Stormwater Asset Management Plan

September 2020

Document Version Control

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Executive Summary

What is this plan?

This *Stormwater Asset Management Plan* forms part of the Shire's *Asset Management Framework*. It seeks to ensure we continue to deliver stormwater assets that support service delivery now and into the future, whilst managing the inherent risk associated with these assets.

It outlines how the Shire's plans to manage stormwater assets in line with our Asset Management Principles of :

- Leadership Driven
- Service Led
- Informed by Risk
- Information Based
- Whole of Life
- Environment Aware

What assets are covered?

This plan relates to all stormwater assets Council has responsibility for, including:

- Catchment drainage
- Drainage structures
- Water Sensitive Urban Design (WSUD)

These assets under this plan have a gross replacement cost of **$595M**.

How are they managed?

We manage our stormwater assets through monitoring there performance against the level of service areas of **quality**, **functionality**, and **capacity**.

The current performance of our stormwater assets in these service areas is as follows:

- **Quality** **99%**
  (primarily based on asset age)
- **Functionality** -
  (to be assessed in future revisions)
- **Capacity/Use** -
  (to be assessed in future revisions)

These are supported by technical levels of service and performance measures looking at how we **operate**, **maintain renewal**, **upgrade** and **expand** our asset network.

What will it cost?

The current financial projection to provide assets to meet the levels of service amounts to **$64M** over 10 years (excluding upgrade and new/expansion).

The current long-term financial plan has a budgeted expenditure of **58M**, or **112%** or the required expenditure.

This signifies that we expect to be able to continue to provide our stormwater assets at the current service levels over the planning term of this asset management plan.

The next steps

Aside from outlining our plan for managing transportation assets, this plan also identifies improvement opportunities that will allow us to continually enhance how we manage our assets.

The main improvement opportunities identified and included in the implementation plan are:

- Collection of performance data on asset functionality and capacity/use
- Undertake community consultation around levels of service for stormwater assets
- Develop stormwater asset specific risk register
- Establish routine performance audit programs based on asset criticality
- Update asset modelling processes
- Development of asset vulnerability assessment tool

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1 Introduction

1.1 Purpose and Scope

The *Stormwater Asset Management Plan* specifies the activities, resources, responsibilities and timescales required for stormwater related assets to achieve our *Asset Management Objectives* identified in the *Asset Management Strategy*.

1.1.1 Goals of Plan

The specific goals of this plan are:

- To identify how the Shire's stormwater assets help in achieving the Council's strategic objectives;
- To outline the service needs of stormwater assets and nominate levels of service based on those service needs;
- To document known risks related to stormwater assets, and specify the treatments and controls in place to add and preserve value;
- To measure current asset performance against the above levels of service;
- To detail the asset lifecycle plan, including forward capital works programs and maintenance programs, to ensure levels of service are met in future;
- To summarise the financial projections based on the lifecycle plan, linking them to Council's Long-Term Financial Plan; and
- To outline an implementation and improvement plan to ensure continual improvement in the management of the Shire's stormwater assets.

1.1.2 Scope of Plan

This *Asset Management Plan* encompasses all assets within the major asset class 'Stormwater' that the Shire owns and/or manages. Table 1 summaries the total value of assets within this major asset class, by asset category.

Table 1. Assets covered by this plan

Asset Category	Gross Replacement
Catchment Drainage	$543,209,000
Drainage Structures	$33,323,000
Water Sensitive Urban Design (WSUD)	$18,224,000
Total	**$594,756,000**

*** Effective from 1 July 2019**
(Subject to change at any time)

Details on the types of assets contained within each of the above asset categories is provided in Figure 6 on page 18.

Several infrastructure asset types are not the responsibility of the Shire. For clarification purposes, these assets are included in a list in Appendix A of the *Strategic Asset Management Plan*.

1.2 Plan Development

1.2.1 Key Contributors

The following Shire teams had significant input in preparing this plan:

- Asset Management
- Roads, Drainage & Cleansing Operations
- Climate Change, Energy and Water
- Finance
- Infrastructure Planning
- Project Delivery
- Innovation & Advocacy
- Audit and Asset Protection
- Safety & Service Quality
- Risk & Insurance

There was also significant engagement with officers throughout the organisation, in the form of facilitated workshops, the outcome of which heavily influenced this Plan.

1.2.2 Associated Documents

The *Stormwater Asset Management Plan* is to be read with the following associated Mornington Peninsula Shire Council documents:

- Our Peninsula 2021: Mornington Peninsula Shire Council Plan, 2017-21, adopted by Council, 13 June 2017
- Adopted Budget 2019-2020, adopted by Council Jun 2019
- Asset Management Policy, adopted by Council Sep 2020
- Asset Management Strategy, adopted by Council Sep 2020
- Strategic Asset Management Plan, adopted by Council Sep 2020

1.2.3 Standards and Guidelines

This plan was developed under guidance of:

- International Infrastructure Management Manual (IPWEA, 2015);
- AS ISO 55000:2014 – Asset Management – Overview Principles and Terminology (Standards Australia, 2014);
- AS ISO 55001:2014 – Asset Management – Management Systems – Requirements (Standards Australia, 2014); and
- AS ISO 55002:2019 – Asset Management – Management Systems – Guidelines for the application of ISO 55001 (Standards Australia, 2014).

1.2.4 Planning Horizon of Document

The planning horizon for this *Stormwater Asset Management Plan* is 10 years.

It is to be reviewed and amended, to be adopted by Council, within each term of Council and no more than five years from its previous Council approval date.

1.3 Organisational Context

The role of a Council is to provide good governance in the Shire for the benefit and wellbeing of the local community.[1]

To demonstrate that Council is performing its role in accordance with the principles outlined in the *Local Government Act 2020*, this *Stormwater Asset Management Plan* aligns with the Mornington Peninsula Shire Council's vision, mission, values and objectives, and supports the *Asset Management Objectives* outlined in the *Asset Management Strategy*.

1.3.1 Council Objectives

The Council's Strategic Objectives most closely linked with Shire's *Asset Management Objectives* and specifically the *Stormwater Asset Management Plan* are:

Our Place

- Through strategic planning we improve and protect the unique characteristics of the Mornington Peninsula
- We create thriving, accessible and inclusive places to live, work and visit
- We demonstrate leadership in climate change mitigation and adaption

Our Wellbeing

- Our community works together to achieve optimal standards of health and wellbeing for all residents
- Facilitate and promote connected and active lives

Asset Management has been identified as a key service helping Council achieve their *Strategic Objectives*, and the *Asset Management Strategy* and *Plans* have been identified as documents that directly support their delivery.

1.3.2 Legislation

Aside from the Local Government Act 2020, which applies to the Shire's management of all assets (as outlined in Section 1.3.4 of the Shire's *Strategic Asset Management Plan*), the other key pieces of legislation which apply to this Plan are:

- Commonwealth Water Act 2007
- Water Act 1989
- Coastal Management Act 1995
- Climate Change Act 2017
- Road Management Act 2004

Other legislation relevant to the management of Stormwater assets and considered in the development of this plan is outlined in Appendix D of the *Strategic Asset Management Plan*.

[1] Local Government Act 2020, s. 8 – Role of a Council

1.4 Asset Management Framework

1.4.1 Overview

This *Stormwater Asset Management Plan* is part of the Shire's broader *Asset Management Framework* (as illustrated in Figure 1).

Figure 1. Asset Management Framework

1.4.2 Asset Management Principles and Objectives

The *Asset Management Objectives* (Figure 2) outline the results that the Shire is seeking to achieve in order to realise value from community assets. This realisation of value depends on balancing costs, risks, opportunities and performance. These have been aligned back to the *Asset Management Principles*, within the *Asset Management Policy*.

The *Asset Management Strategy* outlines these objectives in detail and links them to Council's *Strategic Objectives*. This is to ensure the Shire's asset management practices are supporting the broader direction of the organisation, thereby delivering the desired outcomes for the community.

