



URBAN  
FOREST ASSET  
MANAGEMENT  
PLAN 2024-2033





Hazelwood Park

# EXECUTIVE SUMMARY

The objective of asset management is to ensure that assets provide their required levels of service in the most cost effective manner to cater for both present and future customers.

While trees are not considered financial assets in line with accounting standards or legislation, trees are a valuable part of the history, culture, heritage, and liveability of the City and play an important role in making the City of Burnside a healthy, livable, attractive area. As such, there is benefit in taking an asset management approach to the management of trees, and this Asset Management Plan (AMP) has been developed to focus on the City of Burnside's urban forest assets accordingly.

This plan specifies the requirements for effective management of these assets and the corresponding financial implications. The figures (condition and financial data) in this plan will be reviewed annually, with a full update completed every 4 years.

The scope of the plan is limited to public trees within verges and urban open spaces. While data for most street and major park trees have been collected, information on trees within the City's smaller parks and Hill Face reserves is pending and will be progressively collected over the coming 4 years.

Effective management of urban forest assets will contribute towards achievement of the following strategic plan objectives:

ENVIRONMENT:

- Adapt and mitigate for climate change
- Canopy cover, greening and open space
- Use natural resources efficiently and minimise waste
- Healthy habitats and biodiversity

PLACE

- Attractive streets and neighbourhoods with easy access and movement and encouragement of greener transport
- Character and heritage protected, cherished and celebrated

The valuation of the City's Urban Forest assets has yet to be determined, as it is a complex collection of inputs and data, including social, environmental and physical attributes. These are planned to be collected over the coming four years such that a valuation can be provided within the next iteration of this AMP. The projected expenditure necessary to meet the service standards for these assets averages around \$810,000 per year over the next 10 years. This is the average annual level of spend required to ensure all assets are maintained in accordance with service levels. Actual annual expenditure requirements will differ from year to year as specific assets are due to be renewed.

Community consultation feedback in relation to this Asset Management Plan was positive. When asked about trees on public land, 68% agreed that they were well-maintained and 76% agreed that they are valued.



# REVISION HISTORY

REVISION	DESCRIPTION	DATE
0.1	Draft for community consultation	May 2023
1.0	Final for approval	January 2024

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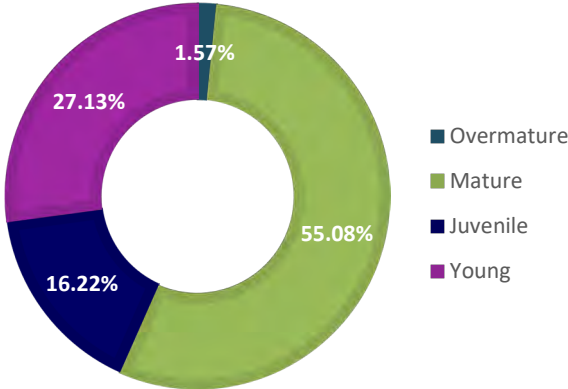


# URBAN FOREST SUMMARY

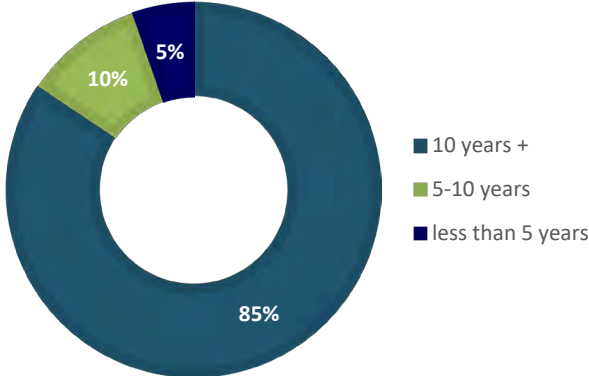
**TREE STATISTICS:**

40301 trees recorded  
 422 different species of trees across the City

**AGE PROFILE:**



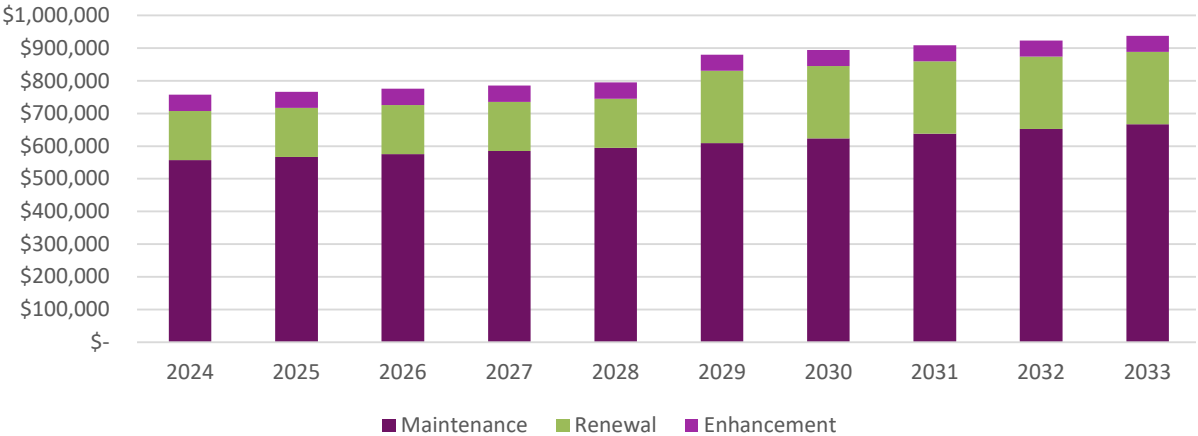
**USEFUL LIFE EXPECTANCY:**



**TREE SIZE:**

91.5% less than 2m circumference  
 5.9% 2m-3m circumference  
 2.7% greater than 3m circumference

**PROJECTED EXPENDITURE:**





# INTRODUCTION

The City of Burnside's urban forest assets provide valuable services to the environment and the community. These assets must be properly maintained and managed to continue to provide benefits for current and future generations. This plan demonstrates Council's responsive management of urban forest assets, and proposed funding requirements to provide the defined levels of service.

This plan, which focuses on public trees in verges and urban open spaces (excluding Hill Face Zone Reserves), demonstrates how Council will achieve this outcome by applying the principles of responsible Asset Management Planning and urban forestry best practice, the object of which is to deliver a defined level of service to existing and future customers, balancing risk and efficiency.

