. • Levels of service and performance measures in place covering a range of service attributes. • Annual reporting against performance targets.
Demand Forecasting	• Demand forecasts based on robust projection of a primary demand factor (e.g. population growth) and extrapolation of historic trends. • Risk associated with demand change broadly understood and documented. • Demand management is considered in major asset planning.
Operating Planning	• Emergency response plan is developed • Asset utilisation is measured for critical asset groups and its routinely analysed.
Maintenance Planning	• Asset critically considered in response processes. • Fault tracking and closure process • Strategy for prescriptive versus performance-based maintenance developed. • Key maintenance objective established and measured.
Capital Works Planning	• Projects have been collated from a wide range of sources such as hydraulic models, operational staff, and risk processes.
Financial and Funding Strategies	• 10+ year financial forecasts based on current AMP outputs. • Significant assumptions are specific and well-reasoned. • Expenditure captured at a level useful for AM analysis.
Asset Register Data	• Sufficient information to complete asset valuation – basic physical information recorded in a spreadsheet or similar (e.g location, size, type) but may be based on broad assumptions or not complete. • Replacement costs and asset age/life. • Asset hierarchy, asset identification and asset attribute system documented.
Asset Condition	• Condition assessment programme in place for major asset types, prioritised based on assets risk. • Data supports asset life assessment • Data management standards and processes documented • Programme for data improvement developed.
Information Systems	• Asset registered enables hierarchical reporting (at component to facility level). • Customer request tracking and planned maintenance functionally enabled • System enables manual reports to be generated for valuation, renewal forecasting.
Service Delivery Mechanisms	• Service delivery roles clearly allocated (internal and external), with contracts in place for external service provision.

1 – IPWEA, 2011, IIMM, p2.22

Existing Infrastructure Base

The section provides an overview of the infrastructure assets covered by this AMP. The overview provides an understanding of the age, value, and condition of Council's existing infrastructure asset base.

Asset Summary

A summary of the Drainage and Flood Mitigation Assets covered by the AMP are included in table 9.

Table 9: Asset Summary

Asset Type	*Replacement Value (June 2024)*
Rural Culvert	$6,490,541
Stormwater Pipe	$13,135,761
Stormwater Pit	$2,991,874
Urban Culvert	$80,063
Flood Levee System	$0
Total	*$22,698,239*

Residual Value and Useful Life

"Residual Value is defined as – the estimated amount that and 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 life"

Except for where assets are typically traded in an open market it has been assumed that the Residual Value is nil. It should be noted that Useful life is not used as a primary input to the calculation of the Fair Value., However, it is a critical assumption used to determine Depreciation Expense. Useful life is determined using professional judgement and is usually determined after given consideration to the past experiences of the entity as well as to potential outcomes flowing from improved asset management strategies.

Asset Hierarchy and Useful Life

An asset's useful life is the period over which a depreciable asset is expected to be fully consumed. This period can be significantly impacted by Council's maintenance practices.

The useful life of an asset is initially based on the manufacturer's recommended (expected) life. This is subject to change however, based on historical evidence of the impact of the local environment on the expected life.

The hierarchy and useful lives of Council's assets are provided in Table 10.

1 – IPWEA, 2011, IIMM, p2.22

Table 10: Asset Lives and Hierarchy

Asset type	Component	Recorded Standard Life (years)
Conduit	Box Culvert	70
	Gravity Main	80
		90
		100
	Pipe Culvert	70
	Rising Main	90
	Subsoil	100
GPT	Letter	130
	Oil and Grease	120
Inlet/Outlet	Floodgate	130
	Wing Wall	100
Kerb & Gutter	Barrier	60
	Dish Drain	60
	Dissipator	60
	Kerb Only	60
Lagoon	Lagoon	150
	Retention Basin	150
Levee	Box Culvert	130
	Concrete	150
		160
	Crib Wall	140
		160
	Earthen Bank	150
		160
	Floodgate	130
	Pipe Culvert	130
	Weir	120
		130
	Wing	130
Open Drain	Concrete Lined	100
	Earthen Bank	100
Other	Pump	120
		140
Pit	Junction	90
	Side Entry	90

Table 11: Stormwater Data

Asset Type	Asset Sub-Type	Component	Component Type	Component Sub-Type	Short-Life				Long-Life			#Total
					Prop %	RV	UL Min	UL Max	Prop %	RV	UL	
Rural Culvert	DICL	DICL	1800	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	1
Rural Culvert	RCBC	RCBC	1200X1200	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	1
Rural Culvert	RCBC	RCBC	300X1500	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	1

