Asset Management Plan
Stormwater and Drainage 2025-2035

Adopted June 2025

INNER WEST

Fish Traps by Edwards Clarke, on the Bay Run

Aboriginal and Torres Strait Islander Statement

We the residents of the Inner West acknowledge Aboriginal and Torres Strait Islander peoples as the First peoples of this land.

We greet the living members of the oldest living continuous culture on earth and celebrate their wisdom and special connections to the lands, sky, and waterways.

We acknowledge all Aboriginal and Torres Strait Islander peoples of Australia, especially the Gadigal and Wangal peoples of the Sydney Basin who are the Traditional Custodians of the lands in which the Inner West Council is situated.

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Document Control

Document History

Version	Date	Status	Author	Summary of changes
1.0	28/2/2025	Draft	T. Blefari	2025 Revision of AMP.
1.1	2/4/2025	Final Draft	T. Blefari	Updates following stakeholder comments.
1.2	30/5/2025	Final	T. Blefari	Updates following further stakeholder comments.

Definitions

Explanation of definitions and acronyms used in this plan.

Term/Acronym	Definition
AASB	Australian Accounting Standards Board
AM Strategy	Asset Management Strategy
Backlog	The quantum of assets that meet the levels of service reflected in the modelling rule base and hence due for a capital treatment, however, funding is not enough to treat these assets. The current hypothetical cost of recouping this backlog (i.e. SDAMP funding required to bring every asset in condition state 5, Very Poor, back to a condition state 1, being Very Good) by immediate capital renewal.
Condition or Service State	The service state involves the use of a single integer between 1 and 5 to describe the ability of the asset in question to fulfill its function; where 1 is very good and 5 is very poor.
GPT	Gross Pollutant Trap
IIMM	International Infrastructure Management Manual
IP&R	Integrated Planning & Reporting
IPWEA	Institute of Public Works Engineering Australasia
ISO55000	55000 Series, International Suite of Asset Management Standards
LTFP	Long-Term Financial Plan
Net Strategy Cost	Total cost lifecycle scenario strategy. Calculation; Total Capital Cost over 20 Years + Total Maintenance & Operational Cost over 10 Years – Backlog Movement Over 20 Years.
Non-current assets	Physical and intangible infrastructure assets, including information and communication technology (ICT) assets, controlled by the organisation
OCI	Overall condition index
SAM	Strategic Asset Management
SQID	Stormwater Quality Improvement Device
SDAMP	Stormwater & Drainage Asset Management Plan
WSUD	Water Sensitive Urban Design

1 Executive Summary

1.1 The purpose of the Plan

The purpose of this Stormwater & Drainage Asset Management Plan (SDAMP) is to inform Inner West Council's (Council) commitment to best practice asset management and provide principles for sound stormwater drainage asset investment decision making.

The SDAMP documents the overall integrated planning framework to guide and improve Council's long-term strategic management of its stormwater drainage assets in order to cater for the community's required levels of service into the future as detailed in Section 3.6 Level of Service. The SDAMP defines the state of Council's stormwater assets as at the 2025 Financial Year, the 10-year funding required to achieve Council's adopted asset performance targets and planned asset management activities over a 10-year planning period.

This SDAMP is to be read in conjunction with Council's Asset Management Strategy.

1.2 Current State of Council's Assets

The value of stormwater drainage assets covered by this SDAMP is estimated at $190.15M, as of 30th June 2024 and summarised in the table below:

Asset Type	Quantity (Number)	Replacement Cost ($,000)	Accumulated Depreciation ($,000)	Fair Value ($,000)	Annual Depreciation ($,000)
Stormwater & Drainage	20,093	$190,150	$65,235	$124,915	$1,636
Grand Total	**20,093**	**$190,150**	**$65,235**	**$124,915**	**$1,636**

Table 1 - Assets Valuations as of 30th June 2024[1]

Figure 1 provides a high-level overview of the current condition (OCI-asset health) of all stormwater drainage assets owned and maintained by Council. The condition score is a numerical value assigned to each major stormwater asset to represent its current performance (i.e., where is the asset on its lifecycle path).

[1] Source: Inner West Council | Annual Report 2023-24 | Notes to the Financial Statements 30 June 2024

Utilising predictive modelling software and techniques, Council can simulate each asset's degradation (the way it moves from one condition state to another throughout its lifecycle) to predict when assets will fail and require future treatment intervention.

Refer to Figure 7 – Asset Condition Rating Guidelines for condition definitions.

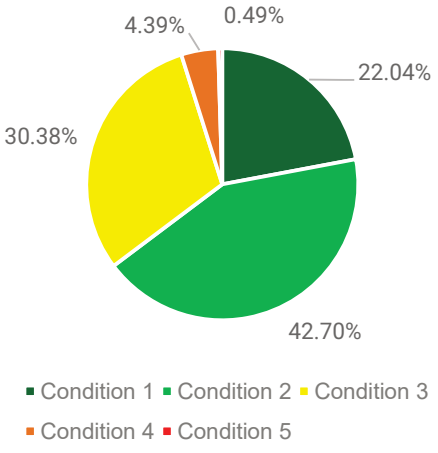
$190.15M
Asset Value Modelled

20,093
Asset Quantities

$1.89M
Backlog Value

2.2 out of 5
Average Condition

All Stormwater Assets Condition Distribution



Condition Distribution by Replacement Value

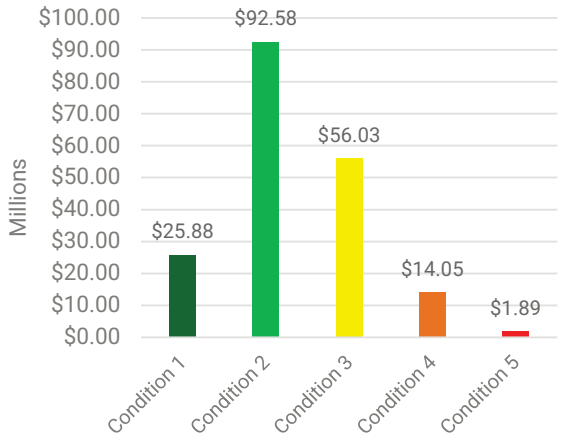


Figure 1 – State of Assets Snapshot as at FY2025

The diagram below provides a condition snapshot of Council's stormwater drainage assets by asset function.

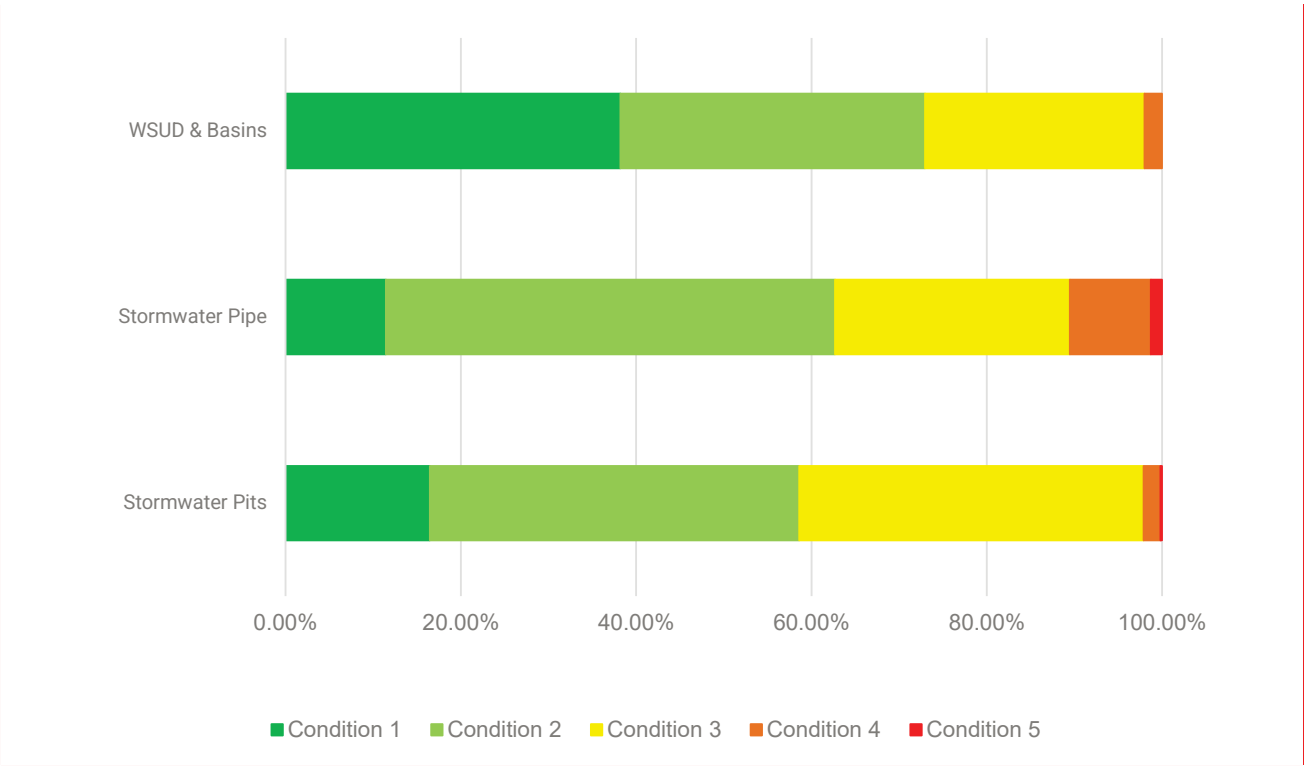


Figure 2 – Condition Distribution by Asset Function & Replacement Cost as at FY2025

1.3 Asset Funding Levels

Council has adopted a strategic, evidence-based approach to assessing the long-term renewal and upgrade needs of its stormwater drainage network, using Modelve© predictive modelling software. This modelling underpins the financial allocations set out in Council's current Long-Term Financial Plan (LTFP) and ensures alignment with best practice asset management as detailed in the Financial Summary.

The model simulates asset deterioration over a 10-year period (2025–2035), applying lifecycle treatments and condition-based rules to forecast network performance under the proposed funding scenario. It considers both renewal needs and upgrade requirements arising from capacity issues identified through floodplain management studies and Council's operational knowledge.

As of 2025, the average condition of the stormwater drainage pipe and pit network is 2.2 out of 5. The model confirms that the funding levels allocated in the current LTFP are sufficient to maintain this average condition over the next 10 years. This provides a strong evidence base that the planned investment is adequate to sustain current service levels.

