2025/26-2034/35

ASSET MANAGEMENT PLAN STORMWATER DRAINAGE

INTEGRATED **PLANNING** AND
REPORTING FRAMEWORK

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EXECUTIVE SUMMARY

The Stormwater Drainage Asset Management Plan (AMP) outlines all the tasks and resources required to manage and maintain Council's stormwater drainage to an agreed standard. The AMP sets out a detailed overview of all Council's stormwater drainage valued at approximately $367 million (30 June 2024). This value does not include indexation.

Council currently has an adopted level of service to resource the maintenance/ renewal of its stormwater drainage to ensure that they are not in poor condition.

This AMP forecasts the resourcing to meet that level of service for Council's next Delivery Program 2025-2029.

Council provides a condition rating as a measure of the asset's performance and reporting through the special schedule of infrastructure assets included in the annual financial statement.

This AMP identifies the financial investment by Council to meet the Financial Benchmarks from the Office of Local Government and reported through the special schedule of infrastructure assets included in the annual financial statement.

1. INTRODUCTION

Fairfield City Council is responsible for the management of stormwater drainage assets valued at approximately $367 million built up over many generations. This presents significant challenges as many assets were constructed many decades ago, and some of these are approaching the end of their useful life. The cost of maintaining and renewing these depreciating assets is likely to have a significant impact on scarce financial resources over the coming decades.

1.1 Fairfield City Plan Link

The Fairfield City Plan goals and objectives in this Asset Management Plan are:

Table 1.1 Council Goals and how these are addressed in this Plan

Broad Theme	Goal	Outcomes	How objectives are addressed in AMP
Theme 2 - Places and Infrastructure	Goal 2.3 Community Assets and Infrastructure are well managed into the future	Long-term reliability and serviceability for the City	Upgrade and maintain infrastructure such as roads, kerb and gutter, drainage, footpaths, bridges, etc
Theme 3 - Environmental Sustainability	Goal 3.1: A sustainable natural environment	Improved health of local eco-systems	Strengthen Flood Mitigation and Infrastructure Maintenance Enhance Emergency Preparedness and Community Awareness

1.2 Scope of this Plan

Fairfield City Council is responsible for the management of stormwater drainage assets as shown in Table 1.1, with a replacement value of $367 million.

Table 1.2

Asset Category	Quantity	Replacement Cost $'000	Replacement Cost %
Detention Basin*	11** items	$2,017	0.56%
Gross Pollutant Trap	25 items (Major)	$1,881	0.52%
Channel	11km	$10,327	2.86%
Pipe	478km	$305,086	84.43%
Drainage Pit	14372 items	$41,476	11.48%
Headwalls	580 items	$471	0.13%
Rain Garden	22 items	$95	0.03%
Other Assets		$5,667	
	Total	**$367,020**	

* *Earthworks in detention basins are not depreciated.*
** *Council controls 19 detention basins, and 11 are declared as dams under legislation.*

Distribution of Drainage assets covered by this Asset Management Plan (AMP) are shown in Figure 1.2

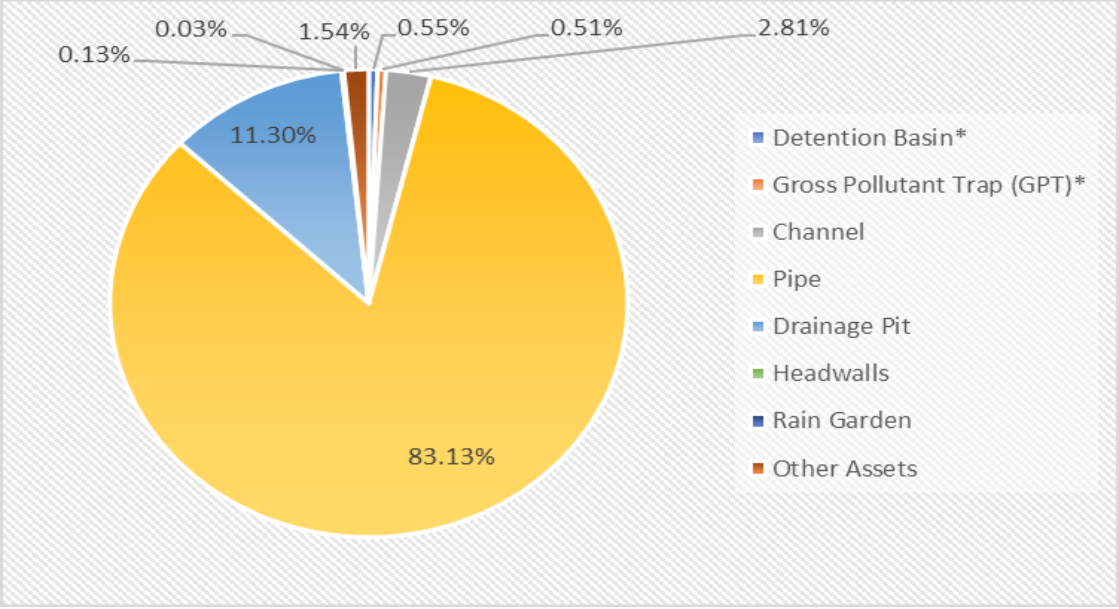


Figure 1.2 - Distribution of Drainage Assets

2. LEVELS OF SERVICE

2.1 Legislative Requirements

Council must meet many legislative requirements, including Australian and State legislation. These include:

Legislation	Requirement
Local Government Act	Sets out the role, purpose, responsibilities, and powers of local governments, including the preparation of a long-term financial plan supported by asset management plans for sustainable service delivery.
The Australian Accounting Standards AASB116, AASB13 and AASB 2022-10	The Australian Accounting Standards Section 27 (AAS27) requires that assets be valued and reported in the annual accounts, which also includes depreciation value (i.e. how fast these assets are wearing out).
Road Act 1993	Sets out the extent of Council responsibilities and powers in the road reserve.
Water Management Act 2000	The objects of this Act are to provide for the sustainable and integrated management of the water sources of the State for the benefit of both present and future generations and, in particular: (a) to apply the principles of ecologically sustainable development, and (b) to protect, enhance and restore water sources, their associated ecosystems, ecological processes and biological diversity and their water quality, and (c) to recognise and foster the significant social and economic benefits to the State that result from the sustainable and efficient use of water, including: (i) benefits to the environment, and (ii) benefits to urban communities, agriculture, fisheries, industry and recreation, and (iii) benefits to culture and heritage, and (iv) benefits to the Aboriginal people in relation to their spiritual, social, customary and economic use of land and water, (d) to recognise the role of the community, as a partner with government, in resolving issues relating to the management of water sources, (e) to provide for the orderly, efficient and equitable sharing of water from water sources, (f) to integrate the management of water sources with the management of other aspects of the environment, including the land, its soil, its native vegetation and its native fauna, (g) to encourage the sharing of responsibility for the sustainable and efficient use of water between the Government and water users, (h) to encourage best practice in the management and use of water.