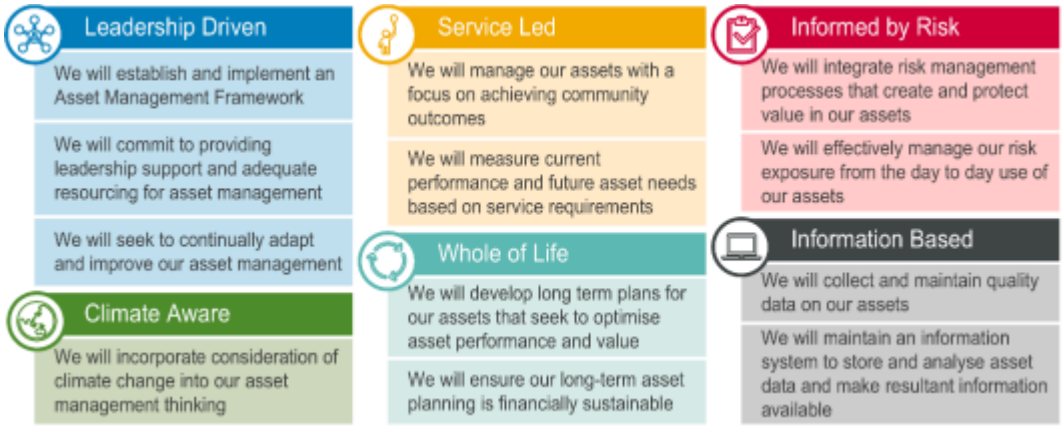


Figure 2. Asset Management Objectives

2 Leadership

2.1 Commitment to Asset Management

Senior leadership's commitment to asset management is set out in the Shire's *Asset Management Policy*.

These principal responsibilities are further broken down in Section 2.3, which clarifies how specific asset management responsibilities have been delegated to Shire leaders and officers.

2.2 Organisational Structure

Figure 3 outlines the organisational structure of Council, highlighting the roles that have specific asset management responsibilities in relation to the Shire's stormwater assets.

These specific roles and responsibilities are outlines in Section2.3, below.

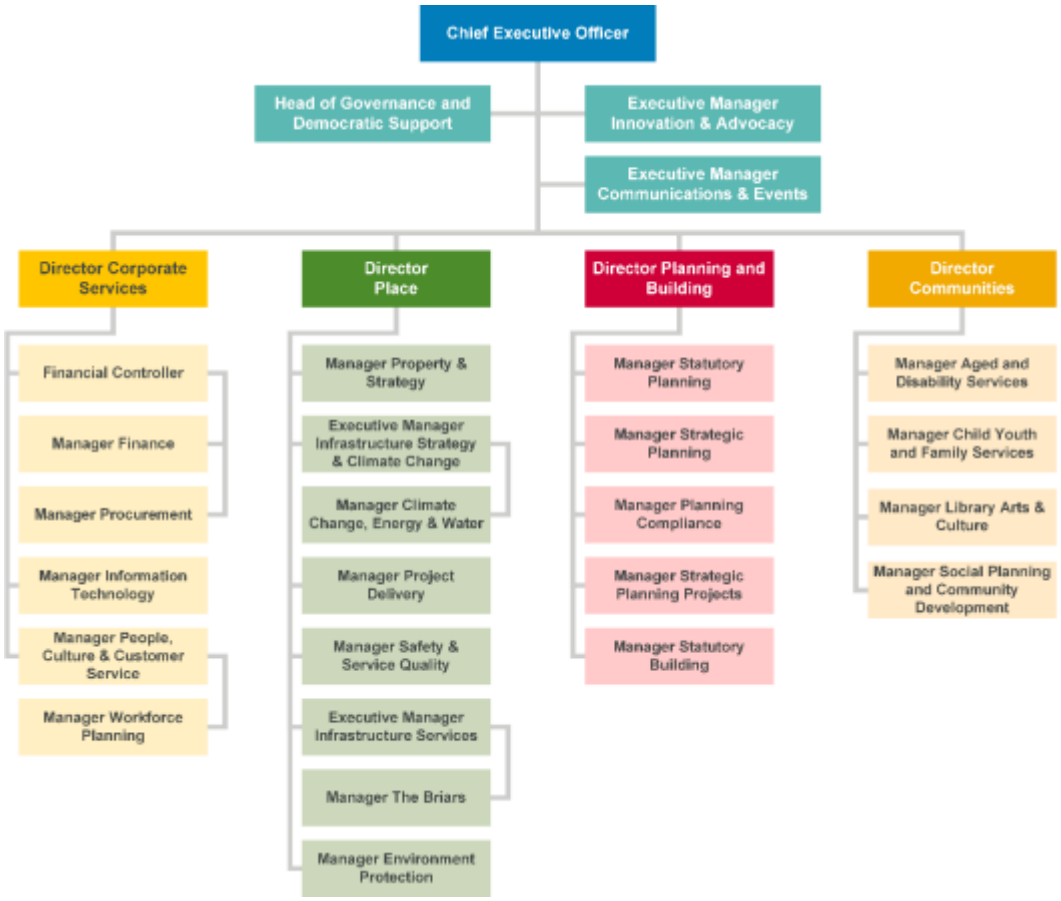


Figure 3. Mornington Peninsula Shire Organisational Structure*

*** Effective from 23 April 2020**
(Subject to change at any time)

2.3 Roles and Responsibilities

The key people with responsibilities for the management of stormwater assets are summarised below:

- Asset Owner — Council (on behalf of the community)
- Asset Manager — Executive Manager - Infrastructure Strategy & Climate Change
- Asset Maintainer — Executive Manager - Infrastructure Services
- Asset Operator — Executive Manager - Infrastructure Strategy & Climate Change

Improvement SWAMP 2.1
Review Roles and Responsibilities Matrix

A more detailed responsibility matrix relating to stormwater assets is included in Appendix B of the *Strategic Asset Management Plan*. These responsibilities will need to be reviewed to ensure they reflect current responsibilities within the organisation.

2.4 Support for Asset Management

2.4.1 Asset Class Working Groups

The Shire has in place a Stormwater Assets Working Group as outlined in the *Strategic Asset Management Plan*.

The Stormwater Assets Working Group is responsible for overseeing the management of the Shire's Stormwater asset class, including review and development of the portfolio *Asset Management Plan*, setting of levels of service based on service needs, input into methods of performance monitoring and modelling of assets, and development of long-term capital plans for Stormwater related assets.

The Stormwater Assets Working Group includes representation from:

- Asset Management
- Climate Change, Energy and Water
- Infrastructure Planning
- Parks & Roadsides Operations
- Infrastructure Customer Support
- Roads, Drainage & Cleansing Operations
- Natural Systems
- Project Delivery
- Strategic Planning

Improvement SWAMP 2.2
Establishment of 'WSUD Assets Working Group'

It is also proposed to establish a Water Sensitive Urban Design (WSUD) Assets Working Group, dedicated to the management of this specialist category of drainage assets.

2.5 Monitoring and Reporting

Improvement SWAMP 2.3
Establishment of 'Asset Management Performance' reporting mechanisms to AM Steering Committee.

The Shire will establish and maintain management processes to regularly record, monitor and assess asset performance, and use those results to improve performance.

A *State of the Assets* report will be prepared annually, and be presented to the Asset Management Steering Committee, detailing:

- Current asset performance against levels of service; and
- Financial performance and long-term financial forecasts.

A separate report on the implementation of the *Asset Management Framework* will also be prepared annually, and presented to the Steering Committee, detailing

- Progress on implementation of Improvement Plan (see Section 8.1); and
- National Asset Management Assessment Framework (NAMAF) assessment results and improvement opportunities

3 Service

3.1 ShireServices

All Shire services are grouped into one of thirteen service programs as seen inFigure 4. Service programs that rely upon open space assets, and their effective management, have been highlighted.

Figure 4. Council's Service Catalogue

The *Strategic Asset Management Plan* outlines the need for all assets to be aligned to the services they support, and for the service to have long-term service plans to inform asset investment decisions.

Whilst Stormwater assets have been broadly linked to the above service programs, individual service plans are yet to be developed that identify each services' specific asset needs. This work needs to be done in order to correctly identify the assets needed, and the level of service those assets need to provide.

Improvement
SWAMP 3.1
Link Stormwater assets to Council services and identify asset needs in Service Plans.

Once long-term service plans are in place, the *Stormwater Asset Management Plan* will be able to more effectively identify all stormwater assets that need to be created, maintained, renewed, upgraded or disposed over a 10-year period to meet service needs.

At the time of this plan's development, the Shire's *Integrated Water Strategy* was under review. This document will also be critical in setting service levels for this plan and the findings from that Strategy will be incorporated into this plan once it is completed.

Improvement
SWAMP 3.2
Review and incorporate updated *Integrated Water Strategy*

This plan will be reviewed and updated accordingly following the development of long-term service plans.

