open space
asset management plan

December 2011

Knox City Council

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Executive Summary

It is recommended that this Plan be read in conjunction with the revised Knox Open Space Plan and Knox Recreation Plan which set the strategic direction for open space management within the municipality.

Purpose of the Plan

To provide a strategic and practical framework to both Council and the community with regard to the management, protection and care of open space assets.

Knox Open Space

The current value of open space land and related assets owned by Council is $627M (2009/10 Financial Report). The public open land has been classified as follows (Refer Attachment 1):

- Active Open Space – 220.7 ha
- Passive Open Space – 432.1 ha
- Conservation Sites – 129.5 ha
- Other Public Open Space Land – 108.5 ha

Public open space ownership and maintenance responsibilities within the municipality are often shared with others making it difficult to communicate the extent of Council's influence over the appearance of the network:

- Council owned sites that are maintained by others – 114.7 ha (11 sites)
- Sites maintained by Council but owned by others – 118.3 ha (48 sites)

Asset Audit Results

The majority of Council's open space assets were found to be in good condition. Most open space sites were also found to have:

- Clear access and egress points on multiple sides at least 1.8 m wide
- Good levels of visibility with less than 50% of the perimeter blocked by non transparent fencing
- More than 80% of the surface area available for unencumbered community activities
- Low levels of shade coverage

Community Expectations

Community expectations and service levels will be detailed in the revised Knox Open Space Plan. This is expected to enable Council to better balance competing priorities, align its activities with community needs and assess the ongoing performance of its asset management practices.

In the absence of documented community service levels, satisfaction with Council's current service has been inferred from a review of customer requests for maintenance and responses to the Local Government Community Satisfaction Survey (LGCSS). The latest survey results suggest that the community is more satisfied with Council's recreation facilities than with the appearance of public areas. The most common maintenance requests raised by the community in 2010 related to mowing of undeveloped blocks, litter clearing, tree pruning and collection of fallen tree limbs.

The draft Open Space Asset Management Plan was open for community feedback in October 2011.

Managing Demand

In order to remain responsive to community expectations it is important that Council remains abreast of changes in all factors that are likely to affect demand for public open space. With

limited opportunity to increase the amount of public open space, demand management strategies are expected to continue to focus on enhancing the amenity of existing spaces. Council can influence demand via a number of tools:

- Planning scheme controls
- Enforcement of land title boundaries
- Partnerships with other authorities and private land owners
- Community awareness initiatives

Integrated Service & Asset Management

Open space assets support a range of services/functions that will be discussed in detail in the Open Space Plan

- Biodiversity
- People
- Sustainable Futures
- Leisure & Recreation
- Play for All
- Water Management
- Economic Development
- Cultural Heritage & the Arts
- Travel Movement & Connectivity

With the exception of Biodiversity, Sustainable Futures and Play for All, Council's open space services have been formulated and established many years ago. Service adjustments have tended to be iterative and informal with a reluctance to discontinue aspects of existing services.

Many improvement projects recommended in this plan seek to enhance the integration of decision makers. Given the large number of services provided, and the multitude of open space assets, many internal stakeholders are involved in the provision and management of open space. This makes coordinated decision making difficult. Officers responsible for business case preparation often have difficulty identifying synergies with projects that form part of a program managed by another Council department.

Recommended Improvement Projects

A total of 26 improvement projects have been identified and are summarised in **Attachment 8**. Implementation of these projects is expected to result in the following desirable outcomes:

- Improved Asset Knowledge and Data Management
- Strategic Investment in Asset Management
- Improved Risk Management
- Improved Integration of Decision Makers
- Better Meet Community Expectations
- Improved Financial Sustainability

Recommended Funding

Recognising that open space and other services delivered by Council all compete for the same pool of limited capital and operating funds, a predictive financial model was developed to demonstrate the impact of different funding decisions on open space asset performance over 20 years. The modelling suggests that the medium funding scenario is the most financially sustainable option.