1 – IPWEA, 2011, IIMM, p2.22

Rural Culvert	RCBC	RCBC	450X300	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	4
Rural Culvert	RCP	RCP	1050	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	12
Rural Culvert	RCP	RCP	1200	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	12
Rural Culvert	RCP	RCP	1500	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	1
Rural Culvert	RCP	RCP	1650	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	1
Rural Culvert	RCP	RCP	1800	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	2
Rural Culvert	RCP	RCP	300	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	14
Rural Culvert	RCP	RCP	375	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	31
Rural Culvert	RCP	RCP	450	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	498
Rural Culvert	RCP	RCP	450/375	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	1
Rural Culvert	RCP	RCP	525	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	31
Rural Culvert	RCP	RCP	600	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	90
Rural Culvert	RCP	RCP	675	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	1
Rural Culvert	RCP	RCP	750	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	18
Rural Culvert	RCP	RCP	759	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	1
Rural Culvert	RCP	RCP	900	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	40
Rural Culvert	RCP	RCP	Unknown	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	43
Rural Culvert	Steel	Steel	900	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	1
Stormwater Pipe	<1m	<1m	Conc <300	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	0.00	33
Stormwater Pipe	<1m	<1m	Conc 300	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	0.00	131
Stormwater Pipe	<1m	<1m	Conc 375	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	0.00	153
Stormwater Pipe	<1m	<1m	Conc 450	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	0.00	44
Stormwater Pipe	<1m	<1m	Conc 600	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	0.00	10
Stormwater Pipe	<1m	<1m	Conc 750	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	0.00	9
Stormwater Pipe	<1m	<1m	FC <300	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	0.00	28
Stormwater Pipe	<1m	<1m	FC 300	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	0.00	8
Stormwater Pipe	<1m	<1m	FC 375	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	0.00	3
Stormwater Pipe	<1m	<1m	FC 450	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	0.00	1
Stormwater Pipe	<1m	<1m	PVC <300	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	0.00	153
Stormwater Pipe	<1m	<1m	PVC 300	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	0.00	4

1 – IPWEA, 2011, IIMM, p2.22

Asset Type	Asset Sub-Type	Component	Component Type	Component Sub-Type	Short-Life				Long-Life		
					Prop %	RV	UL Min	UL Max	Prop %	RV	U
Stormwater Pipe	>3m	>3m	Conc 450	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	>3m	>3m	Conc 525	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	>3m	>3m	Conc 600	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	1m-2m	1m-2m	Conc <300	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	1m-2m	1m-2m	Conc 300	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	1m-2m	1m-2m	Conc 375	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	1m-2m	1m-2m	Conc 450	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	1m-2m	1m-2m	Conc 525	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	1m-2m	1m-2m	Conc 600	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	1m-2m	1m-2m	Conc 750	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	1m-2m	1m-2m	FC <300	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	1m-2m	1m-2m	FC 300	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	1m-2m	1m-2m	FC 375	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	1m-2m	1m-2m	PVC <300	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	1m-2m	1m-2m	PVC 300	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	1m-2m	1m-2m	PVC 450	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	2m-3m	2m-3m	Conc 1050	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	2m-3m	2m-3m	Conc 375	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	2m-3m	2m-3m	Conc 450	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	2m-3m	2m-3m	Conc 600	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	2m-3m	2m-3m	Conc 750	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	2m-3m	2m-3m	PVC <300	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pipe	2m-3m	2m-3m	PVC 300	Standard Cost - Standard Life	100.00	0.00	80.00	120.00	0.00	0.00	
Stormwater Pit	<1m	<1m	GIP	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	
Stormwater Pit	<1m	<1m	GKIP	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	
Stormwater Pit	<1m	<1m	JP	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	
Stormwater Pit	<1m	<1m	KIP	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	
Stormwater Pit	<1m	<1m	Spec	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	
Stormwater Pit	<1m	<1m	Unknown	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	
Stormwater Pit	>3m	>3m	GKIP	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	
Stormwater Pit	>3m	>3m	KIP	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	
Stormwater Pit	>3m	>3m	Spec	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	

1 – IPWEA, 2011, IIMM, p2.22

Stormwater Pit	1050	1050	H'wall	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	
Stormwater Pit	1m-2m	1m-2m	GIP	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	

Asset Type	Asset Sub-Type	Component	Component Type	Component Sub-Type	Short-Life				Long-Life			#Total
					Prop %	RV	UL Min	UL Max	Prop %	RV	UL	
Stormwater Pit	1m-2m	1m-2m	GKIP	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	93
Stormwater Pit	1m-2m	1m-2m	JP	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	30
Stormwater Pit	1m-2m	1m-2m	KIP	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	188
Stormwater Pit	1m-2m	1m-2m	Spec	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	3
Stormwater Pit	2m-3m	2m-3m	GKIP	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	7
Stormwater Pit	2m-3m	2m-3m	JP	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	3
Stormwater Pit	2m-3m	2m-3m	KIP	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	19
Stormwater Pit	2m-3m	2m-3m	Spec	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	5
Stormwater Pit	300	300	H'wall	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	6
Stormwater Pit	375	375	H'wall	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	12
Stormwater Pit	450	450	H'wall	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	14
Stormwater Pit	525	525	H'wall	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	2
Stormwater Pit	600	600	H'wall	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	8
Stormwater Pit	750	750	H'wall	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	2
Stormwater Pit	Unknown	Unknown	H'wall	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	3
Stormwater Pit	Unknown	Unknown	Unknown	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	18
Urban Culvert	Poly	Poly	300	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	1
Urban Culvert	RCBC	RCBC	600X300	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	2
Urban Culvert	RCP	RCP	300	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	3
Urban Culvert	RCP	RCP	450	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	5
Urban Culvert	RCP	RCP	525	Standard Cost - Standard Life	100.00	0.00	60.00	100.00	0.00	0.00	0.00	1

Asset Condition

Council has adopted a condition assessment method using a 5-point scale rating, varying from 'Very Good' to 'Very Poor' condition as can be seen in Table 12 below.