3.2 Community Stakeholders

A stakeholder is any person or group having an interest in the service provided by the asset. Key community stakeholders in relation to Stormwater assets include:

- Shire residents
- Municipal road users
- Local community groups
- Abutting municipalities
- Dept. of Environment Land Water & Planning State Road Authorities
- Dept. of Transport Planning & Local Infrastructure / PTV
- State Road Authority
- State Water Authorities
- Utilities
- Emergency and disaster services
- Road developers and consultants
- Civil contractors
- Foreshore committees of management
- Shire's insurer

3.3 Levels of Service

The Shire measures service delivery of assets using customer levels of service and technical levels of service, as detailed in the *Strategic Asset Management Plan.*

The current levels of service being provided by the Shire's Stormwater assets is outlined below, along with the desired level of service the Shire is seeking to achieve with the 10-year capital and maintenance plan outlined in Section 6.2

3.3.1 Customer Levels of Service

Customer levels of service relate to how a customer receives a service and whether value is provided by the asset. They are focused around the service areas of *quality*, *functionality* and *capacity/use.*

Performance for customer levels of service is gauged using two measures:

- **Community measures:**
  Based on community feedback in terms of what they see as being important around the themes of quality, function and capacity/use
- **Organisational measures:**
  Quantitative measures developed using criteria that address issues important to customers to help balance community feedback

The current and desired performance (10-year forecast) for the Shire's Stormwater assets for customer level of service is outlined in Technical levels of service for open space assets are outlined in Table 3 (on page 10).

Table 2 (on page 8).

3.3.2 Technical Levels of Service

Technical levels of service relate to how an asset is delivered in order to support the customer levels of service. They are focused around the service areas of *operations*, *maintenance*, *renewal*, *upgrade* and *capacity/use.*

Technical levels of service for open space assets are outlined inTable 3 (on page 10).

Table 2. Customer Levels of Service

Service Attribute	Community Expectation	Performance Measure	Current Performance	10-year Forecast
Quality	Stormwater assets are in a physical condition that allows them to meet agreed service needs	**Community measure:**		
		Satisfaction survey results for condition of assets	Stormwater assets do not currently have community satisfaction data available*	
		Organisational measure:		
		% of assets within intervention level†	Pipes 99%§ Pits 99%§ Drainage Structures 98%§ WSUD 99%§ Other asset types do not currently have data available	**99%#** **99%#** **99%#** **99%#**
Function	Stormwater assets are fit for purpose and able to meet the agreed service program delivery needs	**Community measure:**		
		Satisfaction survey results for condition of assets	Stormwater assets do not currently have community satisfaction data available*	
		Organisational measure:		
		% of assets within intervention level†	To be developed for all asset categories‡	
Capacity/ Use	Stormwater assets have sufficient capacity to meet the agreed service demand, without being underutilised	**Community measure:**		
		Satisfaction survey results for condition of assets	Stormwater assets do not currently have community satisfaction data available*	
		Organisational measure:		
		% of assets within intervention level†	To be developed for all asset categories‡	

Notes:

TBD – To be determined

*** Community satisfaction data not yet collected (see Improvement SWAMP 3.5, page 13).**

† Intervention level is the point at which an asset is considered for capital works intervention. An asset within intervention is considered to be meeting service needs.

§ Condition data based primarily on asset age

 # A score of 100% is not achievable because each year there are assets that fall due for renewal. This indicates Council's target is to fully fund renewals each year.

‡ Performance data on functionality and capacity/use is not yet widely collected. Assessment criteria need to be established based on identified service needs.

Table 3. Technical Levels of Service

Service Attribute	Service Objective	Performance Measure	Current Performance	Desired Performance*
Operation	Assets are free from hazards and appropriate for use	Defect and performance inspections completed at frequencies linked to service classification	To be developed	
	Assets are clean and free from debris and litter	Proactive cleaning is undertaken at frequencies linked to service classification	To be developed	
Maintenance	Identified defects are rectified in a timely manner	Intervention actions completed within response times linked to service classification	To be developed	
Annual Operation and Maintenance Budget			**$ 4.4 M** (current annual budget)	
Renewal	Assets are not in a condition that impacts on their service delivery needs	% assets due for renewal (Condition 5 on a scale of 1 to 5, i.e. backlog)	Pipes 1% Pits 1% Structures 2% WSUD 1% Other asset types do not currently have data available	**~1%#** **~1%#** **~1%#** **~1%#**
Annual Renewal Budget			**$ 1.73 M** (average over 10-year period)	
Upgrade	Assets are fit for purpose and meet agreed service delivery needs	% assets not meeting agreed service delivery needs†	To be developed	
New / Expansion	Assets has sufficient capacity to meet service delivery needs and assets aren't significantly underutilised	% assets over or significantly under capacity†	To be developed	
Annual New/Expansion and Upgrade Budget			**$ 0.85 M** (average over 5-year period)	

Notes:

TBD – To be determined

*** Desired performance is the performance required to optimise the asset lifecycle. These desired performance indicators require further review in future revisions of this plan.**

 # A score of 0% is not achievable because each year there are assets that fall due for renewal. ~1% indicates Council's target is to fully fund renewals each year.

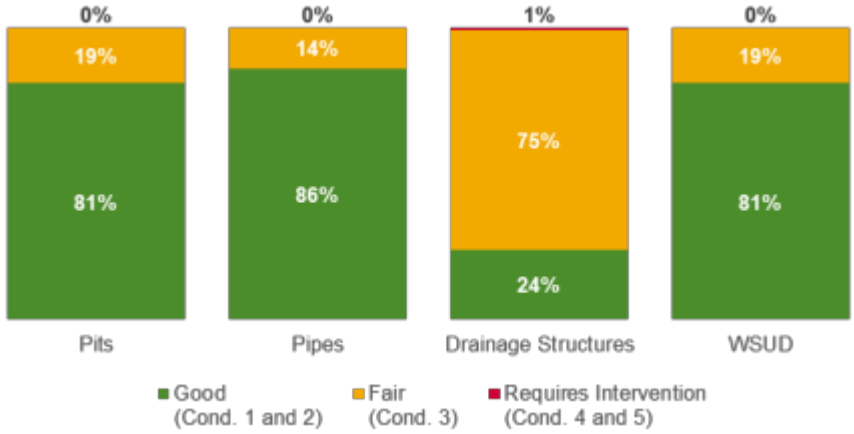
† Performance measures need to be further defined in future revisions of this plan. Long term service plans and community consultation will help to refine these performance measures.

3.3.3 Current Asset Performance

The Shire prepares annually a *State of the Assets* report, which outlines the current performance of Shire assets, including Stormwater assets, based on performance audits undertaken.

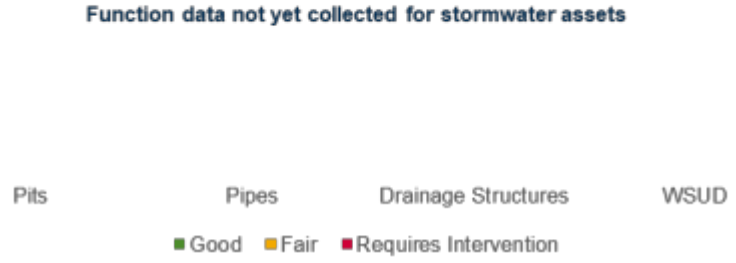
Below is a summary of the performance of the Shire's Stormwater assets.

Condition*



*** Condition primarily based on asset age rather than condition data**

Function



Capacity/Use

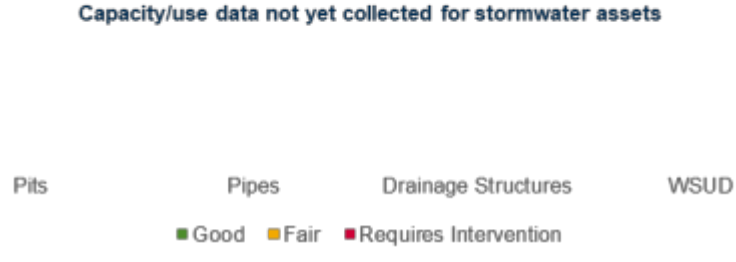


Figure 5. Asset Condition Profiles

The level of service measures in Sections 3.3.1 and 3.3.2 are derived from the data above and that contained in the *State of the Assets report*.

Improvement SWAMP 3.3
Collection of Functional and Capacity performance data for Stormwater assets

Some of the performance measures, particularly those relating to functionality and capacity, have only recently been adopted. They will be refined over time to improve the level of confidence in our assessment of how well assets are performing in delivering their intended function or service.

Studies undertaken to date as part of the Integrated Local Flood Management and Drainage Strategy have identified many areas within the catchments where the system is performing below standard. Possible mitigation works will include pipe upgrades and pit improvement to maximise water entry, and driveway crossing improvements to minimise overland flows causing damage to property.

Outcomes from the pilot catchment modelling have determined a range of stormwater network performances. To determine which sections of the pipe network should be further investigated and considered for upgrade the following criteria has been used:

- In a 5-year event the overland flow exceeds 0.2 m^3/s through property.
- In a 5-year event the overland flow exceeds 0.5 m^3/s down a road.
- In a 20-year event the overland flow exceeds 0.5 m^3/s through property.
- In a 100-year event the overland flow exceeds 1.0 m^3/s through property.

These metrics will be used in determining the functional performance for drainage assets.