Adoption of the recommended funding scenario, detailed in Chapter 8 and summarised in the table below, will allow Council to:

- Renew the backlog of failed assets within the next five years
- Ensure all assets are renewed at the end of their useful life, if required

- Continue Council's commitment to warm season grass conversions as well as parkland and planting renewals
- Increase tree pruning to better meet community expectations
- Undertake all recommended improvement projects over the next five years using minimal external support

Recommended Funding ($ '000)					
	2012/13	2013/14	2014/15	2015/16	2016/17
Capital Works – New/Upgrade					
Upgrades	$1,000	$900	$944	$972	$1,001
LTFS/Status Quo	$1,000	$900	$944	$972	$1,001
Funding Shortfall	$0	$0	$0	$0	$0
Capital Works – Renewal					
Renewal (incl. Disposal)	$1,581	$1,637	$1,694	$1,634	$1,692
LTFS/Status Quo	$1,100	$1,216	$1,252	$1,290	$1,328
Funding Shortfall	$481	$421	$442	$344	$364
Operating Budget – Maintenance					
Maintenance	$5,837	$6,068	$6,308	$6,557	$6,755
LTFS/Status Quo	$5,783	$5,957	$6,136	$6,320	$6,509
Funding Shortfall	$54	$111	$172	$237	$246
Operating Budget – Operational Improvements					
Improvement Projects	$15	$16	$16	$17	$17
LTFS/Status Quo	$0	$0	$0	$0	$0
Funding Shortfall	$15	$16	$16	$17	$17

Under the recommended funding scenario it is important that the objectives of Council's Asset Management Policy are applied. Upon approving a new or upgrade capital works project, appropriate lifecycle funding for maintenance and operation must be determined and committed within the operational budget. It is therefore important that Council staff have the necessary skills to estimate the lifecycle costs for all new and upgrade projects.

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CHAPTER 1 - SUMMARY

- Council owns or maintains 891 hectares of public open space.

- Knox residents also have access to large areas of regional parkland around the perimeter of the municipality including Jells Park, Dandenong Ranges National Park and Lysterfield Park. These are generally owned by the Department of Sustainability and Environment (DSE) and managed by Parks Victoria.

- Public open space land and related assets, owned by Council, have a current value of $627M *(2009/10 Financial Report)*.

- To facilitate management, the open space portfolio has been classified into four (4) categories, each with distinct management needs.
    - Active
    - Passive
    - Conservation Sites
    - Other Public Open Space

- Development and adoption of this Plan meets a number of Council policy and strategy objectives, as well as general requirements of Federal and State Governments:

    Internal Drivers
    - Council Plan 2009-13
    - Knox Vision 2025
    - Asset Management Policy
    - Strategic Asset Management Plan 2003-13

    External Drivers
    - Local Government and Planning Ministers' - National Asset Management and Financial Planning Framework
    - Municipal Association of Victoria (MAV) STEP Program

- This Plan forms part of a suite of other Asset Management Plans and is intended to assist Council as it works towards more sustainable provision and management of an appropriate open space network.

- The following strategic documents (due to be completed in 2012) should be read in conjunction with this Plan:

    - Knox Open Space Plan
    - Sporting Reserves and Facility Development Guidelines

- Implementation of the recommended improvement projects outlined in Chapter 9 are expected to contribute to:
    - Improved Asset Knowledge and Data Management
    - Strategic Investment in Asset Management
    - Improved Risk Management
    - Improved Integration of Decision Makers
    - Better Meet Community Expectations
    - Improved Financial Sustainability

- It is expected that this Plan will be reviewed and updated every five years.

1.1 BACKGROUND

The City of Knox covers an area of 114 square kilometres and is located at the foot of the Dandenong Ranges, approximately 25 kilometres east of the Melbourne CBD. Knox is surrounded by Dandenong Valley Parklands, Dandenong Ranges National Park, Churchill National Park and Lysterfield Park. There are also several linear reserves running through the municipality along the Blind, Ferny, Monbulk, Corhanwarrabul and Dandenong Creek corridors. These parks, as well as the many bushland reserves, provide for numerous passive recreational opportunities. In keeping with the Knox Vision for active communities and promoting active lifestyles, Council also provides the community with traditional sporting ovals for football and cricket, as well as sites for other recreational pursuits such as tennis, baseball, archery and netball.

Council seeks to maintain an attractive, accessible and sustainable open space network that meets current and future community needs. It is therefore important that the impacts of urbanisation, ageing infrastructure and climate change are strategically managed.

This Asset Management Plan demonstrates Council's improving maturity with respect to core asset management knowledge and documentation. The Plan is intended to assist Council as it works towards more sustainable provision and management of an appropriate open space network.

1.2 KNOX OPEN SPACE

Council owns or maintains 891 hectares of public open space, the distribution of which covers 870 sites. The public open space land and related assets owned by Council have a current replacement cost of $627M (2009/10 Financial Report).

To facilitate management of all open space owned and/or maintained by Council, the open space portfolio has been classified into four (4) categories, each with distinct management needs.