The key elements of urban forest management are:

- Recognition that trees are an intergenerational asset
- Taking a life cycle approach
- Recognition that trees have measurable value to the community and environment
- Developing cost-effective management strategies for the long term
- Providing a defined level of service and monitoring performance
- Understanding and meeting the demands of growth through demand management and investment
- Managing risks associated with asset failures
- Sustainable use of physical resources

- Continuous improvement in asset management practices


The contribution of urban forest assets towards strategic goals and asset management objectives will be achieved by:

- Stakeholder consultation through the annual community surveys to confirm and challenge service standards
- A regular program of inspections and monitoring activities to assess asset condition, manage risk and measure performance
- Application of systematic analysis to prioritise works and establish the most cost effective works programs for renewal and expansion
- Continuously reviewing and improving the quality of asset management and urban forest practices

This plan is to be read in conjunction with the Long Term Financial Plan, Annual Business Plan and Budget, Urban Forest Operational Manual, Burnside 2030 Strategic Community Plan, other Asset Management Plans, Disability Access and Inclusion Plan, Community Land Management Plans and relevant Council Strategies and Policies.

The key elements of this plan are:

- Levels of service
- Future demand
- Asset management and Urban Forestry practices
- Life cycle management
- Financial management
- Improvement and monitoring



Assets must be properly maintained and developed to continue to provide **service and benefits** for current and future generations

# LEVELS OF SERVICE INPUTS

## ANNUAL COMMUNITY SURVEY FEEDBACK<sup>1</sup>

- 75%** satisfaction with provision and maintenance of street trees
- 92%** satisfaction with provision and maintenance of parks and reserves
- 74%** satisfaction with protection of built and natural heritage
- 74%** satisfaction with water management initiatives
- 79%** satisfaction with restoration and protection of the City's biodiversity

## STRATEGIC COMMUNITY SURVEY FEEDBACK<sup>2</sup>:

**Q** How satisfied are you with the preservation and maintenance of the tree canopy in streets and reserves within the City of Burnside are?

<b>87%</b>	very satisfied	30%
	satisfied	46%
	neutral	11%
	dissatisfied	8%
	strongly dissatisfied	4%

Consistent with previous iterations of Council's Asset Management Plans, 'strongly agree', 'agree' and 'neutral' responses have been grouped in the community consultation feedback.

This grouping will be reviewed as part of a future review of the Asset Management Plans.

## ASSET MANAGEMENT PLAN COMMUNITY CONSULTATION FEEDBACK:

**Q** I believe trees on public land are:

well maintained	68%
valued	76%

## CITY OF BURNSIDE STRATEGIC COMMUNITY PLAN - BURNSIDE 2030:

### Priorities:

- Adapt and mitigate for climate change
- Canopy cover, greening and open space
- Use natural resources efficiently and minimise waste
- Healthy habitats and biodiversity
- Attractive streets and neighbourhoods with easy access and movement and encouragement of greener transport
- Character and heritage protected, cherished and celebrated

### Principles:

- Service Sustainability
- Communication and Engagement
- Improvement and Innovation
- Governing with Integrity

### LEGISLATIVE:

- Local Government Act 1999
- Civil Liabilities Act 1936
- Native Vegetation Act 1991
- Landscape South Australia Act 2019
- Water Industry Regulations 2012
- Electricity (Principles of vegetation clearance) Regulations 2021
- Planning, Development and Infrastructure Act 2016



Desired levels  
of service are  
informed by risk  
mitigation, legislative  
requirements,  
customer feedback  
and urban forestry  
best practice

# LEVELS OF SERVICE

The levels of service defined in this section will be used to:

- Clarify the level of service that our customers should expect.
- Identify works required to meet these levels of service.
- Enable Council and customers to discuss and assess the suitability, affordability and equality of the existing service level and to determine the impact of increasing or decreasing this level in future.

The adopted levels of service for urban forest assets are based on risk mitigation, legislative requirements, customer feedback and expectations, urban forestry best practice, and strategic goals.

The primary objective of urban forest assets is that they are suitably managed to provide valued services to the community, visitors, environment and fauna.

The following tables defines service levels for urban forest assets:

**TABLE 1: URBAN FOREST LEVELS OF SERVICE**

PERFORMANCE CATEGORY	COMMUNITY SERVICE EXPECTATION	PERFORMANCE MEASURE PROCESS	PERFORMANCE TARGET	CURRENT PERFORMANCE
Quality	Responsiveness to community concerns	Frequency of requests for service and complaints	Requests for service are investigated and responded to within 45 calendar days Complaints are investigated and responded to within 14 calendar days	NA* NA*
Quality	Amenity of assets	Assets are maintained in good condition	90% of the total urban forest to be of fair or above structure and health Juvenile trees are watered for 3 years post planting (summer season only)	94% (structure), 91% (health) On target
Quality	Survival rate of renewed and enhanced assets	Renewed and enhanced assets are planted and supported to ensure the best survival outcome	85% of the total urban forest's renewed and enhanced assets survive within the first 3 years	NA*
Safety	No personal injury or property damage incidents caused by defective or damaged assets	Defects are identified proactively	All assets are proactively inspected every 4 years at a minimum >95% of assets are determined as 'low' risk (TRAQ risk assessment framework)	On track^ 97%
Safety	Maintenance of assets	Reactive works on assets are undertaken in a timely manner	Low priority work carried out within 12 months Medium priority work carried out within 90 days High priority work carried out within 30 days Urgent priority work carried out within 24 hours	NA*
Legislative	Work undertaken on assets are of a high quality	Assets maintained to industry standard	All work undertaken on public trees is undertaken using AS4373-2007	On track

\*NA: methods for monitoring these performance measures have been implemented within Council's Customer Request Management system or Urban Forest Management system, which will allow these to be tracked and measured moving forward

^Council has protections under the *Local Government Act 1999* in relation to liability, damage or loss caused by trees provided Council takes reasonable actions to manage these assets appropriately.



# FUTURE DEMAND

This section of the plan analyses potential factors affecting demand including population growth, social and technology changes. The impact of these trends is examined and strategies recommended as required to modify demand without compromising customer satisfaction.

## DEMAND FORECAST

Factors affecting demand include (but are not limited to) population change, changes in demographics, seasonal factors, consumer preferences and expectations, economic factors, and environmental awareness. The population for the City of Burnside was 45,869 in 2021 and is projected to grow to around 51,035 by 2041 which may realise an increase in demand for use of verge space and a small increase in maintenance of our urban forest assets.

The demand for local government open space infrastructure is relatively constant, with open spaces and associated infrastructure highly valued and used by the local community. There will also continue to be an ongoing demand for renewing existing assets as they complete their useful life.

The continuing collection and improvement of asset data may also change operational approaches, programs and priorities.

## CHANGES IN TECHNOLOGY, ENVIRONMENT AND LAND DEVELOPMENT PLANNING

The following discusses at a high-level

potential changes and impacted in technology, environment and land development.