Over the next 10 years, Council will invest $48.7 million to keep our assets safe, functional, and fit-for-purpose, while also enhancing service standards through targeted new and upgrade works. This investment comprises:

- **Renewal**: $15.4 million
- **New/Upgrade**: $15.6 million
- **Total Capital Investment**: $31 million
- **Maintenance & Operations**: $17.7 million

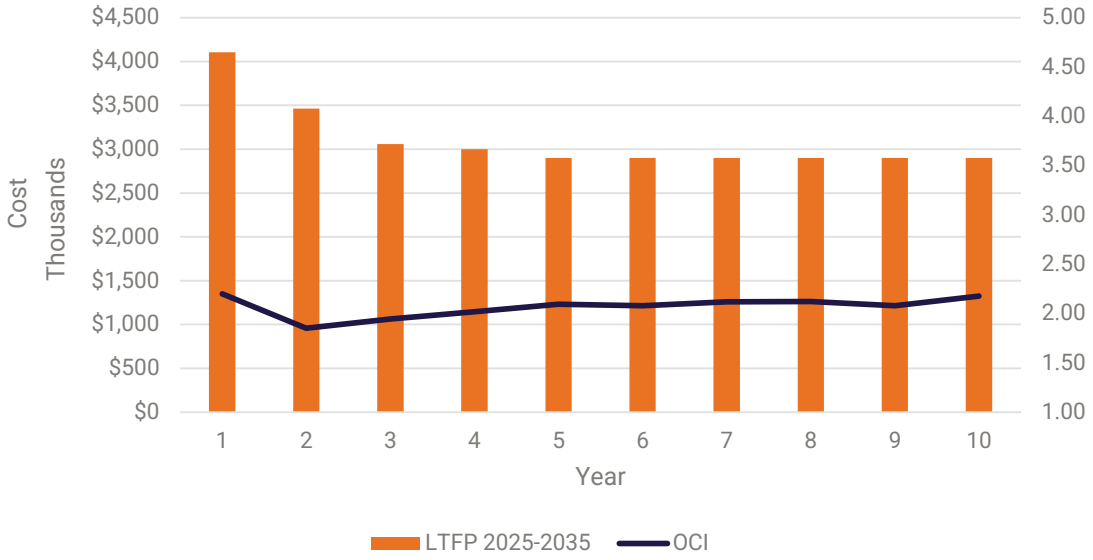


Figure 3 – Forecast 10-Year Capital Funding Analysis and Average Condition by Year

This funding is expected to:

- Maintain overall network condition.
- Progressively address key drainage capacity constraints.
- Enhance network resilience and reduce flood risks.
- Support community satisfaction by responding to known problem areas.

The modelling confirms that current LTFP allocations are appropriately informed, financially sustainable, and aligned with Council's stormwater service goals.

While the current 10-year funding is sufficient, Council will continue to refine and update funding forecasts as asset condition, performance data, and community expectations evolve. This ongoing review is identified as an improvement priority in this SDAMP.

1.4 Monitoring and Improvement Program

The improvement action items identified can be found in Section 7.2 of this Plan.

2 Asset Class Information

2.1 Background

Any rain that falls on roofs or is collected via paved areas like driveways, roads or footpaths is called stormwater. Inner West Council (Council) is bounded by three primary water bodies – Parramatta River to the north, Cooks River to the South and Sydney Harbour to the east – and contains 5 tributary creek systems – Dobroyd Canal, Hawthorne Canal, Whites Creek, Johnstons Creek and Alexandra Canal. Council has nine primary catchments2.

The stormwater drainage system within Council is a combination of pits, pipes, box culverts, open channels, natural waterways, and road reserves, which collect and carry the stormwater and dispose of it in rivers, creeks and/or other catchments. It also includes detention basins and quality protection devices (Gross Pollutant Traps - GPTs) that contribute to maintaining water quality.

Council's stormwater asset portfolio provides a vital service to the community. These stormwater assets represent a significant investment by Council and are of vital importance to providing Council with a stormwater drainage system. The function of the stormwater drainage system is to protect people, property, and public health, by safely and efficiently collecting, transporting, and disposing of stormwater runoff.

To date Council has completed Overland Flood Studies for 8 of its 9 catchments, a tide and storm levels study along the Parramatta River and Sydney Harbour foreshore, as well as contributing to the Cooks River Flood Study and the Parramatta River Estuary Coastal Zone Management Study and Plan3.

Council has also completed flood risk management studies and plans for all areas within the former Leichhardt LGA, Marrickville Valley and Eastern Channel East. Council is currently finalising its Flood Risk Management Study and Plan for the Hawthorne Canal and Dobroyd Canal, as well as undertaking further planning for Alexandra Canal, Johnstons Creek and Whites Creek.

Floodplain management plans and studies define the existing flooding behaviour and associated hazards and investigate possible mitigation options to reduce flood damage and risk within catchment areas. These plans and studies are also used to establish a

[2] A catchment is an area of land where water collects when it rains.

[3] Studies are available on Council's website - https://www.innerwest.nsw.gov.au/live/environment-and-sustainability/in-your-neighbourhood/rivers-and-waterways/flooding

program for implementation and mechanism for stormwater drainage funding requirements which includes priorities, staging, funding, responsibilities, constraints, and monitoring.

New and upgrade stormwater drainage needs, and project candidates are identified from these studies, which detail specific project level description of works, costs and a priority ranking of the identified projects using a high, medium and low priority ranking assessment.

Changing weather patterns and design standards, have resulted in a complex network of stormwater drainage in varying conditions. Common findings of the Floodplain management studies recognise that flooding in each catchment is of a flash flooding nature, flooding of existing developed areas results in economic and social impacts and can impact and damage critical infrastructure. Climate change-related increases in rainfall intensity are predicted to exacerbate current flooding levels.

As the responsible authority for the provision and maintenance of this infrastructure asset base, Council recognises the need to ensure the management of this valuable asset portfolio, to ensure that the current and future benefit to the community is delivered at a cost that the community can afford.

2.1.1 Stormwater Drainage Included in this AM Plan

The stormwater drainage assets considered in this Stormwater Drainage Asset Management Plan (SDAMP), are described as including all assets directly associated with Council's stormwater drainage system, for which Council is the responsible authority.

In all, this SDAMP covers over 20,000 stormwater assets as classified by their asset subclass and set out in Table 2 – Stormwater Asset Quantity by Asset Subclass.

Asset Subclass (Function)	Length (m)	Quantity (Each)
Stormwater Pipes	186,126	9,883
Stormwater Pits	-	10,121
Gross Pollutant Traps (GPTs)	-	23
Surface Drain & Detention Basins	-	9
WSUD & SQID	-	57
Total Stormwater Drainage	**186,126**	**20,093**

Table 2 – Stormwater Asset Quantity by Asset Subclass

A detailed list of all stormwater drainage assets for which Council has included in this SDAMP are recorded in Council's Asset Register.

2.1.2 Stormwater Drainage Exclusions

The SDAMP excludes all stormwater assets owned and maintained by other authorities such as Sydney Water and Roads and Maritime Services. Creeks, rivers and unlined channels are also not considered in this SDAMP.

It should also be noted that household drainage systems from within private properties up until the drainage discharge point, are not maintained by Council. These systems are maintained by the property owners.

2.2 Current State of the Assets

The distribution count of Council stormwater drainage asset portfolio by quantities is illustrated in Figure 4.

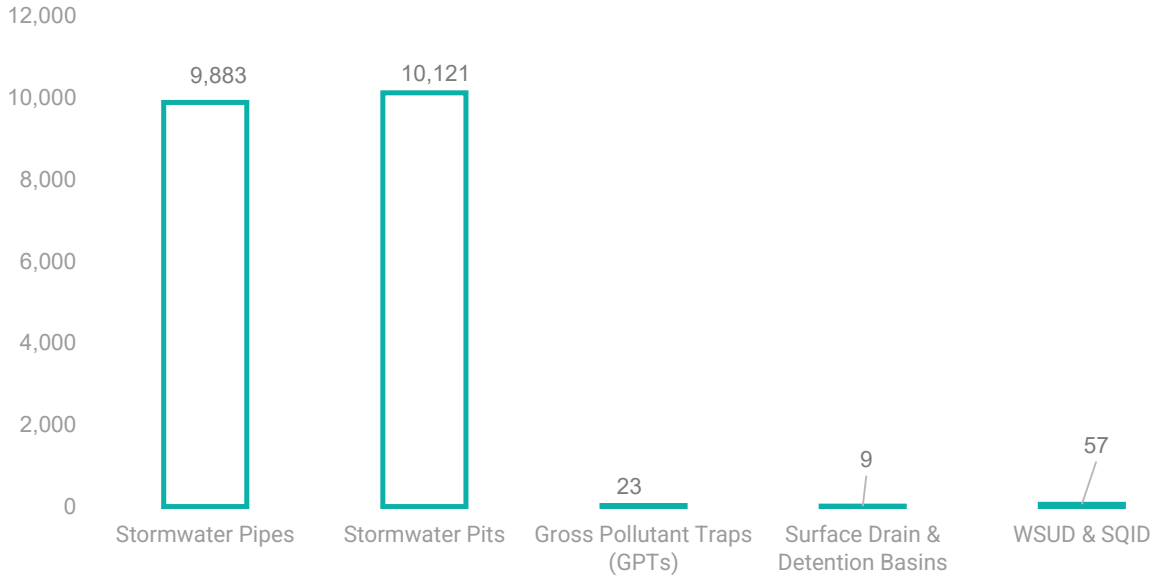


Figure 4 – Distribution Count of Stormwater Assets by Function

2.2.1 Current Replacement Costs

The value of stormwater drainage assets covered by this SDAMP is estimated at $190.15M, as of 30th June 2024. The break-up of the asset subclass by replacement value is illustrated in Figure 5.

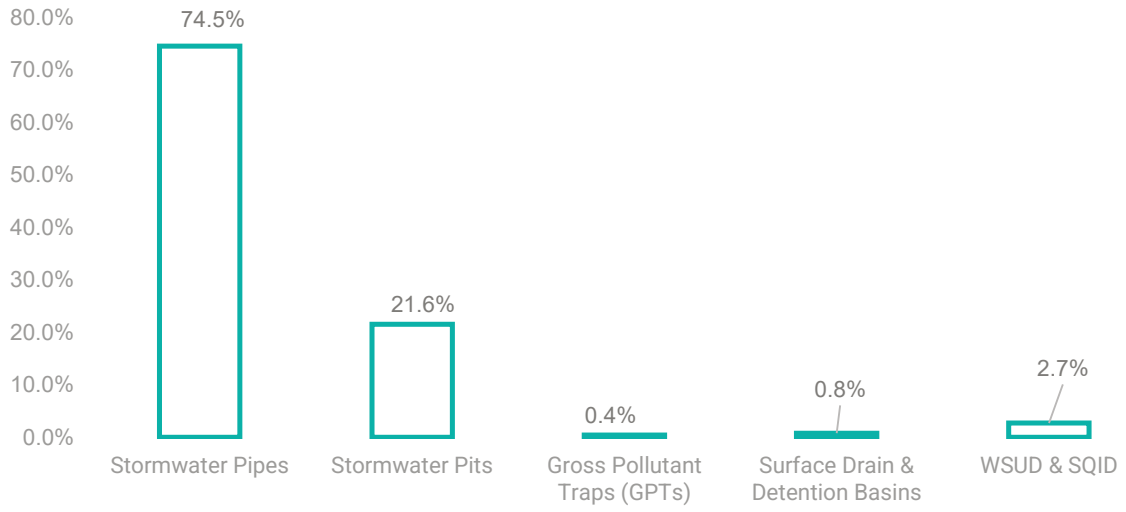


Figure 5 – Distribution of Stormwater Asset Replacement Values by Function

Asset Type	Quantity (Number)	Replacement Cost ($,000)	Accumulated Depreciation ($,000)	Fair Value ($,000)	Annual Depreciation ($,000)
Stormwater & Drainage	20,093	$190,150	$65,235	$124,915	$1,636
Grand Total	**20,093**	**$190,150**	**$65,235**	**$124,915**	**$1,636**

Table 3 - Assets Valuations as of 30th June 20244

Table 3 identifies the annual asset depreciation of Council's stormwater drainage assets to be in the order of $1.64M per annum. The average annual depreciation (asset consumption) is considered a measure of the wearing out or other loss of value of the asset that is systematically accounted for over a standard useful life for accounting purposes – the wearing arises from its use, passing of time or obsolescence or environmental changes.