Table 12: Condition Assessment

Grade	Condition	% Remaining Useful Life	Description
1	Very Good	>70%	Sound physical condition. No signs of deterioration Only normal maintenance required

1 – IPWEA, 2011, IIMM, p2.22

2	Good	70%->50%	Acceptable physical condition; minor deterioration visible, no short-term failure risk. Minor defects only. Only minor work required, if any.
3	Fair	50%->10%	Acceptable physical condition ; minimal short-term failure risk but potential for deterioration in long-term. Minor defects only. Minor components or isolated sections of the asset may need replacement or repair now but asset functions safely at adequate level of service. Work may be required but asset is serviceable. Maintenance required to restore the asset to an acceptable level of service.
4	Poor	10%-4%	Significant deterioration evident. Failure likely in short-term. Likely need to replace most or all of the asset. No immediate risk to health or safety work required in short-term, asset barley serviceable. Asset requires renewal – works to be programmed.
5	Very Poor	<4%	Failed or failure imminent. Immediate need to replace most or the entire asset. Health and safety hazards exist which present a possible risk to public safety, or asset cannot be serviced/operated without risk to personnel. Asset is effectively unserviceable. Major work or replacement required urgently.

The majority of the Drainage and Flood Mitigation Assets are in satisfactory condition and do not require any immediate attention other than routine maintenance. However, Council's asset data indicates that its stormwater pipes are on average well into their current life cycle due to the age of the network. Further analysis and assessment is been carried out to assess the remaining life of these assets.

Assets Criticality

A critical asset is an asset for which the financial, business or service level consequences of failure are sufficiently severe to justify proactive inspection and rehabilitation. Critical assets have a lower threshold for action than non-critical assets.

Although critical assets have a high consequence of failure, they don't necessarily have a high likelihood of failure.

Asset Criticality is a measure of how critical an asset is to the functioning of and/or the services provided by Council.

The importance or degree of asset critically has been proposed to be based on the consequences of failure i.e. consequences of failure are assigned a criticality factor.

Elements that may impact on asset criticality include:

- Safety
- Cost of Failure
- Complexity

1 – IPWEA, 2011, IIMM, p2.22

- Severity of Duty
- Impact of failure
- Impact on Environment
- Location
- Loss of Service
- Number of Customers Serviced
- Site function
- Public image impact

Social, environmental & economic factors may be considered.
Social may include

- Community disruption
- Health and safety
- Litigation

Environment factors that may need to be considered are

- Natural waterways
- Parks
- National parks
- Recreational grounds

Economic

- Business and commercial activities being disrupted
- Costs to the community

Criticality has been assigned using the rating in

Table 13: Criticality Rating - To be assessed

Criticality Rating				
1	2	3	4	5
Insignificant	Minor	Moderate	Major	Extreme

Data Confidence

Council Asset valuations and Condition assessment have been subject to rigorous program where assets were individually inspected and assessed. Subsequently council has a high degree of confidence in the data.

Levels of Service

Level of Service Documents Hierarchy

- Hay Shire 2025-2035 CSP

  The Community Strategy establishes, through community consultation, Council's aspirational goals and objectives for the delivery of Drainage and Flood Mitigation services.

1 – IPWEA, 2011, IIMM, p2.22

- Asset Management Plan
  This asset Management Plan (AMP) develops technical measures against which the aspirational goals and objectives can be measured (Technical Levels of Service).

- Delivery Plan
  The Delivery Plan (DP) allocated those responsible for the assets and the services they deliver, and the operational areas of Council charged with maintaining, operating, and upgrading existing assets or construction new infrastructure.

- Activity Specification
  The activity specification defines the target performance measures for maintenance, operations, or construction activities. It sets routine inspection and maintenance frequencies and for reactive maintenance sets intervention levels, response times, activity duration targets.
- Maintenance Management Plan
  The Maintenance Management Plan (MMP) details how each activity is to be completed and may include the following:
    - Standard Operating Procedures
    - Work Instructions
    - Hazards Risk Assessment
    - Reference to Equipment Maintenance Manuals (particularly fleet, plant, mechanical and electrical assets)

Community Strategy 2025-2035 (Community Levels of Service)

The Community Strategy relevant to this AMP is:-

Outcome 5: Our Infrastructure – Sustainable infrastructure provision that is adaptive to changing and funding levels.

Table 14: Council's Goals

Council Role
• Undertake sound asset management planning and asset mapping. • Where appropriate, upgrade existing or provide new infrastructure.

In addition to Council's Drainage and Flood Mitigation aspirational goal and roles as detailed in Table 14 above, the Community Levels of Service relate to subjective service delivery outcomes that the community wants in terms of safety, quality, reliability, responsiveness, value and legislative compliance.

Community levels of service measures used in this service management plan are:

- Quality – How good is the service?

1 – IPWEA, 2011, IIMM, p2.22

- Function – Does it meet users' needs?
- Capacity/Utilisation – Is the service over or under use?

