TRANSPORT ASSET MANAGEMENT PLAN

Cassowary Coast Regional Council

July 2025

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V1.0	June 2025	Draft AM Plan	Tania Peake	Luke McAvoy	
V1.1	July 2025	Draft AM Plan	Luke McAvoy	David Goodman	Council

The structure and content of this template is aligned to the International Infrastructure Management Manual and the ISO 550xx and 31000 series of risk management standards.

This Asset Management Plan is prepared in line with the Strategic Asset Management Plan and AM Policy and is to be used to inform the Long-Term Financial Plan.

Contents

1.0 EXECUTIVE SUMMARY

1.1 The Purpose of the Plan

The Asset Management Plan (AM Plan) details information about transport infrastructure assets with actions required to provide an agreed level of service while outlining associated risks and future demands on the asset class. The plan defines how and what services are to be provided, what funds are required to provide over the ten (10) year planning period, future demands, and identifies future risk associated with the transport asset class. The AM Plan is a legislative requirement under the Local Government Act (2009) and Regulations (2012) and is required to provide a forecast period of ten (10) years to inform Planned Budgets within the Long Term Financial Plan (LTFP).

- Major Review (Five Yearly) (to coincide with Asset Class revaluations)
- Annual Minor Reviews

This AM Plan is the Major Review of the previous Transport AMP (2019). The AM Plan documents information that specifies the activities, resources and timescales required to achieve broader asset management objectives contained in the Strategic Asset Management Plan. The Plan has specific focus areas on:

- Levels of Service to stakeholders and consistency with Council commitments
- Future Demand on the asset class and associated actions to address
- Lifecycle Management ensuring financially sustainable management of the asset class
- Risk Management of identified risks to sustain service levels.
- Improvement Plan to identify and shortfalls arising in the above.

1.2 Asset Description

This plan covers the infrastructure assets used for the provision and operation of transport services, including roads, bridges, footpaths, cycleways, traffic control devices, public transport infrastructure, and associated facilities. Council's Transport Asset has an estimated replacement value of $1,283,079,782 and the network comprises ten (10) Asset Classes below:

- Roads
- Bridges
- Pathways
- Kerb and Channel
- Culverts
- Bus Shelters
- Guardrails
- Floodways
- Medians

The transport asset data available to inform the AM Plan was that of the FY24 asset class revaluation. Aspects of the data such as condition data of some asset classes is considered uncertain confidence. Forecasts contained within the AM Plan should be considered in this context. This issue is outlined to be rectified as part of the Improvement Plan.

1.3 Levels of Service

The AM Plan identifies allocation in the planned budget (LTFP) is sufficient to continue providing existing services at current levels for the planning period. Performance of the Assets against Levels of Service is expected to remain static should the current LTFP budget remain unchanged.

The AM Plan notes the Technical Levels of Service (operational levels of performance) of the Transport Asset Class are currently under review through the review of Council's Service Catalogue. This review must ensure operational documentation and systems deliver a level of service that is supported by the community but also financially sustainable. This action is identified as the highest priority in the Improvement Plan.

1.4 Future Demand

The major factors influencing future demand and the impacts they have on service delivery are created by:

- Climate Change (both through rainfall changes and sea level rise)
- Inflation in the Construction Sector
- Future Changes to Freight and Logistics
- Population Growth Forecasts and Targets (including Target of 20% growth by 2033 set in the Economic Development Strategy (2023)

Management of the risks arising from the above demands and other identified issues is identified in the Demand Management Plan and Improvement Plan. This solutions include:

- Manage impacts on the Transport Asset Class by identifying a standardised approach to Climate Change through design and management of infrastructure
- Define Grant Application responsibilities and accountabilities within Transport Assets and develop a register to maximise external funding
- Develop Transport Asset Hierarchy and Register of Critical Assets
- Standardise Transport Condition and Maintenance Inspections against Industry Best Practise

1.5 Lifecycle Management Plan

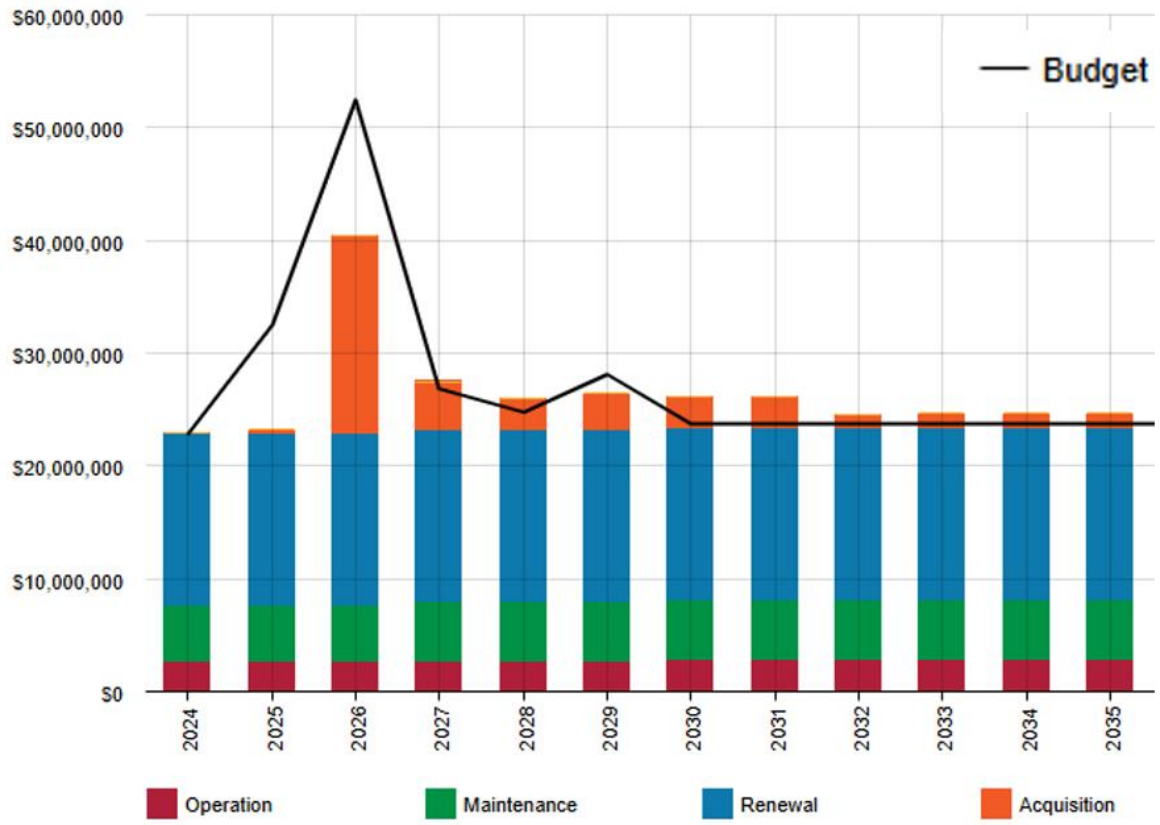
The forecast lifecycle costs necessary to provide the services covered by this AM Plan includes operation, maintenance, renewal, acquisition, and disposal of assets to inform the Long Term Financial Planning period of ten (10) years.

The estimation from the AM Plan is the lifecycle cost forecast of 10-year total outlays, which for the Transport asset class is estimated as $27,120,922 on average per year over the future 10 year period (2026 – 2035 inclusive). The majority of forecast costs is in Renewals, where forecasts estimate minimum $15,253,881 should be budgeted on renewals annually over the ten (10) year LTFP forecasts.

Estimated available funding for the ten (10) year period is $27,469,675 on average per year. This is approximately 101% of the forecast lifecycle cost to maintain the current level of service.

The anticipated Planned Budget (LTFP) for the Transport asset class therefore leaves an average surplus of $348,753 per year of the forecast lifecycle costs required to provide services in the AM Plan compared with the Planned Budget currently included in the Long-Term Financial Plan.

The LTFP, on average, over the future 10 year period is sufficient to provide services. This is shown in the figure below - noting all values are shown as present day values.



Forecast Lifecycle Costs and Planned Budgets (inc. historic 2 years)

1.6 Financial Summary

Council is adequately funding the Transport Asset Class to maintain the current level of service. No changes to LTFP are proposed as part of this report.

Providing financially sustainable and affordable services from transport infrastructure requires the careful management of service levels, costs and risks. Financial Management Ratios are within recommended bounds as detailed in the Queensland Financial Management (Sustainability) Guideline (2024) and are as follows:

Ratio	Target (Tier 4 Council*)	CCRC Transport Asset Class
Asset Sustainability Ratio	Greater than 80%	**98%**
Asset Consumption Ratio	Greater than 60%	**70%**
Asset Renewal Funding Ratio	As close to 100% as possible	**111%**

1.7 Managing the Risks

The acceptable risk level is given as Moderate in the Strategic Asset Management Plan (2022). Risks above the Moderate threshold (High and Very High) and their associated Treatment Plan costs to rectify, have been determined as part of the Transport AM Plan.

Current risks within the stormwater asset class were identified and ranked according to the IPWEA Risk Ranking Matrix based on assessed likelihood and probability. The critical (very high) risks identified are tabulated below.

Transport Asset Class – Identified Very High Risks

What can Happen	Likelihood	Consequence	Risk Rating (VH, H)	Risk Treatment Plan
Loss/Reduction of External Funding from Existing Operational and Capital (inc. Disaster Funding)	Likely	Catastrophic *(Risk to Life, Service Interruption, Reputation, Finance)*	**VH**	**Operational and Capital Budgets to consider loss of Disaster Funding (Sensitivity Analysis)**
Climate Change - Increase in sea level and rainfall intensity in under design of older infrastructure and increase in service failure	Likely	Catastrophic *(Risk to Life, Service Interruption, Reputation, Finance)*	**VH**	**Investigate Climate Change Guidelines as per ARR/QUDM and CSIRO - Council Decision to Implement**
Construction Industry Specific Inflation	Almost Certain	Major (Service Interruption, Reputation, Finance)	**VH**	**Short Term - continue to aim to maximise external funding sources and construction efficiencies**
Freight and Logistics Demand Increase	Almost Certain	Major (Service Interruption, Reputation, Finance)	**VH**	**Continue to increase capital budget horizon and external funding for upgrades to relevant infrastructure**
Areas of unknown Asset Condition leading to reduction in Level of Service / Catastrophic Failure	Likely	Catastrophic *(Risk to Life, Service Interruption, Reputation, Finance)*	**VH**	**Develop Asset Condition Inspection Program for all Subclasses and Implement**

Critical Asset Failure due to non-targeted inspection and maintenance scheduling	Likely	Catastrophic *(Risk to Life, Service Interruption, Reputation, Finance)*	**VH**	**Develop Hierarchy/Criticality Rating for Asset Class as per IPWEA IMMM Section 3.2.5**

1.8 Improvement Plan

The tasks arising from the critical risks and associated Risk Treatment Plan are laid out as part of the Improvement Plan. The critical next steps identified in the AM Plan to improve asset management practices are:

- Gain consistency between defined Levels of Service across documentation and departments and under Best Practise Guidance (inc. IPWEA PN8, IMMM Section 2.2) through Service Catalogue Review
- Develop Plan and Process to reach Lifecycle Costing Budget Targets including decreasing Council controlled revenue ratio through external funding submissions and improving data quality
- Develop External Funding (Relevant Grants) Register/Calendar and Define Application Responsibilities
- Develop Asset Hierarchy (IPWEA IMMM Section 3.2.5) and Register Critical Assets for Condition Inspection Programs
- Validate Sealed Roads Surface Condition Data and Develop 10 Year Reseal Program
- Sealed Roads Visual Condition Assessment and Asset Management Training (IPWEA - PN9 Suite) - Inspectors
- Standardise Condition and Maintenance Assessment Checklists against Industry Standards and Guidelines (inc. IPWEA PN1, PN2, PN5, PN9)
- Local Government Infrastructure Plan (LGIP) Revision
- Develop Cost Sharing Arrangement between Departments responsible for Capital Projects within Transport Corridor
- Assess Targeted Historical Performance Data to look for continued improvement in materials, construction and maintenance practises

1.9 Asset Management Planning Practices

Assets requiring renewal are identified from either the asset register or an alternative method.

- The timing of capital renewals based on the asset register can be applied by adding the useful life to the year of acquisition or year of last renewal (Asset Register Method),
- Alternatively, an estimate of renewal lifecycle costs is projected from external information and may be supplemented with, or based on, expert knowledge (Alternate Method).

The Alternate Method was used to forecast the renewal lifecycle costs for this AM Plan. Transport Asset data within the Asset Register was deemed of too uncertain confidence to be used in the Asset Register Method.

Key assumptions made in this AM Plan are detailed in associated Organisational documents.

2.0 INTRODUCTION

2.1 Background

This AM Plan communicates the requirements for the sustainable delivery of services through management of assets, compliance with regulatory requirements, and required funding to provide the appropriate levels of service over the planning period.

The AM Plan is to be read with the Cassowary Coast Regional Council planning documents. This should include the Asset Management Policy and Strategic Asset Management Plan (SAMP, 2022) along with other key planning documents:

- CCRC Annual Budgets including Long Term Financial Plans (2016-2025)
- CCRC Annual Reports (2016-2025)
- CCRC Asset Management Policy (2023)
- CCRC Community Scorecard (2024)
- CCRC Corporate and Operational Plan (2025)
- CCRC Economic Development Strategy (2023)
- CCRC Local Government Infrastructure Plan (LGIP) (2018)
- CCRC Planning Scheme (2015)
- CCRC Transport AM Plan (2019) (Previous Edition)
- CCRC Valuation of Transport Assets (2024)
- Queensland Financial Management (Sustainability) Guideline (2024)

This plan covers the infrastructure assets used for the provision and operation of transport services, including roads, bridges, footpaths, cycleways, traffic control devices, public transport infrastructure, and associated facilities. Council's Transport Asset has an estimated replacement value of $1,283,079,782 and the network comprises ten (10) Asset Classes below:

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- Culverts
- Bus Shelters
- Guardrails
- Floodways
- Medians

Key stakeholders in the preparation and implementation of this AM Plan are shown in Table 2.1.

Council's organisational management hierarchy for transport infrastructure asset service delivery is shown in Figure 2.1 and Council's organisational document hierarchy for stormwater infrastructure asset service delivery is shown in Figure 2.2.

Table 2.1: Key Stakeholders in the AM Plan (SAMP, 2022)

Key Stakeholder	Role in Asset Management Plan
Mayor/Councillors	**Strategic Direction** Corporate plan Key Goals and Strategic Objectives Council Policies Strategic Prioritisation Resources available to achieve AM objectives Act as stewards for all Council Assets
Executive Management Team	**Operational Decision Making** Statutory requirements Administration Policies Sustainability Service strategy Future demand and considerations Asset management objectives
Asset Management Working Group	**Strategic Alignment** Strategic AM Planning Policy management Legislative compliance Review of Asset Management Plans for consistency Demand management Infrastructure management Asset Related risks are captured in Council's Risk Management System Guiding continuous improvement Defining the level of service Whole of council asset performance monitoring
Asset Custodians Maintenance Managers Service Managers	**Tactical/Operational** Service Delivery Asset capture Asset risk management Accurate asset data Asset specific performance measures Prioritisation and optimisation of resources Planned and unplanned maintenance Planned capital renewals Planned new, upgraded and expanded capital Planned disposals Asset management plan development

Figure 2.1: CCRC Transport Infrastructure Asset Management Hierarchy

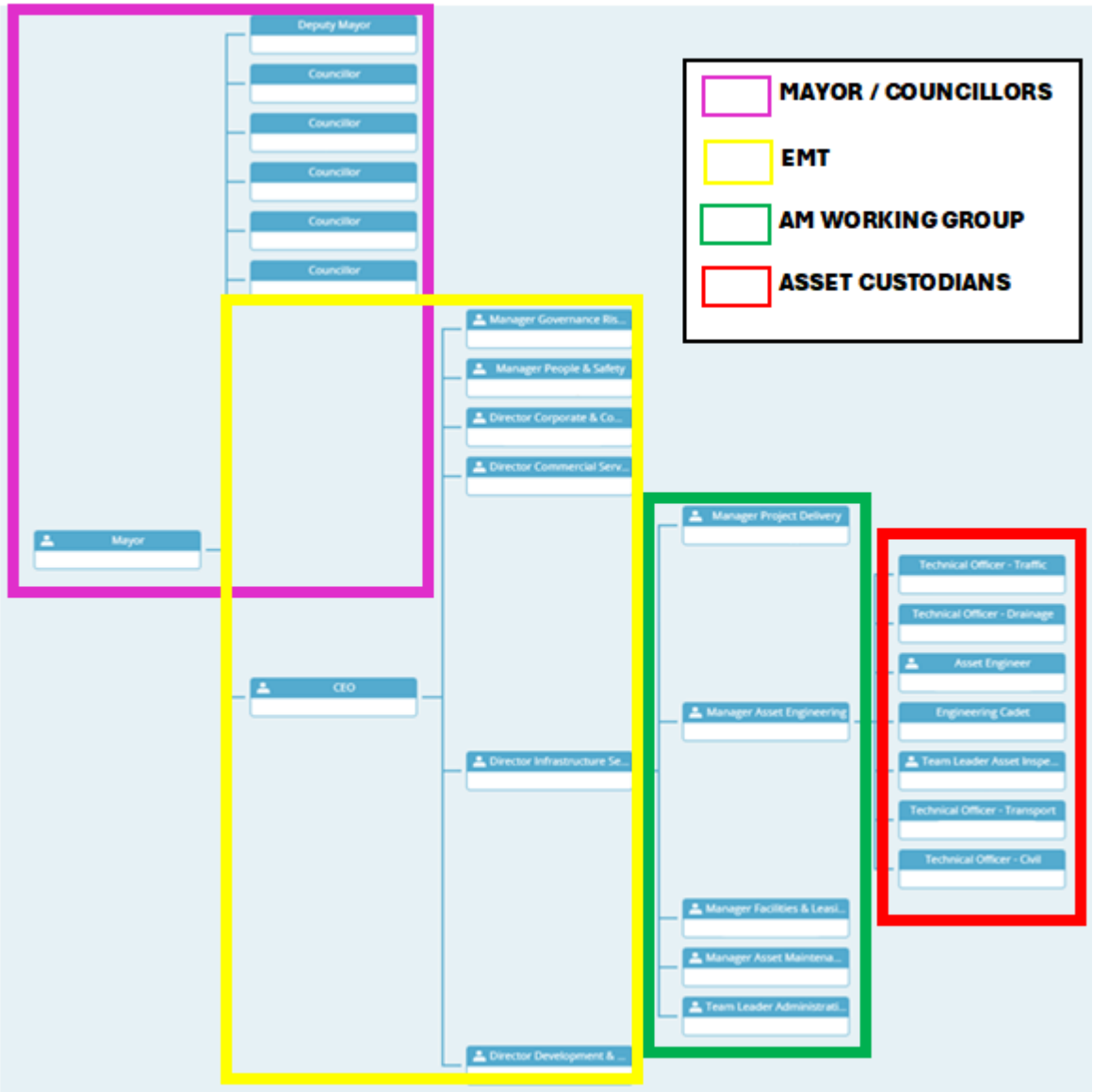


Figure 2.2: CCRC Asset Management Document Hierarchy (SAMP, 2022)

2.2 Principles, Goals and Objectives of Asset Management

1. The principles of asset management as per the International Standards for asset management are:

   - **Value**: asset management focuses on the value assets provide to the organization over time.
   - **Alignment**: asset management aligns financial, technical and operational decisions with the organizational objectives, promoting vertical and horizontal coordination.
   - **Leadership**: leadership and sustained commitment at all levels are crucial for successful asset management.[1]

Our goal for managing infrastructure assets is to deliver the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers. This is detailed in both the SAMP (2022) and Council's Integrated Corporate and Operational Plan (2025).