Emerging technologies and influences such as smart technologies, mobility solutions and data warehousing all have the ability to affect demand and practices, however it is not anticipated that these will produce a significant impact within the 4 year life of this asset management plan, apart from data warehousing. The recent implementation of a new state of the art tree management system has the greatest potential for change and improvement across all aspects of Urban Forest management.

Smart Cities technologies will also continue to be further investigated and trialled where appropriate.

Climate change is a major threat and opportunity to the success of the Urban Forest. Shifts in weather patterns and conditions will see changes in tree species, with new species becoming more viable. Maintaining resilience across the canopy through asset diversity will be critical to dealing with emerging threats such as water security, over grazing, pests, and disease.

Changes in the way private land is being utilised and developed is continuing to have a significant impact on the availability of suitable public verge space for tree planting. This is not limited to renewal or enhancement plantings, but also existing assets that may be affected by the change in surface and ground conditions. This is

mainly due to the subdivision of existing parcels of land into smaller lots which then require their own vehicle crossover within the verge. Recent changes in planning development legislation (PDI Act) has further removed the level of control Council has over these developments.

#### DEMAND MANAGEMENT PLAN

The key long term strategy is to manage demand so that services can still be provided into the future at a reasonable cost.

Council currently manages demand in relation to urban forest assets through a number of corporate and strategic documents, including:

- Strategic Community Plan
- Open Space Strategy
- Urban Tree Strategy
- Urban Forest Management Framework (under development)
- Community Land Management Plans
- Environmental Sustainability Strategy
- Individual Conservation Plans and Management Plans
- Operational Manuals

There are also a number of assets, locations and groups of assets that are managed under state government status, these include:

- Regulated and significant trees
- SA State Heritage Register items

#### NEW ASSETS FROM GROWTH

The City of Burnside is principally a fully developed urban area with relatively few new substantial developments; with the exception of the Glenside Redevelopment Project- the exact impact of which is not yet fully quantified.

There will continue to be a small number of new assets associated with development handovers, however (with the exception of Glenside) the increase is estimated to be minimal and as such will not impact on the service level or the ability/cost to provide the service.



# ASSET MANAGEMENT PRACTICES

This section identifies the strategies, practices and guidelines supporting Asset Management at the City of Burnside. While an asset management plan for urban forest assets is not legislatively required, this document has been developed to provide clear expectations and planning in relation to the City of Burnside's urban forest, in line with best practice urban forestry management.

## STANDARDS AND GUIDELINES

Asset Management practices and processes are guided and assisted by developed guidelines and standards.

- International Infrastructure Management Manual, NAMS (Provides guidance and direction on asset management policy and plan

development)

- AS ISO 55000:2014 Asset Management- Overview, principles and terminology (Provides guidance around frameworks for effective asset management)

## ACCOUNTING/FINANCIAL SYSTEMS

Council utilises 'TechnologyOne' software as Council's financial management and accounting system.

## ASSET MANAGEMENT SYSTEMS

Council utilises 'Forestreet' software as Council's Urban Forest asset management system, which is real time linked to TechnologyOne. This ensures there is full integration between operating and financial functions. Council utilises a combined

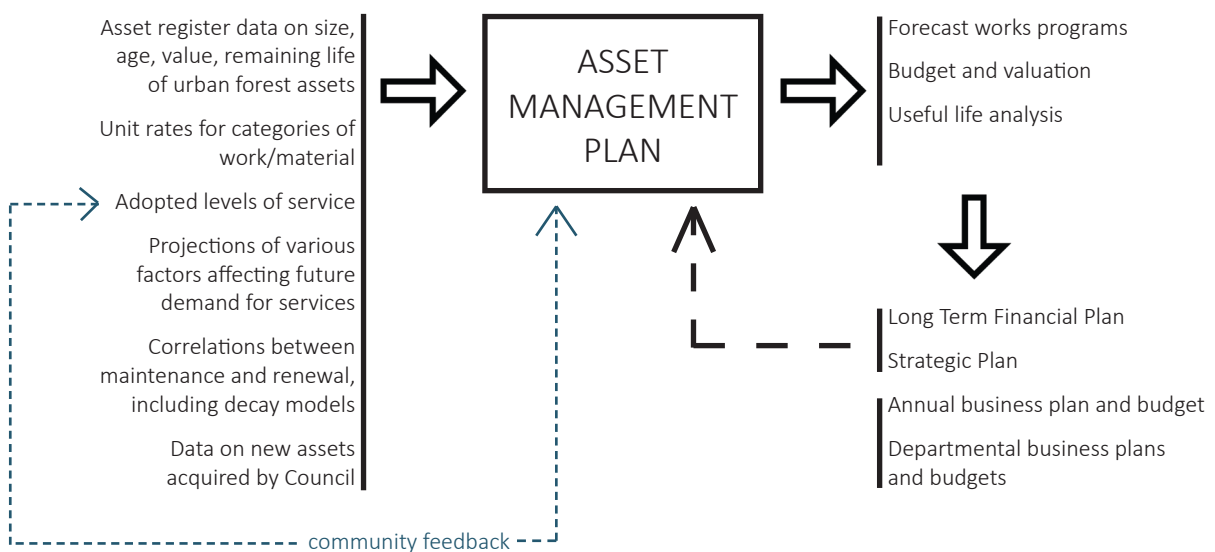


FIGURE 1: ASSET MANAGEMENT INFORMATION FLOWCHART

Financial / Operational Asset register that avoids any reconciliation issues that arise from two separate registers.

TechnologyOne IntraMaps is the corporate GIS. The GIS is predominantly used to show information such as cadastral, topographic, aerial information and asset location. It is a computer mapping system that graphically represents the geographic component of data that is housed within TechnologyOne. Basic data on individual tree assets is contained in IntraMaps. Forestry also utilises GIS and is the primary source of Urban Forest asset data.

## RISK MANAGEMENT

The objective of the risk management process with regards to urban forest assets is to ensure that:

- All significant operational and organisational risks are understood and identified
- The highest risks that need to be addressed in the short to medium term are identified
- Strategies and treatments to address risks are identified and applied

An assessment of risks associated with service delivery from assets has identified the most critical risks to Council. The risk assessment process identifies and assesses risks, develops a risk rating and develops a risk treatment plan for non-acceptable risks. The key risk management criteria relating to Council's urban forest assets include:

- Public health and safety
- Urban Forest health
- Environmental impacts (pest, disease and climate)
- Security and vandalism
- Business interruption
- Financial risk (escalating costs in deterioration)
- Asset damage through storms, flooding, water damage or events such as accidents.

Owing to increased rainfall and temperatures associated with climate change, there is a risk that assets will fail or need to be maintained earlier than expected. However, it is still unclear as to the exact impact of these changes.

According to the World Bank Group, "asset management, when undertaken according to best practice, is already one of the most significant climate adaptation strategies".