These community levels of service promised by Council are outlined in Table 15.

1 – IPWEA, 2011, IIMM, p2.22

Table 15: Community Levels of Service

Service Level Outcome	Principle Activity	Strategic Elements	Performance Outcome	Assessed By
Reliability	Drainage and Flood Mitigation doesn't impact other services	Unobtrusive	No disruptions from Drainage and Flood Mitigation network	Number of interruptions/years
Quality	Good value Drainage and flood Mitigation Services No Odours	Stormwater collection, transport and treatment remains affordable	Agreed level of service delivered within budget allocations while maintaining an acceptable level of risk and asset life expectations. Cost of Drainage and Flood Mitigation services does not increase more than inflation.	Quantitative cost assessment
Function	Provide an effective method of collection and disposal of wastewater. No backup of sewerage into properties. No overflows of sewage into public places/waterways. Drainage and Flood Mitigation re-use.	Drainage and Flood Mitigation system functions as designed. Water re-use from treatment plants is optimised. Drainage and Flood Mitigation network doesn't impact the environment.	Water re-use from treatment plant is optimised. Sewage treatment meets all relevant environment guidelines.	Water quality testing Environment impact assessment
Condition	Drainage and Flood Mitigation network is maintained in good condition	The condition of the Drainage and Flood Mitigation Assets is regularly assessed.	Condition rating for the Drainage and Flood Mitigation Network Assets.	Movement in the assessed condition of the assets % of renewal programs delivered.
Capacity & Utilisation	Provides adequate population capacity	Network has sufficient capacity to meet community expectations	The capacity of the Drainage and Flood Mitigation network will have capacity to meet population growth expectations.	% of Drainage and Flood Mitigation network by value that has poor or very poor capacity or utilisation Capacity with criteria set out in technical service levels for various.

1 – IPWEA, 2011, IIMM, p2.22

Technical Levels of Service

Technical levels of service support the community levels of service by turning subjective requirements of the Community Levels of Service into objective assessments. These technical measures aim to quality the performance of the assets and service they provide and relate to the allocation of resources to services activities that the organisation undertakes to best achieve the desired community outcomes and demonstrates effective organisational performance.

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 an asset near as practicable to an appropriate service condition (e.g., road patching, unsealed road grading, building and structure repairs)
- Renewal – the activities that return the service capability of an asset to that which it has originally (e.g 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 (e.g widening a road, sealing tan unsealed road, replacing a pipeline with a larger size) or
- New – a new service that did not exist previously (e.g., a new library).

Asset managers plan, implement and control technical service levels to influence the community service levels. [1]

These technical Levels of Service are outlined in Table 16 by asset classification

1 – IPWEA, 2011, IIMM, p2.22

Table 16: Technical Levels of Service

Asset Class	Drainage and Flood Mitigation		
Service Statement	Council effective improvement of stormwater transport, treatment and disposal with minimal environment impact.		
Performance Measure	Number of complaints per annum		
Service Factors	Community Levels of Service	Technical Level of Service	Performance Measures
Quality			
Effective Drainage and Flood Mitigation transport and treatment	An unobtrusive service	No nuisance from sewage services Operations Maintenance • Inspect assets on a routine basis to identify their condition • Inspect asset on a routine basis to identify and address any defect and safety concerns • Maintain assets in a tidy, safe and functional condition	100% of Activities identified in the SLA met 30% of Asset Base condition assessed annually. Defect inspect 90% of Drainage and Flood Mitigation Assets. <1 complaint/ month.
		Renewal • Renew/replace components when they no longer function. reseal/rehabilitation. • Renew/replace assets when they degrade to a dangerous level.	Average network condition remains constant of or improves. 90% delivery of renewal programs
Function			
Environmental Compliance Affordability and whole of life management.	Drainage and Flood Mitigation treatment meets all relevant environment guidelines. Drainage and Flood Mitigation collection, transport and treatment remain affordable.	New/Upgrade • Provide new/upgrade infrastructure to cater for community growth in accordance with community demand. • Provide new/upgraded infrastructure as required to comply and constructed in accordance with industry standards or statutory requirements.	90% delivery of CAPEX programs. 100% Compliance with design standards and guidelines. 5> complaints/annum

1 – IPWEA, 2011, IIMM, p2.22

		• Ensure new/upgrade infrastructure is designed and constructed in accordance with Council's Guidelines.	
Capacity /Utilisation			
Stormwater re-use	Water re-use is optimised	New/upgraded • Ensure new/upgrade infrastructure is designed and constructed in accordance with Council's Guidelines	100% Compliance with design standards and guidelines Customer surveys. Promote water reuse.

1 – IPWEA, 2011, IIMM, p2.22

Demand

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

Specific to Council, the demand factor that may impact on service delivery are summarised in Table 17.