It should be acknowledged that depreciation is not an ideal measure of asset renewal needs or sustainability from a future funding perspective and is seldom recommended now in modern practice. The focus is now more on sustainability-based analysis of asset service level (long term financial plans based on strategic lifecycle modelling & planning). This method is based on analysing multiple scenarios of funding vs service levels and is the correct method chosen by Council to determine its LTFP.

[4] Source: Inner West Council | Annual Report 2023-24 | Notes to the Financial Statements 30 June 2024

2.2.2 Stormwater Information Management

All information pertaining to asset type and function, location, constructed year and condition of these stormwater drainage assets are recorded and stored in Council's Asset Register which is a module of the Finance System. At the time of preparing this SDAMP, it is estimated that Council's Asset Register is 70% up to date. The Improvement Plan identifies actions to further enhance and improve Council's Asset Register information, by verifying and improving the current asset dataset attributes, particularly in relation to the assets performance (i.e. condition and capacity).

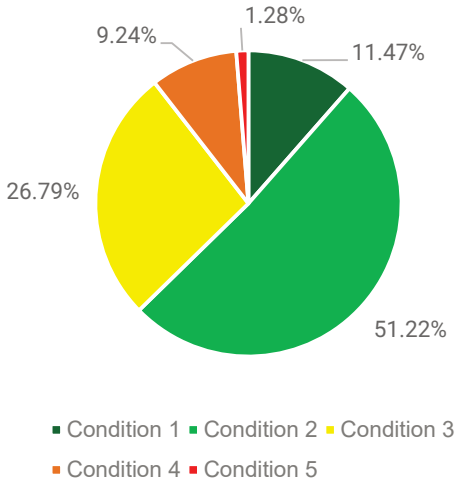
2.2.3 Current Asset Performance

The following dashboard provides a high-level overview of the current condition (asset health) of all stormwater drainage assets owned and maintained by Council. The condition state (OCI) is a numerical score assigned to each major building component (asset) to represent its current performance (i.e. where is the asset on its lifecycle path), with condition 1 representing a very good/as new condition and condition 5 representing a very poor condition.

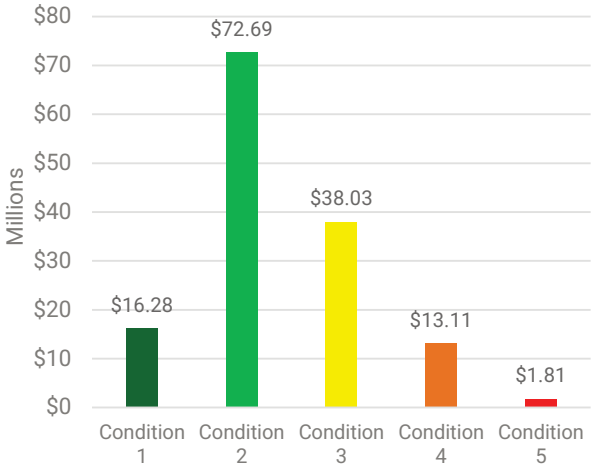
Refer to Figure 7 – Asset Condition Rating Guidelines for condition definitions.

$141.9M	9,883	$1.81M	2.3 out of 5
Asset Value Modelled	Asset Quantities	Backlog Value	Average Condition

Stormwater Pipes Condition Distribution

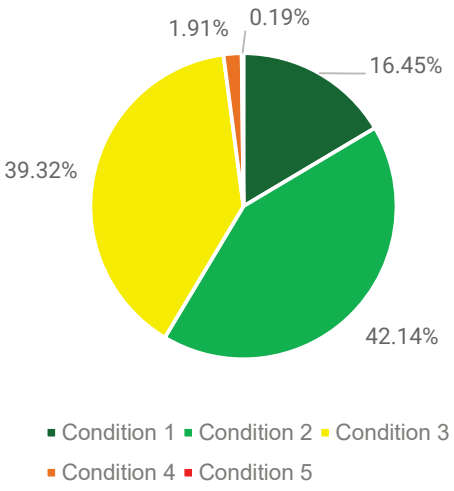


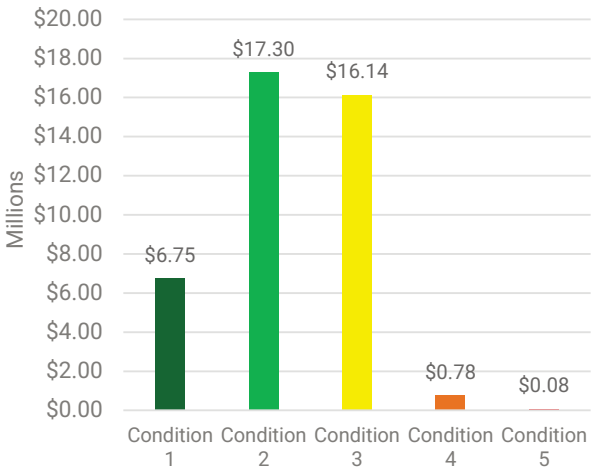
Condition Distribution by Replacement Value



$41M	10,121	$0.08M	2.4 out of 5
Asset Value Modelled	Asset Quantities	Backlog Value	Average Condition

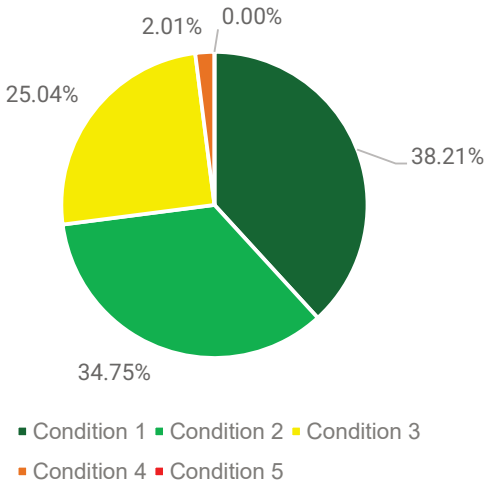
Stormwater Pits Condition Distribution | **Condition Distribution by Replacement Value**





$7.45M	89	$0M	2.1 out of 5
Asset Value Modelled	Asset Quantities	Backlog Value	Average Condition

Stormwater Other Condition Distribution



Condition Distribution by Replacement Value

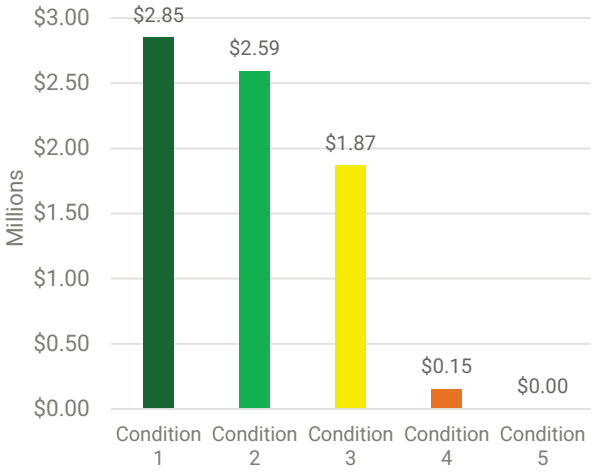


Figure 6 – State of Assets Snapshot as at FY2025

Best practice asset management with regards to stormwater assets utilises statistical sampling of the underground pipes using Closed Circuit TV (CCTV) methods to determine the structural condition and serviceability of pipes, whilst Floodplain management studies determine the drainage network's fitness for purpose in regard to meeting the required drainage design standards. Other stormwater drainage assets such as pits, GPTs and basins are visually inspected.

Locations where deficiencies in service performance exist are currently and progressively being identified by Council officers from the Floodplain management studies and resident

requests5. The Improvement Plan recognises that further work is required to develop a Master List of all stormwater drainage projects necessary to alleviate known flooding issues and to prioritise these works to develop a long-term rolling program of capital new and upgrade works. This is particularly relevant where locations coincide with major road rehabilitation projects. It is estimated that at present, approximately $200-$300M of new and upgrade works are required to address the known Floodplain management issues identified in each completed study and resident requests.

The framework documented in Council's Asset Management Policy, and the Strategies documented in the Asset Management Strategy and supported by this SDAMP will place Council in a good position to address the asset issues currently faced.

2.2.4 Condition Assessment

Currently, condition assessments of underground drainage assets are undertaken on a reactive basis and are generally limited to investigations following resident flooding complaints6. Asset condition is primarily estimated based on construction dates, known defects, and limited CCTV inspections.

Statistical sampling is a proven method for assessing buried drainage infrastructure, but effective results require randomised CCTV inspections, which have not yet commenced. Council is in the process of procuring external consulting services to conduct a full condition audit of the Stormwater Drainage pipelines and pits network, which is scheduled to begin in 2025/2026, improving condition data for long-term asset planning.

The high cost of comprehensive CCTV assessments remains a financial challenge for Council. Future updates to this SDAMP will incorporate statistical sampling and capacity scoring, enhancing asset renewal and upgrade planning. Until then, asset condition continues to be reported on a 1 to 5 rating scale.

The condition rating system is summarised in Figure 7 – Asset Condition Rating Guidelines, based on IPWEA Practice Notes.

[5] Council officers record nuisance flows and flooding incidents as reported by residents, maintaining a register of these locations.

[6] Estimated between 30-40% of the pipe network surveyed over the past 10-years.

Figure 7 – Asset Condition Rating Guidelines

Assets where deficiencies in service performance are known are detailed in Table 4 - Asset Service Issues.

Asset Type	Service Issue
Pipes	Refer to Overland Studies available on Council's website - https://www.innerwest.nsw.gov.au/live/environment-and-sustainability/in-your-neighbourhood/rivers-and-waterways/flooding
Pits	Refer to Overland Studies available on Council's website - https://www.innerwest.nsw.gov.au/live/environment-and-sustainability/in-your-neighbourhood/rivers-and-waterways/flooding
Open drains and channels	Requiring clearing if vegetated to allow water flow or repair of cracking of batters or floors.

Table 4 - Asset Service Issues

2.3 Lifecycle Management

Lifecycle Management is an essential component of any good asset management plan. This section of the SDAMP identifies the processes required to effectively manage, maintain, renew and upgrade Council's stormwater assets.

2.3.1 Operations & Maintenance Plan

Operations activities can be described as activities that are delivered on a day-to-day basis necessary to meet levels of service delivery requirements. Operational activities can

include service delivery items such as clearing debris from pits and pipes. Operational activities also include proactive and reactive inspections, undertaken by in-house technical staff and/or specialist contractors. Operations activities do not improve the condition of assets.

Over time, minor faults can occur within the stormwater drainage portfolio. Council addresses the repairs and maintenance of these faults (i.e. broken pit lid, collapsed section of pipe) based on defined intervention levels and response times. The intervention level defines the condition, state or risk level associated with an asset/component, i.e. the point in time at which the asset is considered to be below an acceptable level of service. Maintenance is scheduled as soon as the asset reaches this point.

Operations and maintenance activities do not improve the condition of the stormwater but rather enable the stormwater assets to deliver their service levels as related to their function.

For the Levels of Service delivered on a day-to-day basis (i.e. responding to customer requests for maintenance faults and responding to localised asset failures), these intervention levels7 are currently documented in Council's maintenance management system. At present, Council considers that these current operations and maintenance service levels meet the community's needs and expectations.

As part of the 2022 Improvement Plan, Council has commenced a formal review of these operations and maintenance activities which are being formally documented in a Stormwater Service Framework.