By continuing to ensure that the City of Burnside has the best possible information about its assets, the Council is able to better predict future demand and account for any potential required changes as a result of climate change.

Risk identification for urban forest assets can be identified from a number of resources such as:

- Proactive inspections
- Reports and complaints from general public
- Information obtained from incidents
- Data analysis

- Advice from industry and professional bodies
- Past experience
- Retention, qualification and experience of specialised arboricultural staff

Risk ratings are determined using the City of Burnside’s risk matrix:

TABLE 2: RISK RATING MATRIX

	Consequence				
Likelihood	Insignificant	Minor	Moderate	Major	Severe
Certain	11 Medium	16 High	20 High	23 Extreme	25 Extreme
Likely	7 Medium	12 Medium	17 High	21 High	24 Extreme
Possible	4 Low	8 Medium	13 Medium	18 High	22 Extreme
Unlikely	2 Low	5 Low	9 Medium	14 Medium	19 High
Rare	1 Low	3 Low	6 Low	10 Medium	15 High

Once risks have been assessed and rated, the most significant risks (those rated as high or extreme) are isolated for treatment/control. Those identified as moderate or low will continue to be monitored and reviewed if circumstances change.

Options to treat risk posed by open space assets include (but not limited to):

- Risk elimination
- Reduction in the cause or likelihood of the event occurring
- Reduction in the consequence or severity of the event if it were to occur
- Increasing maintenance and/or inspection frequency
- Initiating improvements, which could include amending operating processes or procedures
- Sharing risk through insurance or contracts
- Accepting the risk as-is

**TABLE 3: MAJOR RISKS RELATING TO URBAN FOREST ASSETS**

RISK	RISK RATING*	TREATMENTS IN PLACE	RESPONSIBILITY	DUE DATE
Natural Environment is not maintained or improved as result of Council's activities or operations	Low (6)	Annual program of operational maintenance (reactive and proactive) Approved Council policy and strategy on environment sustainability which provides strategic direction and action plan. Hill-face zone management framework- provides operational information on action required	Technical Services and Operations Environment and Infrastructure	Ongoing
Plant disease or environmental impact upon Urban forest	Medium (8)	Documented inspection and maintenance regimes Tree watering program- water truck used to water new trees to aid establishment or those that are reported as being under stress Operational manuals Documented and agreed routine proactive tree inspection program over a 4 year rolling program Species diversity to reduce the loss of a single species or family of trees	Technical Services and Operations Environment and Infrastructure	Ongoing
Plant disease destroying nursery stock or requiring it to be destroyed	Low (3)	Regular maintenance of site and vegetation on it Regular inspection of plant stock and destruction of any diseased plants or treatment Plant hygiene standards (separation of field equipment and cleanliness of nursery equipment)	Technical Services and Operations	Ongoing
Material reduction in number of volunteers	Medium (13)	Ongoing advertising for volunteer positions Volunteer recognition awards and social events Ongoing training and education opportunities provided to volunteers to ensure they have skills and knowledge required to undertake role	People and Innovation (includes WHS) Technical Services and Operations Community Connections (Volunteer Coordination)	Ongoing
Records being kept or maintained are not sufficient to allow Council to use the statutory immunity afford by Section 244 or 245 of the Local Government Act	Low (4)	Forestreet Tree Management System contains current tree history and maintenance records. Backed up in TechOne and Forestreet, Further information collected in ECM and CRM as part of customer requests and interactions	Technical Services and Operations	Ongoing
Failure of a tree which results in the death of a member of the public	High (15)	Rolling 4 year tree maintenance program to proactively assess the condition of trees. Note, trees with a higher risk category than low are assessed more frequently. Immediate action has been taken to address overdue tree assessments.	Technical Services and Operations	Ongoing

\*Risk rating = residual risk rating with treatments in place

RISK	RISK RATING*	TREATMENTS IN PLACE	RESPONSIBILITY	DUE DATE
Mobile data systems and applications are not able to be access by field staff	Medium (8)	Use of a service providers with greater up time and area of coverage Capacity to work off line and sync at a later date Multiple forms of comms- mobile and two way radio system (owned by Council)	Technical Services and Operations People and Innovation	Ongoing
Extreme weather events which result in requirement for significant unplanned capital renewal or maintenance works	Medium (14)	Creek line maintenance and improvement program Emergency Management plans and Crisis Management plans Depot receive and distribute BOM weather warnings as they are received which may allow for some planning and preparedness Regular inspection and maintenance program on Council owned trees ensures visible tree faults are detected, prioritized and fixed. Regular review of asset conditions- this helps with accurate assessment of useful life and replacement at an appropriate time. Council Policy on Watercourse Management	Technical Services and Operations Environment and Infrastructure	Ongoing
Assets not delivered or maintained in a safe condition or doesn't adequately fit the needs of users	Low (5)	Site specific reserve plans that specify how reserves will be maintained, used e.g. Hazelwood Park or Attunga Garden Timely and fit for purpose engagement with residents and stakeholder which is a critical input into the decision making process. Community survey, customer feedback and community engagement to ensure assets fit the needs of users Asset Management Plans, condition assessments, reactive and proactive maintenance programs,	Technical Services and Operations Environment and Infrastructure Community Engagement and Communications	Ongoing

## URBAN FOREST ASSET RISK MANAGEMENT

The inspection regime for urban forest assets is outlined below.

As advice is received of defects, safety or otherwise, Arborists make an assessment of how that issue is to be dealt with in terms of priority of attention. Priority of maintenance rectification is based on risk.

Prioritisation of response occurs during the inspection recording process. The response time will vary according to the hierarchy category, the location of the defect within the City, and the severity of the issue. These response times are documented as part of the Levels of Service.

**TABLE 4: URBAN FOREST ASSET INSPECTION REGIME**

Urban Forest Assets	<ul style="list-style-type: none"> <li>Proactive 4 yearly condition assessment of all trees, with high risk trees inspected more frequently.</li> </ul>
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# LIFECYCLE MANAGEMENT PLAN

This section outlines asset performance and condition information, and uses Asset Management principles to develop broad strategies and specific work programs to achieve the service standards previously outlined.

It presents an analysis of available asset information and the life cycle management plans covering the three key work activities to manage urban forest assets.

- **Maintenance Plan**- Activities undertaken to ensure efficient operation and serviceability of the assets. This will ensure that the assets retain their service potential over the course of their useful life.

- **Renewal Plan**- Provides a program of

progressive renewal of individual assets.