- Active
- Passive
- Conservation Sites
- Other Public Open Space Land

Definitions of each category are described in Chapter 2. A detailed listing of open space sites is provided in Attachment 1. It is worth noting that many sites include a combination of open space classifications.

Figure 1 below, illustrates the distribution of public open space within the municipality. It highlights the fact that not all open space available for community benefit is owned or managed by Knox City Council.

Figure 1 – Open Space Land within the City of Knox

Knox residents have access to large areas of regional parkland around the perimeter of the municipality. These are generally owned by the Department of Sustainability and Environment (DSE) and managed by Parks Victoria:

- Koomba Park, Nortons Park, Jells Park, Chesterfield Park and Tirhatuan Wetland Reserve (along Dandenong Creek) to the west

- Churchill National Park, Lysterfield Park and Dandenong Police Paddocks Reserve to the south
- Dandenong Ranges National Park to the east

These parks provide a diverse range of recreation opportunities and protect important flora and fauna. Such high quality facilities provide for picnicking, relaxing, sight seeing, walking, cycling, children's play and other activities. Any future direction regarding open space within the municipality needs to not only recognise Council's obligations in open space provision, but also consider the context of these large scale open spaces, which are already provided, owned and managed by authorities other than Council.

As illustrated in Figure 1 Melbourne Water, with its statutory responsibility for flood plain management is also involved in the management of large portions of open space land within the municipality. Melbourne Water has primary responsibility for the bed and banks of creeks, major floodways and retarding basins.

1.3 DRIVERS OF STRATEGIC ASSET MANAGEMENT

Development and adoption of this Plan meets a number of Council policy and strategy objectives, as well as general requirements of Federal and State Governments.

Council Drivers

Preparation of this Plan aligns with the principles of Council's overall asset management planning framework.

The Council Plan 2009-13 is Knox's key corporate document that supports the achievement of the Knox Vision 2025 over the medium term. The Council Plan identifies eight themes as the focus for action. The implementation and delivery of all themes are supported by this Open Space Asset Management Plan:

Healthy, Connected Communities	Improve the health and wellbeing of the Knox community.
Culturally Rich & Active Communities	Provide and support opportunities for community members to participate in a vibrant community life.
Dynamic Services & Facilities	Continuously improve the capacity of Council's services and infrastructure to best meet the community's needs.
Attractive & Vibrant Places	Improve the quality and sustainability of the built environment and ensure it enhances the city's leafy character and cultural heritage.
Accessible Transport Choices	Improve transport connectivity through the municipality through open space and transport infrastructure provision.
Sustainable Natural Environment	Protect and enhance the natural environment to ensure a green and leafy municipality.
A Prosperous Modern Economy	Attract and stimulate economic and employment opportunities through the provision of well managed open space.
A Well Governed & Leading Organisation	Ensure the highest standards and transparency of our governance practices and the capability of our organisation, and to improve the condition and suitability of the municipality's assets.

Council's *Asset Management Policy 2009* articulates Council's overarching commitment to asset management. A key policy statement is that "Council will continue to invest in

improving its asset management knowledge and commit to further research and development of asset management plans."

Council's *Strategic Asset Management Plan 2003-13* identifies several improvements required for the responsible management of all Council assets. One of the key recommendations (recommendation 18) outlines that individual Asset Management Plans for each asset category should be developed.

This Open Space Asset Management Plan is the fifth in Council's suite of Asset Management Plans. Plans already adopted by Council are as follows:

- Footpath & Shared Path Asset Management Plan (2005)
- Road Asset Management Plan (2007)
- Building Asset Management Plan (2009)
- Drainage Asset Management Plan (2010)

External Drivers

In order to foster a nationally consistent approach to asset management, the Local Government and Planning Ministers' Council developed a National Asset Management Framework in 2009 to focus on long term assets managed by local governments. For some time, most Victorian Councils have been part of the Municipal Association of Victoria's (MAV) asset management capacity building program, the STEP program. The development of a National Asset Management and Financial Planning Assessment Framework for Local Government replaces the assessment framework of the STEP program, and enables benchmarking and reporting to be undertaken at both State and National levels. One of the eleven elements of this new assessment framework is the requirement for Councils to work towards preparing documented asset management plans for all material asset categories. The framework also outlines key inclusions and components of a typical asset management plan, which are consistent with the recommendations of the International Infrastructure Management Manual.