2.3.2 Renewal/Replacement Plan

Activities such as renewal, rehabilitation, reconstruction, and replacement will return the degraded service of the asset back to its original condition. The extent of service improvement depends on the nature and type of treatment.

The nature of Council, being a mature urban environment means that the Council area is generally considered to be fully serviced by the existing stormwater drainage system. However, as previously mentioned, due to the nature of changing weather patterns and design standards, there are parts of the Council area that will benefit from upgrading the stormwater drainage network (which typically will have a renewal cost element to the project).

[7] Intervention level define the activity or defect and response time to attendance or repair.

At present, the program of major renewal works on Council's drainage network is progressively developed from the CCTV inspection results of requests and known localised flooding locations.

In future, this program will include renewal works identified from proactive CCTV surveys and take into consideration known localised flooding locations.

The Improvement Plan recognises that Council will develop a Service Framework that documents the rule bases which reflect the policy decisions that Council will employ to determine when they will select assets for inclusion in their capital works program.

The built nature of new stormwater assets will always be provided in accordance with Council's Development Control Plan, relevant Australian Standards, Australian Rainfall and Runoff Guidelines and Council's design standards.

2.3.3 Upgrade/Expansion Plan

Upgrade and expansion works improve service levels beyond the original design capacity or extend asset capacity to meet higher resilience and service demands. Unlike renewal and replacement, which restore degraded assets within their original design limits, upgrades focus on enhancing performance and increasing flood resilience.

Projects for upgrade and expansion are identified through multiple sources, including Floodplain Management Studies, community and Councillor requests, strategic plans, partnerships, and future predictive modelling. Each candidate project is assessed through on-site verification and a preliminary cost estimation process. Floodplain studies provide a project description, estimated cost, and a priority ranking, using a multi-criteria analysis (MCA) approach.

To ensure consistency, Council will develop a standardised prioritisation framework for ranking stormwater drainage projects. The MCA approach currently used in Floodplain Management Studies should be formalised and applied across all catchments, ensuring a transparent and comparative assessment of all new and upgrade projects.

Currently, approximately $200–$300M[8] in drainage upgrades and new infrastructure have been identified across all Floodplain Management Studies. To implement these over a 20-year period, Council would require an annual investment of $10–$15M. Given these funding constraints, it is crucial to review existing implementation plans and adopt a structured MCA

[8] The upgrade funding plan will be reviewed in conjunction with the next SDAMP update in 2029. As new information becomes available on growth demand needs, developing and endorsing an MCA and asset lifecycle, these will be reflected in the 10-Year Funding Strategy.

framework to prioritise projects that deliver the greatest economic, social, and environmental benefits.

Presently, there are plans to spend approximately $15.6 million9 over the following 10 years to upgrade Council's stormwater drainage and these have been documented in Council's current 10-Year Works Program.

2.3.4 Creation/Acquisition Plan

New works are those works that create a new asset that did not previously exist. New stormwater assets are typically acquired from developers. New assets required to meet population growth demands will be typically acquired from land developments and constructed by private developers who then gift these assets to Council.

Council can also acquire new stormwater infrastructure by constructing new assets to alleviate drainage capacity issues, construct new pipes or lined open channels to replace creeks or unformed watercourses, construct new pits to improve inlet capacity or construct new GPTs to improve water quality outcomes of water entering localised creeks/rivers.

2.3.5 Disposal Plan

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition, relocation or transfer of ownership. At present, there are no plans to dispose of any stormwater drainage assets.

2.4 Leadership and Accountability

Council's Asset Management Policy reviewed in 2025 defines the roles and responsibilities within Council for asset management.

In addition, an Asset Management Steering Committee (AMSC) has been drawn from across Council administration to coordinate asset management related matters. Meetings are held regularly and chaired by the Director Infrastructure. As part of the 2022 Improvement Plan, the development of an Asset Management Responsibility Assignment Matrix is currently underway. This matrix, which will detail the organisational relationships and lines of responsibility regarding asset management over the asset lifecycle, is planned to be implemented progressively over the life of this AM Plan.

[9] 2025-2035 10 Year Capital Program February 2025 Version

3 Levels of Service

3.1 Social Infrastructure Planning

Council provides over 100 services, where our stormwater infrastructure plays a critical role in flood mitigation, environmental protection, and urban water management. A service-centric approach ensures that stormwater assets are strategically located, functionally adequate for future community needs, and aligned with Council's vision for sustainable and resilient infrastructure. This approach prioritises capital and maintenance investment based on asset criticality while considering repurposing, redundancy, or relocation of assets to optimise funding.

Council's Floodplain Management Studies, Drainage Master Plans, and Catchment Studies provide a framework for stormwater asset planning. These studies identify stormwater challenges, flood risks, and key infrastructure upgrades required to improve drainage performance and flood resilience.

This SDAMP works in conjunction with Council's Floodplain Management Plans, Stormwater Strategies, and Environmental Plans, ensuring a coordinated and long-term approach to managing stormwater assets. The role of each element in stormwater asset planning is as follows:

- Asset Provision (Floodplain Studies, Drainage Master Plans, Strategic Plans & Catchment Studies)
    - Identifies existing and future stormwater infrastructure needs, including new drainage systems, detention basins, GPTs, and flood mitigation measures.
    - Guides the location and design of stormwater assets to support urban development, climate resilience, and environmental sustainability.
- Asset Performance (SDAMP)
    - Defines the capital and maintenance performance standards for stormwater assets to ensure they operate at the desired service levels.
    - Prioritises renewal, upgrades, and new works based on condition assessments, flood risk analysis, and hydraulic modelling.

By integrating stormwater planning with asset performance management, Council ensures that stormwater infrastructure is efficient, sustainable, and capable of adapting to climate and urban growth challenges.

3.2 Customer Research and Expectations

Council conducts regular customer surveys to assess community priorities and satisfaction levels. The 2024 survey[10], indicates that while stormwater and flood management remain important services, satisfaction has declined over time.

- Stormwater management satisfaction dropped from 3.41 in 2021 to 3.15[11]. in 2024.
- Flood management satisfaction declined from 3.33 to 3.14 over the same period.

This progressive decline since 2018 may be influenced by increasing rainfall, with 2021 recording 1,260mm compared to 880mm in 2018.

While the community values stormwater services, there is growing dissatisfaction with flood mitigation efforts, particularly as climate change increases environmental risks. Residents also express a desire for better communication and transparency in Council decision-making. However, satisfaction with public engagement remains low, highlighting the need for:

- Clearer communication on stormwater and flood management initiatives.
- Greater community involvement in decision-making
- Improved transparency in planning and implementation.

Addressing these concerns and providing better communication and transparency with residents about decisions Council has made in the community's interest will be key to enhancing community trust and improving overall satisfaction with stormwater and flood management services.

Additionally, the funding commitments detailed in this SDAMP, particularly those targeting asset upgrades, and new drainage infrastructure—will directly support improvements to drainage capacity in known flood-prone areas. These investments are expected to reduce the frequency and severity of localised flooding, helping to address one of the key drivers of community dissatisfaction and build confidence in Council's long-term stormwater strategy.

[10] Inner West Council Community Research –Micromex Research July 2024

[11] 1 is Not Important or Not Satisfied and 5 Very Import or Very Satisfied

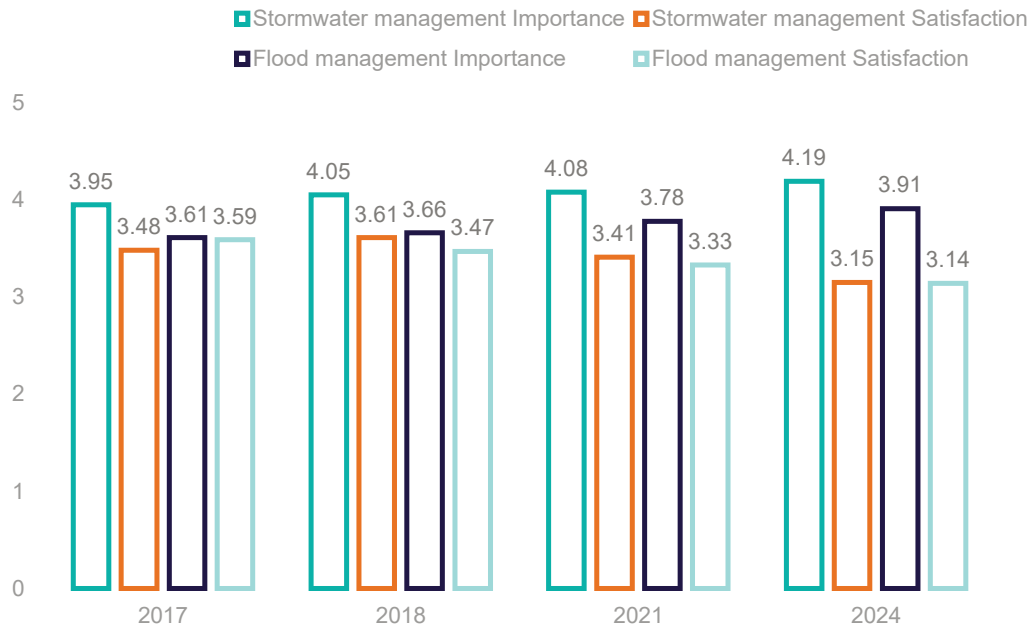


Figure 8 – Inner West Community Satisfaction Survey Overall Performance

3.3 Strategic and Corporate Goals Alignment

This SDAMP is prepared and aligned with Council's vision, mission, goals and objectives and has been aligned to deliver cost-effective, transparent, realistic and affordable service levels in accordance with community expectations, which are reflected in the five strategic directions detailed in the Community Strategic Plan 2041 (CSP).

Relevant Council CSP strategic directions, outcomes and strategies and how these are addressed in this SDAMP are detailed in Table 5.

Strategic Direction (SD)	Outcome	How CSP outcomes and strategies are addressed in SDAMP
SD1.3 – Healthy Waterways	• Implement water-sensitive policies, plans, and projects.	• Ensure stormwater infrastructure supports water-sensitive urban design (WSUD) principles to improve water quality and reduce pollution in waterways. • Maintain and upgrade stormwater drainage assets (e.g., pits, culverts, swales) to manage runoff effectively and prevent contamination of natural water systems.
SD1.4 – Zero Emissions	• Implement strategies to reduce and	• Design and implement climate-resilient stormwater infrastructure, incorporating sustainable drainage systems (SUDs), permeable

Strategic Direction (SD)	Outcome	How CSP outcomes and strategies are addressed in SDAMP
	mitigate greenhouse gas emissions. Build local resilience and adapt to climate change.	pavements, and bio-retention basins to reduce flooding and mitigate climate risks. • Minimise carbon footprint by using low-impact construction methods and energy-efficient pumping stations where required.
SD2.2 – Sustainable Development	• Integrate planning and urban design for public and private spaces. - Monitor local development for legislative compliance.	• Ensure stormwater drainage design aligns with urban planning frameworks to support sustainable growth and climate-adaptive infrastructure. • Enforce legislative compliance for stormwater drainage in new developments, ensuring adequate capacity and flood mitigation measures.
SD4.2 – Responsible, Transparent Management and Future Planning	• Plan to meet community needs and aspirations. • Deliver financial sustainability to manage public resources responsibly.	• Develop and maintain a 10-year stormwater capital improvement program, ensuring a structured and financially sustainable approach to renewal, upgrade, and maintenance. • Ensure evidence-based decision-making informs prioritisation of drainage projects, balancing community needs with financial constraints.
SD4.4 – Engaged and Informed Community	• Deliver evidence-based Council decision-making.	• Improve community engagement and transparency in stormwater asset planning, ensuring residents understand flood mitigation efforts, infrastructure investments, and ongoing maintenance programs. • Provide regular updates on stormwater network improvements and climate adaptation measures to ensure community awareness and involvement.