Legislation	Requirement
Local Government (General) Amendment (Stormwater) Regulation 2006, under the Local Government Act 1993	Council charges a stormwater levy, and the income must be spent in accordance with the approved plan and applicable legislation
Environmental Planning and Assessment Act 1979	Sets out guidelines for land use planning and promotes the sharing of responsibilities between various levels of government in the state.
Environmental Planning and Assessment Amendment Act 2008	Sets out guidelines for land use planning and promotes the sharing of responsibilities between various levels of government in the state.
Protection of the Environment Operations Act 1997	Sets out Council responsibility and powers in the local area environment and its planning functions.
Dams Safety Act 2015 Dams Safety Regulation 2019	Council controls 19 detention basins. Council controls 11 detention basins that are declared as designated dams under the Dams Safety Act 2015. Council must meet the requirements of the applicable legislation while managing these dams. This management includes maintenance and upgrade to a required standard meeting the requirements of Dams Safety NSW.

2.2 Adopted Levels of Service

The adopted Levels of Service that are considered appropriate to the Fairfield City Council are scheduled in Table 2.2.1.

Table 2.2.1

Key Performance Indicator	Level of Service	Target Performance	Performance Measure Process
Social Needs	Ensure that drainage assets are fully functional for community needs	Importance and satisfaction levels are considered	Community Survey Results
Appearance	Stormwater drainage systems and associated assets are in clean and presentable condition	Maximum 5 requests/ Complaints per month regarding cleanliness	Customer Service requests
Legislative Compliance	Council has a legal right to drain through an easement, drainage reserve or water course.	100% compliance	All drainage assets are mapped in Council's GIS system
Health and Safety	Provide a stormwater system that is low risk to the	<5 per year Incident Reports	Incident reports

Key Performance Indicator	Level of Service	Target Performance	Performance Measure Process
	community	<5 per year requests related to safety	Customer service requests
Quality	Ensure that stormwater assets undergo appropriate maintenance to minimise disruption to service delivery	<20 complaints per annum	Number of customer complaints per annum
Quantity	Adequate capacity to accommodate flow rates generated by 1 in 5-year storms	20 stormwater blockages per 100 km of pipe per annum.	Customer Service Requests Australian Rainfall Runoff technical specifications and guidelines Council's Stormwater Management Policy
Reliability and Performance	Percentage of customer requests actioned within twenty-eight days	100%	Audit of Work Orders generated. Customer Request Management statistics
Responsiveness	All works relating to drainage assets are completed within agreed timeframes, depending on the task and rating as specified in the risk register and maintenance plan	90% of work identified as completed within designated response times	Audit of Work Orders generated. Customer Request Management Statistics
Condition	Asset Condition	Backlog does not exceed 2 %	Condition Data Analysis as reported through Special Schedule 7
	Overall Asset Condition	Maximum 5 % of assets will be in conditions 4 & 5 in 10 years with the current level of funding	Condition Data Analysis as reported through Special Schedule 7
Capacity	New stormwater drainage pipes are designed for 1 in 5 year storm events	95%	Council Policy compliance
Financial Sustainability	Drainage assets are managed for future generations	Asset Renewal Funding Ratio 90%	Annual Budget Expenditure Review
	Projects are delivered within budget	100%	Percentage of projects completed within 5% of the commit to build budget

3. FUTURE DEMAND

3.1. Demand Forecast

3.1.1 Technological Change

Table 3.1.1.1 Changes in Technology and Forecast Effect on Service Delivery

Technology Change	Effect on Service Delivery
Integrated asset management system including electronic recording of asset condition and performance linked to GIS	Improve the efficiency and effectively measure the performance of asset management plan and delivery of service
Affordable continuous water quality measuring devices	More frequent measurement of water quality and level of pollutants
Improvements to pollutant control devices	Higher level of pollution capture and treatment of stormwater.
Alternative pipe materials and equipment	Reduce pipe laying costs
Further development of urban stormwater sensitive devices and techniques	Reduce stormwater run-off and increase reuse
Affordable pipe liners	Cost-effective method of retaining existing assets

3.1.2 Increased demand for asset renewal and maintenance

The table below shows the variance over the last 3 years in terms of the value of new stormwater drainage assets.

Financial Year	Asset Value
2021/2022	$ 123,328
2022/2023	$ 333,249
2023/2024	$ 2,036,483

Council has mapped its stormwater drainage assets to a high level of confidence. Currently, there is no accepted methodology for condition assessment of stormwater drainage assets. For this reason, their life cycle is determined by the age of the asset.

3.1.3 Change in Community Expectation

Community Expectations	Effect on Service Delivery
There is a strong desire from the community for increased environmental responsibility and the reuse of stormwater runoff	Existing networks are not suitable for the purpose.

3.1.4 Environmental Considerations

Environment and Climate Change (Sea Level Change)	Effect on Service Delivery
It is widely accepted that climate is changing	The stormwater network will be impacted by climate change and increased number of severe rainfall events.

3.4 Demand Management

Opportunities identified to date for demand management are shown in Table 3.1.3.1.

Table 3.4.1 Demand Management Strategies Summary

Service Activity	Demand Management Strategies
All Drainage Assets	WSUD – more overland flow, green swales, local detention basins, less impervious areas on new developments. To be included further in Council's Stormwater Management Policy.
	Greater compliance for surface water runoff pollution, particularly on new developments, to reduce the silting up of pits, pipes and other waterways.
	Greater cleaning and flushing of the underground system to ensure full capacity is realised.
	More use of GPTs on private property to arrest pollutants before they reach the Council network. This must also include compliance checks to ensure ongoing effectiveness of the devices.

4. RISK MANAGEMENT

Council uses FORM framework for the risk associated with the Asset Management, consistent with ISO31000.

In order to establish those risks that will be covered by the risk management program, a table has been developed showing sources of risk, their potential impacts, current controls and action plans (refer to Table 4.1). The risk register has established the responsibilities of the relevant departments (City Assets and Infrastructure) and personnel.