Table 17: Demand Impact

Demand Driver	Current Position	Projected Position	Potential Impact	Response Required
Community Growth	2946 residents	• No current prediction available	Population growth will result in an increase in asset use and have an impact on lifecycle cost if the assets.	There is not enough growth to have a significant impact on services.
Demographic	Median age 45	• No current prediction available	Increases in the median age increases the importance for service accessibility.	The average population being relatively young will increase the need for community Drainage and Flood Mitigation infrastructure.
Tourism	Tourism and related industries account for 16.6% of the total employed in the Council area.	• No current prediction available	An increase in visitors to the area will have a larger effect on infrastructure services	Council will not have to increase size of the asset base specially for tourism increases

(*Australian Bureau of statistics – Hay Shire Council)

Growth/Demand Response

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

Non-asset solutions focus on providing the required service without the need for Council to own the assets and management actions including reducing demand for the service, reducing the level of service (allowing some assets to deteriorate beyond current service levels) or education customers to accept appropriate assets failures.

Opportunities for demand will be developed in future revisions of this asset management plan.

Council's current adopted growth rate is 1% per annum. There is existing capacity in the Drainage and Flood Mitigation network to cater for this level of growth for the foreseeable future.

1 – IPWEA, 2011, IIMM, p2.22

Risk Management

Risk Management Objectives

Council has a 'duty of care' to the community in relation to management of the assets and appropriate management of risk. Council must reduce risk where it is reasonable to do so. Risks that affect Council include:

- Risks associated with the loss of service by the failure of critical assets
- Financial risks from a lack of due diligence in the management of funding for the renewal, maintenance, and operation and management outputs.

The objectives to be achieved in managing risks under the AMP are:

- Identify high risk assets
- Maintain Levels of Service
- Mitigate risks to the public
- Reduce the number and magnitude of unplanned asset failures.

Managing risks involves identifying, assessing and determining risk management option.

Risk options vary depending on several factors, including but not limited to:

- Available resources and funding
- Risk assessment level and
- Network demand

In this way, it may be reasonable to mitigate a lower risk when it is not practical to mitigate a high risk.

For each identified risk Council can elect to adopt one of the following positions:

- Take the risk
- Transfer the risk
- Treat the risk
- Terminate the risk

Risk Assessment Method

Risks vary on both likelihood and consequence. Analysing risks in a risk matrix can help to quantify the risk to then identify necessary treatment actions. The risk matrix used to assess Council's risk is shown below.

LIKELIHOOD		CONSEQUENCES				
		1	2	3	4	5
		Negligible	Minor	Moderate	Major	Catastrophic
Likelihood	A. Rare	Low	Low	Low	Moderate	High
	B. Unlikely	Low	Low	Moderate	High	High
	C. Possible	Low	Moderate	Moderate	High	Extreme
	D. Likely	Moderate	Moderate	High	Extreme	Extreme
	E. Almost Certain	Moderate	High	High	Extreme	Extreme

1 – IPWEA, 2011, IIMM, p2.22

Risk Assessment	Treatment Options
Low(L)	Acceptable Risk • Unlikely to require specific application of resources • Manage by routine procedures • Monitor, review and react
Moderate (M)	Acceptable Risk • Unlikely to cause much damage and/or threaten the efficiency and effectiveness of the activity • Treatment plans to be developed and implemented by operational managers. • Manage by specific monitoring or response procedures
High Risk (H)	Generally unacceptable • Likely to cause some damage, disruption, or breach of controls • Senior management attention needed, and management responsibility specified • Treatment plans to be developed and reported to executives
Extreme (E)	Not acceptable • Likely to threaten the survival or continued effective function of the organisation, either financially or politically • Must be managed by senior management with detailed treatment plan in place • Immediate action required.

Risk Analysis - Asset Failure

To be assessed

1 – IPWEA, 2011, IIMM, p2.22

Rick Analysis – Operational Activities

Table 18: Drainage and Flood Mitigation Operational Risk Assessment

Asset at Risk	Risk ID	Critical Incident	Cause	Likelihood	Consequences	Rating
Flood Mitigation and Drainage	S1	Failure to detect conduit failure causing leak	Reduced Asset inspection programs	Unlikely	Major	High
Flood Mitigation and Drainage	S2	Poor Quality Assets provided or constructed	Failure to comply with Council's guidelines	Rare	Major	Moderate

Operational Risk Report

The risk report resulting from the assessment is included as Table 19 below.

Table 19: report resulting from the assessment

ID	Risk Description	Risk Assessment	Action	Proposed Treatment Options	Estimated Cost	Target Risk Result
S1	Assets are being acquired or created and recorded in the asset register. The information recorded is not appropriate (e.g. Asset Name: "Capital works")	High	Treat	Improve processes and procedure documentation train staff. Improve data recording of Ops & Main. Exp. Improve asset data recording, capitalisation and management	$TBA	Moderate
S2	Annual works programs are not being delivered (Plan, design and conduct within a single year)	High	Treat	Amend budget to include forward planning and forward Design allocations.	Nil	Moderate

TBA (To Be Assessed) are reactive in nature and will be addresses when the issue arises.

1 – IPWEA, 2011, IIMM, p2.22

Long Term Funding

The available funding is based on financial data in the LTFP. The Capital expenditure has also been extracted from Council's LTFP. There is no clear separation between maintenance and operational costs in Council's financial planning which is an area for improvement.