Local Integrated Drainage Strategy (LIDS) and Drainage Modelling

As a result of the Local Integrated Drainage Strategy (LIDS) increased knowledge has provided greater and more accurate understanding of the Peninsula's hydrology.

Improvement SWAMP 3.4
Update LIDS drainage models and flood maps and review LIDS implementation plan.

However this work requires constant review to continue to benefit from new and improved data, modelling and mapping technology. In addition the modelling needs to be updated to consider drainage works being implemented, increasing urban development and refined climate understanding.

Twenty-four drainage models cover the 70+ catchments on the Mornington Peninsula. These models need to be updated to take account of Australian Rainfall and Runoff (ARR) 2016, Melbourne Water's altered modelling technical specifications, and new LiDAR data that is available. [2]

3.4 Service Classification

Service classifications are used to specify different levels of services for assets within the same asset category. Further details on how service classifications are used and determined are provided in the *Strategic Asset Management Plan*.

Where a service classification is not specified it is assumed that the same level of service applies to all assets within that category.

[2] Local Integrated Drainage Strategy Update [A8170039]

3.4.1 Drainage in Road Reserves

For stormwater drains located on a road, the level of service for intervention levels, intervention actions and maximum response times is dependent on the hierarchy of the road. Refer to the Shire's *Road Management Plan*.

The service classification (Road Classification) for every Public Road in the Shire can be obtained from the Shires *Register of Public Roads*.

3.4.2 Sub-catchments

The other service classification used for stormwater assets it the sub-catchment area that the asset is located within. These range from **Very High (1)** down to **Very Low (5)**, and are primarily used to set inspection and cleaning frequencies for underground drainage assets.

3.5 Level of Service Drivers

There are three main drivers that are to be considered when setting the level of service for the Shire's Stormwater assets.

- Community Needs and Expectations
- Legislative Requirements
- Future Demand

Further information on how these three areas are used to helping to establish service levels is outlined in the *Strategic Asset Management Plan*.

3.5.1 Community Needs and Expectations

Consultation processes directly relating to the Shire's Stormwater assets include:

Your Peninsula:
Engagement by the Shire with the community to inform the development of the Council Plan and Health and Wellbeing Plan.

Monitoring of Customer Satisfaction in Service Contracts
The service providers are required to undertake a survey of their performance to assess how they perform in the opinion of the Shire's customers.

Community consultation information and community satisfaction results are closely analysed and used to:

- Set and monitor the customer levels of service outlined in Section 3.3.1
- Assess Council's overall performance
- Improve customer service
- Steer Council's overall direction

Whilst the above sources have been used to determine service levels and gauge performance, there is a need for more targeted and specific engagement with the community in relation to Stormwater assets to both set agreed levels of service with the

Improvement
SWAMP 3.5
Undertake community consultation for Stormwater assets

community, and to also better gauge the communities perception on the performance of the Shire's Stormwater assets.

3.5.2 Strategic and Corporate Goals

Council's *Strategic Objectives* relating to this Plan are listed in Section 1.3.1. These objectives have been considered in setting customer levels of service outlined in Section 3.3.1.

3.5.3 Legislative Requirements

Legislative requirements that relate to Stormwater assets have been outlined in Section 1.3.2. These requirements have been considered in developing the customer levels of service outlined in Section 3.3.1.

3.6 Future Demand

3.6.1 Demand Drivers

Demand drivers are anything in the future that could have an impact on Shire assets or the services they support.

The major demand drivers that affect all of the Shire's asset base are discussed in the *Asset Management Strategy* and have been considered in setting the Shire's *Asset Management Objectives*. These include:

- Population growth
- Change in demographics
- Tourism and Visitor Increases
- Economic Factors

These demands have also been further explored, along with demand management strategies, in Section 3.6 of the *Strategic Asset Management Plan*. The strategies used to manage these demands for Stormwater assets are similar to strategies for the Shire's entire asset base, and therefore no specific strategies for Stormwater assets need be developed and included below.

Impacts of COVID-19

The impact of COVID-19 on the management of Shire assets is discussed in Section 3.6.1 of the *Strategic Asset Management Plan*.

Whilst the full impacts of COVID-19 are as yet unknown, it is important to acknowledge the Shire's commitment in the *Asset Management Policy* that "capital expenditure for asset renewal will be given priority over expenditure for upgrade, expansion or acquisition of new assets", ensuring that the Shire seeks first and foremost to maintain current service delivery.

3.6.2 Demand Impacts and Demand Management Plan

Demand drivers specifically impacting stormwater assets, and requiring specific demand management strategies include:

- Development density and infill
- Climate Change
- Environmental Awareness
- Sustainability

These are discussed in Table 4.

Table 4. Demand Drivers, Projections and Impact on Services

Demand Driver	Impact on Services	Demand Management Plan
Development Density and Infill Developments: Urban consolidation affects stormwater runoff volumes and flood risks in urban areas.	Increased overall stormwater run-off volumes and flow rates. Potential long-term future pressures on the existing drainage system. Increased flows in receiving waterways will increase erosion and damage habitats.	Investigate need for additional stormwater detention systems or retarding basins. Analyse overland flow paths to cope with increased stormwater volumes.
Climate change: Including: - rising sea levels (projected increase 0.08-0.17 m by 2030) - increase in extreme weather events (flooding, high fire risk days, etc.) Catchment analysis assumes 32% increase in rainfall intensity.	Higher stormwater run-off flows will reduce current levels of service with respect to flood protection and accessibility during minor and major rainfall events. Potential for inundation of properties. Increased runoff increases need for effective WSUD infrastructure.	Introduce '**Climate Aware**' as a key *Asset Management Principle*. Revise drainage design standards to cater for the expected changes in rainfall events. Expeditiously build knowledge of the performance of the Peninsula's drainage infrastructure network, and flood vulnerable areas.
Environmental Awareness: Increasing focus on interception of gross pollutants and sediments in the Shire, water bodies. Management of water quality risk through accessibility controls.	Need for provision of new infrastructure and monitoring / treatment processes to achieve water quality targets in water storages and water courses which meet community demand, including construction of wetlands. Support for the implementation of green infrastructure through water sensitive urban design initiatives in roads and open space.	Implementation of numerous water quality initiatives for the Shire. Gross pollutant interception on stormwater drains discharging to the catchment.
Sustainability: Increasing need to make use of stormwater runoff as a sustainable resource. Desire to replenish depleted groundwater supplies.	Increase in need for stormwater to irrigate significant areas.	Provision of new infrastructure to capture, treat and reuse collected stormwater and wastewater. Develop partnerships with water users in the community to jointly exploit water reuse opportunities.

3.6.3 Asset Programs to Meet Demand

Chapter 6 outlines the whole of life plan for the Shire's Stormwater assets, which incorporates the above demand impacts into the planning for capital and maintenance programs. These plans rely on long term service planning being in place to correctly forecast asset needs (see Section 3.1). Once these plans have been developed, the whole of life plans for Stormwater assets will be able to be updated, which will help ensure that capital programs are addressing the above demands.

Outside of the capital and maintenance plans, there are currently no planned asset programs to specifically address the demands outlined in Table 4.

4 Risk

4.1 Risk Management

4.1.1 Risk Register

As part of the *Asset Management Framework*, the Shire is developing an *Asset Management Risk Register*. This will be based on the key risks, controls and treatments identified in the Shire's *Strategic Risk Register* and *Operational Risk Register* that relate specifically to the Shire's assets and how they are managed.

Improvement SWAMP 4.1
Develop Stormwater specific risks for *Asset Management Risk Register*

The *Asset Management Risk Register* will also include risks specific to the Shire's stormwater assets and how they are managed. Once developed, risks related specifically to Stormwater assets will be included in Appendix A.

4.1.2 Identified Asset Issues

Stormwater Pits and Pipes

- Collapse or blockage of assets, resulting in flooding of roads and properties
- Older assets may not meet newer design standards (resulting from climate change) and have inadequate capacity during storm events.
- Assets are physically located underground and are therefore difficult to confirm location and condition

New Assets

- Provision to AM Team of incorrect asset data, incorrect format, missing data and plans. Design errors

Overland Flow Paths

- Inadequate flow paths resulting in flooding to properties and roads.

Open Drains

- Erosion or silting of drain, or bank collapse, resulting in flooding to properties and roads.

Condition Data

- Different condition rating systems exist between asset management team and Roads and Drainage Team causing confusion and inconsistent information.

4.2 Asset Criticality

4.2.1 Asset Category Criticality

Table 5 outlines the criticality assigned to each stormwater asset category, based on the asset hierarchy in Section 5.2.1.

Table 5. Asset Category Criticality

Asset Class	Financial Category	Asset Category	Criticality
Stormwater	Drainage	Catchment Drainage	3
		Drainage Structures	3
		WSUD	2

4.2.2 Critical Assets

Critical assets are those that have either a major (4) or catastrophic (5) consequence of failure.