The key objectives of infrastructure asset management as defined by the International Infrastructure Management Manual are:

- Defining levels of service and monitoring performance,
- Managing the impact of growth through demand management and infrastructure investment,
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service,
- Identifying, assessing and appropriately controlling risks, and
- Linking to a Long-Term Financial Plan which accommodates the required expenditure and how it will be funded.[2]

[1] ISO 55000:2024 Asset Management – Vocabulary, overview, and principles

[2] IPWEA International Infrastructure Management Manual (IIMM), Sec 1.2.1

2.3 Goals and Objectives of Asset Ownership

Our goal for managing infrastructure assets is to meet the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers. The key elements of infrastructure asset management are:

- Providing a defined level of service and monitoring performance
- Managing the impact of growth through demand management and infrastructure investment
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service
- Identifying, assessing and appropriately controlling risks, and
- Linking to a Long-Term Financial Plan which identifies required, affordable forecast costs and how it will be allocated.

Key elements of the planning framework are

- Levels of service – specifies the services and levels of service to be provided,
- Risk Management,
- Future demand – how this will impact on future service delivery and how this is to be met,
- Lifecycle management – how to manage its existing and future assets to provide defined levels of service,
- Financial summary – what funds are required to provide the defined services,
- Asset management practices – how we manage provision of the services,
- Monitoring – how the plan will be monitored to ensure objectives are met,
- Asset management improvement plan – how we increase asset management maturity.

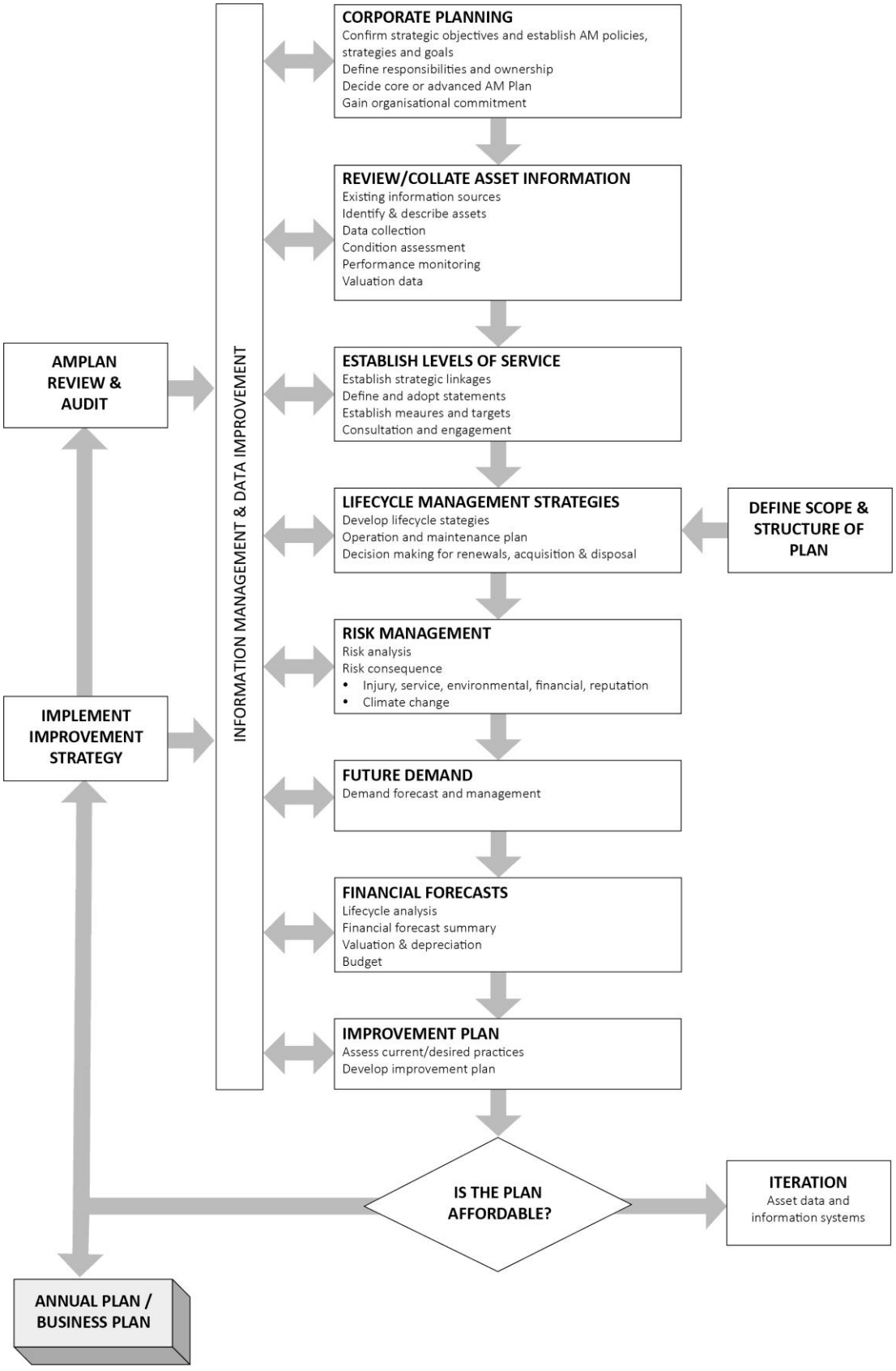
Other references to the benefits, fundamentals principles and objectives of asset management are:

- International Infrastructure Management Manual 2020
- ISO 550003

A road map for preparing an AM Plan is shown below.

[3] ISO 55000 Overview, principles and terminology

Road Map for preparing an Asset Management Plan
Source: IPWEA, 2006, IIMM, Fig 1.5.1, p 1.11



3.0 LEVELS OF SERVICE

3.1 Customer Research and Expectations

In the absence or specific targeted research, Council's 2024 MARKYT Community Scorecard, Customer Request statistics, and staff experience have been used to provide guidance on Customer Values.

Customer expectations can also be gleaned from levels of service given in guidelines such as those published by:

- Far North Queensland Organisation of Councils (FNQROC)
- Australian Road Research Board (ARRB)
- Department of Transport and Main Roads (DTMR - Queensland Government)
- Institute of Public Works Engineering Australasia (IPWEA)
- Austroads

Development of technical levels of service is underway through inter-departmental work to update Council's Service Catalogue. This work is identified as a priority to be undertaken in the Improvement Plan.

Future revisions of the AM Plan will incorporate customer consultation on service levels and costs of providing the service. This will assist the Executive Management Team and stakeholders in matching the level of service required, service risks and consequences with the customer's ability and willingness to pay for the service.

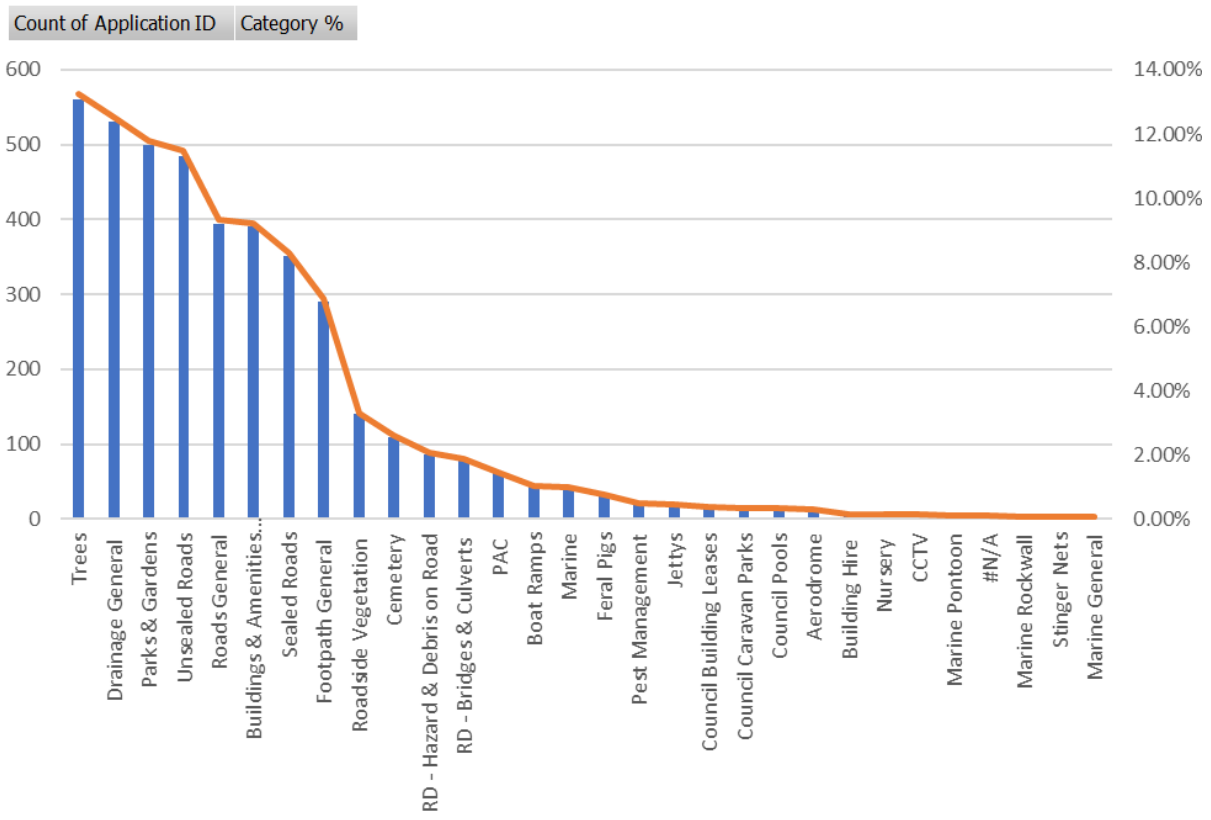
3.1.1 Customer Requests

An extraction of Customer Requests taken for the 2024 calendar year below (4321 total – see Figure 3.1) shows many incoming requests related to Transport Assets. The following are included within the Top 10:

- Drainage General (12.5% of all requests)
- Unsealed Roads (11.5% of all requests)
- Roads General (9.3% of all requests)
- Sealed Roads (8.3% of all requests)
- Footpath General (6.9% of all requests)

Management of transport assets, particularly roads, is a foremost concern to the community.

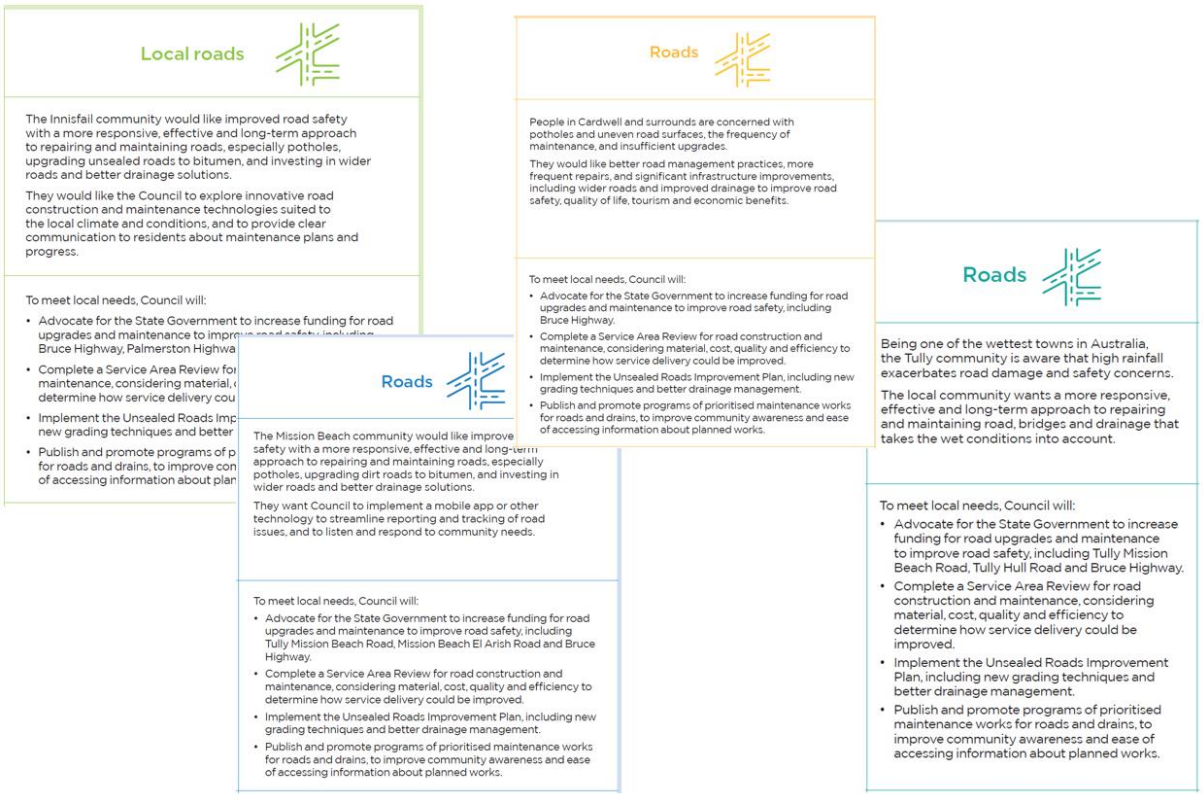
Figure 3.1: Customer Request Count - 2024 Calendar Year



3.1.2 Community Scorecard

Community priorities were mapped as part of the Integrated Corporate and Operational Plan (2025). All major centres in the Cassowary Coast (Cardwell, Innisfail, Mission Beach and Tully) considered the management of roads as one of the top community concerns. In addition, the management of footpaths, trails and cycleways was identified as an additional high priority by the residents of Mission Beach and surrounds.

Figure 3.2: Community Scorecard Extract – Road Items for All Four Major Centres



3.2 Strategic Goals

Strategic Asset Management goals have been set by Council's Strategic Asset Management Plan (SAMP) (2022) and are summarised in Table 3.2.

Table 3.2: Strategic Goals and how these are addressed in this Plan

Document	Goal	Objective	How Goal and Objectives are addressed in the AM Plan
SAMP (2022)	Regional infrastructure that delivers levels of service supported by the community and is financially sustainable.	Renewal decision making processes are consistent with the Council's broader strategic objectives, asset/workforce and systems capability, actual asset performance, and prioritisation of need	The AM Plan takes direction from the SAMP (2022) amongst other relevant documentation. A realistic view of Council's capability and current asset performance is taken. Priorities and needs are considered objectively based on whole of life costing.
SAMP (2022)	Regional infrastructure that delivers levels of service supported by the community and is financially sustainable.	Asset data is considered an asset and managed objectively with outcome in mind	Asset data improvement is identified as a key area for improvement in the SAMP (2022) and in the AM Plan. Areas for improvement and associated improvement actions are identified in the Improvement Plan.
SAMP (2022)	Regional infrastructure that delivers levels of service supported by the community and is financially sustainable.	Asset management planning that drives compliance, continuous improvement and inclusiveness within council and the community	The AM Plan is a key cog in the holistic approach to Asset Management outlined in the SAMP (2022). A key focus of the AM Plan and associated Improvement Plan is identifying clear and achievable areas for improvement.
SAMP (2022)	Regional infrastructure that delivers levels of service supported by the community and is financially sustainable.	Maintenance of Assets that is adaptive, integrated and informed by shared data aimed to improve the reliability of services and their financial sustainability	The AM Plan is prepared with consultation between specific and relevant Council departments and with direction from the latest industry guidelines.

3.3 Legislative Requirements

There are many legislative requirements relating to the management of assets. Legislation that impacts the asset management of the Transport Asset Class includes (but is not limited to):

- Queensland Local Government Act (2009) and Regulation (2012)
  - Section 60: Gives councils control of local roads within their jurisdiction.
  - Section 75: Permits councils to acquire, construct, maintain, and improve infrastructure.
  - Requires councils to manage assets sustainably and in the public interest.
- Queensland Planning Act (2016) and Regulation (2017)
  - Regulate development near and on transport corridors.
  - Set requirements for infrastructure charges and road access conditions.
  - Ensure integration of transport and land use planning.
- Queensland Transport Infrastructure Act (1994)
  - Outlines responsibilities for transport infrastructure between state and local governments.
  - Defines road manager roles and provides for road corridor permits.
- Queensland Transport Operations (Road Use Management) Act 1995
  - Supports road safety and enables councils to regulate parking and traffic through Local Laws.
  - Integrates with road rules and safety strategies.
- Queensland Work Health and Safety Act (2011)
  - Requires councils to manage safety risks associated with transport assets.
  - Covers maintenance regimes, signage, and contractor safety.
- Queensland Environmental Protection Act (2011)
  - Mandates stormwater quality, noise, and erosion control for road infrastructure.
  - Requires avoidance or mitigation of environmental harm.
- Local Laws (particularly Local Law 4 – Local Government Controlled Areas and Roads)
- Relevant Common Law
- Relevant Council Policy

3.4 Customer Values

Service levels are defined in three ways:

- Customer values
- Customer levels of service and
- Technical levels of service.