Table 5 - Council's Goals and how these are addressed in this Plan

3.4 Key Stakeholders

Assets controlled by Council are utilised by a broad cross-section of the community. It is critical that assets are maintained and renewed based on need and fit for purpose. Asset users are key stakeholders of this SDAMP.

Table 6 identifies stakeholders where consultation is necessary when Council seeks input in relation to the determination of Levels of Service and intervention levels.

Stakeholder Group	Role or Involvement
Internal Stakeholders	
Elected Council	Custodian of the asset, with Council representing the residents and setting strategic direction as per the CSP.
Executive Team	To ensure that the Asset Management Policy and Strategy are being implemented as adopted, and to ensure that long-term financial needs to sustain the assets for the services they deliver are advised to Council for its strategic & financial planning processes.
Engineering Services Department	Maintaining Council's asset registers and performing strategic predictive modelling analysis works to inform Council's Long Term Financial Plans and Capital Works Program. Responsible for coordinating the development and implementation of asset management processes, GIS support, administration and frameworks within the Council.
Finance Department	Ensuring that the asset valuations are accurate. Development of supporting policies such as capitalisation and depreciation. Preparation of asset sustainability and financial reports incorporating asset depreciation in compliance with current Australian accounting standards.
Maintenance Department (Internal)	To ensure provision of the required/agreed level of maintenance services for asset components.
Information Technology Managers	To ensure that the relevant IT systems are functioning and that any data within the systems are secure, and its integrity is not compromised.
Risk Managers	To ensure that risk management practices are conducted as per Council policy and assist operations managers with advice on risk issues.
Internal Auditors	To ensure that appropriate policy practices are carried out and to advise and assist in improvements
External Stakeholders	
Community	General users of the water and drainage network.

Stakeholder Group	Role or Involvement
Service Providers	Those external bodies or agencies that provide services to the community utilising council owned stormwater drainage & facilities.
Maintenance Personnel (contractors)	To ensure provision of the required/agreed level of maintenance services for asset components.
Utility Service Providers	Agencies that provide utility services such as electricity, gas, water, sewerage and telecommunications necessary to facilitate services from stormwater.
State & Federal Government Depts	Periodic provision of advice, instruction and support funding to assist with management of the drainage network.
Council's Insurer	Insurance and risk management issues.

Table 6 – Key Stakeholders

3.5 Legislative Requirements

There are many legislative requirements relating to the management of Council assets.

Legislative requirements that impact the delivery of Council stormwater services include:

Legislation	Requirement

Local Government Act 1993	Sets out the role, purpose, responsibilities and powers of local governments. The purposes of this Act are as follows:
	• to provide the legal framework for an effective, efficient, environmentally responsible and open system of local government in New South Wales,
	• to regulate the relationships between the people and bodies comprising the system of local government in New South Wales,
	• to encourage and assist the effective participation of local communities in the affairs of local government,
	• to give councils:
	  ○ the ability to provide goods, services and facilities, and to carry out activities, appropriate to the current and future needs of local communities and the wider public
	  ○ the responsibility for administering some regulatory systems under this Act
	  ○ a role in the management, improvement and development of the resources of their areas,
	• to require councils, councillors and council employees to have regard to the principles of ecologically sustainable development in carrying out their responsibilities.

Legislation	Requirement
	The land management provisions of the Act require that Council prepare plans of management for all community land. The plan of management identifies the management objectives for the land category, performance indicators and performance measures to meet the objectives identified.
Local Government Amendment (Planning and Reporting) Act 2009	Local Government Amendment (Planning and Reporting) Act 2009 includes the preparation of a long-term financial plan supported by asset management plans for sustainable service delivery.
Local Government Act – Annual Reporting Section 428(2)(d)	A report of the condition of the public works (including public stormwater drainage, public roads and water sewerage and drainage works) under the control of Council as at the end of that year; together with • An estimate (at current values) of the amount of money required to bring the works up to a satisfactory standard; and • An estimate (at current values) of the annual expense of maintaining the works at that standard; and • The Council's programme for maintenance for that year in respect of the works.
Crown Lands Act, 1989	An Act to provide for the administration and management of Crown land in the Eastern and Central Division of the State of NSW. Council has large holdings of Crown land under its care, control and management.
Roads Act 1993	Sets out the rights of members of the public to pass along public roads, establishes procedures for opening and closing a public road, and provides for the classification of roads. It also provides for declaration of the RTA and other public authorities as roads authorities for both classified and unclassified roads, and confers certain functions (in particular, the function of carrying out roadwork) on the RTA and other road authorities. Finally, it provides for distribution of functions conferred by this Act between the RTA and other roads authorities, and regulates the carrying out of various activities on public roads.
Work Health & Safety Act 2011	Sets out roles and responsibilities to secure the health, safety and welfare of persons at work and covering injury management, emphasising the rehabilitation of workers particularly for return to work. Council is to provide a safe working environment and supply equipment to ensure safety.
Environmental Planning and Assessment Act 1979	An Act to institute a system of environmental planning and assessment for the State of New South Wales. Among other requirements the Act outlines the requirement for the preparation of Local Environmental Plans (LEP), Development Control Plans (DCP), Environmental Impact Assessments (EIA) and Environmental Impact Statements.
Environmental Protection Act 1994	This act sets out requirements with respect to environmental protection.

Legislation	Requirement
Public Works and Procurement Act 1912	Sets out the role of Council in the planning and construction of new assets.
Inner West Development Control Plans	The primary purpose of a Development Control Plan (DCP) is to guide development according to the aims of the corresponding Local Environmental Plan (LEP).
Inner West Local Environmental Plan 2020	The LEP is a legal document that provides controls and guidelines for development in an area. It determines what can be built, where it can be built, and what activities can occur on land.
Plant Protection Act 1989	Sets out requirements with respect to Flora Protection.
Threatened Species Conservation Act, 1995	An Act to conserve threatened species, populations and ecological communities of animals and plants. Under the terms of this Act Council is required to ensure the long term survival of the species identified.

Table 7: Legislation Relevant to Management of Stormwater Assets

Regulations, Standards & Guideline requirements that impact the delivery of Council's stormwater services are outlined below.

Regulation / Standard / Guide	Requirement
Integrated Planning and Reporting (IP&R) framework	All councils in NSW are required to work within the IP&R framework to guide their planning and reporting activities. IP&R provides a pathway for elected representatives to: • work directly with their community to identify long-term priorities for local identity, growth and lifestyle; • understand the range of services the community wants, the service standards they expect and the infrastructure that will be required; • report to the community on their success in achieving these goals; and • be assured that their council is meeting planning, consulting and reporting requirements under other laws.
Environmental Planning and Assessment Regulation 2000	Fire safety systems are required in commercial, industrial & public stormwater drainage to ensure the safety of occupants in the event of a fire or emergency. The Act includes provisions relating to fire safety and matters concerning the Stormwater Code of Australia (Part 9).
Australian Rainfall and Runoff	A national guideline document for the estimation of flood flows in Australia.
Blue Green Algae Protocol	Provides information to councils on how to address the various issues arising from blue-green algae outbreaks.

Regulation / Standard / Guide	Requirement
NSW Government (2005) NSW Floodplain Development Manual: The Management of Flood Liable Land	The manual relates to the development of flood liable land for the purposes of section 733 of the Local Government Act 1993.
NSW Government (2007) Floodplain Risk Management Guideline: Practical Consideration of Climate Change	The risk management guidelines provide extra support for councils to prepare and implement floodplain risk management plans.
NSW Government (2007) S117 Directive - Guideline on development controls on low flood risk areas – floodplain development manual, January	This circular provides advice on a package of changes concerning flood-related development controls on residential development on land above the 1-in-100-year flood and up to the Probable Maximum Flood (PMF).
ISO 55000 Suite, 2014	The International Organization for Standardization's *ISO 55000:2014 Asset Management* (ISO 55000) provides a global guide to better practice in asset management, including asset information management. ISO 55000 specifies that entities should align information requirements to asset management needs and risks, along with requirements for collecting, managing, evaluating, and ensuring consistency and availability of information for asset management decision-making.
Australian Accounting Standards Board (AASB)	Provides direction and guidance on the financial and reporting expectations of entities, to ensure a consistent approach to accounting records. The following regulations apply to Council: AASB 116 Property, Plant & Equipment – prescribes requirements for recognition and depreciation of property, plant and equipment assets. AASB 136 Impairment of Assets – aims to ensure that assets are carried at amounts that are not more than their recoverable amounts. AASB 1021 Depreciation of Non-Current Assets – specifies how depreciation is to be calculated. AAS 1001 Accounting Policies – specifies the policies that an organisation is to have for recognition of assets and depreciation.

Regulation / Standard / Guide	Requirement
	AASB 1041 Accounting for the reduction of Non-Current Assets – specifies the frequency and basis of calculating depreciation and revaluation basis used for assets; and AAS 1015 Accounting for the acquisition of assets – method of allocating the value to new assets on acquisition.
All other relevant Australian Standards	AS/NZ Standards such as Risk Management Standard.
All Local Laws and relevant policies of the Organisation	Construction standards, Maintenance contracts, etc.
International Infrastructure Management Manual, Sixth Edition, IPWEA, V6.0, 2020	The IIMM has been developed with public and private sector industry input from Australia, New Zealand, the United States Canada, South Africa and the United Kingdom to promote best asset management practice for all infrastructure assets.

Table 8: Regulations & Standards Relevant to Management of Stormwater Assets

The following is a summary of policies relevant to this asset class. Many of these policies are available from Council.

Policy	Requirement
Infrastructure, Plant, Property and Equipment Determination Protocol 2019	To define Inner West Council's asset classes and associated methodologies in capturing and recording asset related information, guided by relevant accounting and industry standards as well as legislation.
Asset Management Policy 2022	The Policy acknowledges Council's commitment to asset management and provides a consistent asset management approach with clear principles and guidelines to manage Council's assets for the current and future community. It establishes a framework to ensure a structured, coordinated, cost effective and financially sustainable approach to asset management across the organisation.

Table 9: Policies Relevant to Management of Stormwater Assets

3.6 Level of Service

It is considered that this SDAMP has improved the level of sophistication in the documentation of the levels of service that will be delivered by Council's stormwater drainage assets. The levels of service delivered by Council's stormwater drainage have been documented considering the expectations of Council's residents. This has required a

clear understanding of resident needs, expectations and preferences that will be explored in this Section and continually reviewed and updated as required in future SDAMP iterations.

The levels of service defined are intended:

- to inform customers and Council of the proposed type and level of service to be offered.
- to enable customers and Council to assess suitability, affordability and equity of the services offered.
- to measure the effectiveness of the services provided by Council.
- to identify the costs and benefits of the services offered.

Council has defined two tiers of levels of service, which are based on:

Community Levels of Service – what Council expects to provide in terms of key customer outcomes based on perceptions of expected quality and future financial allocations:

- Appropriateness of service.
- Accessibility to users 24 hours a day, 7 days a week.
- Affordability – acknowledging that Council can only deliver what it can afford.
- Relevance of the service being provided – in terms of demand characteristics, future demographics, current backlogs and where the pressure points are.