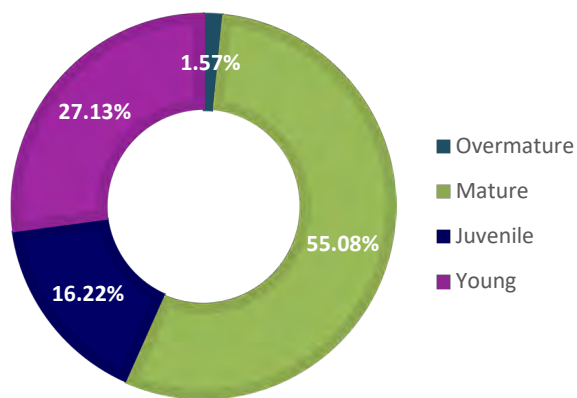
Deteriorating asset condition primarily drives renewal needs, with increasing maintenance costs also considered.

- **Enhancement Plan**- Provides a program of works to create new assets or substantially upgrade existing assets. Primarily driven by community, growth, social and/or environmental needs/desires.

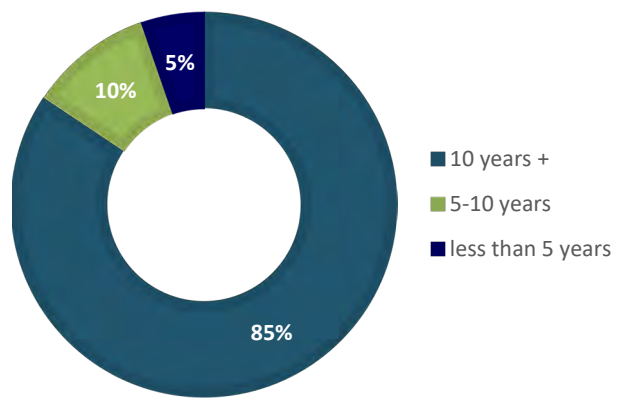


## PHYSICAL PARAMETERS

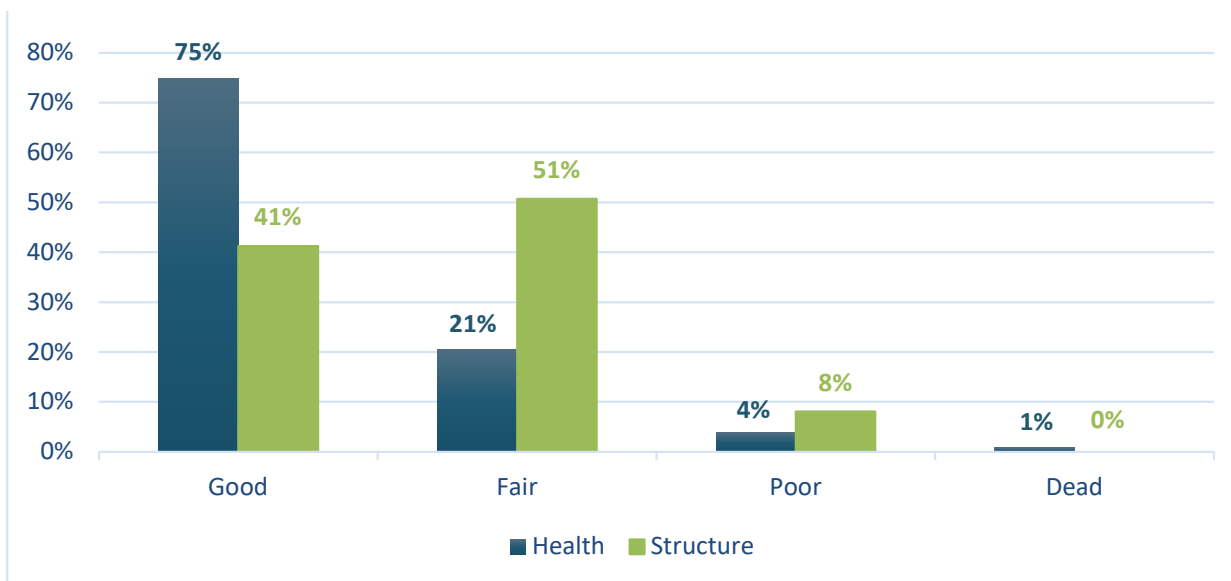
### AGE PROFILE



### USEFUL LIFE EXPECTANCY



## HEALTH AND STRUCTURE PROFILE





### ASSET CONDITION

Asset condition has been determined for Council’s Urban Forest assets. Council is committed to regular condition data collection in order to mitigate risk and make informed decisions when formulating forward Works Programs. Asset condition is determined through visual ground level observations undertaken under the International Society of Arboriculture's (ISA) Tree Risk Assessment Framework (TRAQ). The TRAQ framework includes the collection of a number of attributes against an asset which include –

- Targets – presence and frequency under the asset, such as people and property
- Site factors – the environment within which the asset sits, such as soils, weather, topography
- Health and structure – the appearance and vigor of the asset, such as foliage, pests, disease, previous failures
- Load factors – forces applied to the asset, such as wind, other vegetation, crown size and density
- Tree defects – within the crown, trunk, roots

Urban Forest asset conditions are measured using a Low to Extreme risk rating system where Low relates to an asset that poses a holistic low level of risk, and Extreme relates to an asset that poses an urgent level of risk. The chart provided shows the proportional condition and risk profiles of Urban Forest assets

### RISK PROFILE



**FIGURE 3: ASSET RISK PROFILE**

## ASSET VALUATIONS

While trees are not 'valued' for the purposes of financial accounting, there is a benefit in attributing a 'value' to trees to assist in conveying the benefits of these assets.

The valuation of Urban Forest assets is however complex and covers the key areas of physical, social, economic and environmental value. Unlike hard and fixed assets, Urban Forest assets, as organic assets, appreciate rather than depreciate, with a variable and unpredictable lifecycle.

Over the next four years, data will be collected to support the development and refinement of both individual tree valuations and an overall valuation of the Urban Forest.

An Amenity Tree Valuation formula, as defined in the Urban Tree Strategy 2014 – 2025: Technical Manual 2 – Public Amenity Tree Valuation, is utilised by Council for the formulation of tree removal valuations, as they relate to development activities. The formula is based on factors including tree condition, species type and growth rate, aesthetics value and locality values. It is recognised that this methodology requires modernisation and this is planned to be completed in due course.

The economic, social and environmental valuation of the Urban Forest as a whole is a

much larger undertaking and one that only a few places around the world have attempted. To provide some context, a 2018 study of 507 trees within the City's iconic Hazelwood Park (representing 48% of the park's total tree population) returned a valuation of \$8,789,879.

Over the next four years this valuation methodology will be further investigated and, if practical, implemented.

# MAINTENANCE PLAN

Routine maintenance is the regular on-going work necessary to keep assets operating, including instances where portions of assets fail and need immediate repair to make the asset operational again. Maintenance includes reactive and proactive work activities.

Reactive maintenance is unplanned repair work carried out in response to service requests and management/supervisory directions.