The Shire has not yet identified critical assets within the portfolio. However, assignment of a criticality rating to individual assets will be undertaken in the future. This will identify assets with either a high or catastrophic consequence of failure. Once identified, these assets will be subjected to more detailed lifecycle planning to assist in managing the risk associated with these consequences.

Improvement
SWAMP 4.2
Identification of critical Stormwater assets

The criticality of an asset in a Stormwater context needed to be considered at both:

- an asset or component level, in terms of how the individual assets impact the drainage line;
- a drainage catchment level, in terms of the importance of that catchment.

5 Information

5.1 Asset Management Information System

A summary of the Shire's Asset Management Information System is provided in the *Strategic Asset Management Plan*.

5.2 Asset Data

5.2.1 Asset Hierarchy

The Shire's asset hierarchy specifically related to Stormwater assets is outlined in Figure 6.

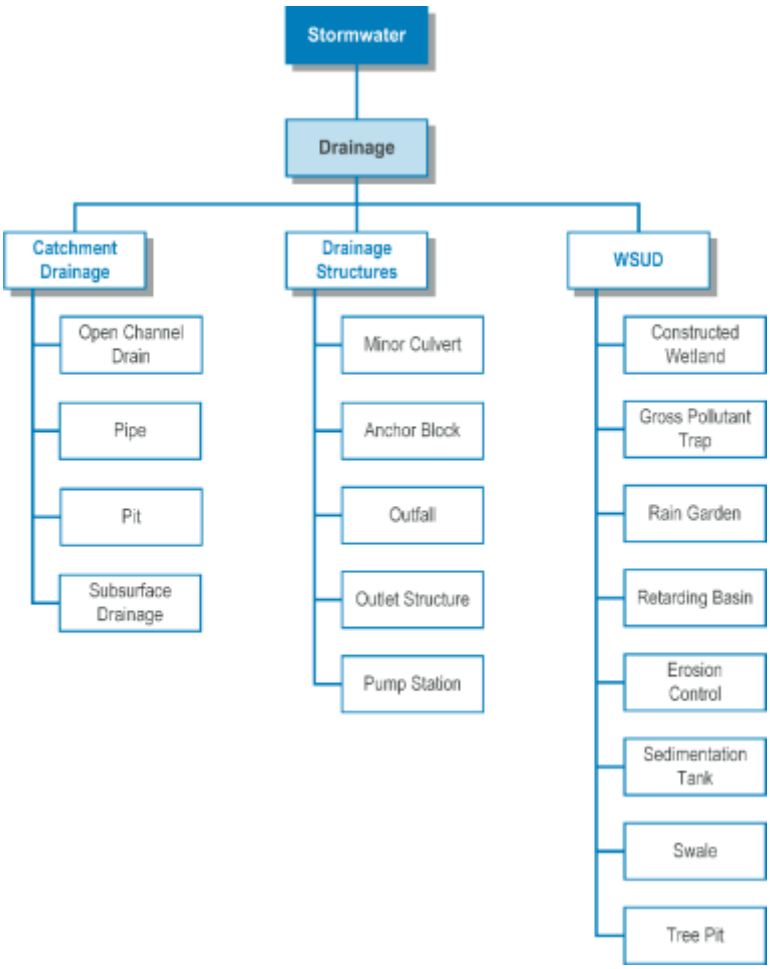


Figure 6. Asset Hierarchy

5.2.2 Data Confidence

Table 6 summarises the Shire's confidence in the current data held for the major asset categories of the Shire's Stormwater assets. As part of the development of the *Asset Data Standard*, discussed in the *Strategic Asset Management Plan*, this data confidence will be re-assessed and updated.

Confidence level descriptions are provided in Section 5.2.2 of the *Strategic Asset Management Plan*.

Table 6. Summary of data confidence for Stormwater Asset Class

Asset Class	Quantity / Location	Replacement Cost	Useful Life	Condition
Stormwater	Medium	Medium	Low	Low

Improvement SWAMP 5.1
Improve confidence is drainage asset data through asset validation processes

In order to improve the asset data on drainage assets, the Shire (through service providers) is undertaking an audit of all drainage pits across the municipality. This information will allow for improvements in stormwater data for both pits and pipes, allowing for better long-term planning and decision making. This plan will be updated once this audit is completed.

5.3 Financial Reporting

The total value of assets covered by this plan provided in Table 1 on page 1.

Financial valuation figures for open space assets as at 1 July 2019 are as follows:

• Gross Replacement Cost	$594.8 M
• Depreciable Amount	$594.8 M
• Depreciated Replacement Cost	$401.6 M
• Annual Average Asset Consumption (Annual Depreciation)	$6.1 M

No amendments were made to the useful life of open space assets during 2018/19 Financial Year revaluation, as no evidence became available to warrant a change from the previous estimates. The methodology used for the revaluation is as outlined in the *Strategic Asset Management Plan*.

Various ratios of asset consumption and expenditure have been prepared to help guide and gauge asset management performance and trends over time.

Rate of Annual Asset Consumption (Depreciation / Depreciable Amount)	1.03%
Rate of Annual Asset Renewal (Capital Renewal Expenditure / Depreciable Amount)	0.29%
Rate of Annual Upgrade & Expansion (Capital Upgrade & Expansion Expenditure / Depreciable Amount)	0.14%
Asset Renewal as Percentage of Consumption (Capital Renewal Expenditure / Annual Depreciation)	28%
Percentage Increase in Asset Stock (Contributed Assets + Capital Upgrade & New Expenditure / Depreciable Amount)	To be determined

6 Whole of Life

6.1 Asset Planning

The Mornington Peninsula Shire Council plans to manage and operate its stormwater assets at the agreed levels of service (defined in Section 3.3) while accounting for life cycle costs.

This plan reflects our current practices and levels of service. As the information available to officers improves, with the development of function and capacity measures for each asset type, it will be possible to undertake more sophisticated modelling and develop options for changes in levels of service. This work will require improved customer consultation and scenario modelling linked to associated costs or savings.

6.2 Asset Lifecycle

6.2.1 New/Expansion and Upgrade

The *Strategic Asset Management Plan* outlines the processes used for all asset for identifying, planning and delivering new/expansion and upgrade projects. Based on asset category criticality, the extend of identification, planning and delivery varies.

For Stormwater assets, the majority of new/expansion assets are acquired free of cost and gifted to the Shire through land developments and subdivisions. However, there are still many new/expansion and upgrade projects for Stormwater assets undertaken each year by the Shire, via capital works projects and drainage special charge schemes.

Identifying Need:

For asset categories with higher criticality (i.e. stormwater pipes) identification of new/expansion and upgrade projects are primarily from adopted Council strategies and plans, such as:

- **Local Integrated Drainage Strategy (LIDS):**
  Provides knowledge of the Shire's drainage systems and understanding of flood behaviour, to inform flood mitigation drainage works.

  Knowledge building and analyses includes verification, drainage/flood modelling, surveys, studies and investigations. Flood mitigation works identified include upgrading or new underground pipes, overland flow paths, and stormwater retention systems.

- **Special Charge Schemes:**
  Provides a mechanism for the construction of stormwater drainage schemes in order to cater for changing community expectations.

For assets with lower criticality, projects may be identified by officers from customer requests, and funds provided from programs set aside in the budget for minor works.

Planning and Evaluation:

The process for evaluating new/expansion and upgrade projects for stormwater assets is as outlined in the *Strategic Asset Management Plan*, as is the planning process for these projects.

The long-term capital program for stormwater assets, including new/expansion and upgrade programs, is provided in Appendix B. This program has been established through the long-term capital works program work undertaken by Council.

As capacity and functionality data becomes more available for open space assets, and service needs are understood, it is proposed that different models be presented here for new/expansion and upgrade programs (as is presented in Section 6.2.3 for renewals). This will provide the ability to look at different scenarios and understand the implications they have on levels of service and service delivery.

The projected financial expenditure for new/expansion and upgrade projects is presented in Section 6.3. The level of service implications based on this funding scenario are presented in Technical levels of service for open space assets are outlined in Table 3 (on page 10).

Table 2 and Table 3 in Section 3.3.

6.2.2 Operation and Maintenance

The *Strategic Asset Management Plan* outlines the general processes used planning and undertaking maintenance and operational activities for Shire assets.

Operation and maintenance activities for Stormwater assets are undertaken through both the *Safer Local Roads* contract and the *Cleansing and Drainage* SIMS2 contract. This includes operation activities require to provide the service (i.e. pit cleaning), proactive defect inspections and proactive and reactive maintenance activities.