Table 4.1: Drainage Asset Risk Register

Hazards	Risk (what can happen?)	Likelihood	Consequence	Risk Score	Controls	Action	Responsibility
Asset Condition	Ongoing deterioration of drainage assets	4	3	12	Repaired after receiving a request from a resident	1. Regular condition inspections 2. Asset modelling 3. Annual allocation of sufficient funding and resources	Asset Management
Asset Condition	Poor asset condition causes damage and injury to staff and community member	3	4	12	Repaired after receiving a request from a resident	1. Prioritise capital and maintenance works based on condition 2. Submit appropriate funding requests for Drainage inspections (CCTV camera) and maintenance	Asset Management
Insufficient Maintenance	Insufficient maintenance over the years increases the risk of injury to users	3	3	9	Reactive type	Prepare program work as per the AMP for budget consideration	Asset Management
Natural Events (flooding, bushfire, earthquake etc)	Significant asset loss due to Natural events	3	3	9		Organise an inspection immediately after flooding.	Asset Management
Restricted flow	Damage and injury caused by restricted flow	3	3	9	Repaired after receiving a request from a resident	Asset inspections, as set out in the AMP, and maintenance program development	Asset Management
Overflow due to blockage of pipes and pits	Damage and injury caused by restricted flow	3	3	9	Repaired after receiving request from resident	Asset inspections as set out in AMP and maintenance program development	Asset Management

Hazards	Risk (what can happen?)	Likelihood	Consequence	Risk Score	Controls	Action	Responsibility
WHS Practices	Injury due to poor WHS practices	2	3	6		WHS controls trained	Infrastructure Services
Inappropriate works	Damage and injury caused by inappropriate works	2	3	6		Need to ensure that works are carried out in accordance with specification.	Infrastructure Services
Poor Design and Construction	Injury caused by poor design and construction	4	3	12	Design review	Rigorous design to ensure that standards are achieved and documented. Implement quality control & quality assurance processes in construction. Establish post construction review with design	Asset Management

5. LIFE CYCLE MANAGEMENT PLAN

5.1 Objective

The objective of the drainage network is to manage stormwater infrastructure that helps reduce the chances of flooding and transport stormwater from the point of collection to its point of discharge.

5.2 Asset Inclusions and Exclusions

5.2.1 Inclusions

The assets covered by this plan are shown below:

- Piped drainage
- Gross Pollutant Traps
- Drainage pits
- Headwalls
- Detention Basins (including declared dams)
- Litter baskets
- Concrete-lined channels
- Open earth channels
- Rain Garden

5.2.2 Exclusions

Other assets are not covered by this plan:

- Bridges
- Natural waterways
- Natural creek

Bridges are covered in the Roads and Transport Asset Management Plan. Built assets within natural water ways and creeks are included in the Asset Register and Plan.

5.3 Life Cycle Issues

Some of the key life-cycle issues relating to drainage assets are:

- Dams Safety NSW expect Council to upgrade Council's declared dams to meet the regulated requirements of the NSW Dams Safety legislation. This means assessing Council dams against the regulated criteria and undertaking works if needed to address where there are non-compliances.

- The quality of road reinstatement by service authorities and other organisations has a significant effect on drainage quality.

- The emphasis on predictive modelling of concrete pipe and pits deterioration needs to be continued to enable understanding of drainage useful life and planned increases in rehabilitation expenditure.

5.4 Hierarchy

The hierarchy for this asset class has been created to assist maintenance and renewal planning. All assets fall within a unified guideline with regard to design, operation, maintenance and renewal.

Road & Drainage Reserve	Description
Regional	Drainage system on the regional road
Collector	Drainage system on the collector
Local	Drainage system on the local road
Cul-De-Sac	Drainage system on the cul-de-sac
Drainage Reserve	Drainage system on the drainage reserve (not on the road)

The detention basins follow Catchment and are classified as per legislation, as dams and other detention basins.

5.5 Asset Description

Fairfield City Council manages 470 kilometres of stormwater pipe and 14,025 stormwater pits. Drainage assets have been identified for valuation purposes into the following assets components:

Drainage Assets	Asset Components
Stormwater Pits	Grated Gully Pit Kerb Inlet Pit Grated Pit with Kerb Inlet Junction Pit Letterbox Pit Median Pit Grated Surface Inlet Pit in Open Space
Stormwater Pipe	Class 2 Pipe (225mm to 2100mm)
Open Channel	Concrete
Detention Basin	Structures
Gross Pollutant Traps (GPT)	Structures
Rain Garden	Structures

5.6 Physical Parameters

5.6.1 Asset Capacity, Performance and Compliance

Most of the drainage system was built in Fairfield over the last several decades. The theoretical design capacity of drainage in some areas may no longer effectively manage higher stormwater runoff from additional development, infill housing and other increases in impervious areas (i.e. increased residential concrete surfaces).

The capacity analysis of stormwater pipes in Fairfield is carried out by internal staff.

5.6.2 Asset Condition

Results included in the following table were gathered through an audit of the drainage assets by Council staff.

Condition is measured using a 1-5 rating system as defined in the Table 5.6.2.1 below:

Level	Condition	Description	% Life Consumed
1	Excellent	No work required (normal maintenance)	0
2	Good	Only minor work required	25
3	Average	Some work required	50
4	Poor	Some renovation needed within I year	75
5	Very Poor	Urgent renovation/upgrading required	100

Examples of stormwater pits are shown below:

Condition 1:
No work required (normal maintenance)

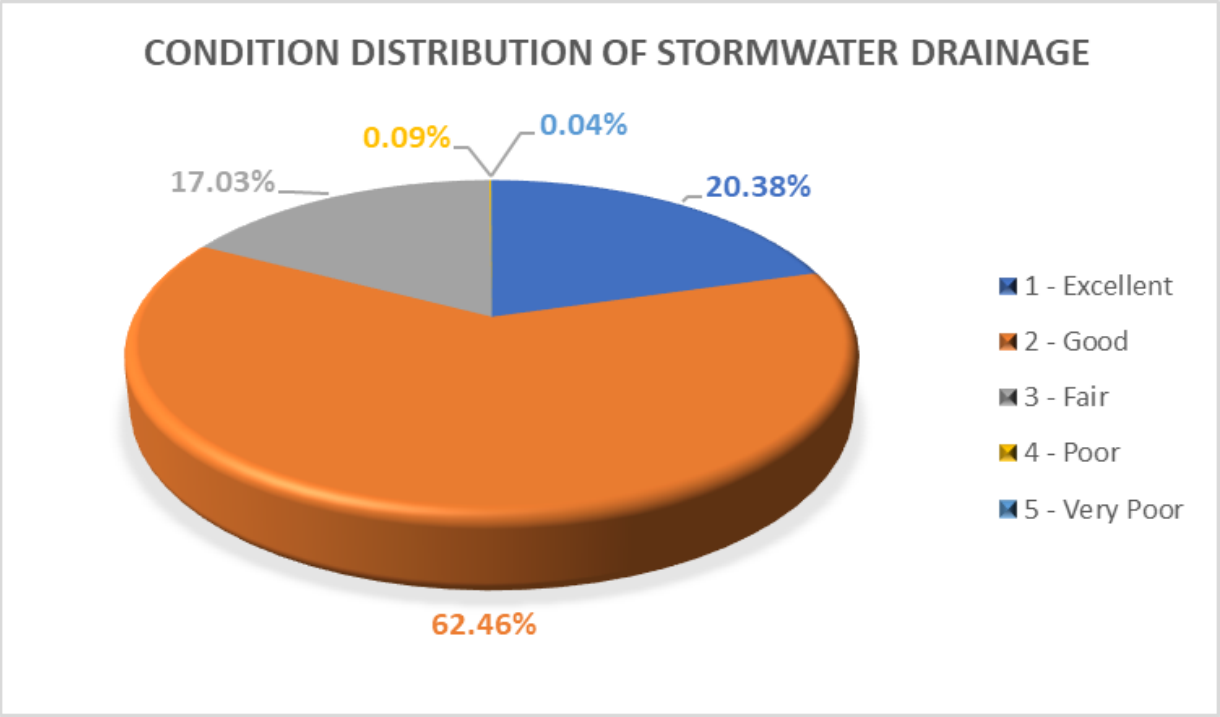
Condition 2:
Only minor work required

Condition 3:
Some work required

Condition 4:
Some renovation needed within 1 year

Condition 5:
Urgent renovation/upgrading required

Audit results for all Council Drainage assets result in the condition profile shown below:



5.7 Asset Valuation

Valuation of Council's Stormwater Drainage assets is undertaken every 5 years and is externally audited by the NSW Office of Audit.

A summary of replacement cost on 30 June 2024 is detailed in Table 5.7.1 below.

Table 5.7.1: Asset Valuation

Asset Group	Replacement Cost $'000
Stormwater Drainage	$367,020

5.7.1 Asset Useful Life

The useful life of an asset is defined as the period over which an asset is expected to be fully utilised.

The useful life used in this Asset Management Plan is detailed in the table below and was derived from the following sources:

- International Infrastructure Management Manual (IPWEA, 2006)
- Council's experience with similar assets
- Other Councils' Road Asset Management Plans

Drainage Assets	Useful Life (years)
Drains	10-150

5.8 Renewal and Maintenance Expenditure

Council's Stormwater Drainage Renewal Program budget allocation over the last three years is detailed in 5.1.2.

Table 5.1.2: Renewal and Maintenance Expenditure

	2021/2022 $'000	2022/2023 $'000	2023/2024 $'000
Renewal and Maintenance Expenditure	$703	$933	$2,521

5.9 Life Cycle Activities

5.9.1 Operations

Operational activities keep the asset utilised but do not affect the condition. Typical operational activities can include, but are not limited to the pit cleaning, asset inspection, and asset management software maintenance. This work must be carried out in accordance with Council's Asset Management Strategy.

5.9.2 Maintenance

Maintenance activities are those routine works that keep assets operating to the required service levels. They fall into two broad categories:

1. *Planned Maintenance (proactive)*
   Maintenance works carried out in response to reported problems or defects. Typical planned maintenance activities include:
   - Re-grading Table Drains

2. *Unplanned Maintenance (reactive)*
   Maintenance works unplanned to prevent asset failure and deterioration. Typical planned maintenance activities include:
   - Repair of damaged pit lid, grate, end wall etc 3

5.9.2.1 Maintenance Standards

Stormwater Drainage asset maintenance standards are a set of performance criteria to the agreed service standard and future maintenance. They form the basis of the minimum level of service for a particular asset.

These standards allow the development of a plan that determines the level of maintenance needed based on the agreed service standard for all drainage assets.

Each asset is allocated a hierarchy to identify the maintenance standard that is required. Maintenance standards, condition auditing and frequency of servicing/maintenance varies depending on the importance of the asset.

The actual asset condition will be compared against the desired maintenance standard, or in the case of legislation, the required maintenance standard. Variations from the standard that are identified will form part of the maintenance plan.

5.9.2.2 Dams Safety

Council uses the Fairfield Council Dams Safety Management System for the management of the safety of the declared dams. The system provides for regular inspection, monitoring, maintenance and reporting.

5.9.2.2 Maintenance Strategy

Maintenance strategies include:

- Prevent premature deterioration or failure of stormwater drainage assets.
- Deferring minor maintenance work if drainage assets are due for rehabilitation/renewal.
- Ensuring all assets are maintained to deliver the desired levels of service.

Maintenance works are prioritised based on the following factors:

- The safety of asset users
- It is likely that the area of distress may expand.
- Renewal work depends on the planned maintenance work
- Asset hierarchy
- Statutory regulation
- Executive priority

Maintenance Specifications

Maintenance work is carried out under Council's Specification, including the AUS-SPEC standards and specifications.

5.9.2.3 Maintenance Program

Both planned and unplanned maintenance is undertaken because of proactive inspection by Council staff or after receiving a request from customers.

A maintenance plan (**Appendix 1**) is a part of this Asset Management Plan.

The plan describes the timing of activities such as inspection and other works to be undertaken on a stormwater drainage asset.

5.9.2.4 Maintenance Service Provision

Fairfield City Council currently uses a mixture of its own staff and external contractors for the provision of road and transport asset maintenance services.

5.10 Renewal Plan

Renewal

Renewal work is the replacement of an asset or a significant component to restore its original size and capacity. Typical drainage renewal works include replacement of the existing:

- Stormwater Pits
- Stormwater Pipes

5.10.1 Renewal Strategy

The asset management plan enables Council to holistically manage its stormwater drainage assets through the development of an annual Major Program. Renewal, replacement and upgrade projects are determined based on:

- **Risk** – where the risk of failure and associated safety, financial and commercial impact justifies action.
- **Asset performance** – when the asset fails to meet the required level of service; and
- **Economics** – when it is no longer economic to continue repairing the asset (that is, the annual cost of repairs exceeds the annualised cost of renewal).

Additionally, Council considered the following when preparing the Delivery Program (2025-2029):

- Statutory obligations, e.g. Dams Safety Legislation, WHS
- Risk to public health and property, e.g. Public Liability
- Availability of external grants
- Community feedback, including community survey, CRMS and representation from elected representatives.

Renewal Specifications

Maintenance work is carried out under Council's Specification.

5.10.3 Renewal Expenditure Forecasts

Council's Asset Management System (Conquest) maintains data and information relating to Councils Stormwater Renewal Program.

This data informs financial planning and using an approved (industry standard) software (MyPredictor), Council is able to model the deterioration of the assets in order to determine the renewal needs over the longer term.

5.9 New/Upgrade Works

New/upgrade works involve the extension or upgrade of assets required to cater for growth or additional levels of service. New works create an asset that did not exist or extend an asset beyond its original size or capacity.

Council may be required to upgrade several detention basins and must plan for assessment and updates based on the latest data.

5.9.1 New/Upgrade Works Strategy

Most of the new stormwater drainage assets in Fairfield are created as part of subdivisional activity. The constructions of new assets within new subdivisions are generally funded by the developers and must be constructed in accordance with the Council's Subdivisional Standards.

Recently, the State Government has allowed development to proceed without approval through the Complying Development pathway, commonly known as the CDC. The new construction could potentially increase the sealed impervious surface by up to 20%. Increasing sealed surface will increase runoff and are expected to overload stormwater infrastructure. Excluding catchment characteristics, a 20% increase in build area is expected to increase runoff volume by the same amount. This increased density will increase requests related to stormwater discharge and risks of failure of the detention basins (including dams).