Proactive maintenance is work that is identified and managed through proactive asset condition assessments and associated support of juvenile and mature trees. Activities include physical tree maintenance, watering and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.

Projected maintenance expenditure over the next 10 years is provided as Figure 3.

### STANDARD AND SPECIFICATIONS

Typically Urban Forest assets are maintained to a risk rating of moderate or lower.

### MAINTENANCE EXPENDITURE

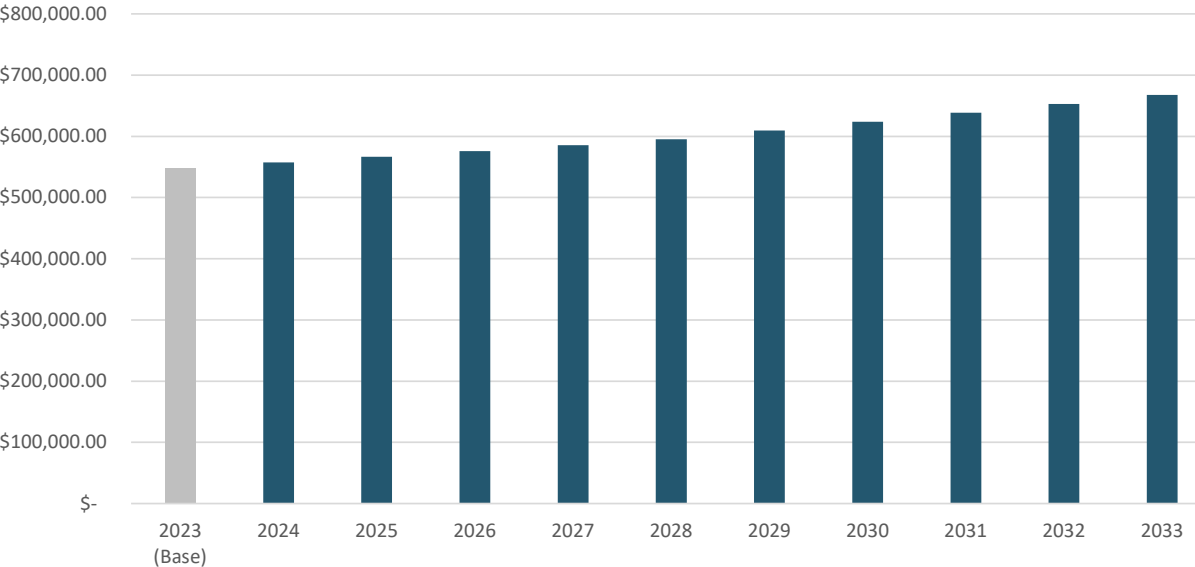


FIGURE 4: MAINTENANCE EXPENDITURE FORECAST



# RENEWAL PLAN

Renewal expenditure is major work that restores, rehabilitates, replaces or renews an existing asset to its original service potential. For Urban Forest assets this means maintaining current asset numbers (and canopy coverage) by the removal of a living or dead tree and replacement with a juvenile/young tree. This is important to maintain overall health, diversity and resilience across the Urban Forest. However Urban Forest assets are organic and as such are highly unpredictable when it comes to renewal programming. The first preference for any Urban Forest asset is its preservation but balanced against risk and effort.

Assets requiring renewal are identified from proactive and reactive assessments and logged

in the tree management system. The location of proposed renewals is prioritised based on the LiDAR tree canopy coverage data with preference given to areas with lower tree canopy coverage. However each potential renewal site is inspected to verify suitability for replanting. Verified renewals are scheduled into future planting programs, which are subject to approved annual operational budgets.

## REQUIRED RENEWAL EXPENDITURE

To date renewal programs of Urban Forest assets have been based on relatively static reoccurring operational budgets.

However based on the Useful Life assessments within the tree management system the



projected future renewal expenditure costs are summarised in Figure 5. Note that all costs are shown in current 2021/22 dollar values.

#### IMPACT OF DEFERRING RENEWAL WORKS

Renewal works may be deferred if the cost (or aggregate cost) is beyond the current financial ability to fund. This can occur when there are short term renewal profile peaks, or higher priority works are required on other infrastructure asset groups.

When renewal works are deferred, the impact of the deferral on the assets ability to still provide the required level of service will be assessed.

Although the deferral of some renewal works may not impact significantly on the short-term operation of the assets, repeated deferral will create a liability (backlog) in the longer term, and this needs to be taken into account before making a decision to defer. For the Urban Forest an inability to maintain asset numbers will mean potential reduction in future canopy coverage.

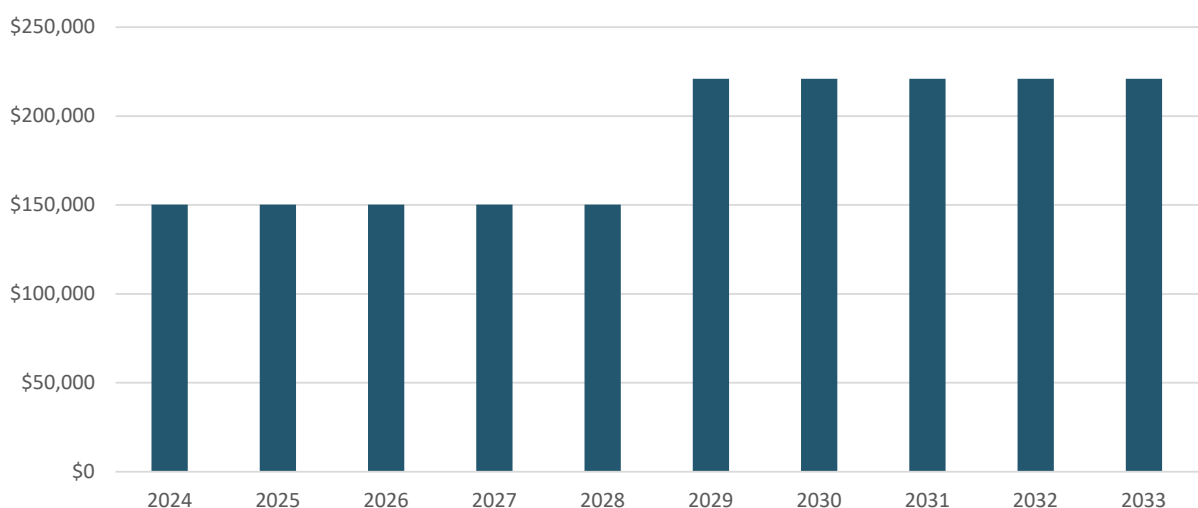


FIGURE 5: FORECAST RENEWAL EXPENDITURE BASED ON USEFUL LIFE EXPECTANCY

The graph above shows that over the coming 10 years increases in associated operational budgets may be needed to meet the theoretical renewal demand based on current useful life assumptions.