The full list of activities undertaken on Stormwater assets, as included in the *Safer Local Roads* contract and *Cleansing and Drainage* SIMS2 Contract, are:

- Clear culverts, pipes and pits
- Maintenance of Gross Pollutant Traps
- Soak pits maintenance
- Minor repair lined drains
- Clear open drains
- Pit/drainage structure repair
- Retarding basin maintenance
- Stormwater and drainage
- Drainage Asset Validation
- Maintenance of gross pollutant traps
- Clearing of culverts, pipes and pits

In future it is the aim to develop a *Stormwater Asset Operational Plan* that sets out all operational and maintenance service levels for Stormwater assets, along with processes for reviewing and altering those levels of service through consultation with the community. Any changes to operational and maintenance service levels within the *Safer Local Roads* and *Cleansing and Drainage* contracts should be made in accordance with this *Asset Operational Plan* and with consideration to the lifecycle impacts on assets.

Improvement
SWAMP 6.1
Develop *Stormwater Asset Operational Plan* with process documented for altering levels of service

Actual operational and maintenance expenditure, based on the current service levels, is shown in Table 7.

Table 7. Maintenance Expenditure Trends

Year	Maintenance Expenditure
2019-20	$4,312,000
2020-21 (budget)	$4,379,000

Maintenance expenditure levels are adequate to meet projected service levels, which may be less than or equal to current service levels. In future, where maintenance expenditure levels are such that will result in a lesser level of service, the service consequences and service risks will need to be identified and service consequences highlighted in this plan and considered in the *Asset Management Risk Register*. Deferred maintenance works that are identified for maintenance and unable to be funded will also be included in the risk register.

The projected operational and maintenance expenditure is presented in Section 6.3. The level of service implications based on this funding scenario are presented in Technical levels of service for open space assets are outlined in Table 3 (on page 10).

Table 2 and Table 3 in Section 3.3.

6.2.3 Renewal

The *Strategic Asset Management Plan* outlines the general processes used planning and undertaking asset renewal for Shire assets.

Condition Monitoring:

Updated condition data for Shire assets is collected at the following frequencies:

- Catchment Drainage — Not yet undertaken at a network level
- Drainage Structures — Not yet undertaken at a network level
- WSUD — Varies

Improvement SWAMP 6.2
Establish routine condition audit programs for all Stormwater asset categories based on criticality.

The Shire needs to put in place regular condition auditing for all Stormwater assets to improve renewal modelling and to get a better understanding of current performance. This may only be initially on a random sample basis for catchment drainage, where condition auditing is expensive, and the assets are long life assets.

Improvement SWAMP 6.3
Establish condition audit program for WSUD assets

Improved condition auditing and understanding of the lifecycle of WSUD assets is also required.

In place of complete condition data, the condition of asset as used for renewal modelling is based primarily on age.

Renewal Modelling:

Renewal modelling has been undertaken for all Stormwater asset categories (with the exception of Open Drains) based on either collected condition data or inferred condition from asset age. Modelling is currently done at a network level using probability-based deterioration models. It is proposed that more detailed models be developed using the Assetic Predictor software, incorporating additional information such as functional and capacity information. These models will not be able to be developed until a sample of condition data is available

Improvement SWAMP 6.4
Update renewal modelling processes

Renewal modelling has looked at two scenarios; fully funding renewals (current policy) and funding no renewals (to give a baseline service level under a *'do nothing'*

approach). Based on this modelling, the renewal targets for the Shire's stormwater assets are outlined in Figure 7. By meeting these targets the Shire will be able to ensure that the service levels outlined in Technical levels of service for open space assets are outlined in Table 3 (on page 10).

Table 2 and Table 3 are achieved.

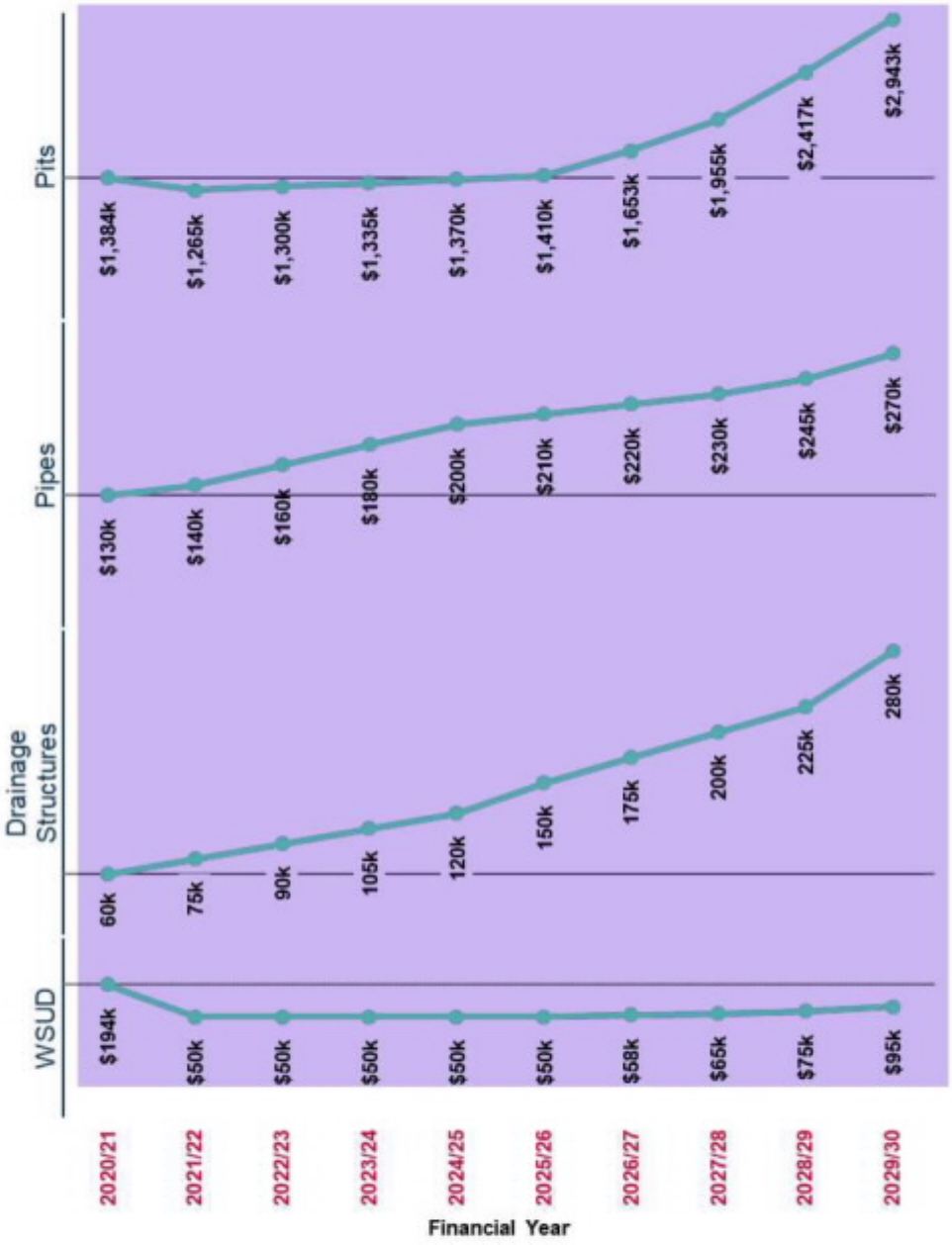


Figure 7. Renewal Target Modelling Outputs

Project Planning:

Renewal projects are identified through a combination of condition audit data, on site validation, and linkages with other capital works projects. These are used either to form up individual capital projects or are provided as a priority listing as part of program level renewal projects in the budget.

Once these projects are identified they are prioritised using the same criteria as new/expansion and upgrade projects, as set out in the *Strategic Asset Management Plan*. Noting that, as outlined in the *Asset Management Policy*, capital expenditure

for asset renewal will be given priority over expenditure for upgrade, expansion or acquisition of new assets.

For assets with lower criticality, projects may be identified by officers from customer requests, and funds provided from programs set aside in the budget for minor works.

Most underground drainage assets within the Shire are less than 50 years of age and are well short of reaching the end of their estimated useful life, in the order of 100 years. The few renewals and replacements at this stage are undertaken following routine inspection or identification of failure of the asset following a customer service request.

The long-term capital program for Stormwater assets, including proposed renewal programs, is provided in Appendix B. These figures are based on the renewal modelling option for fully funding renewals.

The projected financial expenditure for renewal projects is presented in Section Financial Projection and Funding Strategy. The level of service implications based on this funding scenario are presented in Technical levels of service for open space assets are outlined in Table 3 (on page 10).

Table 2 and Table 3 in Section 3.3.