This means Council must plan for upgrades when undertaking renewals.

Additionally, Dams Safety NSW requires Council to bring its dams to a standard meeting the requirements of the 2019 Dams Safety Regulations. Council has previously agreed to upgrade 4 of the 11 detention basins (declared dams). The construction of the Fairfield Golf Course detention basin (dam) upgrade is already complete. The construction of the Mimosa Road (Powhatan Reserve) Detention Basin (Dam) upgrade is underway and expected to be completed by December 2025. The construction for the Stockdale detention basin (Dam) upgrade has commenced and will be completed by October 2025. Council is waiting for a suitable grant to fund the construction of the King Park Detention Basin (Dam) upgrade. While waiting for a grant, Council is considering if the status of the dam could be reviewed. Additionally, Council is considering whether the remaining dams need assessing. Council expects that the reviews will be undertaken over the next life of the next Delivery Program (2025-2029).

For other upgrades, Council use the criteria outlined in Council's Stormwater Management Plan.

5.10 Asset Disposal

Asset disposal involves assessment of strategic goals and the recognition that some assets may be underperforming or surplus to operating requirements. Disposal of assets may be recommended when:

- The asset is underutilised and surplus to Council service delivery.
- Community consultation identifies that the asset is not providing a value-for-money service.
- The asset is not aligned with corporate goals or the City Plan

No assets have been identified for decommissioning and disposal in this asset class. However, the classification of several detention basins may change over the next 4 years after assessment is undertaken. The classification is based on the NSW Dams Safety Regulation 2019.

6. FINANCIAL FORECAST

6.1 10-Year Financial Forecasts

The results are presented as "*what if*" scenarios for the expenditure required for renewal, operation, maintenance, and new/upgrade works over a ten (10) year period.

This assessment also incorporates Council's long-term financial plan projections and assumptions about asset performance, rates of deterioration and funding requirements.

Scenario 1: Current Funding - Maintain Backlog 2% (No more than 2% of assets in conditions 4 and 5)

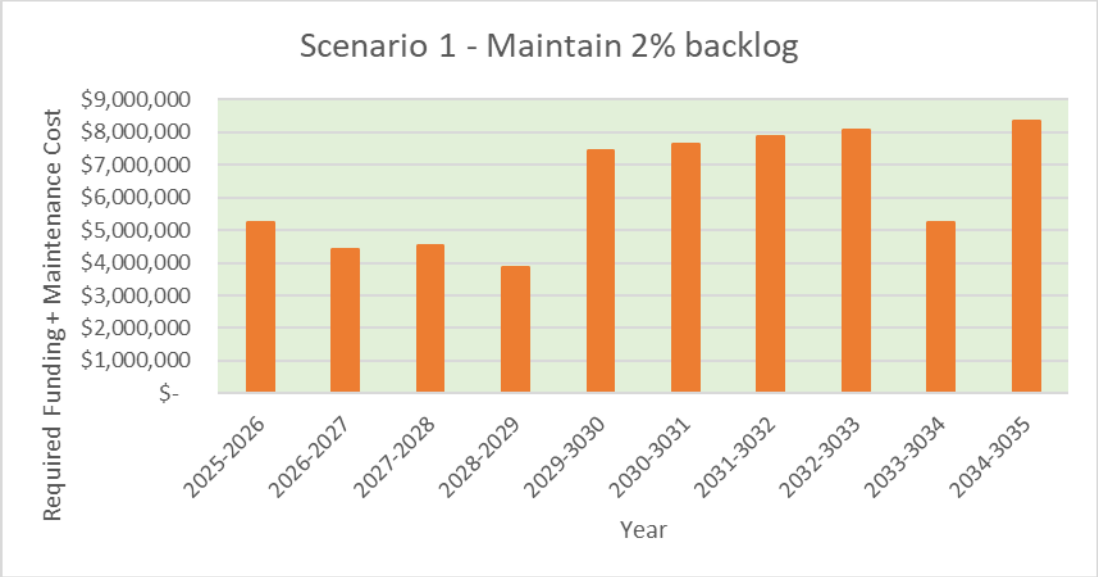


Table 1: 10-year expenditure forecast for stormwater drainage

Capital Expenditure	2025-2026 (m)	2026-2027 (m)	2027-2028 (m)	2028-2029 (m)	2029-3030 (m)	2030-3031 (m)	2031-3032 (m)	2032-3033 (m)	2033-3034 (m)	2034-3035 (m)
Drainage Renewal	$4.17	$3.31	$3.39	$2.68	$6.24	$6.41	$6.59	$6.76	$3.90	$6.97
Maintenance and Operational	$1.09	$1.12	$1.15	$1.17	$1.21	$1.24	$1.27	$1.31	$1.34	$1.38

Scenario 2: Maintain Backlog 5% - Stormwater Drainage

This scenario models the funding required to maintain a 5% asset backlog for stormwater drainage, meaning no more than 5% of the network is in poor or very poor condition (Condition 4 or 5).

To achieve this, reduced annual capital investment in renewal works is assumed, reflecting approximately 40% of the optimal funding level required to maintain a 2% backlog. While this approach lowers capital expenditure, it increases the risk of asset failure and reduced service levels over time.