Customer Values indicate:

- what aspects of the service is important to the customer,
- whether they see value in what is currently provided and
- the likely trend over time based on the current budget provision

Table 3.3 summarises currently identified Customer Values regarding the Transport Asset class. The expected trend based on Planned Budgets (LTFP) is a static trend in performance against estimated Customer Values.

Table 3.3: Customer Values

Customer Values	Customer Satisfaction Measure	Current Feedback	Expected Trend Based on Planned Budget
Accessibility (Drainage - Nuisance Flooding)	Customer Requests relating to transport asset drainage (unplanned) performance issues affecting transport network	Many legacy requests on poor drainage management Mixed public opinion on response times/solutions	Trend expected to improve as hydraulic assessment becomes commonplace on renewals to determine upgrade requirements
Amenity - Personal Experience (Touch, Sights and Smells)	Asset Inspector/Customer Requests relating to drainage network ponding/stagnation, silting, (Operational Issues) and Seperation/Crackin g etc. (Maintenance Issues) Asset Inspector/Customer Requests relating to performance (Ride Comfort) of both sealed and unsealed roads	Varied across LGA pending individual expectations, asset heirarchy (i.e. Unsealed Roads)	Trend expected to stay stable as per Operations/Maintenanc e Budget Allocation
Functionality/Capacity (Transport Based - Congestion)	Asset Inspector/Customer Requests relating to Capacity of road subclass assets	Little to no complaints regarding capacity of local transport network	Expected to stay stable
Functionality/Capacity (Property Protection - Nuisance Flooding)	Customer Requests relating to transport asset drainage capacity issues inundating/damagin g ratepayer property	Level of Acceptance higher for Cassowary Coast residents (wet tropics residents expectant of flooding) however new property owners from outside LGA (particularly post COVID) have limited acceptance/understanding.	Expected trend is to potentially worsen before improving once budgets allocations redirect to underspent areas. Upgrade designs allocated in future years' capital to improve

Quality/Condition (Sealed and Unsealed Roads, Footpath and Cycleway Performance)	Customer Requests and Community Feedback within 2024 Community Scorecard.	The 2024 Community Scorecard showed the most consistent highest priority across the whole of community (not just Infrastructure/Assets) was Local Roads. Improving quality and condition of road infrastructure is closely linked to drainage asset performance.	Expected improving trend due to: Unsealed Roads Program continued assessment Planned Improvements to Road Sealing Program
Reliability - Failure Rates (Condition Failure)	Asset Inspector/Customer Requests Condition Failures	Roads and Drainage SubClass areas of highest feedback rates	Trend of failures (Condition State 5) expected to increase before improving once budget allocations redirect to underspent areas.
Safety (Drainage or Road Washouts/Excessive Deterioration)	Customer Requests relating to drainage network discharge/safety issues (culvert/floodway washouts) and Council response	Limited generalised Safety Specific Complaints These are generally prioritised internally where safety is a genuine concern - however asset management procedures usually offer early detection Mostly occur during declared event under DRFA Procedures	Trend expected to stay stable
Sustainability (Environmental Protection and Interference with Nature)	Customer Requests relating to fish passageway, erosion, habitat interference etc.	Minimal requests - often well considered in design Feedback	Continued improving trend under existing regulation/legislation

3.5 Customer Levels of Service

The Customer Levels of Service are considered in terms of:

Condition How good is the service … what is the condition or quality of the service?

Function Is it suitable for its intended purpose …. Is it the right service?

Capacity/Use Is the service over or under used … do we need more or less of these assets?

These are measures of fact related to the service delivery outcome (e.g. number of occasions when service is not available or proportion of replacement value by condition %'s) to provide a balance in comparison to the customer perception that may be more subjective.

In Table 3.4 under each of the service measures types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current budget allocation. The expected trend based on Planned Budgets (LTFP) is a static trend in performance against estimated Customer Levels of Service measures.

Table 3.4: Customer Level of Service Measures

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Condition	Condition of Transport Assets	Condition Rating of Transport Assets as per Industry best practice (inc. IPWEA PN1, PN2, PN5, PN9)	7.5% of Current Assets are in Poor / Very Poor Condition. This equates to approximately $76.4M Replacement Cost.	Based on predicted total budgets condition expected to generally remain static in most asset subclasses . Asset subclasses with existing underspend (i.e. roads) or with an historic condition-apparent underspend (i.e. culverts) will likely trend downwards until budgetary increases are consistent.
	Confidence levels		Medium (Professional judgement supported by data sampling)	Medium (Professional judgement supported by data sampling)
Function	Measure of whether Transport Assets are appropriate for intended use	Industry Standards and Guidelines i.e. - FNQROC - QUDM - ARRB - DTMR -IPWEA -Austroads	Assets generally be considered fit-for-purpose against industry standards.	Trend of limited occurance/discovery of non fit-for-purpose designs expected to continue
	Confidence levels		High (Professional Judgement supported by extensive data)	High (Professional Judgement supported by extensive data)
Capacity	Measure of whether Capacity of Transport Assets are sufficient.	Industry Standards and Guidelines i.e. - FNQROC - QUDM - ARRB - DTMR -IPWEA -Austroads	Legacy issues with Transport Drainage Assets. Original QUDM published in 1992, original ARR in 1987 - design flood capacity of pits/pipes as per current requirements unlikely prior to those publications.	Issues likely to improve - renewal design considers upgrades in known problem areas incorporating latest standards inc. hydrology and hydraulic modelling.
	Confidence levels		Medium (Professional judgement supported by data sampling)	Medium (Professional judgement supported by data sampling)

3.6 Technical Levels of Service

Technical Levels of Service are operational or technical measures of performance to deliver the customer values, and impact the achieved Customer Levels of Service. These technical measures relate to the activities and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

3.6.1 General

Technical service measures are linked to the activities and annual budgets covering:

Acquisition – the activities to provide a higher level of service (e.g. widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (e.g. a new library).

Operation – the regular activities to provide services (e.g. cleaning, mowing grass, energy, inspections, etc.

Maintenance – the activities necessary to retain an asset as near as practicable to an appropriate service condition. Maintenance activities enable an asset to provide service for its planned life (e.g. road patching, unsealed road grading, building and structure repairs). Council's adopted current approach to Maintenance is shown in Figure 3.1.

Renewal – the activities that return the service capability of an asset up to that which it had originally provided (e.g. road resurfacing and pavement reconstruction, pipeline replacement and building component replacement),

3.6.2 Current Service Level Standards

Current Technical Levels of Service for Transport Assets are generally set through both the Asset Engineering and Asset Maintenance teams, and are detailed through the following sources:

- Council Documentation
- Internal Software such as REFLECT
- Council Service Catalogue

There is inconsistency between the Levels of Service detailed between internal sources. This is identified as a foremost item to be rectified though an item in the Improvement Plan.

The SAMP indicates current levels of service across Council may be too high (particularly considering Councils very high value of asset base per rateable property), however this is not explicitly detailed for Transport Assets.

3.6.3 Future Service Level Standards

As per upcoming Council resolution, the Service Catalogue is to be considered the future 'point of truth' for Technical Levels of Service across the Transport Asset Class.

The SAMP also indicates a Level of Service review should be undertaken parallel to major reviews of any AM Plan – hence it is considered a foremost Improvement Plan item.

Technical Input into the Levels of Service for Transport Assets should consider industry guidelines and best practise including any outlined in:

- Far North Queensland Organisation of Councils (FNQROC)
- Australian Road Research Board (ARRB)
- Department of Transport and Main Roads (DTMR - Queensland Government)
- Institute of Public Works Engineering Australasia (IPWEA) inc.
    - Practise Note 1 (Footpaths and Cycleways)
    - Practise Note 2 (Kerb and Channel)
    - Practise Note 5 (Stormwater Drainage)
    - Practise Note 8 (Levels of Service)
    - Practise Note 9 (Road Pavements)
    - Practise Note 11 (Street Lighting)
- Austroads

The SAMP shows Levels of Service must be in Strategic Alignment and considered through the AM Working Group (now superseded by the AM Steering Committee).

3.6.4 Assessment

Service and asset managers plan, implement and control technical service levels to influence the service outcomes.[4] Table 3.5 shows the activities and current performance expected to be provided under the Budget (LTFP) allocation, and expected performance to achieve current levels of service and risk appetite. Figure 3.3 shows the adopted approach to Asset Maintenance as outlined in the SAMP (2022) where the optimal approach is shown as Reactive Maintenance.

Table 3.5: Technical Levels of Service

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Expected Performance **
TECHNICAL LEVELS OF SERVICE				
Acquisition	Infrastructure Acquisition	Asset Base increases (i.e. Eaton Estate construction, DRFA 2023 event Betterment)	Asset Maintenance and Operations Budget performing adequately. Limited knowledge on long term Acquisition Cost of upcoming Major Acquisitions	Asset Management Budget (Capital and Operational) increases as Acquisitions occur.
	Infrastructure Capacity Upgrades	Pathway Upgrades, Stephenson Road sealing upgrade (Size/Capacity Increase - sometimes represented as partial Acquisitions in Council data/records)	Reactive Decision to Upgrade (based on observational/ anecdotal information)	Proactive Decision to Upgrade - Planned/Capacity Based Renewals - Proactive Condition Assessment
		Budget	**$2,592,750**	**$3,557,454**
Operation	Transport Management	Transport Program Support M-000093 Budget Cost Code M-000097 Budget Cost Code M-013211 Budget Cost Code M-015080 Budget Cost Code M-021639 Budget Cost Code		
	CCRC Slashing	Roadside Mowing & Slashing M-005683 Budget Cost Code M-005684 Budget Cost Code M-005685 Budget Cost Code	Planned Maintenance (Delta)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)
	Roadside Vegetation	Brushing Roadside M-005687 Budget Cost code M-005686 Budget Cost code	Reactive Maintenance (i.e. Customer Request/Inspection)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)
		Budget	**$2,694,880**	**$2,782,437**

[4] IPWEA, 2015, IIMM, p 2|28.

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Expected Performance **
Maintenance	Road Lighting Maintenance	Maintenance works in REFLECT M-000157 Budget cost code M-005680 Budget cost code M-018575 Budget cost code	Reactive Maintenance (i.e. Customer Request/Inspection)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)
	Road Sweeping	Maintenance Works in REFLECT M-000159 Budget cost code	Planned Maintenance (Planned Works)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)
	Roadside Herbicide	Maintenance Works in REFLECT M-005682 Budget Cost code M-018577 Budget cost code	Reactive Maintenance (i.e. Customer Request/Inspection)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)
	Roadside Waste collection Illegal dumping	Maintenance Works in REFLECT M-007055 Budget Cost Code	Reactive Maintenance (i.e. Customer Request/Inspection)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)
	Rural address posts	Maintenance Works in REFLECT M-007055 Budget Cost Code	Reactive Maintenance (Customer Request)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)
	Sealed Road Minor Reseal	Maintenance Works in REFLECT M-005692 Budget Cost Code	Reactive Maintenance (Planned Works Inspection)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)
	Sealed Road patching	Maintenance Works in REFLECT M-005694 Budget Cost Code M-005695 Budget Cost code M-005696 Budget Cost code	Reactive Maintenance (i.e. Customer Request/Planned Inspection)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)
	Sealed Road Pavement Repairs	Maintenance Works in REFLECT M-005697 Budget Cost Code	Reactive Maintenance (i.e. Customer Request/Planned Inspection)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)
	Sealed Road Shoulder Grading	Maintenance Works in REFLECT M-005698 Budget cost code M-005701 Budget cost code	Reactive Maintenance (i.e. Customer Request/Planned Inspection)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)
	Cross Drainage	Maintenance Works in REFLECT M-005700 Budget cost code M-005701 Budget cost code	Reactive Maintenance (i.e. Customer Request/Reactive Inspection)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)
	Kerb & Channel	Maintenance Works in REFLECT M-005702 Budget cost code M-005703 Budget cost code M-005704 Budget cost code	Reactive Maintenance (i.e. Customer Request/Reactive Inspection)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)

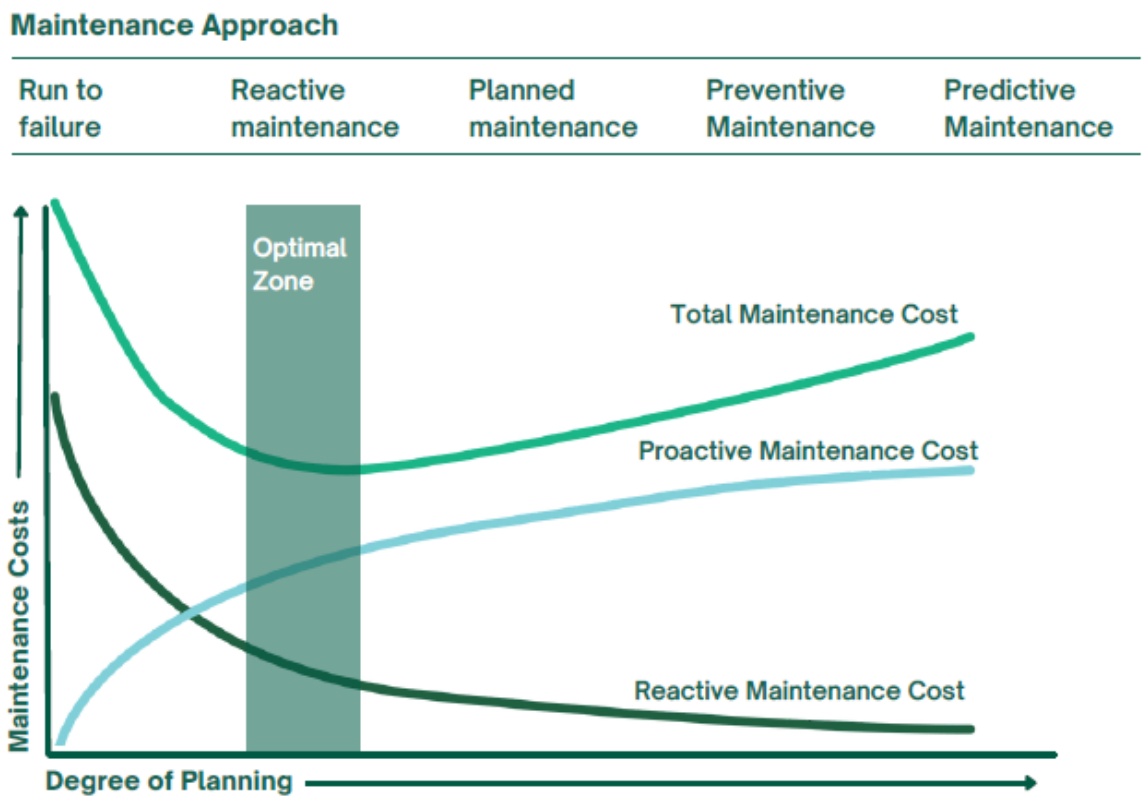
Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Expected Performance **
	Longitudinal Drainage	Maintenance Works in REFLECT M-005705 Budget cost code M-005706 Budget cost code M-019239 Budget cost code	Reactive Maintenance (i.e. Customer Request/Planned Inspection)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)
	Road Delineation	Maintenance Works in REFLECT M-005711 Budget cost code M-005712 Budget cost code M-005713 Budget cost code	Reactive Maintenance (i.e. Customer Request/Inspection)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)
	Road Islands & Medians	Maintenance Works in REFLECT M-005714 Budget cost code	Reactive Maintenance (i.e. Customer Request/Inspection)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)
	Road Signage	Maintenance Works in REFLECT M-005715 Budget cost code M-005716 Budget cost code M-017184 Budget cost code M-023062 Budget cost code	Reactive Maintenance (i.e. Customer Request/Planned Inspection)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)
	Unsealed Road Grading	Maintenance Works in REFLECT M-005724 Budget cost code M-005725 Budget cost code M-005726 Budget cost code	Reactive Maintenance (Delta)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)
	Unsealed Road Pavement Repairs	Maintenance Works in REFLECT M-005727 Budget cost code	Reactive Maintenance (i.e. Customer Request/Planned Inspection)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)
	Bridges	Maintenance Works in REFLECT M-000171 Budget Cost code M-000173 Budget cost code	Reactive Maintenance (i.e. Customer Request/Planned Inspection)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)
	Causeways & Floodways	Maintenance Works in REFLECT M-000177 Budget cost code	Reactive Maintenance (i.e. Customer Request/Reactive Inspection)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)
	Path & Cycleways (outside CBD)	Maintenance Works in REFLECT M-000179 Budget Cost code M-000181 Budget cost code	Reactive Maintenance (i.e. Customer Request/Reactive Inspection)	Current Performance Acceptable (supported by Strategic AMP/Current LOS)
	Bus Shelters	Maintenance Works in REFLECT M-005729 Budget cost code	Reactive Maintenance (i.e. Customer Request/Reactive Inspection)	Current Performance Acceptable (supported by Strategic AMP)
		Budget	**$5,052,988**	**$5,216,682**
Renewal	Condition Based Renewal	Renewals as per Capital Budget		

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Expected Performance **
	Performance Based Renewals	Renewals as per Capital Budget	Minimal to No Current Performance Based Renewals	Depending on Condition renewals, plan for Performance Based Renewals (Upgrades) in circa 5 years (once Condition Renewal Backlog is cleared)
		Budget	**$17,905,886**	**$15,253,881**
Disposal	Asset Disposal	Minimal to No Asset Disposals	Minimal to No Asset Disposals	Minimal to No Asset Disposals
		Budget	**$0**	**$0**

Note: * Current activities related to Planned Budget.