6.2.4 Disposal

No Stormwater assets have been identified for possible decommissioning and disposal

Improvement
SWAMP 6.5
Development of a disposal plan for stormwater assets

Future revisions of this plan will look at developing up a disposal plan for assets that reach end of life and are no longer required to provide service.

6.3 Financial Projection and Funding Strategy

6.3.1 Financial Projection

The financial projections, based on the recommended programs from Section 6.2, are outlined in Figure 8 through to Figure 10.

Table 8 list the projected expenditures for input into the 10-year long term financial plan.

Note that all costs are shown in present day values.

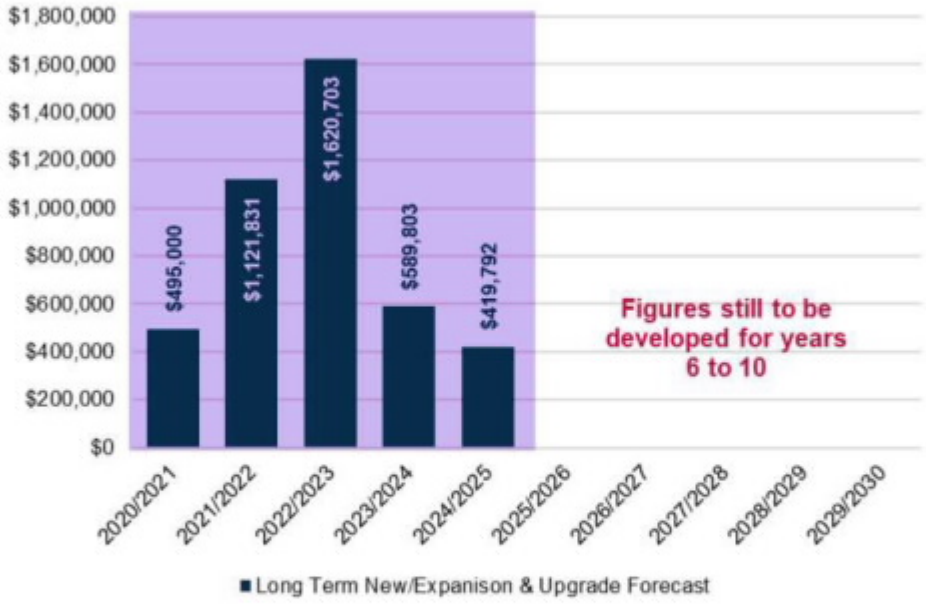


Figure 8. Projected Capital Upgrade/New Asset Expenditure

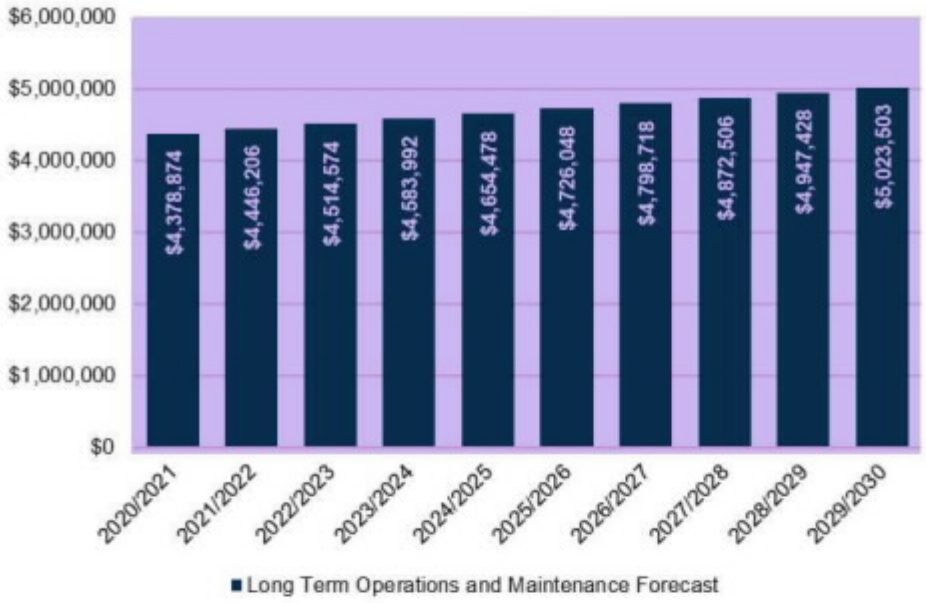


Figure 9. Projected Operating and Maintenance Expenditure

*** Renewal targets are based on asset age, not condition, so may not be a true reflection of renewal requirement**

Figure 10. Projected Capital Renewal Expenditure

Table 8. Projected Expenditures for Long Term Financial Plan

Financial Year	Maintenance	Capital Renewal	Capital Upgrade/ New	Disposals
2020/21	$4,378,874	$1,280,000	$495,000	To be developed
2021/22	$4,446,206	$1,238,169	$1,121,831	
2022/23	$4,514,574	$2,989,297	$1,620,703	
2023/24	$4,583,992	$2,670,197	$589,803	
2024/25	$4,654,478	$2,680,208	$419,792	
2025/26	$4,726,048	$910,000	To be developed	
2026/27	$4,798,718	$1,053,000		
2027/28	$4,872,506	$1,225,000		
2028/29	$4,947,428	$1,481,000		
2029/30	$5,023,503	$1,794,000		

6.3.2 Sustainability of Service Delivery

Over the long-term, assets should be renewed as they are being consumed to ensure sustainability of existing service levels. A prime indicator of the Shire's asset renewal performance is the **Asset Renewal Funding Ratio**.

Table 9 shows the asset management financial indicators in tabular format over the 10-year planning period and for the long-term life cycle for Stormwater assets.

An indicative target for the asset renewal funding ratio is between 90% and 110%.[3]

[3] AIFMM, 2015, Version 1.0, Financial Indicators, Sec 2.6.1, p 11.

Further details are provided in the *Strategic Asset Management Plan*.

Table 9. Asset Management Financial Indicators for Stormwater Assets

Asset Renewal Funding Ratio	Indicator
Asset Renewal Funding Ratio [LTFP 10yr budget renewal expenditure / 10yr projected renewal demand]	**163%**
Long Term – Lifecycle Costs	
Life Cycle Projected Expenditure (yearly average) [average 10 years projected ops, maintenance exp and depreciation]	$10.8 M
Life Cycle Budgeted Expenditure (yearly average) [average 10 years LTFP budget ops, maintenance & capital renewal exp.]	$6.4 M
Life Cycle Gap [budgeted expenditure – projected expenditure (-ve = gap)]	-$4.4 M
Life Cycle Indicator [budgeted expenditure / projected expenditure]	**59%**
Medium Term – Lifecycle Costs	
10yr Projected Expenditure (yearly average) [10yr Operations, Maintenance & Renewal Projected Expenditure]	$5.8 M
10yr Budgeted Expenditure (yearly average) [10yr Operations, Maintenance & Renewal LTFP Budget Expenditure]	$6.4 M
10yr Financing Shortfall [10yr projected expenditure – 10yr budget expenditure]	$0.67 M
10yr Financing Indicator [10yr budget expenditure / 10yr projected expenditure]	**112%**
Short Term – Lifecycle Costs	
5yr Projected Expenditure (yearly average) [5yr Operations, Maintenance & Renewal Projected Expenditure]	$5.3 M
5yr Budgeted Expenditure (yearly average) [5yr Operations, Maintenance & Renewal LTFP Budget Expenditure]	$6.7 M
5yr Financing Shortfall [5yr projected expenditure – 5yr budget expenditure]	$1.3 M
5yr Financing Indicator [5yr budget expenditure / 5yr projected expenditure]	**125%**

6.3.3 Funding Strategy

After reviewing service levels, as appropriate to ensure ongoing financial sustainability, projected expenditures identified in Section 6.3.1 will be accommodated in the 10-year long term financial plan.

The Shire monitors, manages and maintains the zero 'gap' by developing this *Asset Management Plan* to provide guidance on future service levels and resources required to provide these services, and review future services, service levels and costs with the community.

7 Climate

The Shire recognises that Climate Change has emerged as a vital issue in Australian communities.

On 13 August 2019, the Mornington Peninsula Shire Council unanimously declared a Climate Emergency, calling for immediate and urgent action to reverse global warming. As such 'Climate Aware' has been included as one of the *Asset Management Principles* in the *Asset Management Policy*.

Some of the likely outcomes of climate change are:

- Increased temperature (max and min)
- Rainfall change (amount, frequency, intensity)
- Increased evaporation / evapotranspiration
- Sea level rise
- Fewer frosts
- More intense cyclones, higher storm surges
- Changes in cyclone distribution
- Melting of sea and continental ice
- Increase CO2 in atmosphere
- Changes in the oceans (acidity, currents, etc.)