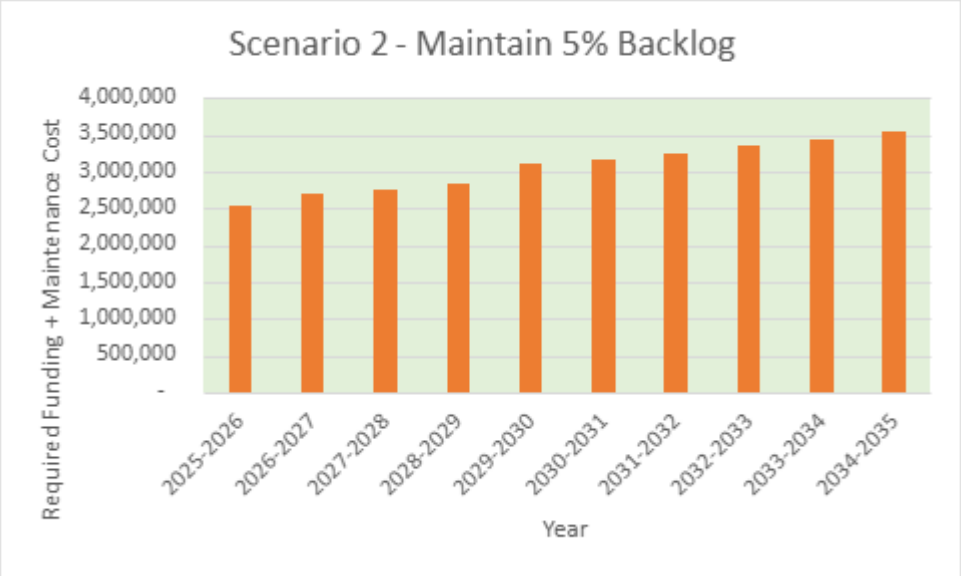


Table 2: 10-Year Expenditure Forecast – Stormwater Drainage (5% Backlog Scenario) **Capital Expenditure**	**2025-2026 (m)**	**2026-2027 (m)**	**2027-2028 (m)**	**2028-2029 (m)**	**2029-3030 (m)**	**2030-3031 (m)**	**2031-3032 (m)**	**2032-3033 (m)**	**2033-3034 (m)**	**2034-3035 (m)**
Drainage Renewal	$1.44	$1.59	$1.61	$1.66	$1.89	$1.94	$1.99	$2.04	$2.10	$2.16
Maintenance and Operational	$1.09	$1.12	$1.15	$1.17	$1.21	$1.24	$1.27	$1.31	$1.34	$1.38

6.2 Key Assumptions

- Assumptions have been made to average useful lives.
- No disposal of assets is considered in the financial projection.

6.3 Funding Strategy

The focus of this Asset Management Plan is on identifying the optimum cost for each asset group necessary to produce the desired level of service. How the cash flow is to be funded is a matter for separate consideration as part of Council's funding policy review.

Current Funding sources available for these assets include:

Asset Type	Funding Source
Stormwater Drainage	Rates Federal Government Funding State Government funding. Private developer-funded works. Transport for NSW (TfNSW) Stormwater Levy

6.4 Confidence Levels

The confidence in the asset data used as a basis for the financial forecasts has been assessed using the following grading system:

Confidence ratings for each asset group and/or sub-group

Asset Category	Qty	Cond	Age	Service Levels	Demand Forecasts	Lifecycle Management	Financial Forecasts	Overall Rating
Storm-water Drainage Assets	A	A	A	B	B	B	A	A

Confidence Grade	Confidence Rating and Description
A	Highly Reliable < 2% uncertainty Data based on sound records, procedure, investigations, and analysis, which is properly documented and recognised as the best method of assessment
B	Reliable 2%≤CR<10% uncertainty Data based on sound records, procedures, investigations, and analysis, which is properly documented but has minor shortcomings, for example, the data is old, some documentation is missing, and reliance is placed on unconfirmed reports or some extrapolation
C	Reasonably Reliable 10%≤CR<25% uncertainty Data based on sound records, procedures, investigations, and analysis, which is properly documented but has minor shortcomings, for example, the data is old, some documentation is missing, and reliance is placed on unconfirmed reports or significant extrapolation.
D	Uncertain 25%≤CR<50% uncertainty Data based on uncertain records, procedures, investigations, and analysis, which is incomplete or unsupported, or extrapolation from a limited sample for which grade A or B data is available.
E	Very Uncertain ≥ 50% uncertainty Data based on unconfirmed verbal reports and/or cursory inspection and analysis

7. ASSET MANAGEMENT PRACTICES

Council utilises the following computer software *as part of Council's Asset Management system* to manage its drainage assets:

- PeopleSoft Financial Management System
- Conquest Asset Management System
- My Predictor Predictive Modelling Tool
- MapInfo (GIS – Geographic Information System)
- DRAINS

8. PLAN IMPROVEMENT AND MONITORING

8.1 Improvement Program

Council's Asset Management Strategy 2025/26 – 2035/36 identifies the improvement tasks as part of the following Priority themes:

- Optimise lifecycle costs.
- Enhance risk management.
- Enhance data integrity.
- Enhance financial sustainability.

Appendix 1 – Stormwater Drainage Asset Maintenance

Pipe, Pit and Rain Garden Maintenance

Item	Reason for Activity	Treatment Description	Intervention Level	Regional Road	Collector Road	Local Road	Cul-De-Sac	Drainage Reserve
Pipe, Pit and Rain Garden maintenance	Blocked, damaged and broken pipe and pit causing overflow	General maintenance includes cleaning, clearing, flushing and repair of damaged pits includes repair and replacement of gratings and lids	Pit lid broken or not appropriately located. Obstructions in pipes restrict the flow of water. Grates are blocked or not appropriately located. Pits blocked. Flooding Pits or surrounds are damaged. Pipes broken. Scours of either inlet or outlet Weed growth.	Cleaning and clearing annually under Maintenance Works Program Reactive works-Response Rating 1	Cleaning and clearing annually under Maintenance works. Program Reactive works-Response Rating 2	Cleaning and clearing two times per year. Reactive works-Response Rating 2	Cleaning and clearing two times per year. Reactive works-Response Rating 2	Cleaning and clearing two times per year. Reactive works-Response Rating 1

Concrete and Earthen Open Channel Maintenance

Item	Reason for Activity	Treatment Description	Intervention Level	Regional Road	Collector Road	Local Road	Cul-De-Sac	Drainage Reserve
Open Channel Maintenance	Damaged concrete panels and blocked drains are causing flow restrictions and scouring of banks	General maintenance includes cleaning, clearing and repairing damaged concrete panels	Ponding in drains Loose components (i.e., bricks, bluestones to be replaced) Vegetation restricts the flow of water. Litter visible. Drains are noticeably scoured. The drain is reduced by silt to less than 75% of its original capacity.	Cleaning and clearing annually under Maintenance Works Program Reactive works-Response Rating 1	Cleaning and clearing annually under Maintenance Works Program Reactive works-Response Rating 2	Cleaning and clearing two times per year. Reactive works-Response Rating 2	Cleaning and clearing two times per year. Reactive works-Response Rating 2	Cleaning and clearing two times per year. Reactive works-Response Rating 1

Head Walls Maintenance

Item	Reason for Activity	Treatment Description	Intervention Level	Regional Road	Collector Road	Local Road	Cul-De-Sac	Drainage Reserve
Head Walls Maintenance	Blocked drain causing flow restrictions and scouring of banks	General maintenance includes cleaning, clearing and repair of damaged head walls	End walls collapsed or blocking inlet or outlet. Damaged head walls	Annually in accordance with Maintenance Works Program	Annually in accordance with Maintenance Works Program	Annually in accordance with Maintenance Works Program	Annually in accordance with Maintenance Works Program	Annually in accordance with Maintenance Works Program

Detention Basin Maintenance

Item	Reason for Activity	Treatment Description	Intervention Level	Regional Road	Collector Road	Local Road	Cul-De-Sac	Drainage Reserve
Detention Basin Maintenance	Blocked drain causing flow restrictions and scouring of banks	General maintenance includes cleaning, clearing, flushing and repair of damaged pits, including repair and replacement of gratings and lids	Visible litter Pit lids are broken or not appropriately located. Grates blocked.	Annually under Maintenance works Program Reactive works-Response Rating 1	Annually under the Maintenance works program Reactive works-Response Rating 2	Annually under Maintenance works program Reactive works-Response Rating 2	Annually in accordance with Maintenance works program Reactive works-Response Rating 2	Annually in accordance with Maintenance works program Reactive works-Response Rating 1