# ENHANCEMENT PLAN

New works are those works that create a new asset where one did not previously exist. Within the Urban Forest the opportunity for enhancement comes from vacant planting locations, land redevelopment or one-off projects such as tree groves. Noting that the number of vacant planting locations is currently limited, a city-wide audit needs to be undertaken within the life of this AMP.

## **SELECTION CRITERIA**

The need for new assets arises from various sources, including community requests, Council resolutions, proposals identified through strategic plans, or partnerships with other organisations. Potential proposals are inspected to verify need and to develop preliminary estimates. Verified proposals are ranked by priority and available funds and scheduled in future works programs.

## **FORECAST NEW ASSET EXPENDITURE**

The ability to deliver an Enhancement program is constrained by the operational budget available, physical resources (labour and plant) and the space to be able to plant new trees. Over 10 years it is anticipated that the City's Urban Forest will expand by an additional 8000 trees. This takes into account a nominal loss of trees and assumes the locations exist to plant them. Noting this number is purely public trees in verges and reserves and excludes the hills face zone (as this is the scope of this plan). To meet this target, investment in enhancement is forecast at approximately \$50,000 per year.



Michael Perry Reserve, Stonyfell



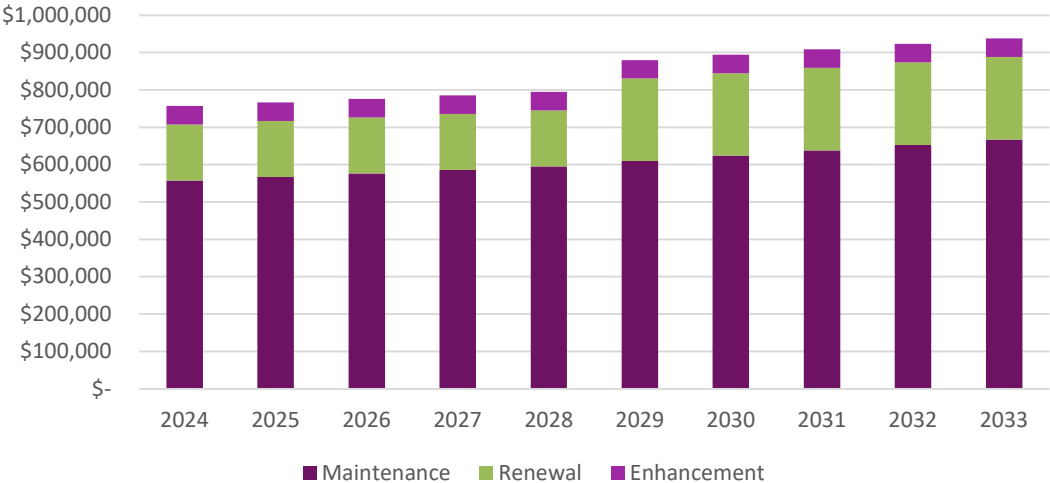
# FINANCIAL SUMMARY

This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan.

## FINANCIAL PROJECTIONS

Figure 6 highlights the financial projections for planned operating expenditure (maintenance, renewal and enhancement) for Urban Forest assets. The target is to retain relatively stable levels of operating expenditure for all asset types.

Projected expenditure is to be funded from Council’s operating budgets. The funding allocation is detailed in Council’s 10-year Long Term Financial Plan (LTFP)



**FIGURE 6: TOTAL FORECAST EXPENDITURE - URBAN FOREST ASSETS**

Figure 6 shows that, over the entire Urban Forest asset category there is significant amount of maintenance and renewal work over the next 10 years, as assets reach their typical end of useful life. Without additional funding, resources and plant a significant backlog of work will occur. This may also reflect in the risk profile changing with more assets becoming a higher risk thus potentially impacting personal safety and property.

[34] City of Burnside Urban Forest Asset Management Plan 2024-2033

## KEY ASSUMPTIONS

This section details the key assumptions made in presenting the information contained in this asset management plan and in preparing forecasts of required operating expenditure. It is presented to enable readers to gain an understanding of the levels of confidence in the data behind the financial forecasts.

Key assumptions made in this infrastructure and asset management plan are:

- All costs are shown in 2022/23 financial year dollar values.
- General macro assumptions have been made in the replacement of assets based on the asset type.
- The required expenditure assumes general intervention levels that do not take into account the volatility and complexity of the Urban Forest, and are based on the assumption that whole assets are replaced as opposed to discrete parts.
- The required expenditure also assumes that the community is content with the current levels of service across the entire asset category, which is confirmed through the consultation process for asset management plans. Should these levels of service be refined through future community consultation, it could have a significant impact on the intervention levels used and funding required



# PLAN IMPROVEMENT AND MONITORING

## MONITORING AND REVIEW PROCEDURES

This figures within this infrastructure and asset management plan will be reviewed annually as part of Council's long term financial plan review process and amended to recognise any changes in service levels, valuations, conditions and/or resources available to provide those services.