** Expected performance related to forecast lifecycle costs.

Figure 3.3: Maintenance Asset Management Approach (SAMP, 2022)



4.0 FUTURE DEMAND

4.1 Demand Drivers

Drivers affecting demand on assets broadly include things such as population change, regulations, changes in demographics, seasonal factors, vehicle ownership rates, consumer preferences and expectations, technological changes, economic factors, agricultural practices and environmental awareness.

A demand driver refers to the factors or trends that influence the need for infrastructure services and capacity. The factors influencing future demand are created by:

- Climate Change
- Construction Industry Specific Inflation
- Freight and Logistics Evolution and Increases
- Legislative Requirements
- Population Growth
- Port and Export Sector growth and changes in industry
- Tourism Industry expansion and seasonal peak demands
- Value of Asset base per rateable property (Asset Rationalisation Program)

Demand drivers help predict future infrastructure needs and guide planning and investment decisions.

4.2 Demand Forecasts

The present position and projections for some of the more prominent demand drivers that may impact future service delivery and use of transport assets have been identified.

4.2.1 Climate Change

Climate Change affects transport assets primarily through the impact on weather patterns, particularly intensity of rainfall and other weather related events such as cyclones. The most important transport assets according to Customer Values also are those most heavily impacted by climate change, namely drainage and road assets (particularly unsealed roads). The Federal Government's Climate Change in Australia resource identifies the following specific changes to the Wet Tropics area:

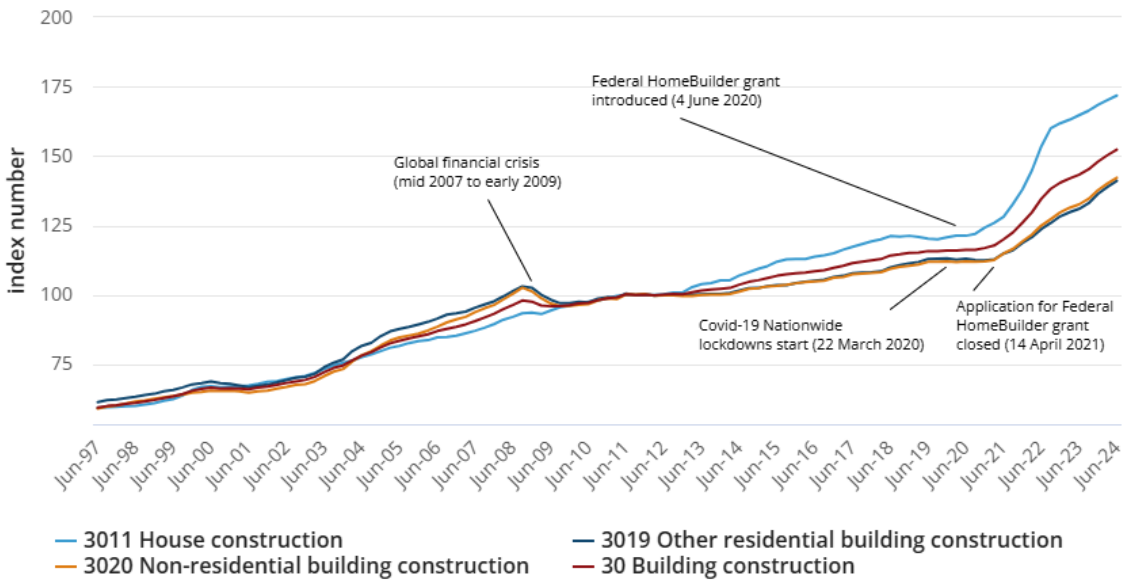
- Average temperatures will continue to increase in all seasons (very high confidence).
- More hot days and warm spells are projected with very high confidence.
- Changes to rainfall are possible but unclear.
- Increased intensity of extreme rainfall events is projected, with high confidence.
- Mean sea level will continue to rise and height of extreme sea-level events will also increase (very high confidence).
- With medium confidence, fewer but more intense tropical cyclones are projected.
- On annual and decadal basis, natural variability in the climate system can act to either mask or enhance any long-term human induced trend, particularly in the next 20 years and for rainfall.

Council will be in a position in future where decisions must be made around treatment of transport assets impacted by climate change. The Improvement Plan identifies multiple items to background these decisions.

4.2.2 Construction Industry Specific Inflation

Following the COVID 19 pandemic, prices received by construction businesses have increased dramatically. From the September 2020 quarter to the June 2024 quarter, non-residential construction (index most related to Transport Assets) has increased by 27.1%. This is not expected to significantly decrease in the near future. Figure 4.1 shows the historic increases in construction costs in Australia over time and their relation to relevant events.

Figure 4.1: Outputs of Building Construction, Index Numbers, Australia (ABS, 2025)



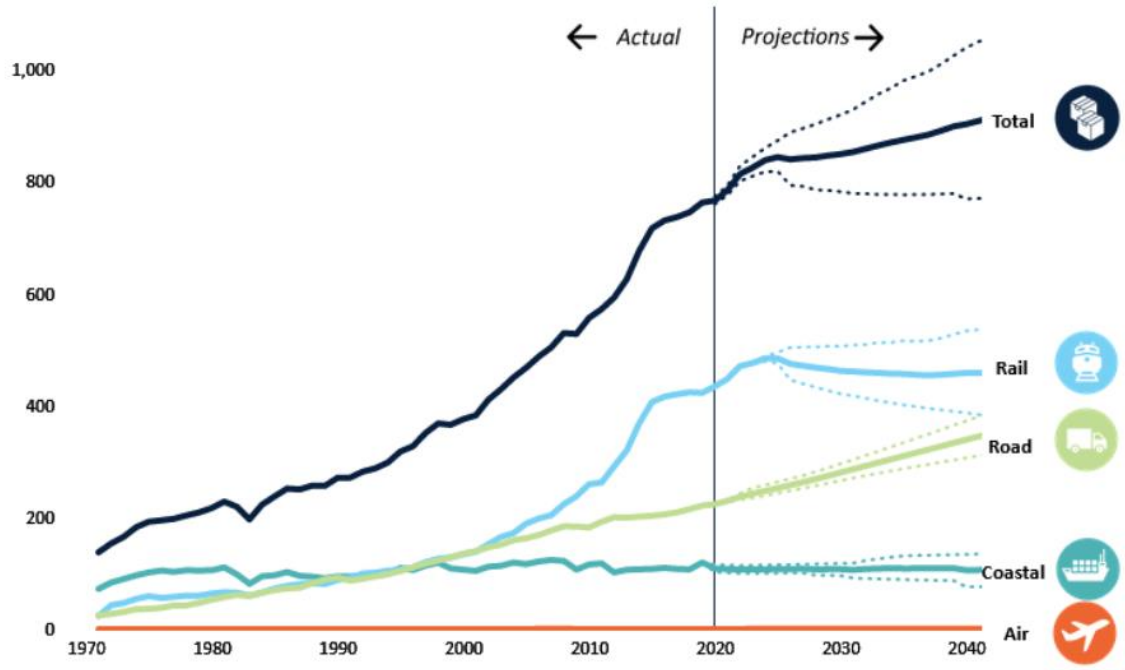
4.2.3 Freight and Logistics Evolutions and Increases

Road freight in Queensland is expected to increase from 41M tkm to 58M tkm from 2020 to 2040. This is a 41.4% increase in road freight in Queensland in only 20 years as shown in Figure 4.2. Unlike other states on the eastern seaboard, the majority of this freight is focused away from capital cities and interstate transport. This shows a skewed impact on regional areas, including Council areas such as the Cassowary Coast.

Some of this can be seen as an impact to non-Council assets (such as State-controlled roads) however the dominant freight generator within the LGA must be considered – the agricultural sector. The agricultural sector, by nature, relies on even the lowest order roads in the LGA for transportation of freight. This means Council must take a whole-of-network approach to managing the future impacts of freight increases on transport assets. As shown in Figure 4.3, increases in road freight are significantly disproportionate to increases in other methods of domestic freight forecasts.

Figure 4.2: Road Freight, Queensland (BITRE, 2025)

Figure 4.3: Actual and Projected Domestic Freight, Australia (BITRE, 2025)



4.2.4 Population Growth

Council's Economic Development Strategy (2023 – 2033) outlines goal of 20% targeted population growth by 2033. Although this varies significantly from Australian Bureau of Statistics Projections (approx. 7% by 2046), the target has been adopted by Council, and progress made towards this target will have a significant impact on transport assets.

4.3 Demand Impact and Demand Management Plan

The impact of the demand drivers that may affect future service delivery and use of assets are shown in Table 4.3. Further opportunities will be developed in future revisions of this AM Plan.

Table 4.1: Demand Management Plan

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Climate Change (Increase in Rainfall and Severe Weather Patterns)	The CCCHAS (2023) identifies the Cassowary Coast region and its residents are vulnerable to changes in coastal hazards and the long-term impacts of climate change. These need to be considered during asset planning and design. Particular focus needs to be on assets vulnerable to flooding in low-lying areas and stormwater capacity during renewal planning.	Providing confident rainfall projections for the Wet Tropics is difficult because global climate models offer diverse results, and models have shortcomings in resolving some tropical processes. In the near future (2030) natural variability is projected to predominate over trends due to greenhouse gas emissions.	By late in the century, potential summer and autumn rainfall changes for the Wet Tropics are approximately -25% to +20% under a high emission scenario and -15% to +10% under an intermediate scenario. Impacts on runoff should be assessed and consider the risk of both a drier and wetter climate (CSIRO, 2023).	Identify Critical Infrastructure Identify Rainfall approach with stakeholders
Climate Change (Sea Level Rise)	The CCCHAS (2023) identifies the Cassowary Coast region and its residents are vulnerable to changes in coastal hazards and the long-term impacts of climate change. These need to be considered during asset planning and design. Particular focus needs to be on assets vulnerable to flooding in low-lying areas and stormwater capacity during renewal planning.	CCCHAS (2023) and State Planning Policy (2017) recommend adopting strategies based on 0.8m Sea Level Rise by 2100.	Intrusion of saltwater and impact on coastal outlet design should be assessed	Identify assets vulnerable to sea level rise and potential changes to class and/or cover requirements Develop Renewal Program/update Policy with CCCHAS approach regarding design tailwater sea level considerations
Construction Industry Specific inflation	Capital and Operational Program Managers are being forced to do 'more with less' due to increases in cost of materials inc. over 50% increase in steel and concrete costs.	ABS Statistics show stabilisation in certain materials i.e. steel - however both global, national and local factors are subject to change.	Levels of Service will decrease in future years unless Council controlled budget or external funding sources increase	Short Term - continue to aim to maximise external funding sources to a minimum ratio as set in the Financial Sustainability Strategy
Freight and Logistics Evolution and Increases	Reactive maintenance and upgrades to increasing heavy vehicle usage on local roads often constrained by budgetary priorities.	Road freight in Queensland is predicted to increase by 41.4% between 2020 records and 2040.	Local Roads servicing freight routes will require pavement and cross section upgrades (depth and width) as heavy vehicle numbers increase.	Collate and assess roads identified such as RRIS Heavy Vehicle Productivity etc. for future upgrades. Continue to seek future external Heavy Vehicle specific funding to alleviate Council budgetary constraints.

Legislative Requirements	Legislation is a major driver of stormwater asset management in local government, e.g. Local Government Act, Local Government Regulations, Planning Act and Planning Regulations.	There is minimal major changes expected to Legislation governing Council-owned and managed asset classes.	Minimal but subject to change	Monitor Relevant Legislation
Population Growth	Over the past 5 years the region has experienced an average annual growth rate 0.6%.	The forecast population in 2026 is 30,521 and in 2031, 31,022 . These growth rates are lower than the state average but comparable to other Queensland Councils.	Minimal if projections are met. Unknown impacts if desired population growth as per Economic Development Strategy (2023) of 20% by 2033 is reached.	Monitor LGA Population Growth (Census Data Reviews) Consequences of 20% growth by 2033 (Economic Development Strategy, 2023) on Asset Class to be investigated with stakeholders
Port and Export Sector growth and changes in industry	Imminent major projects with both realised and potential impacts on transport assets including new mining exports (silica) and expansion/development of a Priority Development Area in the Port of Mourilyan.	Increase in demand - magnitude uncertain	Magnitude uncertain	Capital and Operational Program managers to stay abreast of relevant development and potential future impacts on transport assets.
Tourism Industry expansion and seasonal peak demands	Tourism numbers rebounding post COVID and this is expected to continue. Trend pre-COVID was increasing. Transport assets (i.e. pathways, cycle, road assets) must continue to provide a level of service to both encourage and provide for increasing international and domestic tourists.	Minimum return to pre-COVID levels.	Transport assets must be able to adapt to demands of annual increase (potentially beyond pre-COVID levels in near future) but also sub-annual seasonal fluctuations in tourism.	Monitor impacts on existing infrastructure to determine relevance to design considerations.
Value of Asset Base per rateable property (Asset Rationalisation Program)	2015 QTC (Qld Treasury Corporation) report identified high asset base a risk to Council sustainability. Council has commenced the Asset Rationalisation project to achieve its commitment to ratepayers to generate savings by rationalising some assets that are unused or underutilised.	The Asset Rationalisation program is expected to reduce the demand on Council Lifecycle costs of transport assets through the handover of custodianship to community stakeholders.	The services provided through the Annual Budget for transport assets are expected to improve. The rate of this improvement is dependent on individual outcomes in the Asset Rationalisation program and is difficult to quantify at this stage.	Updating of Asset Register and subsequently Asset Management Plans as Assets are Disposed

5.0 LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the Council plans to manage and operate the assets at the agreed levels of service (Refer to Section 3) while managing forecast lifecycle costs.

The lifecycle management plan details how the Cassowary Coast Regional Council plans to manage and operate the assets at the agreed levels of service (Refer to Section 3) throughout their entire lifecycle, from acquisition or creation to disposal. The goal is to maximise the value of the assets while minimising costs and risks, ensuring they continue to meet performance requirements over time.

From a financial perspective, infrastructure activities tend to be classified as being either Operating or Capital. The lifecycle activities used in the asset management and financial planning and reporting process cover:

Capital

- **Acquisition** – the activities to provide a higher level of service (e.g., widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (e.g. a new library).
- **Renewal** – the activities that replace or restore assets to the standard it had originally provided (e.g., road resurfacing and pavement reconstruction, pipeline replacement and building component replacement).

Operating

- **Operations** - the routine activities that keep services accessible and effective, balancing efficiency with user expectations (e.g. opening hours, cleansing, mowing grass, energy, inspections, etc.)
- **Maintenance** – the preventative and corrective actions to sustain asset functionality and minimise unexpected failures. Maintenance activities enable an asset to provide service for its planned life (e.g., road patching, unsealed road grading, building and structure repairs).
- **Disposal** – the decommissioning, removing, or repurposing of assets that are no longer cost-effective, safe, or necessary (e.g. shutting down an old water treatment plant, demolishing unsafe buildings, dismantling old bridges, etc.).

A pictorial representation of the asset lifecycle activities is shown below in Figure 5.1.

Figure 5.1: Asset Lifecycle Activities

5.1 Background Data

5.1.1 Physical parameters

The assets covered by this AM Plan are shown in Table 5.1. All figure values are shown in current day dollars. For the purposes of the AM Plan, only data contained in the Asset Register (Council's primary Asset Database) is considered. Rectification of the inconsistencies above is to be addressed as detailed in the Improvement Plan.

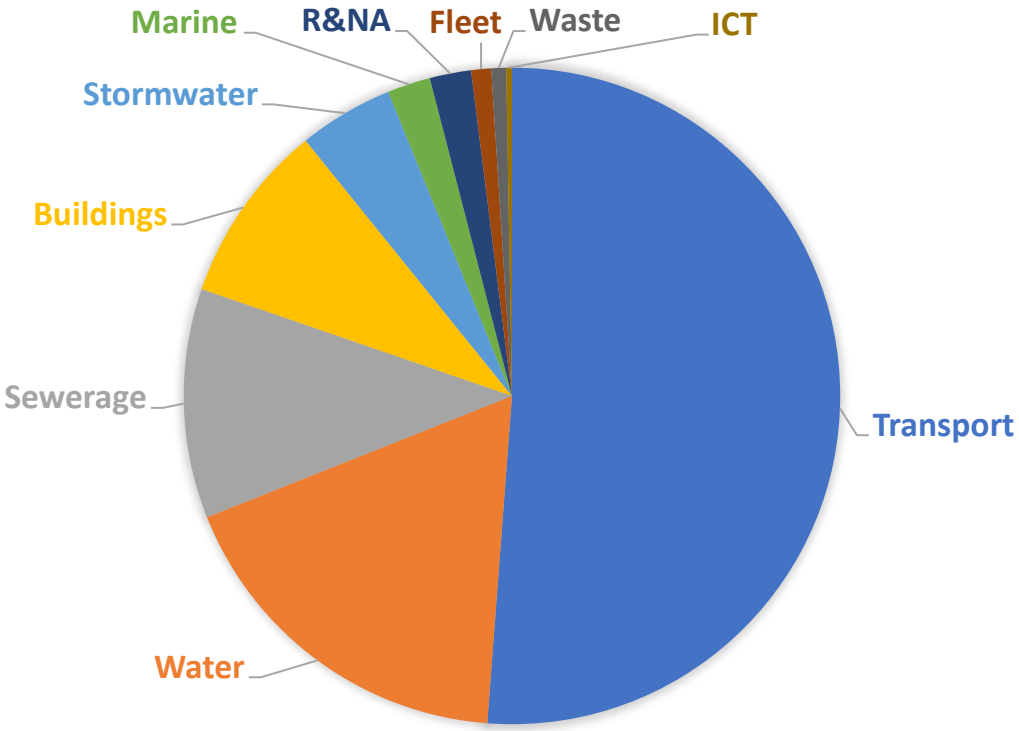
The total replacement value of the transport asset class is estimated at $1,283,079,782. This is approximately half the total replacement value of the entirety of Council's asset portfolio as shown in Figure 5.2.