Gross Pollutant Trap (GPT) Maintenance

Item	Reason for Activity	Treatment Description	Intervention Level	Regional Road	Collector Road	Local Road	Cul-De-Sac	Drainage Reserve
GPT Maintenance	GPT blockage	General maintenance includes cleaning, clearing, flushing and repair of damaged pits, including repair and replacement of gratings and lids	Visible litter Pit lids are broken or not appropriately located. Grates blocked. GPT with an excess of 20% silting in GPT, diversion chamber or inlet/outlet pipes	Annually clean as determined by the Inspection. Reactive works- Response Rating 1	Annually clean as determined by the Inspection. Reactive works- Response Rating 2	Annually clean as determined by the Inspection. Reactive works- Response Rating 2	Annually clean as determined by the Inspection. Reactive works- Response Rating 2	Annually clean as determined by the Inspection. Reactive works- Response Rating 1

Table and Side Drain Maintenance

Item	Reason for Activity	Treatment Description	Intervention Level	Regional Road	Collector Road	Local Road	Cul-De-Sac	Drainage Reserve
Table drain, cut off and side drain	Build-up of access water flows along the road shoulder	Grade or excavate to ensure vegetation and silt are removed, and the drain is free	Excess flow of water along the road shoulder. The shoulder is higher than the pavement edge	Annually in accordance with the Maintenance Works Program	Annually in accordance with the Maintenance Works Program	Annually in accordance with the Maintenance Works Program	Annually in accordance with the Maintenance Works Program	Annually in accordance with the Maintenance Works program

Appendix 2 – Stormwater Drainage Asset Inspection

Asset Type	Hierarchy	Inspection Type	Frequency	Responsibility
Pit	Regional	Risk Inspection	6 Months	Infrastructure Services
		Condition Inspection	25% of pit network annually	Asset Management
	Collector	Risk Inspection	12 months 6 months for hot spot pit	Infrastructure Services
		Condition Inspection	25% of pit network per year	Asset Management
	Local	Risk Inspection	12 months 6 months for hot spot pit	Infrastructure Services
		Condition Inspection	25% of pit network per year	Asset Management
	Cul-De-Sac	Risk Inspection	24 months 6 months for hot spot pit	Infrastructure Services
		Condition Inspection	25% of pit network per year	Asset Management
	Drainage Reserve	Risk Inspection	6 months	Infrastructure Services
		Condition Inspection	25% of pit network per year	Asset Management
Pipe	Regional	Risk Inspection	6 months	Infrastructure Services
		Condition Inspection	2.5% of pipe network per year	Asset Management
	Collector	Risk Inspection	6 months	Infrastructure Services
		Condition Inspection	2.5% of pipe network per year	Asset Management
	Local	Risk Inspection	12 months	Infrastructure Services
		Condition Inspection	1% of pipe network annually	Asset Management
	Cul-De-Sac	Risk Inspection	24 months	Infrastructure Services
		Condition Inspection	1% of pipe network per year	Asset Management
	Drainage Reserve	Risk Inspection	3 months	Infrastructure Services
		Condition Inspection	2.5% of pipe network per year	Asset Management

Asset Type	Hierarchy	Inspection Type	Frequency	Responsibility
Rain Garden	Regional	Risk Inspection	6 months	Natural Resources
		Condition Inspection	25% of the rain garden network per year	Asset Management
	Collector	Risk Inspection	12 months	Natural Resources
		Condition Inspection	25% of the rain garden network per year	Asset Management
	Local	Risk Inspection	12 months	Natural Resources
		Condition Inspection	25% of the rain garden network per year	Asset Management
	Cul-De-Sac	Risk Inspection	24 months	Natural Resources
		Condition Inspection	25% of the rain garden network per year	Asset Management
	Drainage Reserve	Risk Inspection	6 months	Natural Resources
		Condition Inspection	25% of the rain garden network per year	Asset Management
Open Channel	Regional	Risk Inspection	6 months	Infrastructure Services
		Condition Inspection	25% of open channel per year	Asset Management
	Collector	Risk Inspection	6 months	Infrastructure Services
		Condition Inspection	25% of open channel per year	Asset Management
	Local	Risk Inspection	12 months	Infrastructure Services
		Condition Inspection	25% of open channel per year	Asset Management
	Cul-De-Sac	Risk Inspection	24 months	Infrastructure Services
		Condition Inspection	25% of open channel per year	Asset Management
	Drainage Reserve	Risk Inspection	6 months	Infrastructure Services
		Condition Inspection	25% of open channel per year	Asset Management
Gross Pollutant	Regional	Risk Inspection	6 months	Natural Resouces

Asset Type	Hierarchy	Inspection Type	Frequency	Responsibility
Traps (GPT)		Condition Inspection	Annually	Asset Management
	Collector	Risk Inspection	Annually	Natural Resources
		Condition Inspection	Annually	Asset Management
	Local	Risk Inspection	Annually	Natural Resources
		Condition Inspection	Annually	Asset Management
	Cul-De-Sac	Risk Inspection	Annually	Natural Resources
		Condition Inspection	Annually	Asset Management
	Drainage Reserve	Risk Inspection	Annually	Natural Resources
		Condition Inspection	Annually	Asset Management
Detention Basin	Regional	Risk Inspection	Annually	Catchment
		Condition Inspection	Annually	Asset Management
	Collector	Risk Inspection	Annually	Catchment
		Condition Inspection	Annually	Asset Management
	Local	Risk Inspection	Annually	Catchment
		Condition Inspection	Annually	Asset Management
	Cul-De-Sac	Risk Inspection	Annually	Catchment
		Condition Inspection	Annually	Asset Management
	Drainage Reserve	Risk Inspection	Annually	Catchment
		Condition Inspection	Annually	Asset Management

Appendix 3 – Delivery Program– Stormwater Drainage Renewal – 2025/2026 – 2028/2029