Long -Term Financial Plan Summary

The LTFP funding available for operations, maintenance and CAPEX (new, upgrade, renewals) projects is shown in table 20

Table 20: LTFP funding available for operations

Financial Year Ending	*Operations & Maintenance*	*Renewals*	*Total*
2025/26	110,000	$55,000	$166,000
2026/27	111,500	$30,000	$141,500
2027/28	$113,037	$75,000	$188,037
2028/29	$114,613	$85,000	$199,613
2029/30	$116,229	$55,000	$171,229
2030/31	$117,884	$55,000	$172,884
2031/32	$119,501	$5,000	$125,501
2032/33	$121,321	$5,000	$126,321
2033/34	$123,104	$5,000	$128,104
2034/35	$124,932	$5,000	129,932
Total	$1,172,121	$492,500	$1,664,621

This has been verified as underestimated with the assistance of Cumberland City Council asset team, confirming LTFP allocation required is $4,659,761 (Operations/maintenance - $79,443 per annum and 10-year asset renewal of $3,865,331). The LTFP shows a significant shortfall in renewal works compared with asset valuation/consumption. Continued further analysis and inspections are required to achieve a higher level of confidence in these figures and confirmation if this is the reality.

Operations & Maintenance

Operations and Maintenance activities relate to the day to day running and upkeep of assets, the costs of which are particularly significant for dynamic/short-lived assets.

Operations expenditure is recurrent expenditure, which is continuously required to provide a service. In common use the term typically includes, e.g. power, fuel, plant equipment, street sweeping, mowing, on-costs and overheads but excludes maintenance and depreciation.

Maintenance activities are those necessary for retaining as asset as near as practicable to its original condition, including regular ongoing day-to-day work necessary to keep assets functioning and in good repair. It is operating expenditure required to ensure that the asset reaches its expected useful life.

1 – IPWEA, 2011, IIMM, p2.22

Operations & Maintenance Program

Currently maintenance is managed based on historical information and trends. The maintenance service objectives are to:

- Maintain Council's infrastructure in a safe, serviceable and aesthetic condition to the satisfaction of Council and the community;
- Maintain and preserve the functionality and value of the existing assets;
- To provide and maintain a safe environment of the community within the constraints of Council's financial capacity and resource capability, while displaying a reasonable 'duty of care'; and
- Ensure the provision of a high standard of customer service and that customer requests are responded to quickly efficiently.

Council's future operations and maintenance expenditure is based on last financial year's financial statements. This data only provided very limited granularity and insight into the operations and maintenance work it represents. The operations and maintenance expenditure are not broken down into specific task. From this data it is not possible to assess whether the level of operations and maintenance being conducted is appropriate or how I will change over the planning period.

The projected operations and maintenance expenditure can be seen in Table 21

Table 21: Forecast Operations and Maintenance expenditure

Financial Year Ending	Operations/Maintenance
2025/26	$110,000
2026/27	$111,500
2027/28	$113,037
2028/29	$114,613
2029/30	$116,229
2030/31	$117,884
2031/32	$119,501
2032/33	$121,321
2033/34	$123,104
2034/35	$124,932
Totals	*$1,172,121*

The annualised expenditure on operations and maintenance activities for the next 10 years is $117k per annum

This has been verified as underestimated with the assistance of Cumberland City Council asset team, confirming LTFP allocation required is $4,659,761 (Operations/maintenance - $79,443 per annum and 10-year asset renewal of $3,865,331). The LTFP shows a significant shortfall in renewal works compared with asset valuation/consumption. Continued further analysis and inspections are required to achieve a higher level of confidence in these figures and confirmation if this is the reality.

Maintenance Expenditure Ratio

A high order assessment of the maintenance ratio expenditure shows a medium confidence in the annual expenditure. Current LTFP show we have estimating 50% maintenance expenditure each year compared with assessment by Cumberland. A continued further assessment through inspections and analysis is required.

1 – IPWEA, 2011, IIMM, p2.22

Depreciation Expense Levels

The total Annual Depreciation of stormwater assets excluding rural culverts for the next 10 years is $2,614,000.

The current level of renewals excluding rural culverts is less than 25% of this figure.

Renewals Planning

Renewal expenditure does not increase the assets design capacity but restores, rehabilitates or renews existing asset to its original or lesser required service level.

The renewal expenditure $492K in the LTFP is based on historical figures and has not been subject to a rigorous evaluation.

Analysis by Cumberland City Council shows a renewal budget over the life of the LTFP of $3,865,331, or $386,533 per annum. Current levels of renewal is $103,500. This may result in the deterioration of the stormwater assets if the financial commitment is not increased.

New and Upgrade

New and Upgrade expenditure is for the provision of, or improvement to, an asset where the outlay can reasonably be expected to provide benefits beyond the year of outlay, including a value management approach that aims to produce the most economic and creative solutions.