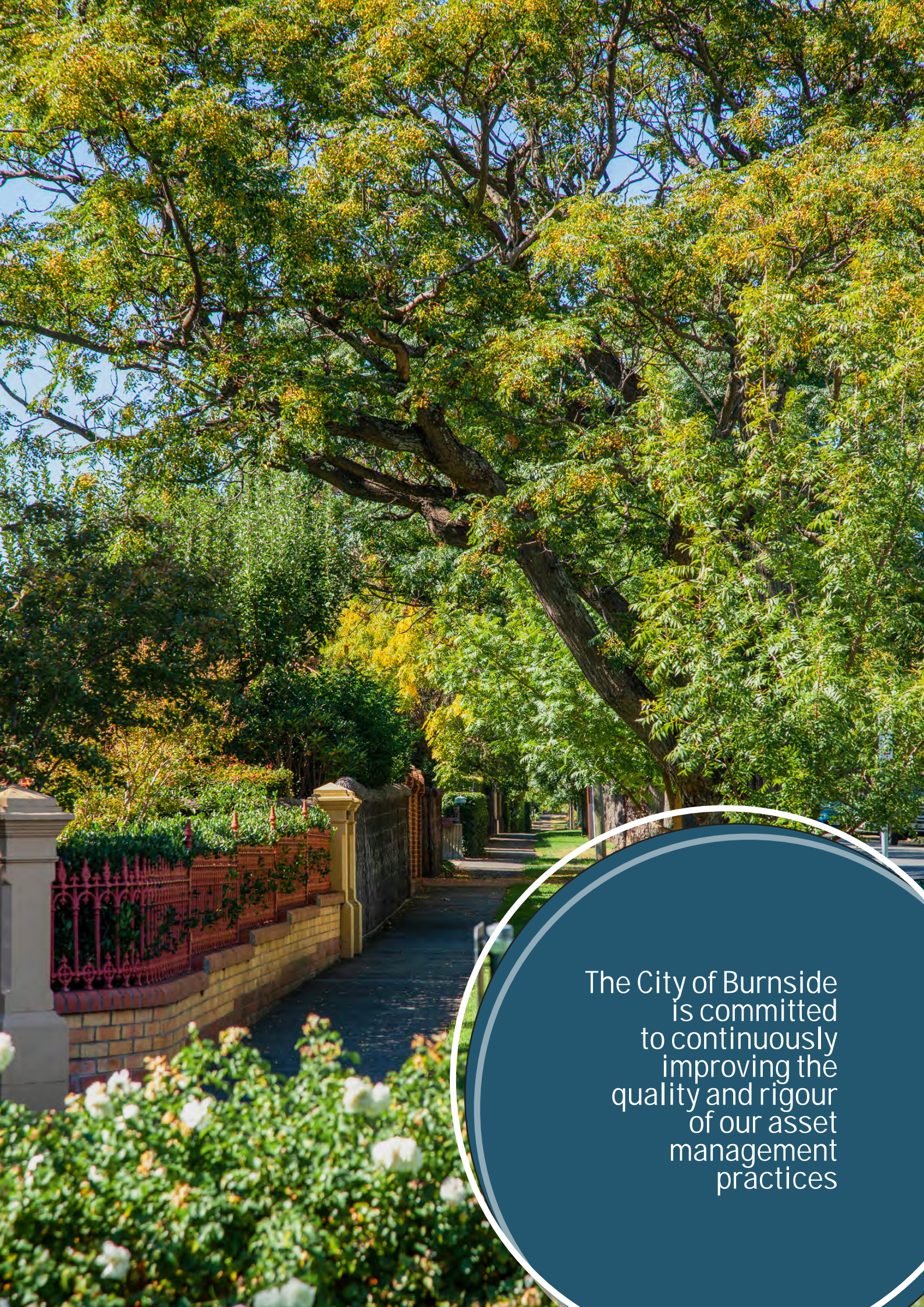
The Plan has a life of 4 years and is due for full revision and updating within 2 years of each Council election.

## IMPROVEMENT PLAN

Council is committed to working to continuously improve the quality and rigour of our Asset Management practices. The asset management improvement plan generated from this asset management plan is shown below.

**TABLE 5 IMPROVEMENT PLAN**

Item	Task	Responsible Department	Target Date	Funded By
1	Condition Assessment – as per levels of service, regularly review condition data in order to ensure the data upon which all funding implications are based is current	Technical Services and Operations	Ongoing	As per approved operating budget
2	Risk Assessment – examine and assess potential risks associated with urban forest assets	Technical Services and Operations	Ongoing	Internal Resources
3	Use feedback obtained from annual community survey to confirm and / or update asset management plan	Technical Services and Operations	Ongoing	Internal Resources
4	Renewal plan- continue to collect data on public trees in minor parks and hill face zone	Technical Services and Operations	Ongoing	Subject to approved operational budgets
5	Enhancement plan- undertake a comprehensive review of vacant tree planting locations within public verges	Technical Services and Operations	By 2023/24	Subject to approved operational budgets
6	Valuation- review the current amenity tree valuation formula	Technical Services and Operations	By 2023/24	Internal Resources
7	Valuation – Improve the quality of the data supporting asset valuations	Technical Services and Operations	By 2026/27	As per approved operating budget
8	Valuation- investigate an urban forest valuation methodology	Technical Services and Operations	By 2026/27	Subject to approved operational budgets
8	Operations Manual – Revise and publicly publish the manual	Technical Services and Operations	By 2023/24	Internal resources



The City of Burnside  
is committed  
to continuously  
improving the  
quality and rigour  
of our asset  
management  
practices

# GLOSSARY

	Term	Definition
A	Amenity value	The amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties, in an arms-length transaction
	Annual Required Renewal Expenditure (ARRE)	The amount needed to be spent in a given year to maintain assets to their agreed level of service.
	Asset condition assessment	The process of continuous or periodic inspection, assessment, measurement and interpretation of the resultant data to indicate the condition of a specific asset so as to determine the need for preventative or remedial action
	Asset management	The combination of management, financial, economic, engineering and other practices applied to physical assets with the objective of providing the required level of service in the most cost effective manner.
	Assets	Resources owned by the organisation which have future value.
B	Backlog	Refers to renewal work that has not been carried out, which is required to bring the condition of the asset up to a standard that will enable it to meet agreed service levels.
C	Cost of an asset	The amount of cash or cash equivalents paid or the fair value given to acquire an asset at the time of its acquisition, plus any costs necessary to place the asset into service.

Term	Definition
Current replacement cost (CRC)	The cost the entity would incur to acquire the asset on the reporting date.
Current replacement cost 'as new' (CRC)	The current cost of replacing the original service potential of an existing asset, with a similar modern equivalent asset.
<b>H</b> Heritage asset	An asset with historic, artistic, scientific, technological, geographical or environmental qualities that is held and maintained principally for its contribution to knowledge and culture and this purpose is central to the objectives of the entity holding it.
<b>L</b> Level of service	The defined service quality for a particular service from an asset. Service levels usually relate to quality, quantity, reliability, responsiveness, environmental, acceptability and cost.
<b>M</b> Maintenance and renewal gap	Difference between estimated budgets and projected expenditures for maintenance and renewal of assets, totalled over a defined time (eg 5, 10 and 15 years)
Maintenance expenditure	Recurrent expenditure, which is periodically or regularly required as part of the anticipated schedule of works required to ensure that the asset achieves its useful life and provides the required level of service.
<b>O</b> Operating expenditure	Expenditure which does not result or contribute to a physical financial asset. In relation to urban forestry, expenditure that contributes to the maintenance, renewal or enhancement of urban forest assets.
<b>P</b> Public Amenity Tree Valuation	The formula for determining the amenity value of a Council owned tree as defined in the Urban Tree Strategy 2014 – 2025: Technical Manual 2 – Public Amenity Tree Valuation
Proactive maintenance	Repair work that is identified and managed through a maintenance management system (MMS). MMS activities include inspection, assessing the condition against failure/breakdown criteria/experience, prioritising scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.
<b>R</b> Reactive maintenance	Unplanned repair work that carried out in response to service requests and management/supervisory directions.
Renewal	Replacement of assets at the end of their useful life

	Term	Definition
R	Risk management	The application of a formal process to the range of possible values relating to key factors associated with a risk in order to determine the resultant ranges of outcomes and their probability of occurrence.
S	Strategic plan	Documents Council objectives and goals for a specified period (3-5 yrs).
U	Useful life	It is the estimated or expected time between placing the asset into service and removing it from service.

 *City of  
Burnside*