The quality of Council's Transport Asset condition data is uncertain when considering the Asset Age Summary of data contained in the Asset Register. This issue can only be eliminated through the further improvements in Condition Inspection Programs and gradual maturing of the Asset Register. This is recommended as part of the Improvement Plan.

Table 5.1: Assets covered by this Plan

Asset Category Label (Unit)	Number
Sealed Roads (km)	697
Unsealed Roads (km)	519
Kerb & Channel (km)	275
Bridges (no.)	162
Rural Culverts (no)	3206
Causeways (no.)	44
Pathways (km)	87
Major Pedestrian / Cycle Bridges (no.)	11
Bus Shelters (no.)	137

Figure 5.2: Council Asset Portfolio – Asset Class Value Representation



5.1.2 Asset capacity and performance

Assets are currently provided to meet capacity and performance standards such as:

- Far North Queensland Organisation of Councils (FNQROC)
- Australian Road Research Board (ARRB)
- Department of Transport and Main Roads (DTMR - Queensland Government)
- Institute of Public Works Engineering Australasia (IPWEA) inc.
- Austroads

However, current 'best practice' in asset capacity and performance have not always existed. This has led to legacy service level deficiencies within certain subclasses of transport assets, particularly drainage assets. Design standards in hydrology and hydraulic design are continually improving, yet much of Council's drainage infrastructure was designed pre- or during the 1990s.

5.1.3 Asset Inspections

Condition assessments of transport assets are currently undertaken at various intervals depending on subclass and with varying purpose, timing and outcomes. These can generally be separated into two classes of inspections (Condition and Maintenance) for which further details are given below:

The Improvement Plan compiled as part of this AMP Plan notes current asset inspection practises require comparison against best-practice methodologies detailed in published standards. The Improvement Plan detailed in the SAMP also notes items to scope the establishment of standalone Asset Management Software (or modification to existing software such as Tech One).

Asset Maintenance Inspection

- **Purpose** – To identify **defects, faults, or immediate maintenance needs** that could affect asset performance or safety.
- **Focus** – operational condition of the asset, issues requiring short term corrective action to reach asset end-of life or compliance with service level standards.
- **Frequency** – More frequent (sub-annually) and cyclical
- **Outcomes** – Generates work orders or maintenance tasks, recorded in a maintenance management system, supports reactive and preventative maintenance

Most inspections undertaken by Council's Asset Inspectors (generally focused on road assets) are maintenance inspections. These generate work order in Council's Maintenance Management System REFLECT to be addressed by relevant crews by function.

Asset Condition Inspection

- **Purpose** – To assess the **overall physical condition** of an asset, often for the purpose of **long-term planning, valuation, or renewal forecasting**.
- **Focus** – structural and/or serviceable condition of the asset, determination of useful and/or remaining service life
- **Frequency** – Less frequent (annual or longer intervals) depending on asset sub class
- **Outcomes** – Supports asset condition ratings, informs capital works planning and valuations, recorded in asset management system for strategic use

Condition inspections often only occur on a reactive basis through consultants, with the majority occurring with Asset class revaluations (once every five (5) years) or as part of capital programming (annually). The results are currently recorded in the Asset Register through the Tech One platform.

Table 5.2 gives a breakdown of business-as-usual asset inspections undertaken by operational Staff, their frequency, and whether they are treated as Maintenance or Condition inspections. This will assist in identifying any shortfalls in maintenance or capital asset management and items arising from the Improvement Plan.

Table 5.2: Operational Staff Business as Usual Asset Inspections

Asset Class	Frequency	Maintenance or Condition Inspection
Sealed Roads	**Class Dependent (REFLECT)**	**Maintenance**
Unsealed Roads	**Class Dependent (Delta)**	**Maintenance**
Kerb and Channel	Reactive or with Road/Path Asset	**Both**
Bridges	Inspection Level Dependent (DTMR)	**Condition**
Rural Culverts	Reactive or Large Program (c. 2018)	**Both**
Causeways	Reactive or with Road Asset	**Both**
Pathways	Reactive or Large Program (c. 2023)	**Both**
Ped./Cycle Bridges	Inspection Level Dependent (DTMR)	**Condition**
Bus Shelter	Reactive or Large Program	**Condition**

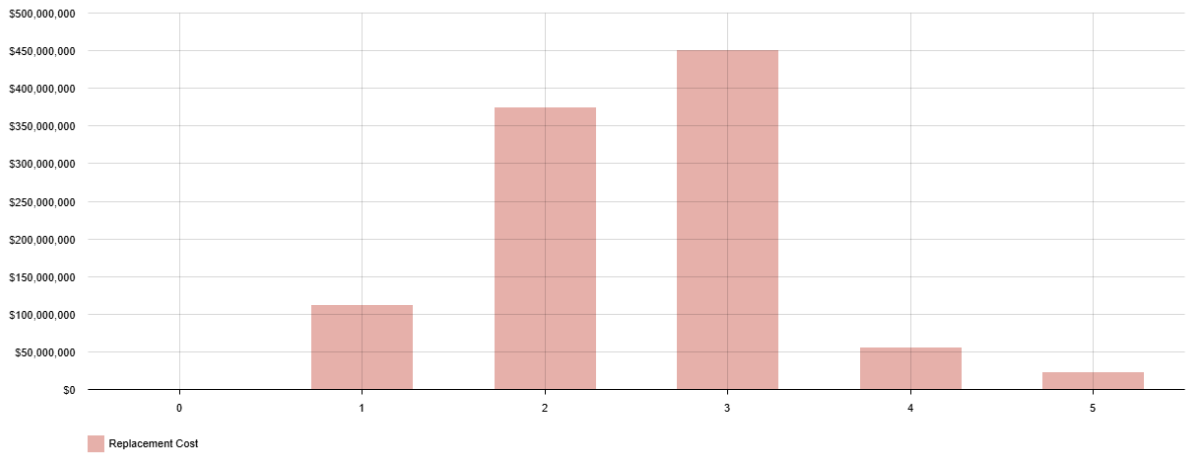
5.1.4 Asset Condition

Condition is generally measured using a 1 – 5 grading system[5] as detailed in IPWEA publications. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. The condition profile of Council transport assets is shown in Figure 5.3. The condition profile as per the 2019 Transport AM Plan is shown in Figure 5.4 for comparison.

Table 5.3: Condition Grading System

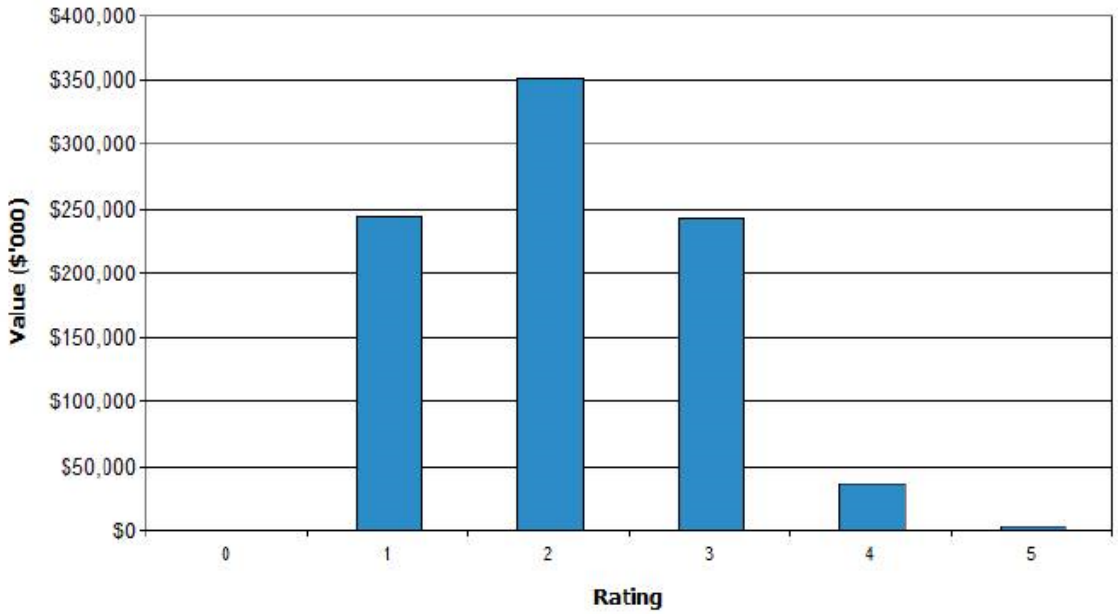
Condition Grading	Description of Condition
1	**Very Good**: free of defects, only planned and/or routine maintenance required
2	**Good**: minor defects, increasing maintenance required plus planned maintenance
3	**Fair**: defects requiring regular and/or significant maintenance to reinstate service
4	**Poor**: significant defects, higher order cost intervention likely
5	**Very Poor**: physically unsound and/or beyond rehabilitation, immediate action required

Figure 5.3: Asset Condition Profile (2024)



[5] IPWEA, 2015, IIMM, Sec 2.5.4, p 2|80.

Figure 5.4: Asset Condition Profile (2019)



The graphs show the total value of the Transport Asset class has increased from $927,722,557 in the 2019 AM Plan to $1,283,079,782 in this AM Plan (approx. 28% increase in value). Further condition assessments have shown a deterioration in overall condition. This deterioration must be monitored in future and offset by capital works to avoid under delivery on expected service levels.

Around 7.5% ($76.4M Replacement Cost) of transport assets are assessed as part of the 2024 valuation as either Poor or Very Poor (Condition 4 or 5). IPWEA Guidelines states that assets assessed as such will generally need renewal/replacement within ten (10) years at most. If this is not undertaken, risks of catastrophic failure of potentially serious consequence (dependent on hierarchy/criticality) are likely.

5.2 Operations and Maintenance Plan

Operations include regular activities to provide services to customers. Examples of typical broader operational activities include cleaning, street sweeping, asset inspection, and utility costs. Operations activities specific to the stormwater asset class include basic management, inspections and revaluations.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating. Examples of typical maintenance activities include pipe repairs, asphalt patching, and equipment repairs. The historic trend in transport maintenance budgets is inconsistent. Budgets for the last five (5) years is shown in Table 5.4.

Table 5.4: Maintenance Budget Trends

Financial Year	Maintenance Budget $	Maintenance Actuals $
2024	$5,052,988	$ 5,052,988
2025	$5,052,988	
2026	$5,054,708	
2027	$5,205,083	
2028	$5,241,751	
AVERAGE	**$5,121,503.60**	

Maintenance budget levels are considered to be adequate to meet current service levels, however it must be noted that review of Service Levels is currently underway through the update of the Service Catalogue.

5.2.1 Asset hierarchy

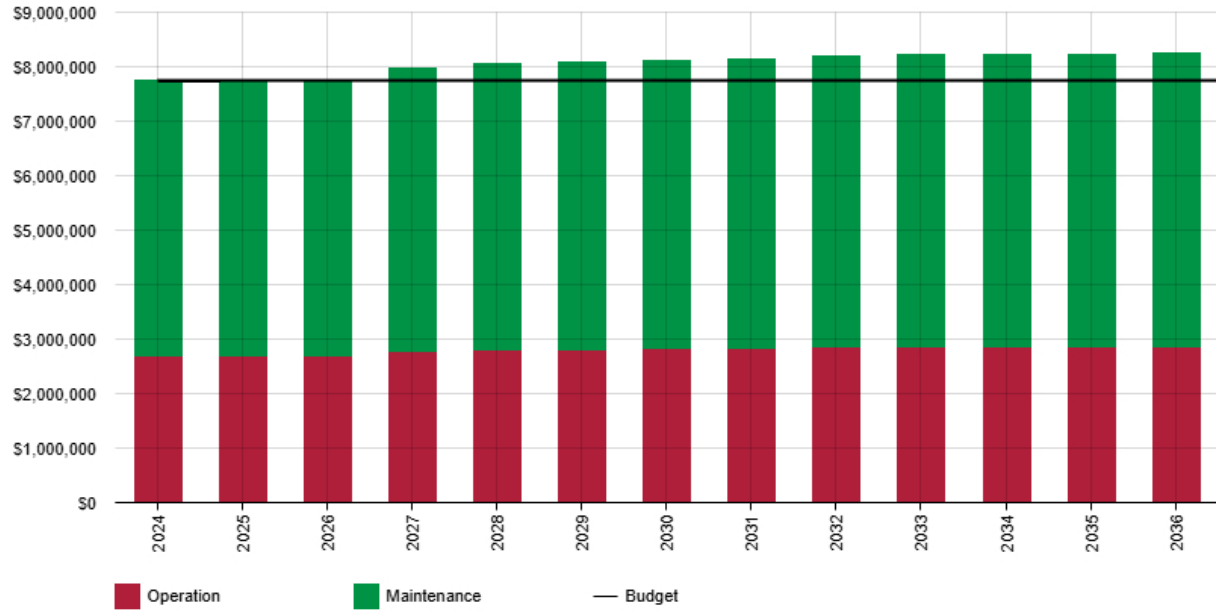
An asset hierarchy provides a framework for structuring data in an information system to assist in collection of data, reporting information and making decisions. The hierarchy includes the asset class and component (used for asset planning and financial reporting) and service level hierarchy (used for service planning and delivery).

Council currently has no formalized asset hierarchy or identified critical assets for the transport asset class. This is to be rectified as per the Improvement Plan.

5.2.2 Summary of forecast operations and maintenance costs

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease. Figure 5.5 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance Planned Budget as per the LTFP. All figure values are shown in current day dollars

Figure 5.5: Operations and Maintenance Summary



5.3 Renewal Plan

Renewal is major capital work which does not significantly alter the original service provided by the asset, but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Work over and above restoring an asset to original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs.

Assets requiring renewal are identified from one of two approaches in the Lifecycle Model.

- The first method uses Asset Register data to project the renewal costs (replacement cost) and renewal timing (acquisition year plus updated useful life to determine the renewal year), or
- The second method uses an alternative approach to estimate the timing and cost of forecast renewal work (i.e. condition modelling system, staff judgement, average network renewals, or other).

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in Table 5.5. Asset useful lives were last reviewed as part of the 2024 Transport Valuation (Stantec, 2024).[6]

Table 5.5: Useful Lives of Assets

Asset (Sub)Category	Useful Life Range
Bridges	30 – 80 years
Culverts	100 years
Floodways	50 years
Kerb and Channel	70 years
Retaining Structures	50 years
Guardrails	25 years
Medians	60 years
Pathways	10 – 60 years
Transport Shelters	40 years
Roads / Pavement	15 – 100 years
Roads / Sub-Pavement	500 years
Roads / Surface	20 – 30 years

There are issues outlined in Section 5.1 regarding data quality relevant to Stormwater Asset acquisition dates and condition. The Improvement Plan identifies Asset Inspections need to be standardized and systematically undertaken to determine the accuracy and maturity of the Asset Register before it is deemed suitable for the development of a Renewal Plan. As a result, Asset Register data has been deemed currently unsuitable for use in lifecycle analysis of Asset Renewals using the Asset Register Method.

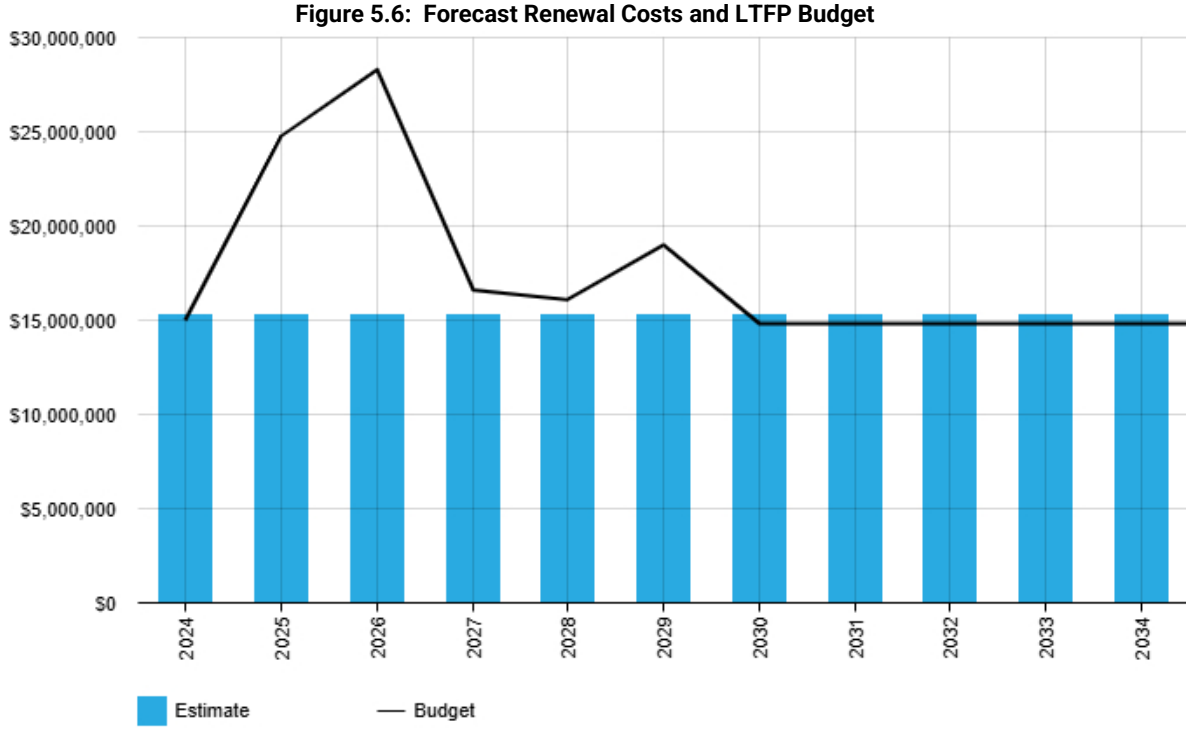
The estimates for renewals in this AM Plan are based on the Alternate Method.

5.4 Summary of future renewal costs

The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 5.6. A detailed summary of the forecast renewal costs is shown in Appendix D. All figure values are shown in current day dollars.

[6] Stantec, 2022, Valuation Report, Sec 3.5.5

Figure 5.6: Forecast Renewal Costs and LTFP Budget



5.4.1 Estimation of future renewal costs

Future renewal costs were estimated for the Alternate Method using the information outlined in Table 5.4-6 below.