Technical Levels of Service – which relates to the outputs the customer receives:

- What Council will do in real terms, i.e. reliability, functionality and adequacy of the services provided. Typically, this SDAMP has documented Council's standards – i.e. at what point will Council repair, renew or upgrade to meet the customer outcomes listed in the strategic levels.
- Technical Levels of Service have been defined for each of the following:
    - New asset – If Council provides new stormwater assets, then what design and maintainability standards shall apply to make them meet Council's strategic outcomes.
    - Upgraded or renewed asset to original standard - If Council upgrades or renews stormwater drainage assets, what design and maintainability standards shall apply to make them meet Council's strategic outcomes.
    - Maintenance – When will Council intervene with a maintenance repair and what will be Council's responsiveness in terms of customer requests for maintenance faults.

The levels of service that have been adopted are considered reasonable as demonstrated by industry standards and benchmarks.

3.6.1 Flood Mitigation Levels of Service

Typically, Council's minor drainage system has been designed for a 20% AEP storm event. This is a storm of intensity and duration that long-term historical records indicate should occur on average every once every 5 years. The major drainage system should be designed for a 1% AEP storm event.

Council will consider adopting a minimum Flood Mitigation Level of Service (LoS) of 3 Star, as outlined in Table 10: Level of Service – Flood Mitigation.

It is based on 1% AEP storm events (i.e. 1 in 100 years on average) and uses a star rating system to categorise the expected flooding outcome. A rating of 1 Star represents significant flooding of private properties and 5 Star has minimal impact on the community. The mid-point 3 Star aligns with industry targets for flood mitigation and is considered the minimum acceptable standard as although it results in community disruption, there will be little damage to buildings and other structures.

Level of Service	Dwellings & Businesses in Urban Areas	Roads
5 Star	No inundation of property in a 1% AEP.	All water contained within road reserve in a 1% AEP.
4 Star	Property may experience inundation, but water does not reach or lap the dwelling/business structure or the area beneath it, in a 1% AEP.	Depth of water at the of edge of traffic lane less than 100mm in a 1% AEP.
3 Star	Inundation reaches below the floor level of the dwelling or business in a 1% AEP event	Depth of water at edge of traffic lane between 100mm and 200mm in a 1% AEP.
2 Star	Inundation rises up to 300 mm above the floor level in a 1% AEP event.	Depth of water at edge of traffic lane between 200mm and 300mm in a 1% AEP.
1 Star	Inundation exceeds 300 mm above the floor level in a 1% AEP event.	Depth of water at edge of traffic lane greater than 300mm in a 1% AEP.

Table 10: Level of Service – Flood Mitigation

The municipality of Inner West is prone to flooding due to its proximity to several water bodies, including the Parramatta River, Cooks River, and Sydney Harbour. There are several publicly available reports and studies on flood risk management in the Inner West Council area, which have been identified in Section 2.

Council acknowledges that it will need to undertake additional flood modelling over the following 3-5 years, as the current models are considered out of date and they will need to consider, past upgrade and renewal works over the previous 5-10 years, to determine the cost to achieve the aspirational 3 Star level of service and, recognising that in some cases, building new stormwater infrastructure may not be possible to mitigate flooding issues, due to environmental and geographic constraints.

The additional studies will also need to incorporate current climate change factors to better understand future impacts and what these implications mean to Council from a level of service and financial affordability perspective.

3.6.2 Customer Levels of Service

Council's Customer Levels of Service that have been adopted for this SDAMP are detailed as follows:

Key Performance Measure	Level of Service	Performance Measure	2021 Performance	2024 Performance
COMMUNITY LEVELS OF SERVICE				
Customer Satisfaction	Stormwater assets meet community needs	>=3.5 community survey satisfaction	3.41	3.15
Quality	Performance in providing and maintaining stormwater drainage services	<900 requests per annum in relation to maintenance requests	812[12]	807[13]

Table 11 - Customer Levels of Service

3.6.3 Technical Levels of Service

Supporting the community service levels are technical measures of performance.

Technical service measures are linked to annual budgets covering operations, maintenance, renewal and upgrade activities as defined in the Lifecycle Management Section.

Key Performance Measure	Level of Service	Performance Measure	2021 Performance	2024 Performance
TECHNICAL LEVELS OF SERVICE				
Condition	Annual proactive condition sampling assessment of stormwater assets.	Overall Condition Index to be in condition 2.5 (out of 5) or better.	2.2	2.3
	Stormwater assets maintained to an acceptable level.	Lesser than 5% of the total network in condition above score 4 out of 5.	1.47%	1.47%

Table 12 - Technical Levels of Service

[12] Data from July 2020 to April 2021

[13] Data from 2024 WO Calendar Year

4 Future Demand

This section identifies the effect of expected growth and consequent demand on Council's stormwater drainage network. Forecasting future demand is essential in determining lifecycle management for assets. The management of stormwater drainage within the Council area is directly affected growth in the number of developments and by growth in the number of assets due to areas of the catchment which have flood management issues and therefore require upgrading of existing infrastructure to mitigate flooding.

4.1 Demand Drivers

The main drivers affecting demand include demographic changes in population, historical design standards and environmental factors such as changing weather patterns influencing infrastructure capacity and design requirements, and technological change and improvements in maintenance and management of infrastructure.

4.2 Demand Forecasts

The current position and future demand drivers for transportation infrastructure assets are outlined in Table 13.

As a well-urbanised area, the Inner West faces mounting pressures on its stormwater assets, including pipes, drains, and water-sensitive urban structures, over the next 10 to 20 years. The current population forecast for 2023 is 188,325, with projections indicating growth to 204,742 by 2046, leading to increased housing developments and higher urban density. This will add significant impervious surfaces, causing greater volumes of stormwater runoff to enter the drainage network. Compounding this issue is the ageing stormwater network, much of which was designed for different population levels and rainfall patterns. Without significant upgrades, the network may struggle to maintain service levels, increasing the risks of localised flooding, asset failure, and water quality degradation. To ensure resilience, comprehensive modernisation and adaptive strategies are required to safeguard public assets and mitigate climate-related risks.

Demand Factor	Present Position[14]	Impact on Services
Population Growth	The Council's 2023 population is 188,325, with a forecast to	Population growth will increase impervious surfaces (buildings, roads, and paved areas),

[14] Source; https://profile.id.com.au/inner-west

Demand Factor	Present Position[14]	Impact on Services
	grow to 191,026 by 2025 and 204,742 by 2046—a 7.18% increase over the next 21 years.	leading to higher stormwater runoff. Drainage systems will require capacity upgrades and proactive maintenance to prevent localised flooding and water quality deterioration.
Urbanisation and Increased Impervious Surfaces	The Inner West is a highly urbanised area, with limited natural infiltration zones and ongoing densification.	Increasing runoff volumes will put further strain on existing stormwater infrastructure, necessitating network expansion, upgrades to detention basins, and improved flow management to reduce peak flow impacts.
Climate Change and Extreme Weather Events	Recent climate data indicates more frequent and intense rainfall events, increasing the risk of flooding and erosion. Many older drainage assets were not designed for these extreme conditions.	With climate change driving more extreme weather events, such as intense rainfall, flooding, and heatwaves, the stormwater system will face higher stresses. Enhanced climate risk assessments and the incorporation of resilient design features (e.g. larger capacity pipes, improved drainage channels, and adaptive maintenance regimes) will be essential to mitigate accelerated asset deterioration and reduce the risk of system failure during peak events.
Sustainability and Water Sensitive Urban Design	While some sustainable stormwater solutions (e.g., rain gardens, permeable pavements) have been introduced, many assets still rely on conventional drainage approaches	Expanding the use of WSUD solutions—such as bioswales, retention ponds, and green infrastructure—will improve runoff management, enhance water quality, and contribute to urban cooling, reducing long-term infrastructure costs.
Aging Infrastructure and Asset Renewal Needs	A significant portion of the stormwater drainage network is aging and may not meet modern performance standards.	Proactive asset renewal strategies must prioritise condition-based upgrades, regular inspections, and targeted replacements to extend the lifespan of critical drainage infrastructure while ensuring service reliability.

Table 13 - Demand Factors, Projections and Impact on Services

The demand for effective stormwater drainage infrastructure in the Inner West is set to increase significantly due to population growth, intensified urbanisation, and the impacts of climate change. Proactive asset upgrades, including enhanced capacity, resilient design measures, and the integration of sustainable, water-sensitive urban features, will be critical to maintaining service delivery and mitigating risks associated with extreme weather events. This forward-looking approach will ensure that stormwater assets continue to

support the community's safety, environmental quality, and long-term infrastructure performance.

4.3 Changes in Technology

Council is continuously monitoring new asset treatments that may be available to increase the life of its assets. Over past years, Council has employed several changes in technology that have affected the functional levels of service of Council's drainage system, including the use of rubber ring jointed pipes to allow for movement of the pipe, improvement in bedding and backfill standards and the installation of gross pollutant traps (GPTs), to improve the quality of stormwater before reaching the receiving waterways.

Utilising advanced trenchless technology when renewing pipes, will minimise the disturbance of the road reserve in highly populated areas, while implementing water sensitive urban design features, will reduce the flow rates from new developments and provides for higher quality water runoff and opportunities to re-use the stormwater. These will be explored in future revisions of the SDAMP.

4.4 New Assets from Growth

Council does not envisage acquiring substantial lengths of new stormwater assets from developers in the near future. There may be occasions where a developer will need to construct new pipes and pits (and gift these to Council) to ensure that their development is connected to the nearest stormwater underground discharge point as opposed to allowing increased stormwater flows to discharge directly to the roadway.

However, evolving climate conditions, urbanisation, and projected population growth necessitate strategic upgrades and expansion to ensure system resilience, capacity, and operational efficiency.

Over the next 10 years, Council envisages expanding its stormwater asset portfolio through a combination of direct construction, strategic partnerships, and contributions from State Government or private developers. Priority will be given to assets that are resilient, adaptive to extreme weather events, and sustainable. Key focus areas include:

- Enhanced drainage capacity: Upgrading and expanding pipelines, culverts, and detention basins to efficiently manage increased runoff from higher urban density.
- Climate resilient infrastructure: Incorporating advanced, flood-resistant design features and real-time monitoring systems to mitigate the impacts of extreme rainfall and evolving climate conditions.

- Water-Sensitive urban design (WSUD) improvements: Integrating permeable pavements, rain gardens, bioretention swales, and sealed wetlands to reduce peak flows, trap pollutants, and enhance overall water quality.

The precise scope, cost, and locations of these new or upgraded stormwater assets have yet to be fully determined. As new growth and development areas are identified, Council will continue to assess and update community stormwater management needs through ongoing studies, community engagement, and master planning initiatives. These findings will be integrated into future revisions of this SAMP, to ensure that the portfolio remains aligned with best practices and evolving service delivery requirements.

It is also important to acknowledge that acquiring, expanding, or upgrading stormwater assets will result in increased annual operational and maintenance funding commitments. These investments are essential to ensure that the enhanced assets deliver reliable, high-quality service over their entire lifecycle, supporting Council's long-term goals for community resilience, environmental sustainability, and effective flood risk management.

4.5 Demand Management Plan

Demand for new services will be managed through a combination of managing existing assets, upgrading 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. Opportunities identified to date for demand management are shown in Table 14. Further opportunities will be developed in future revisions of this SAMP.