Year	Project Description	Suburb	Estimate
2025-2026	2-4 Arana Place Construct and install new pit and pipe (20m)	Cabramatta	$ 30,000
2025-2026	44 Orange Grove Road Replace junction pit, install new grated pit, reinstate dish drain.	Cabramatta	$ 50,000
2025-2026	Cabramatta CBD Replace pit grates and associated work	Cabramatta	$ 30,000
2025-2026	City Wide Replace damaged lintels, grates and fix damaged drainage pipes	City Wide	$ 100,000
2025-2026	City Wide Condition Inspection Survey to assess the pipe conditions	City Wide	$ 100,000
2025-2026	City Wide Replace the concrete grate with galvanised steel grates	City Wide	$ 25,000
2025-2026	City Wide Concrete Pit Lid and Frame For the pits located in back of kerb for Mt Pritchard (68 locations) and Fairfield West (52 locations)	City Wide	$ 120,000
2025-2026	City Wide Unplanned drainage asset renewal and planning to investigate to find a solution and implement to resolve the drainage issues.	City Wide	$ 100,000
2025-2026	Francis Street and Wilga Street Investigate stormwater capacity at Francis Street and Coleraine Street, and reconstruct the required pit/pipes	Fairfield	$ 20,000
2025-2026	Railway Parade from Coleraine Street to Austral Parade along the Railway Corridor Pipe joint repairs and to replace damaged pipes	Fairfield	$ 50,000
2025-2026	Wilga Street Reconstruct three (3) stormwater pits to increase the capacity near 34 Wilga Street and 39 Wilga Street	Fairfield	$ 25,000
2025-2026	2 Sirius Street Replace the existing cast-in-situ lintel with a precast lintel (2.0m) and grate	Fairfield West	$ 5,000

Year	Project Description	Suburb	Estimate
2025-2026	Hawkesbury Street Parklea Parade Foot Bridge, Hawkesbury Street and Parklea Parade Stabilisation around the footbridge by providing Sandstone rock work on the upstream and downstream side (keyed into the existing bank) and extending about 10 metres to stop localised erosion.	Fairfield West	$ 400,000
2025-2026	1 Girra Street Replace cast in-situ pit	Fairfield West	$ 7,000
2025-2026	44 Florence Street Replace existing drainage pit to include additional outlets	Mount Pritchard	$ 15,000
2025-2026	Meadows Road western side From Cayley Place to Moonshine Avenue Investigate, design and implement to resolve ponding issue at 11 Meadows Road	Mount Pritchard	$ 25,000
2025-2026	1A Shackel Avenue Replace 2.4m lintel opening	Old Guildford	$ 3,000
2025-2026	Springfield Park Investigate drainage issue near House Number 20-22 Junction Street	Old Guildford	$ 20,000

Year	Project Description	Suburb	Estimate
2026-2027	Upper Clear Paddock Creek Detention Basin Site C - Bonnyrigg Town Centre Repair and service the Pump Stations 20, 25 and 27 with associated works and to prepare maintenance plan	Bonnyrigg	$ 52,500
2026-2027	City Wide Replace damaged lintels, grates and fix damaged drainage pipes arising from the CCTV survey	City Wide	$ 105,000
2026-2027	City Wide CCTV Condition Inspection Survey to assess the pipe conditions	City Wide	$ 105,000
2026-2027	City Wide Concrete Pit Lid and Frame For the pits located in back of kerb for Cabramatta West (63 locations)	City Wide	$ 84,000
2026-2027	City Wide Unplanned drainage asset renewal and planning to investigate to find a solution and implement it to resolve the drainage issues.	City Wide	$ 105,000
2026-2027	Cawarra Park (opposite 15 Crosby Crescent) Filling around footbridge, Concrete patch, and repairing stormwater pipes	Fairfield	$ 105,000
2026-2027	Stimson Creek Open Channel - From Fairfield Street to House Number 55, Victory Street Concrete-lined open channel - Panel replacement (5 panels), crack repair (130m) and concrete patching.	Fairfield	$ 262,500
2026-2027	Georges River Lakeside Walk Cycleway - From Wharf Road to Ferry Road Investigate, design and implement embankment stabilisation to the back of the property along the lakeside walk/cycleway	Lansvale	$ 315,000

Year	Project Description	Suburb	Estimate
2027-2028	Comin Place Detention Basin Replace damaged timber logs	Abbotsbury	$ 33,075
2027-2028	Dutton Lane - From 105-107 John Street to 48-50 Hill Street Install 2 stormwater pits, reconstruct asphalt and brick footpath, realign kerb & gutter	Cabramatta	$ 165,375
2027-2028	City Wide Replace damaged lintels, grates and fix damaged drainage pipes	City Wide	$ 110,000
2027-2028	City Wide CCTV Condition Inspection Survey to assess the pipe conditions	City Wide	$ 110,000
2027-2028	City Wide Unplanned drainage asset renewal and planning to investigate to find a solution and implement it to resolve the drainage issues.	City Wide	$ 110,000
2027-2028	Fairfield CBD Concrete Box Culvert - Hamilton Road to North Street Closed Channel - Panel replacement, concrete patching, crack repair, joint sealing, weep hole improvement	City Wide	$ 275,000
2027-2028	City Wide Reconstruct damaged headwalls city-wide	City Wide	$ 55,000
2027-2028	Bradbury Wharf Carpark Investigate the conduit located in the stormwater pipe and repair the pipe	Lansvale	$ 15,000
2027-2028	Prospect Creek Open Channel - From Liverpool-Parramatta Transit Way to Elizabeth Street (Y-Junction) Replacement of 13 concrete wall panels, crack sealing and weep hole improvement	Wetherill Park	$ 275,625

Year	Project Description	Suburb	Estimate
2028-2029	37 Lovoni Street Investigate, design, and implement solutions for stormwater issues	Cabramatta	$ 23,152.50
2028-2029	Cecil Road and Brolen Way intersection Investigate, design, and implement solutions for stormwater issues	Cecil Park	$ 20,000
2028-2029	City Wide Replace damaged lintels, grates and fix damaged drainage pipes arising from the CCTV survey	City Wide	$ 115,000
2028-2029	City Wide CCTV Condition Inspection Survey to assess the pipe conditions	City Wide	$ 115,000
2028-2029	City Wide Unplanned drainage asset renewal and planning to investigate to find a solution and implement it to resolve the drainage issues.	City Wide	$ 115,000
2028-2029	Intersection of Delaware Road of Horsley Road Investigate, design and implement solutions for the stormwater issue at the intersection of Delaware Road and Horsley Road	Horsley Park	$ 34,729
2028-2029	Orphan School Creek Open Channel - King Road to Brisbane Road Concrete-lined Open Channel Panel replacement, crack repair, joint sealing, and concrete patching.	Wakeley	$ 230,000
2028-2029	Prospect Creek Open Channel - From Y-Junction to Potter Close Panel replacement, crack repair and concrete patching.	Wetherill Park	$ 289,406
2028-2029	Prospect Creek (Rosford Reserve) Open Channel - From Hassall Street to Victoria Street Panel replacement, crack repair and concrete patching.	Wetherill Park	$ 289,406

It is intended that projects related to Detention Basins and Stormwater Levy be included in this Asset Management Plan over the next 4 years. Additionally, it is intended that future investigations and flood management planning will inform the development of future Delivery Programs and Operational Plans.

FairfieldCity
Celebrating diversity

Fairfield City Council's Resourcing Strategy
is available for viewing at Council's website:
www.fairfieldcity.nsw.gov.au/ipr

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