In order to be climate aware, this asset management plan will outline how the Shire is looking to address the **vulnerability**, **resilience** and **impact** or the Shire's Stormwater assets. Further details are provided in the *Strategic Asset Management Plan*.

7.1 Asset Vulnerability

Improvement
SWAMP 7.1
Development of asset vulnerability assessment tool

Asset vulnerability relates to the risk that an assets value is reduced due to the impacts of climate changes. The Shire will look to undertaken climate vulnerability assessments on all critical assets in order to determine the potential loss in value, and to establish plans for managing these risks. Further detail is provided in the *Strategic Asset Management Plan*.

The key climate change risks that stormwater assets may be vulnerable to are outlined in Table 10 (this table will be expanded in future versions of the plan):

Table 10. Climate Change Risks for Stormwater Assets

Element	Cause	Risk	Potential Consequences
Inland flooding	Increasing intensity and frequency of rainfall events	Capacity of stormwater system exceeded	Damage to property and other infrastructure systems from flooding. Increased maintenance costs and reductions in useful life of assets. Increased energy costs due to increased pumping, where pumping is part of the stormwater system.
Air temperature / Drought	Shrinkage of ground	Damage to in ground assets due to movements in ground	Increase in maintenance costs and reductions in useful lives of assets
Drought	Abnormal tree root penetration	Damage to the Shire's underground drainage assets	Increased maintenance costs and reductions in useful.

7.2 Asset Resilience

Climate resilience relates to the design, construction and upgrade of assets to make them more resilient to the effects of climate change. Further detail is provided in the *Strategic Asset Management Plan*.

Future versions of this plan will investigate how resilience can be built into standard designs for Shire assets, and into ranking criteria for capital projects.

7.3 AssetImpacts on Climate

Asset impacts on climate looks at how stormwater assets impact and contribute (in either a positive or negative way) to the effects of climate change.

The Shire is currently in the process of developing an *Environmentally Sustainable Design (ESD) policy*, which will look at how ESD design principles can be better integrated into infrastructure projects, including Stormwater assets.

Improvement
SWAMP 7.2
Integration of *ESD Policy* into plan

This plan will be updated in future to reflect the *ESD Policy*, and other improvements to lessen the impact of construction, operating and maintaining the Shire's Stormwater assets.

8 Implementation and Improvement

8.1 Implementation and Improvement Plan

No.	Description	Page Reference	Links to SAMP	Responsible Officer	Timeline	Resources
LEADERSHIP DRIVEN						
SWAMP 2.1	Review Roles and Responsibilities Matrix	6	SAMP 2.1	Asset Management Team	Year 1	Existing resources
SWAMP 2.2	Establishment of 'WSUD Assets Working Group'	6	SAMP 2.3	Asset Management Team	Year 1	Existing resources
SWAMP 2.3	Establishment of 'Asset Management Performance' reporting mechanisms to AM Steering Committee	6	SAMP 2.5	Team Leader Asset Management	Year 1	Existing resources
SERVICE LED						
SWAMP 3.1	Link Stormwater assets to Council services and identify asset needs in Service Plans.	7	SAMP 3.1	Asset Management Team (with help of Service Managers)	Year 3	Existing resources
SWAMP 3.2	Review and incorporate updated Integrated Water Strategy	7	-	Climate Change, Energy & Water and Asset Management Teams	Year 2	Existing resources

No.	Description	Page Reference	Links to SAMP	Responsible Officer	Timeline	Resources
SWAMP 3.3	Collection of Functional and Capacity performance data for Stormwater assets	12	SAMP 3.3	Asset Management Team	Year 1 to 4	Existing resources (unknown extent of additional resources required at this time)
SWAMP 3.4	Update LIDS drainage models and flood maps and review LIDS implementation plan	12	-	Climate Change, Energy & Water Team	Year 1 to 4	Existing resources
SWAMP 3.5	Undertake community consultation for Stormwater assets	13	SAMP 3.6	Team Leader Asset Management	Year 1 to 2	Initial work with existing resources Additional resources may be required in future
INFORMED BY RISK						
SWAMP 4.1	Develop Stormwater specific risks for *Asset Management Risk Register*	16	SAMP 4.1	Asset Management Team	Year 1	Existing resources
SWAMP 4.2	Identification of critical Stormwater assets	17	SAMP 4.2	Asset Management Team	Year 2	Existing resources
INFORMATION BASED						
SWAMP 5.1	Improve confidence is drainage asset data through asset validation processes	19	-	Asset Management Team	Year 2	Existing Resources

No.	Description	Page Reference	Links to SAMP	Responsible Officer	Timeline	Resources
WHOLE OF LIFE						
SWAMP 6.1	Develop *Stormwater Asset Operational Plan* with process documented for altering levels of service	21	SAMP 6.3	Asset Management Team	Year 2	Existing resources
SWAMP 6.2	Establish routine condition audit programs for all Stormwater asset categories based on criticality. Initially for piped drains may only involve random sample audit utilising CCTV.	22	SAMP 6.5	Asset Management Team	Year 2	Additional resources required not yet quantified
SWAMP 6.3	Establish condition audit program for WSUD assets	22	-	Asset Management and Climate Change, Energy & Water Teams	Year 1 to 2	Existing Resources
SWAMP 6.4	Update renewal modelling processes	22	SAMP 6.6	Asset Management Team	Year 2 to 3	Existing Resources
SWAMP 6.5	Development of a disposal plan for Stormwater assets	24	SAMP 6.7	Asset Management Team	Year 4	Existing Resources
CLIMATE AWARE						
SWAMP 7.1	Development of asset vulnerability assessment tool	28	SAMP 7.1	Climate Change, Energy and Water Team and Asset Management Team	Year 1 to 2	Existing Resources

No.	Description	Page Reference	Links to SAMP	Responsible Officer	Timeline	Resources
SWAMP 7.2	Integration of ESD Policy into plan	29	SAMP 7.2	Climate Change, Energy and Water Team and Asset Management Team	Year 1 to 2	Existing Resources

8.2 Communication Plan

The Asset Management Steering Committee will engage a senior leader with operational asset management responsibilities to 'champion' and drive the asset management framework and asset improvement across the organisation. The 'champion' will encourage information sharing and cross-functional collaboration.

The Team Leader Asset Management will explore new ways to reinforce the purpose and value of improving asset management practices and communicate these throughout the organisation.

8.3 Monitoring and Reporting

One of the roles of the *Asset Managing Steering Committee* is to monitor and measure the performance of the *Asset Management Framework* and service outcomes and use those results to improve performance.

The Team Leader Asset Management will develop procedures on:

- Monitoring and reporting the progress of the Improvement Plan action items outlined in this plan. Performance monitoring and reporting activities should align with service delivery objectives and assurance requirements
- Monitoring and reporting to the *Asset Management Steering Committee* on the progress of the NAMAF Improvement Opportunities relating to stormwater assets. Emphasis is to be given to stormwater assets that are identified as having higher significance, criticality, risk or complexity.
- Record what information is relied on by the *Asset Management Steering Committee* to satisfy itself on the levels of compliance with the NAMAF.

The Team Leader Asset Management will report to the *Asset Managing Steering Committee* on

- How compatible the organisation's Asset Management Framework (including the Policy, Strategy, Plans and objectives) is with the strategic objectives outlined in the Community Plan, Council Plan and adopted Council Strategies.
- The progress with the improvement plan from this Stormwater Asset Management Plan. This will occur on a quarterly basis.
- The progress with the improvement plan from NAMAF Improvement Opportunities. This will occur on a quarterly basis. The *Asset Managing Steering Committee* will present an annual report to Executive on this progress.

9 References

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Appendix A.
Asset Management Risk Register - Stormwater

To be developed

Appendix B.
Long Term Capital Plan (5 year)

Financial Year	Asset Category	Renewal	New/Expansion & Upgrade
2020/21	Catchment Drainage	$1,000,000	$425,000
2020/21	Drainage Structures	$280,000	$70,000
2020/21	WSUD	$0	$0
2021/22	Catchment Drainage	$1,250,000	$490,000
2021/22	Drainage Structures	$240,000	$860,000
2021/22	WSUD	$0	$0
2022/23	Catchment Drainage	$2,250,000	$490,000
2022/23	Drainage Structures	$240,000	$860,000
2022/23	WSUD	$0	$0
2023/24	Catchment Drainage	$2,250,000	$490,000
2023/24	Drainage Structures	$240,000	$60,000
2023/24	WSUD	$0	$0
2024/25	Catchment Drainage	$2,250,000	$330,000
2024/25	Drainage Structures	$240,000	$60,000
2024/25	WSUD	$0	$0
Total		$10,240,000	$4,135,000

*** Renewal of WSUD assets currently incorporated into service maintenance contracts**

Glossary

See Glossary in *Strategic Asset Management Plan*