New/Upgrade Prioritisation Approach

The considerations taken into account when prioritising new/upgrade Projects. The discussion may include some example criteria as documented below:

- New/upgrade projects that involved legislative drivers were prioritised over others that did not, to ensure compliance with statutory requirements.
- Once the legislation assessment was completed, projects were assessed against alignment with approved Council plans, policies, and strategies. This was essential to ensure projects were not being developed outside the scope of strategic Council documents.
- A risk assessment was undertaken, to identify projects with higher risk. This was necessary to identify the consequences and impacts If projects were nit undertaken. Projects identified as higher risk were prioritised over those with a lower risk.
- An assessment of community growth and demand based on technical levels of service within the Council area was undertaken. This highlighted that projects associated with growth areas such as the northern growth corridor warranted being prioritised over those not located in such an area.
- For projects concerning the upgrade of existing assets, these were given priority over new assets in order to maximise/enhance existing infrastructure before investing in new, additional assets.
- Include evidence of a value management approach taking into consideration the hole of Life costs of each project.

What is not considered in this Plan is the replacement/upgrade of the Flood Levees of Hay and Maude. Council has recently completed the Hay & Maude Floodplain Risk Management Study & Plan, with a high order cost estimate for the levee works of $25M being required. Council, at this point, has insufficient reserves to fund its contribution, estimated to be $3.6M, towards levee upgrade works. The current levee reserve is 524,000

1 – IPWEA, 2011, IIMM, p2.22

Disposal/Rationalisation

Council has undertaken a review of the configuration, type and location of Drainage and Flood Mitigation Assets and the service process relevant to the activity, when an asset becomes uneconomical to maintain or rehabilitate, or is no longer required.

There is currently no information regarding any assets that may have been disposed of. It has been assumed that all assets on the register are in use.

Forecast Expenditure

Financial Summary

The forecast expenditure to deliver the planned new/upgrade program, the condition renewal plan and sustain the current level of operations and maintenance is outlined in Table 22 below.

Table 22: 10-Year Forecast Expenditure

Financial Year Ending	Operations/ Maintenance	Renewals	New Work	Total
2025/26	110,000	$55,000	$0	$166,000
2026/27	111,500	$30,000	$0	$141,500
2027/28	$113,037	$75,000	$0	$188,037
2028/29	$114,613	$85,000	$0	$199,613
2029/30	$116,229	$55,000	$0	$171,229
2030/31	$117,884	$55,000	$0	$172,884
2031/32	$119,501	$5,000	$0	$125,501
2032/33	$121,321	$5,000	$0	$126,321
2033/34	$123,104	$5,000	$0	$128,104
2034/35	$124,932	$5,000		129,932
Total	$1,172,121	$492,500	*$0*	$1,664,621

The 10-year LTFP aligns with the planned works and the condition-based renewals programs.

A review with the assistance of Cumberland City Council has shown the total expenditure required over the life of the LFTP should be $3,998,780 (Operations/maintenance - $67,264 per annum and 10-year asset renewal of $3,326,140); equating to $393,404 per annum. The LTFP shows a significant shortfall in renewal works compared with asset valuation/consumption. Continued further analysis and inspections are required to achieve a higher level of confidence in these figures and confirmation if this is the reality. Current LTFP show we have estimating 50% maintenance expenditure each year compared with assessment by Cumberland. A continued further assessment through inspections and analysis is required.

Asset Values

The valuation is based on:

The valuation has been provided by an external contractor who undertook a rigorous program to formulate the values.

Table 23: Asset Valuations

Asset Class	Replacement Cost	Accumulated Depreciation	Fair Value	Annual Depreciation

1 – IPWEA, 2011, IIMM, p2.22

Drainage and Flood Mitigation Assets	$22,698,241	$9,864,095	$12,834,145	$238,092

Note: this excludes the Hay and Maude levee systems.

Performance Ratios and Sustainability

Annual Ratios

The sustainability outputs are provided to demonstrate the trends that the currently anticipated expenditure will have on key measures. Capital Expenditure for 2022-2025 shown in Table 24.

Table 24: Capital Expenditure 2021-2022

Year	Capital Renewal Expenditure	Capital New/Upgrade Expenditure	Total Capital Expenditure
2025/26	$55,000	$0	$55,000

Assessed asset renewal ratio is currently below what is considered satisfactory. Asset renewal plans need to be implemented that increase the renewal ratio towards 80-100% over the

Renewals Program

This renewal requirement does not include any amount dedicated to a renewal project which upgrades or increases the level of service. Any additional amount for this is to be reported through the New and Upgraded Requirement within the New and Upgrade chapter of this AMP.

This plan provides an indicative program information for the renewal of the assets.

The renewal plan based on the condition and remaining life data held against each asset in the asset register has been prepared and is attached in Appendix C – Renewal Plan.

Prior to the adoption of the renewal plan, a review of individual projects and the data held in the register will be validated by inspection and where discrepancies exist the Plan and the record data will be amended.

Consumption Ratio

The consumption ratio provides a measure of the percentage of the asset base consumed to date and an indication of how fast the assets are being consumed each year and whether investment may require adjustment.

FORMULA

Written down value of assets/gross current renewal costs.

IN OTHER WORDS

The current value of the assets divided by what it would cost to renew them

Table 24: Annual Asset Consumption

Annual Asset Consumption (Depreciation/Depreciable Amount)	1.05%

The Annual Asset Renewal Ratio provides a measure of the rate of investment in renewals.

Table 25: Annual Asset Renewal

Annual Asset Renewal (Capital Renewal Expenditure/Depreciable Amount)	26.8%

The current renewal expenditure is based on historical expenditure is based on historical expenditure which needs to be reviewed in terms of risk and adequacy.