Expected Annual Renewal Cost (adopted in Figure 5.6) is calculated by dividing the Average Remaining Useful Life by the total Renewal Cost of each transport asset sub-class in the Asset Register. This method averages the total cost of renewal over the average remaining useful life of each asset class. Issues around acquisition dates and condition in the Asset Register still exist, however by averaging the remaining useful life and applying across entire asset sub-classes, any inconsistencies in acquisition dates and therefore renewal dates can be spread across the remaining life as opposed to falling on single disposal/renewal years. It must be noted that this method therefore shows an average only, and does not detail the general peaks and troughs expected within sub-classes which is detailed further in the following section.

Table 5.6: Alternate Method Renewal Costings

Asset Sub Class	Average Remaining Useful Life	Total Renewal Cost	Expected Average Annual Renewal Cost
Bridges	37	$199,628,292	$2,792,098
Causeways	32	$3,750,103	$75,002
Culverts	47	$91,554,629	$915,546
Guardrails	20	$1,864,158	$74,566
Kerb and Channel	45	$65,192,355	$931,319
Median	65	$3,173,533	$52,892
Pathways	26	$41,210,661	$867,281
Pavement	29	$302,068,109	$5,716,540
Retaining Walls	40	$20,675,336	$413,507
Sub Pavement	257	$229,885,543	$857,940
Surface	10	$49,051,729	$2,477,926
Transport Shelter	26	$3,170,474	$79,262
Forecast Annual Renewal Cost			**$15,253,881**

5.4.2 Asset Class Specific Renewal Management

The future renewal forecast were assessed at an asset class level to outline specifics on renewal budget expenditure for capital projects. Following figures of the report show comparisons of historic asset class expenditure, an estimation of depreciation based on FY25 depreciation (not official budget position nor increasing as would be expected), and the allocated relevant capital renewal budget in FY26, all shown against renewal lifecycle cost estimates derived using the alternate method.

Figure 5.7: Forecast Renewal Snapshot (Bridges Sub-Class)

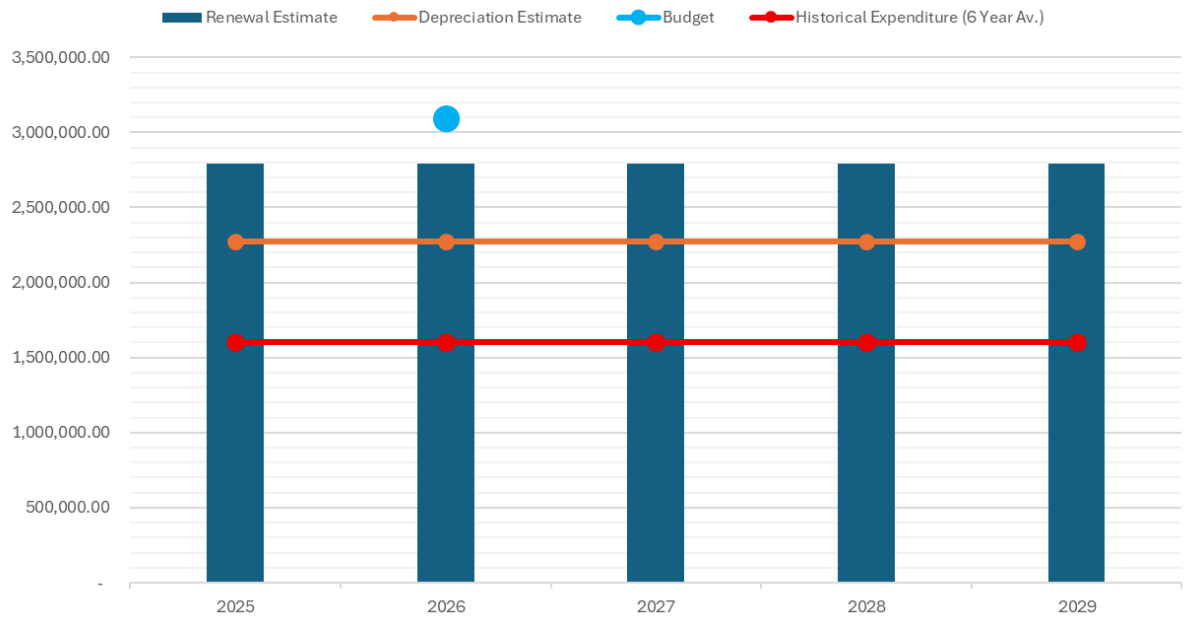


Figure 5.8: Forecast Renewal Snapshot (Culverts Sub-Class)

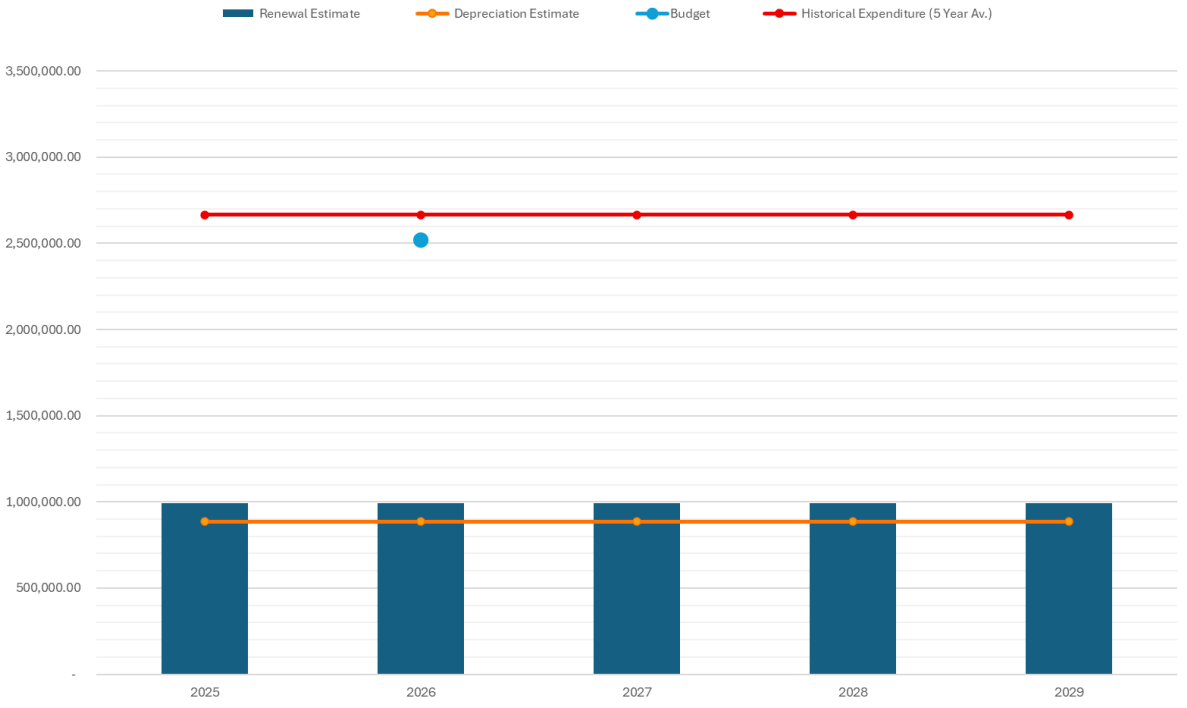


Figure 5.9: Forecast Renewal Snapshot (Footpath Sub-Class)

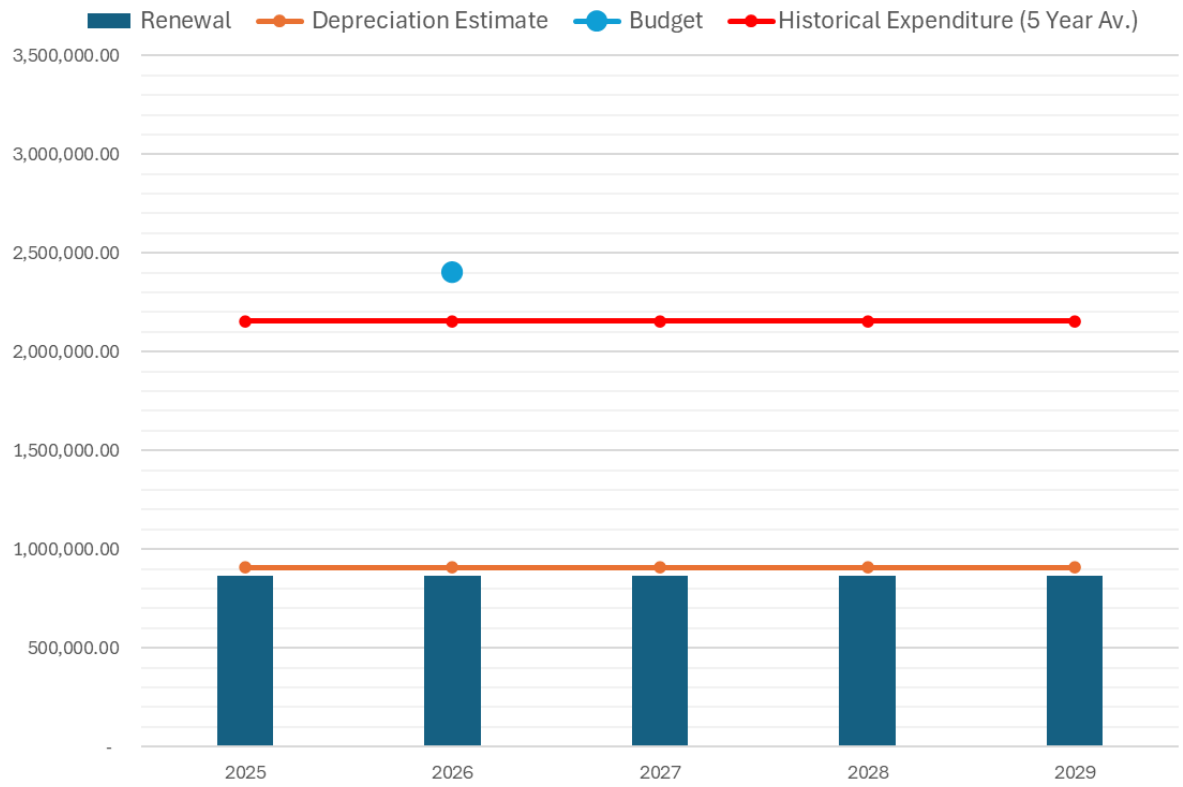


Figure 5.10: Forecast Renewal Snapshot (Kerb and Channel Sub-Class)

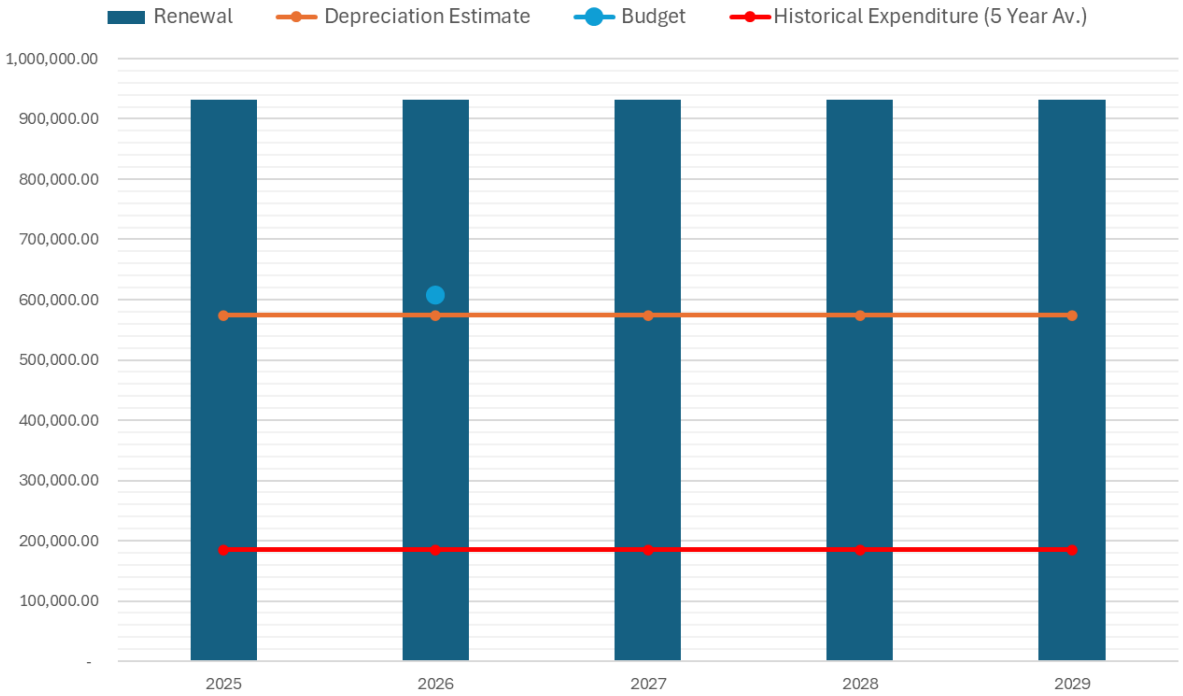


Figure 5.7 shows the renewal snapshot for bridges, and an historic underspend (based on the average alternate method lifecycle costing approach) in the asset sub-class for the last 6 years. In an asset sub-class with a small total asset count with large asset values, this figure is not alarming in isolation. In any case, major capital bridge projects beginning in FY26 bring expenditure within the asset class above the required renewal estimate.

Figure 5.8 shows the renewal snapshot for culverts, and historic expenditure above the average alternate method approach. This is where understanding the representations given by the methodology of calculating future lifecycle costing is important – the peaks and troughs of asset renewal are not represented. The culverts subclass has been in a 'peak' for at least the last five (5) years – asset condition data shows this. A backlog of culvert renewals exists and is expected to exist for some years to come. Culverts considered Condition State 5 (failed) are only just being renewed in the FY26 capital program. From this trend and the known backlog, expenditure above the renewal estimate would be expected for at least the next three (3) years.

Figure 5.9 shows the renewal snapshot for footpaths. As with the culverts asset sub-class, both the FY26 capital budget and historic expenditure are above the average as recommended. This is again due to a known condition backlog post a major condition inspection in 2023. The condition backlog, in conjunction with any renewal works arising from recently adopted Walking Network Plans, indicate the level of expenditure outlined in the FY26 budget will continue for at least the next 5 (five) years.

Figure 5.10 shows both historic, depreciation and FY26 budget below renewal expenditure recommended through the alternate method lifecycle costing. It is noted that some of the shortfall will be made up through pathway projects, where kerb and channel renewal is often undertaken as part of pathway renewal scope of works. However, further kerb and channel condition data (addressed through Improvement Plan) is required to confirm.

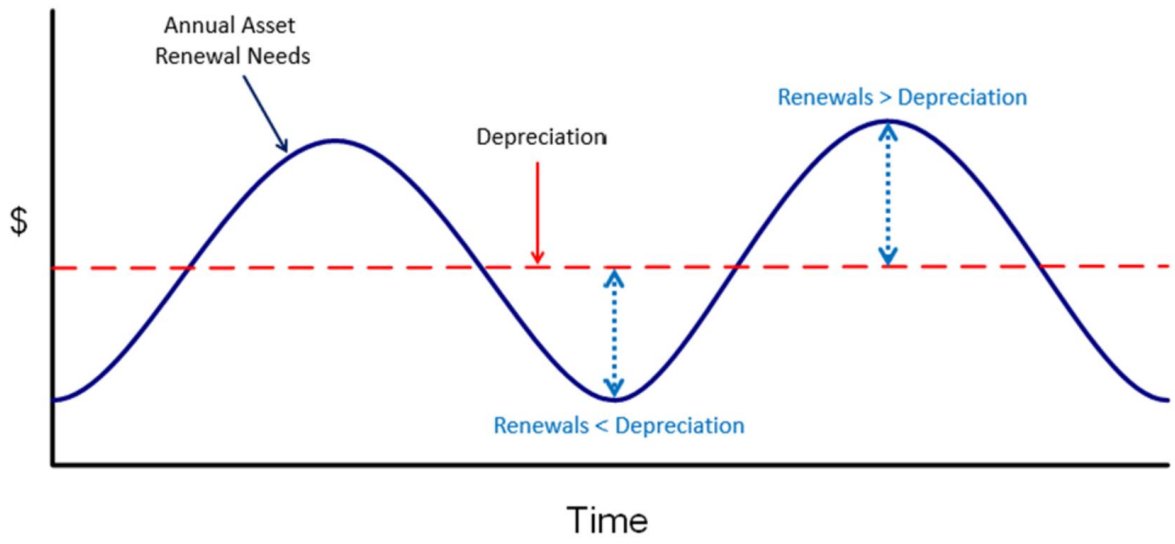
Note that where the proposed asset sub-class budgets exceed the renewal alternate method lifecycle estimate (such as select sub-classes above), this must be:

- **offset by reductions in renewal expenditure in other asset sub-classes or;**
- **budgeted through an increase above the LTFP**
    - **this should be justified (i.e. through known condition failure 'peaks' as per previous)**
    - **where this increase brings total transport asset class capital budget above depreciation expenditure it should be externally funded (i.e. no imposition on rates) where possible**

5.4.3 Renewal forecasts vs Depreciation

Good asset management practice recognises depreciation is not a renewal forecast in isolation. Relationships between the useful and remaining lives of the asset portfolio mean there are deficiencies in comparing asset renewals with depreciation at a point in time. For example, a portfolio of long life assets that are relatively young may have a depreciation expense much greater than required renewal spending. Conversely, a portfolio consisting of majority older assets may warrant much greater renewal spending than the depreciation expense. This is illustrated in Figure 5.11 assuming straight line depreciation.

Fig 5.11 Asset Renewal vs Depreciation (IPWEA)



5.5 Acquisition Plan

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its existing capacity. They may result from growth, demand, social or environmental needs. Assets may also be donated to Council, for example via greenfield development handovers.