Service Activity	Demand Management Plan
Increase in demand to upgrade localised areas that flood	Review all Floodplain management plans and studies and develop a master upgrade list, which details high level project descriptions, project costs and a criticality ranking which considers economic, social and environmental benefits. Develop a criticality rating for locations that are most likely to be affected by storms and implement a proactive capacity upgrade program. Not all properties discharge to a drainage system – this leads to a higher level of nuisance flows. As properties are identified, ensure that stormwater discharge complies with Council's current local laws and standards. Review road design standards to ensure that all roads when reconstructed meet the current criteria to be able to act as overland flow paths during storm events of 1 in 100 years ARI. When undertaking road reconstruction works, explore options of increasing permeable surfaces.
High level of development - the high level of development within many parts of the municipality increases the demand on many sections of the already under capacity drainage network.	Ensure that stormwater discharge complies with Council's current local laws and standards when approving development applications.
Increased need for maintenance and renewal costs	Review and document levels of services after consultation with the Service Managers and the community. Incorporate total asset lifecycle costings into asset management. Procure large services contracts to get better economies of scale to minimise costs.
Changing property owner habits - As a result of house extensions, renovations, building of new and/or bigger garages and covered outdoor entertaining areas, permeable surface areas have decreased which in turn has increased the amount of stormwater runoff, generated by each property	Implement an education campaign to inform the residents in the flood affected areas of Council as to the various drainage issues that Council faces and what actions they can take to alleviate the risk and/or consequence of potential flooding events. Council encourages the use and/or implementation of rainwater tanks and water sensitive urban design, particularly in flood affected areas. Ensure all new and upgraded council facilities include stormwater retention devices.

Service Activity	Demand Management Plan
Community expectations	Monitor community expectations through annual and targeted community surveys or deliberative engagement.
Limited capacity of downstream Sydney Water drains – hence limiting the capacity of Council's drainage system.	Work closely with Sydney Water to identify problem areas and solutions to mitigate. Explore possible options with Sydney Water for joint projects such as wetlands and retarding basins.

Table 14 - Demand Management Plan Summary

5 Risk Management Planning

5.1 Asset Criticality

To manage Council's stormwater drainage assets more effectively, they have been categorised based on the level of importance by applying them with a criticality rating.

Council's Criticality Framework ensures that its stormwater drainage assets are assessed based on their importance to service delivery, and overall community impact. This framework updated in 2025, applies a structured scoring system to classify assets into different levels of criticality, enabling informed decision-making for maintenance, renewal, and strategic investment.

Assets are evaluated using two key safety and damage Criticality Factors:

- Location hierarchy – Focuses on the location of the stormwater drainage asset potential community impacts in times of localised flooding, which considers private property, major roads, local roads or major parks, minor parks and natural areas.
- Function of asset in regard to flood mitigation – Assesses the asset's importance in terms of the stormwater system, such as critical for flood prevention, provides major role in handling large volumes of stormwater to auxiliary assets.

Each asset is scored based on predefined Criteria, Sub-Criteria, and Weighted Scores, producing a Total Criticality Score between 1 (Non-Critical) and 5 (Extremely Critical). This structured approach ensures that Council assets are evaluated consistently, enabling prioritisation of maintenance and renewal activities based on their impact on service delivery, community safety, and financial sustainability.

The Stormwater drainage criticality adopted by Council considers the varying risk and service levels associated with the stormwater asset portfolio and is summarised as follows:

Criticality	Description	Example Asset Type
5 – Extremely Critical	Extremely critical asset. Potentially extreme disruption or catastrophic consequences should the asset fail.	Pipes, channels, and culverts designed as main trunk lines. Pits located on main trunk lines SWD systems serving a major business precinct. SWD Systems providing drainage to major transport corridors All known SWD assets where drainage capacity issues are identified as a high priority in the Floodplain management plan/study. (FPMS)
4 – Critical	Critical asset. Potential major disruption or consequences should the asset fail.	All SWD assets located within Industrial / Commercial areas All Water Sensitive Urban Design assets All known SWD assets where drainage capacity issues are identified as a priority in the FPMS.
3 – Moderately Critical	Moderately critical asset. Potentially moderate disruption or consequences should the asset fail.	Connectors and smaller detention ponds. SWD systems providing drainage to moderate density urban development SWD Systems providing drainage to collector/distributor road transport networks All known SWD assets where drainage capacity issues are identified as a moderate priority in the FPMS.
2 – Partially Critical	Partially critical asset with minor disruption or consequences, should the asset fail.	SWD systems providing drainage to low density urban development SWD Systems providing drainage to local road transport networks All SWD with low or no mention in the FPMS.
1 – Non-Critical	Non-critical asset with insignificant disruption or consequences, should the asset fail.	SWD systems providing drainage to parks and open space where overland flow escape paths exist that significantly reduce any hazard to property or community users.

Table 15 - Asset Criticality / Hierarchy for Stormwater drainage

5.2 Risk Management Plan

Council has identified the need to develop a corporate Risk Management Policy which will set the overall framework for addressing risk within the context of International Standard ISO31000-2018, Risk management – Principles and Guidelines.

Risk Management is defined in ISO31000:2018 as: 'coordinated activities to direct and control regarding risk'.

The development and adoption of this Policy will outline Council's commitment to manage its resources and responsibilities in a manner which is intended to minimise harm or loss. The elements of this framework are illustrated in Figure 9.

Figure 9 – Risk Management Process, Source: ISO31000:2018

5.3 Risks Assessment

Council has developed an asset criticality, giving higher importance to risk assessment and the appropriate levels of inspection and maintenance for each classification.

Critical assets are those which have a high consequence of failure causing significant loss or reduction of service. Similarly, critical failure modes are those which have the highest consequences. By identifying critical assets and failure modes, investigative activities, condition inspection programs, maintenance and capital expenditure plans can be targeted at the critical areas. Activities may include items such as increased inspection frequency and higher maintenance intervention levels.

5.3.1 Risk Plan

As a result of this SDAMP revision, an assessment of risks associated with service delivery from Council's stormwater assets has identified the critical risks that will result in significant loss, 'financial shock 'or a reduction in service.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action), and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment cost after the selected treatment plan are implemented is shown in Table 16.

Service or Asset at Risk	What Can Happen	Risk Rating	Risk Treatment Plan	Residual Risk	Treatment / Costs
Pipes & Pits	Exceed capacity	High	Continue undertaking/reviewing Floodplain management studies/plans and develop a master Implementation Plan List that is prioritised. Plan for funding higher priority projects. Undertake regular & routine proactive cleansing to ensure pits and pipes in higher and medium risk areas are free of debris.	Medium	Costs to be determined.
WSUD & SQUID	Blockages and pollutants entering waterways	High	Identify the location and cleaning frequencies of all WSUD & SQUID as per the manufacturer's instructions. Allocate resources to the task.	Medium	Costs to be determined.

Table 16 – Critical Risks and Treatment Plan

5.4 Climate Impact and Adaptability

The Intergovernmental Panel on Climate Change (IPCC) Special Report on Global Warming of 1.5°C, released in 2018, warned of the severe consequences if global temperature increases exceed 1.5°C above pre-industrial levels15. Given that current global temperatures have already risen by approximately 1.2°C, it is critical for Inner West Council to integrate climate adaptation and mitigation strategies into Asset Management Planning (AMP) to safeguard infrastructure, public services, and community well-being.

[15] https://www.climatecouncil.org.au/resources/infographic-the-difference-between-1-5-and-2-degrees-warming/

Inner West is a highly urbanised area with an aging stormwater system originally designed for historical rainfall patterns and lower population densities. Increasing urban density, coupled with climate change, is placing significant strain on existing stormwater infrastructure, necessitating upgrades, expansion, and innovative water management solutions to prevent flooding, asset degradation, and environmental impacts.

Figure 10 – Climate Impacts due to Temperature Increases

Council has undertaken several stormwater infrastructure resilience initiatives, including:

- Stormwater Works Program – A proactive maintenance, renewal and upgrade program for drainage systems, including pipe relining where possible, upgrade of existing capacity, and improved drainage designs.
- Water Sensitive Urban Design (WSUD) Implementation – Expanding permeable pavements, rain gardens, and bioswales to reduce runoff and improve water infiltration.
- Urban Flood Mitigation Planning – Identifying high-risk areas for stormwater overflows and flash flooding, leading to targeted infrastructure investments.
- Integrated Water Cycle Management Plan – Promoting stormwater reuse and water-sensitive landscaping to reduce dependence on potable water and enhance urban cooling.
- Green Infrastructure Initiatives – Increasing vegetation cover and tree canopy to slow down runoff, improve water absorption, and mitigate urban heat effects.

These efforts align with Council's climate action goals and enhance stormwater drainage resilience to protect public assets, infrastructure, and community well-being.

5.4.1 Climate Change Impacts on Stormwater Drainage

The impacts of climate change on stormwater systems vary depending on asset type, urban density, and exposure to extreme weather events. Council must assess future climate risks, prioritise asset upgrades, and implement adaptive management strategies.

New Asset Description	Climate Change Impact	Asset Resilience Response
Stormwater Pipes and Drainage Channels	Increased storm intensity and rainfall variability, exceeding the capacity of existing infrastructure, leading to localised flooding and asset failure.	Upgrade drainage networks with larger-capacity pipes, reinforced drainage channels, and improved stormwater detention basins to accommodate higher runoff volumes. Conduct regular condition assessments to prioritise high-risk areas.
Flood Mitigation Infrastructure (e.g., detention basins, retention ponds, levees)	More frequent flash flooding due to higher peak stormwater flows, putting additional pressure on existing flood control assets.	Expand and retrofit detention basins and retention ponds to increase storage capacity and enhance flood protection. Implement nature-based solutions such as wetlands and bio-retention systems to slow and filter runoff.
Stormwater Treatment and	Increased drought periods affecting water availability	Implement stormwater harvesting systems to capture and store runoff for reuse in

New Asset Description	Climate Change Impact	Asset Resilience Response
Water Reuse Systems	and placing greater demand on alternative water sources.	irrigation, landscaping, and non-potable water applications. Promote water-sensitive urban design (WSUD) to improve infiltration and reduce water wastage.
Permeable Surfaces and Green Infrastructure	Higher urban temperatures and heat island effects accelerating evaporation rates and reducing soil moisture retention.	Expand the use of permeable pavements, vegetated swales, and rain gardens to increase natural infiltration, reduce heat impacts, and slow runoff. Increase tree planting along stormwater corridors to cool urban areas and reduce rapid water flow.

Table 17 – Climate Change Risks and Response Plan

By integrating climate-resilient infrastructure and sustainable water management strategies, Council can strengthen stormwater drainage resilience, minimise flood risks, and support long-term environmental sustainability.

6 Financial Summary

The provision of adequate financial resources ensures that Council's stormwater drainage assets are appropriately managed and preserved. Financial provisions below requirements impact directly on community development and if prolonged, results in substantial needs for "catch up" expenditure imposed on the community in the future. Additionally, deferred renewal results in increased and escalating reactive maintenance as aged assets deteriorate at increasing rates.

6.1 Forecasted Funding Requirements

The objective of this Section has been to model the deterioration of Council's stormwater drainage assets portfolio, by developing predictive infrastructure models using Modelve's© modelling software.

This process typically involves setting up life cycle paths for each asset / component, along with their inspected condition, identifying the appropriate treatments and unit rates to deliver these treatments and configuring the treatment rule base (matrices based on selected condition criteria that when matching will drive a treatment based on the condition).

6.2 Renewal Funding and Strategic Forecasting

By applying defined criteria and logic within predictive modelling software, it is possible to forecast the future condition and renewal needs of the stormwater drainage asset portfolio under the current funding commitments outlined in the Long-Term Financial Plan (LTFP).