The Annual New & Upgrade ratio provides an indication of the rate of growth of the asset base.

Table 26: Annual New & Upgrade Ratio

Annual New/Upgrade (Capital New & Upgrade/Depreciable Amount)	15%

Sustainability Ratio (Levels of Service)

Assessed sustainability ratio is currently not achieving the required 80%.

Plan Improvement

Performance Measures

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

- The degree to which the required cash flows identified in the development of the final plan are incorporated into Council'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:

1 – IPWEA, 2011, IIMM, p2.22

- The degree to which the exiting and projected services levels and service consequences (what we cannot do), risks and residual risks are incorporated into the Council's Strategic Plan Associated plans,
- The Asset Renewal Funding Ratio achieving the target of 1.0.

Monitoring and Review Procedures

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

This plan has a life of three years and is due for major review in 2024.

Evaluation of findings

The Majority of the assets are in good condition with only a small minority in poor or very poor condition. However, based on the value of the assets and subsequent depreciation charge there is insufficient funds allocated in the renewals program to maintain the service level for the long term. With the Flood Study to be completed over the next 24 months, Council is likely to have to make a significant financial commitment towards the levee system to implement the recommendations.

Way Forward

1) Risk analysis be conducted on assets in relation to criticality and asset condition.
2) Proper evaluation of maintenance costs and requirements to formulate maintenance ratio.
3) Further development of asset inspection regime, condition analysis and asset management techniques.
4) Formulate asset renewal program-based ion engineering requirements and risk.
5) Review flood study and implements actions as required to ensure that residual risk is within appetite.

1 – IPWEA, 2011, IIMM, p2.22

Appendix A - Abbreviations

AAAC	**Average annual asset consumption**
AMP	**Asset Management Plan**
ARI	**Average Recurrence Interval**
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**
LGIS	**Local Government Infrastructure Services**
MMS	**Maintenance Management System**
PCI	**Pavement Condition Index**
RV	**Residual Value**
Vph	**Vehicles per hour**

1 – IPWEA, 2011, IIMM, p2.22

Appendix B – 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 included 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 asset having a similar nature or function in the operations of an entity, and which, for purpose 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 a Council'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 useful life (or remaining future economic benefits/service potential) and totalled for each and every asset in an asset category or class.

Borrowings

A borrowings 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 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 Council's asset base, but may be associated with additional revenue from the new user group e.g. extending a drainage or road network, the provision of an oval or park in a new suburb for 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 asset being renewed. As it reinstates exiting service potential, it generally has no impact on

1 – IPWEA, 2011, IIMM, p2.22

revenue, but may reduce future operations and maintenance expenditure if completed as the optimum time, e.g. 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 has originally. Upgrade expenditure is discretionary and often does not result in additional revenue unless direct user charges apply. I will increase operations and maintenance expenditure in the future because of the increase in Council's asset base. E.g. widening the sealed area of an existing roads, 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 ties 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 and below which the expenditure is charged as an expense in the year of acquisition.

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

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 on-off design and project management costs.

Current replacement cost (CRC)
The costs 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 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 arm's 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

1 – IPWEA, 2011, IIMM, p2.22

determined assuming no additional operating revenue 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 future diminution of existing service levels.

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

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

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 if 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 Cost to give an initial indicator of life cycle sustainability.

Maintenance
All actions necessary for retaining an asset near as practicable to its original condition, including regular ongoing day-today 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 is carried out in response to service requests and management/supervisory directions.

Significant maintenance
Maintenance work to repair components or replace sub-components that needs to be identified as a specific maintenance item in the maintenance budget.

Unplanned maintenance
Corrective work required in the short-term to restore an asset to working condition so it can continue to deliver the required services or to maintain its level of security and integrity.

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

1 – IPWEA, 2011, IIMM, p2.22

Maintenance and renewal sustainability index
Ratio of estimated budget to projected expenditure for maintenance and renewal of assets over a defined time (e.g., 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 if service. It is expenditure, which as 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 Council of the cash flows associated with an assets, 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 arising from e.g. 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 Council, e.g. parks and playgrounds, footpaths, roads and bridges, libraries tec

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 results in decreases relating to distributions to equity participants.

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

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

Recurrent funding
Funding to pay for recurrent expenditure.

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

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 age and in the condition expected at the end of its useful life.

1 – IPWEA, 2011, IIMM, p2.22

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 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 in providing services (Depreciated Replacement Cots/Depreciable Amount)

Strategic Longer-Term Plan
A plan covering the term of office of councillors (4years minimum) reflecting the needs of the community for the foreseeable future. It brings together the detailed requirements in Councils longer-term plans such as the service management plan and the long-term financial plan. The plan is prepared in consultation with the community and details where 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 potholes repairs, replacement of pump 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 front he 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 the over which the future economic befits embodied in a depreciable asset, are expected to be consumed by 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 costs (DRC) for those assets whose future economic benefits are not primary dependent on the asset's 'a ability to generate net cash inflows, where the entity would, if deprived of the asset, replace its remaining future economic benefits

1 – IPWEA, 2011, IIMM, p2.22

1 – IPWEA, 2011, IIMM, p2.22