Any potential upgrade and new works should be reviewed to verify that they are essential to Council and community needs. As with Renewals, Council currently has no priority ranking criteria for Asset Acquisitions. Historically, decisions have been made through channels other than Asset Custodians (Asset Engineering) regarding the Acquisition of stormwater assets; generally through other departments (Planning Services) or higher levels of local government (Mayors/Councilors). Known asset acquisitions are detailed in Table 5.7.

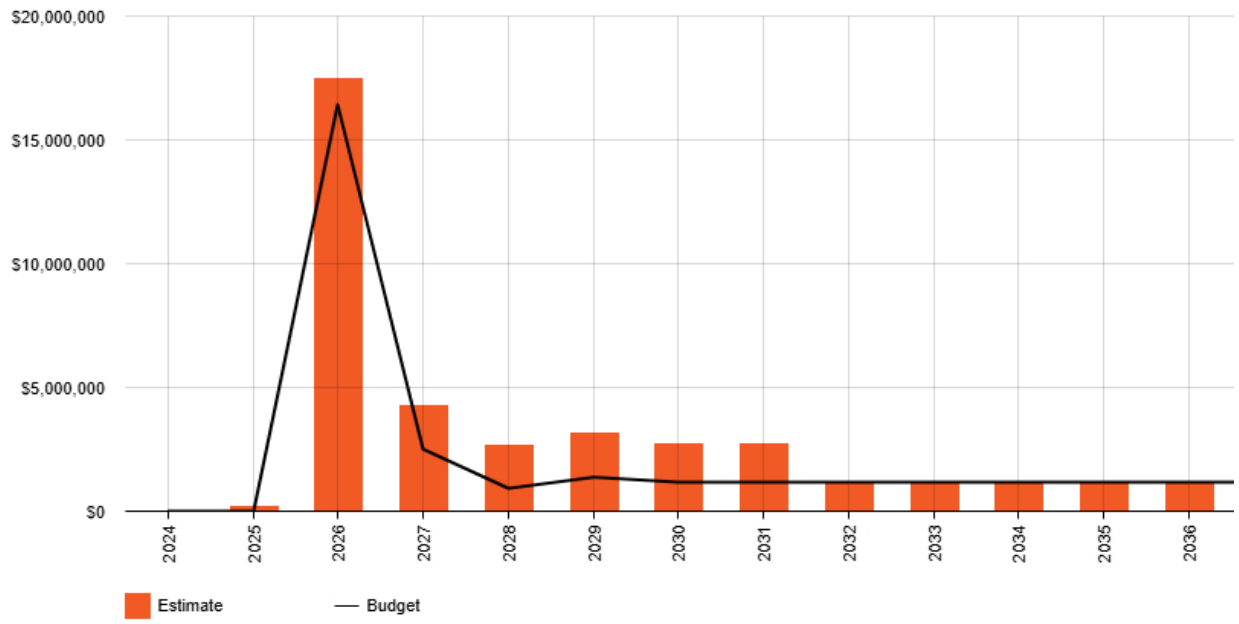
Table 5.7: Future Acquired Transport Asset estimates over 10 Year Forecasts

Acquisition	Value $
Eaton Estate	$10,907,045
Stephenson Road Sealing Upgrade	$7,000,000
CBD Upgrades	$6,509,370
DRFA Betterment	$3,862,500
Pathways	$1,000,000
Regional Pathways Program	$837,500
Unsealed Roads	$1,153,125
Road Improvements	$1,811,250

5.5.1 Summary of future asset acquisition costs

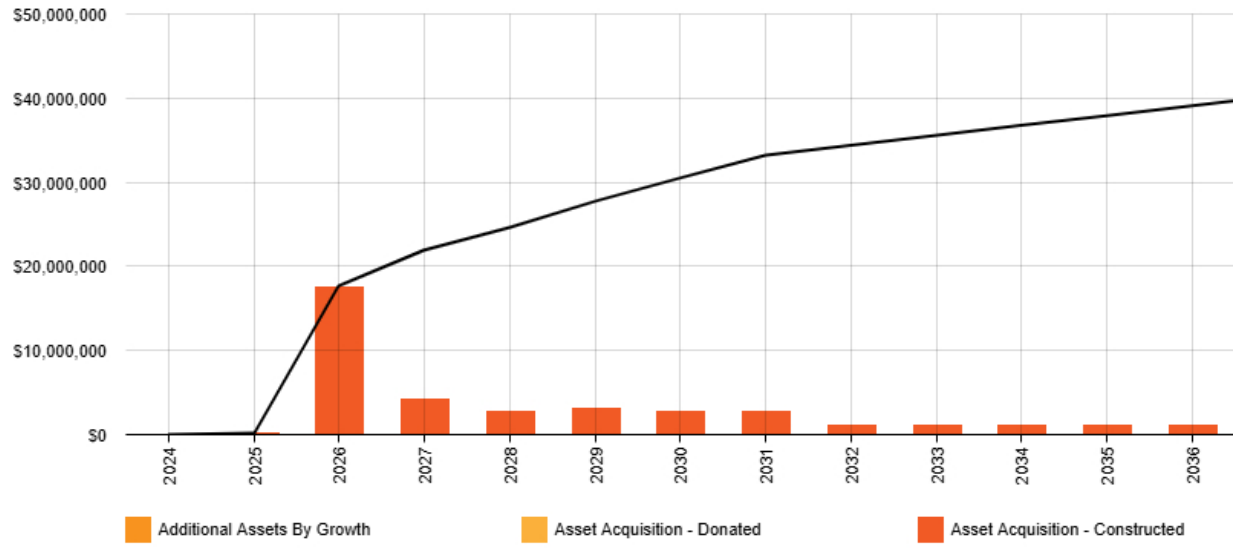
Forecast acquisition asset costs are summarised / summarized in Figure 5.12 and shown relative to the proposed acquisition budget. The forecast acquisition capital works program is shown in Appendix A. All figure values are shown in current day dollars.

Figure 5.12: Acquisition (Constructed) Summary



When committing to new assets, Council must be prepared to fund future operations, maintenance and renewal costs. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by the Entity. The cumulative value of all acquisition work, including assets that are constructed and contributed shown in Figure 5.13. All figure values are shown in current dollars.

Figure 5.13: Acquisition Summary



5.6 Disposal Plan

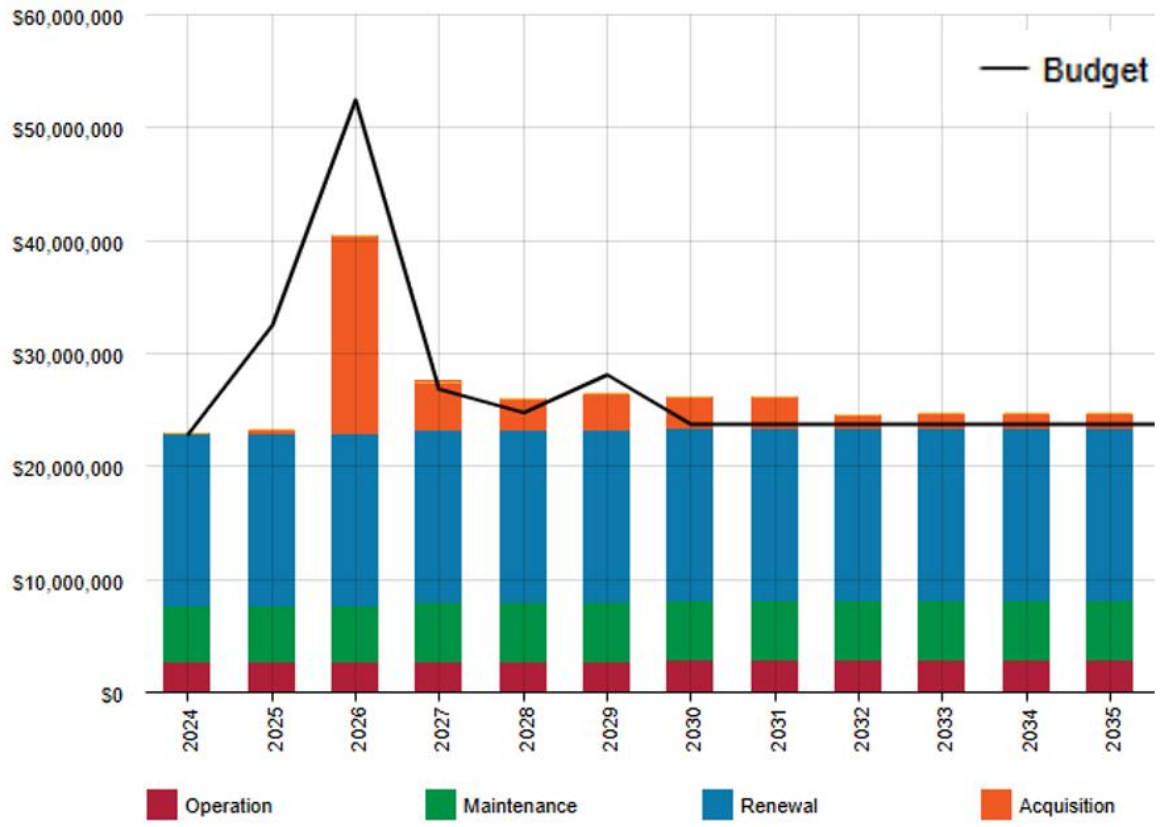
Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition or relocation. Any costs or revenue gained from asset disposals is included in the long-term financial plan.

Due to the nature of the service delivery, there are little Disposals that occur in the Transport Asset class (Assets are almost exclusively Renewed). The main item of Asset Disposals are road areas (generally unsealed) which have been removed from the Maintained Road Network through Council resolution.

5.7 Summary of asset forecast costs

The financial projections from this asset plan are shown in Figure 5.14. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget. All figure values are shown in current day dollars.

Figure 5.14: Lifecycle Summary (inc. 2 historic years)



The estimation from the AM Plan is the lifecycle cost forecast of 10-year total outlays, which for the Transport asset class is estimated as $27,120,922 on average per year over the future 10 year period (2026 – 2035 inclusive). The majority of forecast costs is in Renewals, where forecasts estimate minimum $15,253,881 should be budgeted on renewals annually over the ten (10) year LTFP forecasts.

Estimated available funding for the ten (10) year period is $27,469,675 on average per year. This is approximately 101% of the forecast lifecycle cost to maintain the current level of service.

The anticipated Planned Budget (LTFP) for the Transport asset class therefore leaves an average surplus of $348,753 per year of the forecast lifecycle costs required to provide services in the AM Plan compared with the Planned Budget currently included in the Long-Term Financial Plan.

Council is adequately funding the Transport Asset Class to maintain the current level of service. No changes to LTFP are proposed as part of this report.

6.0 RISK MANAGEMENT PLANNING

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: 'coordinated activities to direct and control with regard to risk'[7].

An assessment of risks[8] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

6.1 Critical Assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets should be identified and along with their typical failure mode, and the impact on service delivery. Failure modes may include physical failure, collapse or essential service interruption.

Council currently has no methodology in place to identify Critical Transport Assets. This is to be addressed as part of the Improvement Plan. By identifying critical assets and failure modes an organisation can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

6.2 Risk Assessment

The risk management process used is shown in Figure 6.1 below.

It is an analysis and problem-solving technique designed to provide a logical process for the selection of treatment plans and management actions to protect the community against unacceptable risks.

The process is based on the fundamentals of International Standard ISO 31000:2018.

[7] ISO 31000:2009, p 2

[8] REPLACE with Reference to the Corporate or Infrastructure Risk Management Plan as the footnote

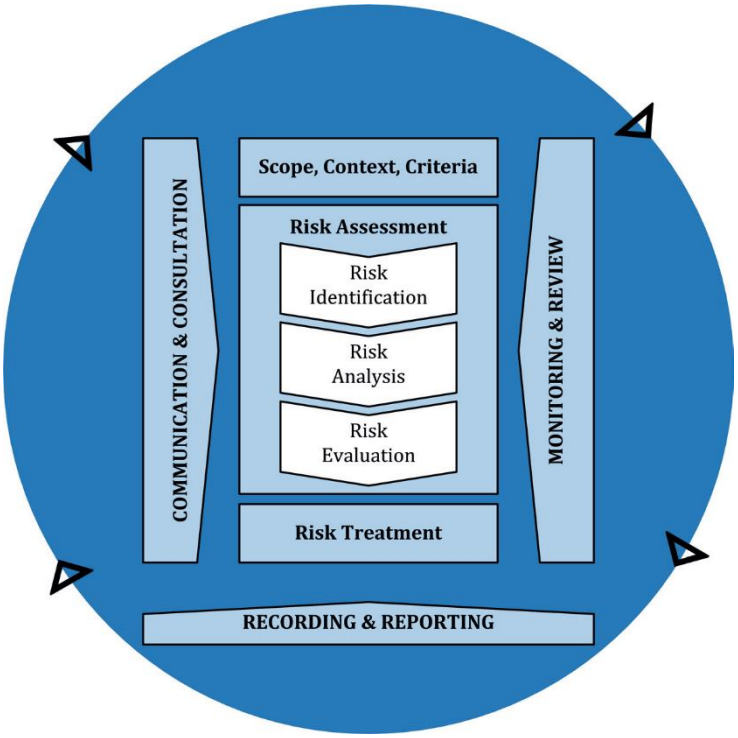


Fig 6.1 Risk Management Process – Abridged
Source: ISO 31000:2018, Figure 1, p9

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks[9] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) risk rating identified in the Risk Assessment Process. The residual risk and treatment costs of implementing the selected treatment plan is shown in Table 6.1. It is essential that these critical risks and costs are reported to management and decision makers, and Council's appetite for risk outlined in the SAMP (2022) is 'Moderate'.

Note no of the Treatment Costs have been added to any Budgets or Lifecycle Costing as they are yet to be formally scoped, costed, or endorsed by decision makers.

[9] REPLACE with Reference to the Corporate or Infrastructure Risk Management Plan as the footnote

Table 6.1: Risks and Treatment Plans

Risk	Likelihood	Consequence	Risk Rating (VH, H)	Risk Treatment Plan
Loss/Reduction of External Funding from Existing Operational and Capital (inc. Disaster Funding)	Likely	Catastrophic *(Risk to Life, Service Interruption, Reputation, Finance)*	VH	**Operational and Capital Budgets to consider loss of Disaster Funding (Sensitivity Analysis)**
Climate Change - Increase in sea level and rainfall intensity in under design of older infrastructure and increase in service failure	Likely	Catastrophic *(Risk to Life, Service Interruption, Reputation, Finance)*	VH	**Investigate Climate Change Guidelines as per ARR/QUDM and CSIRO - Council Decision to Implement**
Construction Industry Specific Inflation	Almost Certain	Major (Service Interruption, Reputation, Finance)	VH	**Short Term - continue to aim to maximise external funding sources and construction efficiencies**
Frieght and Logistics Demand Increase	Almost Certain	Major (Service Interruption, Reputation, Finance)	VH	**Continue to increase capital budget horizon and external funding for upgrades to relevant infrastructure**
Areas of unknown Asset Condition leading to reduction in Level of Service / Catastrophic Failure	Likely	Catastrophic *(Risk to Life, Service Interruption, Reputation, Finance)*	VH	**Develop Asset Condition Inspection Program for all SubClasses and Implement**
Critical Asset Failure due to non-targeted inspection and maintenance scheduling	Likely	Catastrophic *(Risk to Life, Service Interruption, Reputation, Finance)*	VH	**Develop Hierarchy/Criticality Rating for Asset Class as per IPWEA IMMM Section 3.2.5**
Council Target of 20% Population Growth by 2033 – impact on lifecycle costs, Level of Service	Possible	Major *(Service Interruption, Reputation, Finance)*	H	**Engage Internal Stakeholders as to assumptions made in Economic Development Plan and consistency with AM Plan and LTFP**
Planned Budget deficit to Forecast Lifecycle Costing leading to reduction in Level of Service / Catastrophic Failure	Possible	Catastrophic *(Risk to Life, Service Interruption, Reputation, Finance)*	H	**Develop Plan and Process to reach Expenditure based on external funding submissions and improving data quality**

Inconsistency in Condition and Maintenance Checklists from Industry Standards and Guidelines	Possible	Catastrophic *(Risk to Life, Service Interruption, Reputation, Finance)*	**H**	**Standardise Condition and Maintenance Assessment Checklists against Industry Standards and Guidelines (inc. IPWEA PN1, PN2, PN5, PN9)**
Inconsistency in LOS across documentation and departments	Likely	Major (Service Interruption, Reputation, Finance)	**H**	**Gain consistency between defined LOS across documentation and departments and under Best Practise Guidance (inc. IPWEA PN8, IMMM Section 2.2) through Service Catalogue Review**
LGIP - expiry - Council loses right to Infrastructure Charges	Possible	Major (Service Interruption, Reputation, Finance)	**H**	**LGIP Revision Schedule with Stakeholders**

7.0 FINANCIAL SUMMARY

7.1 Financial Sustainability and Projections

7.1.1 Sustainability of service delivery

There are three key ratio indicators of sustainable service delivery that are considered in the AM Plan and required as per the Queensland Government Financial Management (Sustainability) Guideline (2024):

- **Asset Sustainability Ratio** (Capital Expenditure on Replacement of Infrastructure Assets (Renewals) for next 10 years/ Depreciation Expenditure on Infrastructure Assets for the next 10 years)
    - The asset sustainability ratio approximates the extent to which the infrastructure assets managed by a council are being replaced as they reach the end of their useful lives.
- **Asset Consumption Ratio** (Written Down Value of Infrastructure Assets/Current Replacement Value)
    - The asset consumption ratio approximates the extent to which council's infrastructure assets have been consumed compared to what it would cost to build a new asset with the same benefit to the community.
- **Asset Renewal Funding Ratio** (planned renewal budget for the next 10 years / forecast renewal outlays for the next 10 years identified as warranted in the AM Plan)
    - The asset renewal funding ratio measures the ability of a council to fund its projected infrastructure asset renewal/replacements in the future.

Council is classified as a Tier 4 Council as per the Guideline. Table 7.1 below shows Council's management of the Transport Asset Class is sound when measured against ratio indicators.