The modelling simulates the condition of assets over a 10-year period, from 2025 to 2035, using current asset data (as of 2025) and capital funding levels committed through the LTFP. The results of the analysis have been graphed in Figure 11.The analysis focuses on renewal funding and upgrade, or expansion works identified via known capacity issues, floodplain management studies, and/or by Council officers.

As of 2025, the average condition of Council's stormwater drainage pipe and pit network is 2.2 out of 5, based on the standard asset condition rating scale (see Table 5 – Asset Condition Rating Guidelines). Under current capital funding levels, the model predicts that this average condition can be maintained into the future.

The condition graph in Figure 11, illustrates the predicted results of the stormwater asset portfolio modelling analysis under the current proposed 10-year capital works funding allocation. This modelling reflects the impact of the LTFP funding on asset condition and associated service levels over time.

The proposed funding detailed in the LTFP supports the progressive renewal and upgrade of assets, helping to alleviate known drainage capacity issues in the network over time. This investment is expected to improve network resilience, reduce the frequency of localised flooding, and, in turn, contribute to improved community satisfaction with Council's stormwater and flood management services.

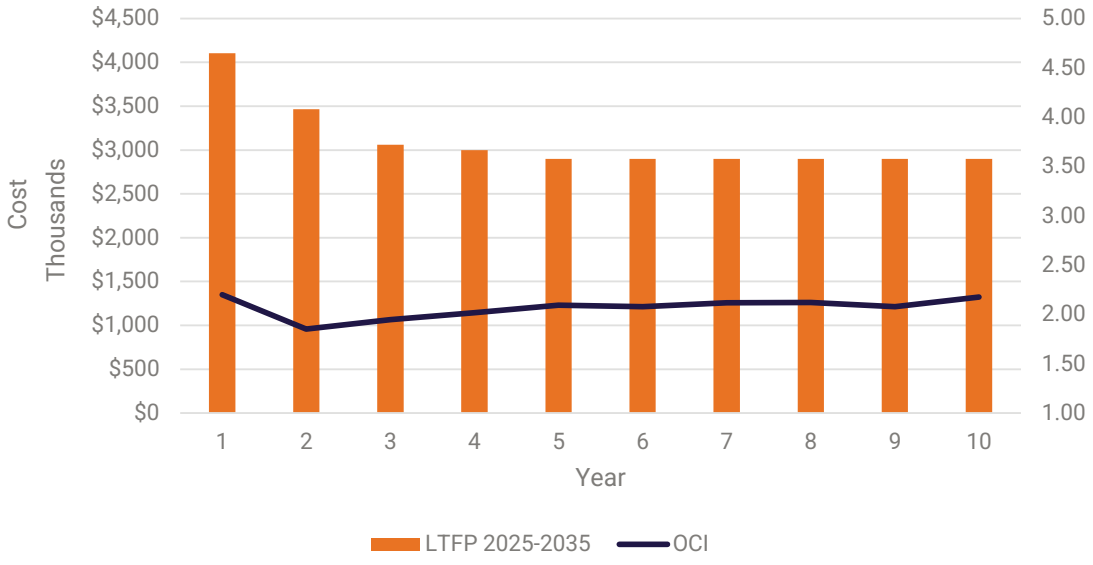


Figure 11 – Forecast 10-Year Capital Funding Analysis and Average Condition by Year

2025-26 ($,000)	2026-27 ($,000)	2027-28 ($,000)	2028-29 ($,000)	2029-30 ($,000)	2030-31 ($,000)	2031-32 ($,000)	2032-33 ($,000)	2033-34 ($,000)	2034-35 ($,000)
New/Upgrade[16]									
$2,496	$1,965	$1,385	$1,400	$1,400	$1,400	$1,400	$1,400	$1,400	$1,400
Renewal									
$1,610	$1,500	$1,675	$1,600	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500
Total Capital									
$4,106	$3,465	$3,060	$3,000	$2,900	$2,900	$2,900	$2,900	$2,900	$2,900
Maintenance & Operational									
$1,865	$1,888	$1,917	$1,595	$1,624	$1,653	$1,683	$1,714	$1,846	$1,878
Total Expenditure									
$5,971	**$5,353**	**$4,977**	**$4,595**	**$4,524**	**$4,553**	**$4,583**	**$4,614**	**$4,746**	**$4,778**

Table 18 – Minimum 10-Year Funding Strategy

Council acknowledges that additional work is required to improve its understanding of future new and upgrade funding requirements, and this has been identified as an improvement item in this SDAMP.

As part of the previous planning cycle, it was identified that additional investment was necessary to address key drainage capacity issues, particularly in flood-prone areas. In response, these needs have been reflected in the current LTFP through increased funding allocations for both renewal and upgrade works.

In the interim, the renewal and upgrade expenditure currently documented in the LTFP is considered adequate for the next four years, supporting progressive improvements in asset condition and capacity.

6.3 Financial Ratios

Asset management ratios provide insight into an organisation's performance and success in managing its assets. Council's asset management ratios for its asset portfolio calculated as of 30 June 2024 are shown in Table 19 – Key Asset Management Ratios.

[16] This funding plan will be reviewed in conjunction with the next SDAMP update in 2026. As new information becomes available on new and upgrade needs and CCTV inspection data, these will be reflected in the 10-Year Funding Strategy.

Ratio	Description	Calculation	Target	2021 Performance	2024 Performance
Asset Renewal Funding Ratio	The extent with regards to how the organisation is funding their capital works program when comparing allocated capital works expenditure with the desired expenditure which has been derived from prediction modelling and/or service level agreements.	Funded capital expenditure on renewals divided by the planned/desired capital expenditure.	>75%	100%	154%
Remaining Service Index Ratio	The overall health of the organisation's asset stock in terms of measuring past asset consumption, via the amount of accumulated depreciation. The lower this ratio is, the more the asset stock has been consumed, which also indicates that not enough capital expenditure has been allocated to the asset.	Written down value (fair value of the portfolio) divided by the total current replacement value.	>70%	67.5%	65.7%
Maintenance Sustainability Ratio	Measures the level of maintenance funding spent per annum, as a % of asset replacement value on the asset portfolio.	Total maintenance funding per annum / Total Replacement Value expressed as a percentage.	1-3%	0.9%	0.8%

Table 19 – Key Asset Management Ratios

7 Plan Improvement and Monitoring

This section outlines how Council will measure its asset management performance. The identified action items in Table 21 will enable Council to improve its asset management capability, enhance asset value and deliver more for stakeholders while balancing cost, risk, and performance.

7.1 Assumptions

The key assumptions made in this SDAMP and risks that these may change are shown below.

Key Assumption	Risk of Change to Assumption / Impact to Model
Stormwater asset and component conditions reflect the assets' current condition as of 2025.	Medium to High
The allocation of renewal funds has been based on the asset replacement costs developed as part of the valuations in June 2024.	Medium to Low
Maintenance funding levels will be progressively increased to represent as a minimum, 2% of the asset base replacement value.	Medium
The funding needs for new &/or upgrade stormwater assets will be identified via Floodplain management studies/plans and funding sought from grants and/or developer contributions. As identified, these will be incorporated into future SDAMP revisions.	Medium
Capital renewal treatments are like for like and do not account for additional costs to upgrade and/or utilise new technologies and materials.	Medium to Low
Current Levels of Service are considered appropriate and meet community needs.	Medium
Asset register currency pertaining to asset quantities.	Medium
Network strategic sampling condition inspections will be funded on a cyclic basis and incorporated into the Operational budget.	Low
Current human resource plan will not change in the near future.	Low

Table 20 – Key Assumptions made in SDAMP and Risks of Change

7.2 Improvement Plan

The Asset Management Improvement Plan which is set out in Table 21 below details the key improvement tasks. Completion of these tasks will improve Council's asset management capabilities for this asset class.

Task No	Improvement Items	Responsibility	Timeline
1.	Formally document the rule bases which reflect the policy decisions that Council employs to determine when they will select stormwater assets for inclusion in their capital works program.	Engineering Services Manager & Senior Manager Capital Works	Jun-27
2.	Formally document and adopt a prioritisation ranking methodology utilising the current multi-criteria analysis (MCA) approach as documented in the existing Floodplain studies, which should be standardised across all catchments and stormwater drainage assets.	Engineering Services Manager	Jan-27
3.	Ensure that new asset needs identified from the Floodplain management studies/plans are reflected in future SDAMP and the LTFP.	Engineering Services Manager & Financial Partnering and Analytics Manager	On-going
4.	Implement and schedule network wide stormwater asset condition assessments to coincide with Council's stormwater condition audit schedule.	Engineering Services Manager	On-going
5.	Explore opportunities for future community surveys to incorporate additional specific questions to the community regarding stormwater assets, to identify and measure the importance and performance in delivering this service to the community.	Engineering Services Manager	On-going
6.	Review financial forecasts annually as better data becomes available, update and submit any supporting budget bids.	Financial Partnering and Analytics Manager, & Engineering Services Manager & Senior Manager Operations	On-going
7.	Review resourcing plan to ensure adequate human resources are available to deliver this SDAMP.	Director Infrastructure	On-going
8.	Ensure that information pertaining to stormwater hierarchies and criticality are updated in Council's Asset Register.	Engineering Services Manager	Dec-25
9.	Develop a process to spatially record capital works projects after completion of scoping documentation.	Engineering Services Manager	Dec-26

Task No	Improvement Items	Responsibility	Timeline
10.	Update the register in real time based on asset handover process	Engineering Services Manager	On-going

Table 21 – Improvement Actions

7.3 Monitoring and Review Procedures

The SDAMP has a planning horizon of 10 years, and it is based on details documented within the Asset Management Strategy. The SDAMP will be reviewed and updated in the year following Council Local Government elections.

This SDAMP will be reviewed and amended to recognise any changes in service levels, needs arising from Floodplain management studies/plans and/or resources available to provide those services because of the budget decision process.

7.4 Performance Measures

The effectiveness of this SDAMP will be measured and monitored based on annual strategic Council indicators as follows:

- The performance of Council against the Levels of Service documented in this SDAMP; and
- Performance against the Asset Management Ratios.

Document	**Asset Management Plan - Stormwater and Drainage 2025-2035**		
Custodian	Director Engineering	Version #	Version 2
Adopted By	June 2025	ECM Document #	40798608
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IWC0936-04/25

Community Languages

Talk free with an interpreter call 131 450

Chinese Simplified	我们说普通话。如需免费传译服务，请致电131 450，然后请传译员致电 02 9392 5000 接通 Inner West市政府。
Traditional Chinese	我們能說您的語言。如需免費傳譯服務，請致電131 450，然後請傳譯員致電 02 9392 5000 接通 Inner West市政府。
Greek	Μιλάμε τη γλώσσα σας. Για να μιλήσετε δωρεάν σε διερμηνέα καλέστε το 131 450. Ζητήστε τους να καλέσουν το Δήμο Inner West Council στο 02 9392 5000.
Italian	Parliamo la vostra lingua. Per parlare gratuitamente con un interprete chiamate il numero 131 450. Chiedetegli di chiamare il Comune di Inner West al numero 02 9392 5000.
Vietnamese	Chúng tôi nói ngôn ngữ của quý vị. Muốn nói chuyện có thông dịch viên miễn phí, hãy gọi số 131 450. Yêu cầu họ gọi cho Hội đồng Thành phố Inner West qua số 02 9392 5000.

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