Table 7.1: Risks and Treatment Plans

Ratio	Target (Tier 4 Council*)	CCRC Transport Asset Class	Interpretation
Asset Sustainability Ratio	Greater than 80%	**98%**	An asset sustainability ratio close to 100% suggests that a council is spending enough on the renewal of its assets to compensate for the deterioration in its asset base as loosely proxied by its reported depreciation, with outcomes too far below this level being potentially indicative of underspending against capital replacement requirements.
Asset Consumption Ratio	Greater than 60%	**70%**	The minimum target of 60% indicates that a council's assets are being broadly consumed in line with their estimated useful lives. Councils with lower than target ratio will need to invest more in those assets (in terms of replacement or maintenance) to ensure they are maintained at a standard that will meet the needs of their communities. On the other hand, if the ratio is much higher than the target ratio, councils may need to revisit their asset management plans to assess their current service levels or whether their estimates of the assets' useful lives are appropriate.
Asset Renewal Funding Ratio	As close to 100% as possible	**111%**	Ideally, the asset renewal funding ratio should be as close to 100% as possible, as this indicates that a council is appropriately funding and delivering the entirety of its required capital program as outlined by its asset management plans.

7.1.2 Forecast Costs (outlays) for the long-term financial plan (LTFP)

Table 7.2 shows the forecast costs (outlays) required for consideration in the 10 year long-term financial plan. Forecast costs are shown in present dollar values.

Table 7.2: Forecast Costs (Outlays) for the Long-Term Financial Plan

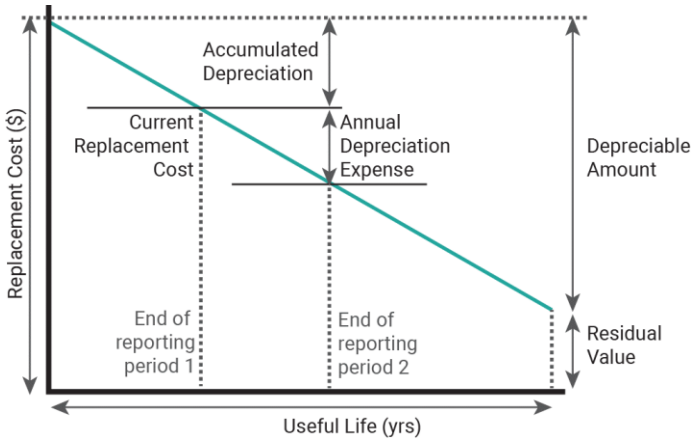
Year	Acquisition	Operation	Maintenance	Renewal	Disposal
2026	17485490	2695800	5054708	15253881	0
2027	4263710	2776233	5205083	15253881	0
2028	2682710	2795846	5241751	15253881	0
2029	3127210	2808187	5264823	15253881	0
2030	2732710	2822572	5291717	15253881	0
2031	2732710	2835143	5315218	15253881	0
2032	1175000	2847713	5338719	15253881	0
2033	1175000	2853118	5348824	15253881	0
2034	1175000	2858523	5358929	15253881	0
2035	1175000	2863928	5369034	15253881	0

7.2 Valuation Forecasts

7.2.1 Asset valuations

The adopted estimate of the value of assets included in this AM Plan (as per FY24 valuation) are shown below. The assets are valued at fair value at cost to replace service capacity. Note these are IPWEA Model estimates from the extraction date and will not correspond exactly to current organisational finances.

Figure 7.1: Valuation Terminology



Replacement Cost (Gross) **$1,283,079,782**

Current Replacement Cost[10] **$898,664,629**

Depreciation **$13,630,365**

[10] Also reported as Written Down Value, Carrying or Net Book Value.

8.0 PLAN IMPROVEMENT AND MONITORING

8.1 Improvement Plan Maturity

Continual assessment of Improvement Plan maturity is required to assist in developing and implementing a continuous improvement programme to deliver Asset Management outcomes more effectively.

8.1.1 Previous Improvement Plan

Table 8.1 shows the Improvement Plan extracted from the previous iteration of the Organisation's Stormwater AM Plan and progress made towards each respective Task. It can be seen little progress has been made towards Improvement Plan Items identified in the 2019 AM Plan.

Table 8.1: 2019 Transport Asset Class Improvement Plan

Task No.	Task	Responsibility	Resources Required	Target Timeline	Progress	Current AM Plan Comment
1	Regular update of AMP following adoption of budget and LTFP	Director of Infrastructure Services	Council Staff	Ongoing	**Started**	Latest AM Plan to be updated annually
2	Improve financial costing approach for operations and maintenance through improved and consistent use of the Technology 1 works system.	Manager Finance	Council Staff, Tech One	2020	**Complete**	Maintenance Budgets managed through Tech One
3	Identify key tourist routes and precincts and incorporate into higher level of service areas (eg CBDs, Bruce Highway, etc)	Director of Infrastructure Services	Council Staff	2020	**Started**	Carryover Action Item
4	Document current levels of service for road maintenance including regional variation	Manager Asset Maintenance	Council Staff	2020	**Started**	Carryover Action Item
5	Rationalise service levels to a regionally consistent level	Manager Asset Maintenance Director of Infrastructure Services	Council Staff	2020	**Started**	Carryover Action Item
6	Incorporate findings of Coastal Hazard Adaptation Strategy (CHAS) into AMP	Director of Infrastructure Services	Council Staff	2021	**Unstarted**	To be incorporated in future revision
7	Develop annual condition assessment program focussing on high risk assets	Director of Infrastructure Services	Council Staff	2021	**Started**	Carryover Action Item
8	Continue to engage with transport industry to ensure network remains open and accessible to industry	Director of Infrastructure Services	Council Staff	Ongoing	**Complete**	Unspecified Actions - likely BAU?

8.2 Improvement Plan

It is important that an entity recognise areas of their AM Plan and planning process that require improvements to ensure effective asset management and informed decision making. The Improvement Plan generated from this AM Plan is shown in Table 8.2.

Table 8.2: Improvement Plan

Task Criticality	Asset Sub - class	Task	Responsibility	Resources Required	Timeline (Calendar Year)	Progress
1	ALL	Gain consistency between defined Levels of Service across documentation and departments and under Best Practise Guidance (inc. IPWEA PN8, IMMM Section 2.2) through Service Catalogue Review	Asset Engineering, Asset Maintenance, Governance	Council Staff	Q3 2025	**Started**
2	ALL	Develop Plan and Process to reach Lifecycle Costing Budget Targets including decreasing Council controlled revenue ratio through external funding submissions and improving data quality	Asset Engineering, Finance, Project Delivery	Council Staff	Q2 2026	**Unstarted**
3	ALL	Develop External Funding (Relevant Grants) Register/Calendar and Define Application Responsibilities	Asset Engineering, Project Delivery, Finance	Council Staff	Q4 2025	**Started**
4	ALL	Develop Asset Heirarchy (IPWEA IMMM Section 3.2.5) and Register Critical Assets for Cndition Inspection Programs	Asset Engineering	Council Staff	Q1 2026	**Unstarted**
5	ROADS (SEALED)	Validate Sealed Roads Surface Condition Data and Develop 10 Year Reseal Program	Tech Officer - Transport, Team Lead Asset Inspectors	Council Staff/Contractor	Q2 2026	**Started**
6	ROADS (SEALED)	Sealed Roads Visual Condition Assessment and Asset Management Training (IPWEA - PN9 Suite) - Inspectors	Tech Officer - Transport, Team Lead Asset Inspectors	Council Staff	Q4 2026	**Unstarted**
7	ALL	Standardise Condition and Maintenance Assessment Checklists against Industry Standards and Guidelines (inc. IPWEA PN1, PN2, PN5, PN9)	Tech Officer - Transport, Team Lead Asset Inspectors	Council Staff	Q4 2025	**Unstarted**
8	ALL	Local Government Infrastructure Plan (LGIP) Revision	Asset Engineering, Water and Wastewater, Planning Services	Council Staff/Contractor	Q1 2026	**Unstarted**
9	ALL	Develop Cost Sharing Arrangement between Departments responsible for Capital Projects within Transport Corridor	Infrastructure Services, Commercial Services	Council Staff	Q4 2025	**Started**
10	ROADS (UNSEALED)	Assess Targeted Historical Performance Data to look for continued improvement in materials, construction and maintenance practises	Tech Officer - Transport, Team Lead Asset Inspectors	Council Staff	Q2 2026	**Unstarted**
11	ALL	Formalise Street Lighting Responsibilities, Condition and Performance Assessments and Capital Works Procedure	Asset Engineering, Project Delivery	Council Staff	Q4 2025	**Started**

12	ALL	Develop Renewal Program for Transport Asset Class (min 3 year outlook)	Tech Officer - Transport, Asset Inspectors	Council Staff	Annual Q2 (begin 2026)	**Started**
13	BUS SHELTERS	Develop Asset Condition Inspection Program and Implement	Asset Engineering	Council Staff	Q4 2025	**Started**
14	KERB AND CHANNEL	Develop Asset Condition Inspection Program and Implement	Asset Engneering	Council Staff	Q1 2026	**Unstarted**
15	CULVERTS / FLOODWAYS	Develop Asset Condition Inspection Program and Implement	Asset Engineering	Council Staff	Q1 2026	**Started**
16	ALL	Annual AMP Update (post Annual Reports, Budgets) to inform LTFP and Capital Works Programs	Tech Officer - Transport, Asset Engineer, Asset Management Officer	Council Staff	Annual Q2 (begin 2026)	**Started**
17	ROADS (SEALED AND UNSEALED)	Update Asset Register to FNQROC nomenclature	Asset Engineer, Asset Management Officer	Council Staff	Q4 2025	**Unstarted**
18	ALL	Investigate assumptions in Economic Development Plan and consistency with AM Plan and LGIP	Asset Engineering, Finance	Council Staff	Q2 2026	**Unstarted**
19	KERB AND CHANNEL	Update Asset Register (including assets on State Roads deemed Council responsibility under Cost Sharing Arrangement) inc. Parking Lanes	Asset Engineer, Asset Management Officer	Council Staff	Q2 2026	**Unstarted**
20	CULVERTS / FLOODWAYS	Develop internal Procedure for commencing and managing SARA Assessments	Asset Engineering, Planning Services	Council Staff	Q3 2026	**Unstarted**
21	ALL	Rectify inconsistencies between Asset Register and Spectrum Spatial Analyst (SSA), Delta, REFLECT (external Software)	Tech Officer - Transport, Asset Engineer, Asset Management Officer	Council Staff	Q2 2026	**Started**
22	ALL	Incorporate findings of Coastal Hazard Adaption Strategy Implementation Plan into AM Plan	Tech Officer - Transport, Planning Services	Council Staff	Q2 2026	**Unstarted**
23	CULVERTS / FLOODWAYS	Investigate design and budgetary impacts of adoption of latest Australian Rainfall and Runoff Climate Change Design Criteria	Tech Officer - Drainage	Council Staff	Q4 2026	**Unstarted**
24	ALL	Asset Maturity Assessment	Asset Engineer	Council Staff	Q2 2027	**Unstarted**
25	ALL	Asset Management Policy Review	Asset Engineer	Council Staff	Q2 2027	**Unstarted**
26	PATHWAYS	Develop Asset Condition Inspection Program and Implement	Asset Engineering	Council Staff	Q1 2027	**Started**

8.3 Monitoring and Review Procedures

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated annually to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget are to be incorporated into the Long-Term Financial Plan once completed.

The AM Plan has a maximum life and is due for complete revision every five (5) years as per the Asset Management Strategy outlined in the SAMP (2022). Annual post-budgetary revisions of the following (as a minimum) and their assessment against Performance Measures are required:

- Actual Budget vs Lifecycle Costing
- Risk Treatment Plan
- Demand Management Plan
- Improvement Plan

The above is to be released as updated versions of this report.

8.4 Performance Measures

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan,
- The degree to which the 1 to 5-year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AM Plan,
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans,
- The Asset Renewal Funding Ratio achieving the Organisational target (this target is often 90 – 110%).

9.0 REFERENCES

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10.0 APPENDICES

Appendix A Acquisition Forecast

A.1 – Acquisition Forecast Assumptions and Source

Acquisition Forecast taken from respective Capital Works Acquisition/Renewal split has been adopted as per Tech One project splits below.

Project	Renewal (%)	Acquisition (%)
DRFA 2023 Event Betterment Capital (TC Jasper)	25	75
DRFA 2023 Event REPA Capital (TC Jasper)		100
DRFA Jan 2025 Event REPA Capital (North & Far North Tropical Low)		100
Innisfail CBD Masterplan Upgrades	70	30
Mission Beach CBD Upgrade	90	10
PROGRAM - Bridge Renewals	100	
PROGRAM - Culvert Renewal	100	
PROGRAM - Eaton Estate Infrastructure		100
PROGRAM - Forward Survey & Design - Transport	75	25
PROGRAM - Guardrail Renewals & Upgrades	100	
PROGRAM - Kerb and Channel Renewals	100	
PROGRAM - Paths Renewal	100	
PROGRAM - Regional Pathway Expansion		100
PROGRAM - Regional Public Transport	100	
PROGRAM - Regional Reseals	100	
PROGRAM - Renewal of Floodways	100	
PROGRAM - Road Improvement Program	75	25
PROGRAM - Sealed Roads Renewal Program	100	
PROGRAM - Unsealed Road Renewal Program	100	
PROGRAM - Unsealed Roads Improvements	25	75
Stephenson Road Sealing Upgrade - SRA		100
Tully CBD Masterplan Upgrades	95	5

A.2 – Acquisition Project Summary

Year	Acquisition	Value
2026	Eaton Estate	3,118,495
2026	Stephenson Road sealing upgrade	7,000,000
2026	CBD Upgrades	1,808,870

A.3 – Acquisition Forecast Summary

Year	Constructed	Donated	Growth
2024	0	0	0
2025	200000	0	0
2026	17485490	0	0
2027	4263710	0	0
2028	2682710	0	0
2029	3127210	0	0
2030	2732710	0	0
2031	2732710	0	0
2032	1175000	0	0
2033	1175000	0	0
2034	1175000	0	0
2035	1175000	0	0

Appendix B Operation Forecast

B.1 – Operation Forecast Assumptions and Source

Operations Forecast using the following Cost Centres taken from 2024 Actuals.

- *1068 Transport Program Support*
- *1069 Road Operations*

Year	Operation Budget
2024	**2,694,880**

B.2 – Operation Forecast Summary

Year	Operation Forecast	Additional Operation Forecast	Total Operation Forecast
2024	2694880	0	2694880
2025	2694880	920	2694880
2026	2694880	80433	2695800
2027	2694880	19613	2776233
2028	2694880	12340	2795846
2029	2694880	14385	2808187
2030	2694880	12570	2822572
2031	2694880	12570	2835143
2032	2694880	5405	2847713
2033	2694880	5405	2853118
2034	2694880	5405	2858523
2035	2694880	5405	2863928

Appendix C Maintenance Forecast

C.1 – Maintenance Forecast Assumptions and Source

Maintenance Forecast using Cost Centres taken from 2024 Actuals.

- *1069 Road Operations*
- *1070 Roads*
- *1072 Bridges*
- *1073 Path & Cycleways*
- *1074 Public Transport Infrastructure*
- *1075 Town Centres*

Year	Maintenance Budget
2024	**5,052,988**

C.2 – Maintenance Forecast Summary

Year	Maintenance Forecast	Additional Maintenance Forecast	Total Maintenance Forecast
2024	5052988	0	5052988
2025	5052988	1720	5052988
2026	5052988	150375	5054708
2027	5052988	36668	5205083
2028	5052988	23071	5241751
2029	5052988	26894	5264823
2030	5052988	23501	5291717
2031	5052988	23501	5315218
2032	5052988	10105	5338719
2033	5052988	10105	5348824
2034	5052988	10105	5358929
2035	5052988	10105	5369034

Appendix D Renewal Forecast Summary

D.1 – Renewal Forecast Assumptions and Source
Assumptions and relevant information relating to the Renewal Forecast are included in Section 5.4.

D.2 – Renewal Project Summary
Specific Capital Projects are subject to change and have not been explicitly delineated in planned budgets or lifecycle costings for the purpose of the AM Plan, with the exception of those outlined in Appendix A.

D.3 – Renewal Forecast Summary

Year	Renewal Forecast	Renewal Budget
2024	15253881	14996516
2025	15253881	24771768
2026	15253881	28295716
2027	15253881	16600208
2028	15253881	16095577
2029	15253881	18999076
2030	15253881	14825000
2031	15253881	14825000
2032	15253881	14825000
2033	15253881	14825000
2034	15253881	14825000
2035	15253881	14825000

Appendix E Disposal Summary

E.1 – Disposal Forecast Assumptions and Source
There are currently no assumed Disposals in the Asset class.

E.2 – Disposal Project Summary
There are currently no assumed Disposals in the Asset class. This is subject to change pending investigation into the Organisation's Asset Rationalisation Program and future updates to the Maintained Road Network.

E.3 – Disposal Forecast Summary
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Table E3 – Disposal Activity Summary

Year	Disposal Forecast	Disposal Budget
2024	0	0
2025	0	0
2026	0	0
2027	0	0
2028	0	0
2029	0	0
2030	0	0
2031	0	0
2032	0	0
2033	0	0
2034	0	0
2035	0	0

Appendix F Budget Summary by Lifecycle Activity

Table F1 – Budget Summary by Lifecycle Activity

Year	Acquisition	Operation	Maintenance	Renewal	Disposal	Total
2024	0	2694880	5052988	14996516	0	22744384
2025	0	2694880	5052988	24771768	0	32519636
2026	16426995	2694880	5052988	28295716	0	52470580
2027	2506000	2694880	5052988	16600208	0	26854076
2028	925000	2694880	5052988	16095577	0	24768444
2029	1369500	2694880	5052988	18999076	0	28116444
2030	1175000	2694880	5052988	14825000	0	23747868
2031	1175000	2694880	5052988	14825000	0	23747868
2032	1175000	2694880	5052988	14825000	0	23747868
2033	1175000	2694880	5052988	14825000	0	23747868
2034	1175000	2694880	5052988	14825000	0	23747868
2035	1175000	2694880	5052988	14825000	0	23747868