The International Infrastructure Management Manual (IIMM) notes that there are benefits in accepting limited objectives for the first asset management plan and recommends that an organisation wishing to implement asset management effectively should produce a plan now, recognise its deficiencies and undertake the necessary improvement activities to enhance the plan. The IIMM recommends core asset management plans address and include best available current information and random condition/performance sampling, a simple risk assessment to identify critical assets, documentation of existing levels of service, a contrast of existing management strategies with opportunities for improvement, prioritisation of capital works using simple ranking criteria, basic financial forecasting and an identification of priorities for future asset management plan development and performance measures.

The development of this Open Space Asset Management Plan meets and exceeds the requirements of a core asset management plan, while at the same time acknowledging improvements required to begin progressing towards a more advanced level.

1.4 OBJECTIVES OF THIS PLAN

As well as the general themes outlined in the Council Plan 2009-13, it is anticipated that implementation of the recommended improvement projects outlined in Chapter 9 will contribute to improved management of Council's open space network and support a number of other strategic objectives for open space management:

- Improved Asset Knowledge and Data Management
- Strategic Investment in Asset Management
- Improved Risk Management
- Improved Integration of Decision Makers
- Better Meet Community Expectations
- Improved Financial Sustainability

1.5 PLAN SCOPE

Council's current asset knowledge and approach to public open space asset management is evaluated in this Plan. Recent performance, as measured by community satisfaction, asset condition, risk exposure and financial sustainability, is considered with a view to identifying gaps in current asset knowledge and service delivery. Strategic and operational techniques are proposed to address gaps and improve decision making across the asset lifecycle. A predictive financial model has been developed to highlight the long term implications of alternative open space funding decisions and assist future budget preparations.

Included Assets

- Council owned or managed land designated as open space and recorded in Council's Asset Management Information System (Lifecycle) and Geographic Information System (Latitude). Refer Attachment 1.
- Public open space related assets, constructed or installed within the open space network (as listed in Attachment 2) including: barbecues, fences, bins, park furniture, art works, sculptures, monuments, signs and sports ancillaries.
- Tree Reserves. These parcels of land contribute in some way to the overall open space network although their management is more aligned with roadside vegetation and street trees. For the purposes of this plan, total areas of tree reserve will be reported as part of the passive open space network, however tree reserves have not been audited.

Excluded Assets

- Open space land located within the City boundaries that is owned and managed by others (e.g. Koomba Park which is owned by the Department of Sustainability and Environment and managed by Parks Victoria).
- Buildings and minor structures located on open space land including public toilets, clubrooms and sporting pavilions. Management strategies for these assets are detailed in the Knox Building Asset Management Plan (BAMP).
- Council road reserves, including roadside vegetation. Management strategies for these assets are detailed in the Knox Road Asset Management Plan (RAMP).
- Footpaths and shared paths. Management strategies for these assets are detailed in the Knox Footpath & Shared Path Asset Management Plan (FAMP).
- Water bodies, wetlands, underground drainage and associated structures are managed in accordance with the Drainage Asset Management Plan (DAMP).
- Off street car parks. This asset class will be the subject of a separate Asset Management Plan to be developed in future years.
- Playgrounds. This asset class will be the subject of a separate Asset Management Plan to be developed in future years.
- Bridges & Boardwalks. This asset class will be the subject of a separate Asset Management Plan to be developed in future years.
- Rights of way that are listed in Council's Public Road Register. Assets constructed on these sites are managed in accordance with the Knox Road Management Plan (RMP).
- Street trees. These assets will be the subject of a separate Street Tree Asset Management Plan (STAMP) to be developed in future years. The STAMP will also detail the management of Tree Reserves.
- Building surrounds associated with Council buildings. These will be considered in greater detail in future revisions of the BAMP
- Council owned land leased to others and not accessible to the community – generally for agistment (e.g. sites in Lysterfield and Bayswater)
- Specific sites
  - Knox Transfer Station – this site is Council owned but managed under contract. It is not deemed public open space.

- Vineyard – this site is Crown land, with Council acting as a committee of management. The site is leased to community groups and is not accessible by the general public. It is therefore not deemed public open space.
- Waterford Valley Golf Course – while this site is Council owned, it is managed under a long term lease with a private operator. For the purposes of this plan, the total area of Waterford Valley Golf Course will be reported when discussing the overall active open space network, however this site has not been audited nor has its management been discussed. This area is of considerable environmental significance for flood mitigation and retention of habitat for biodiversity, and although not managed by Council, there are detailed provisions in the lease agreement to ensure the lessee manages the space in accordance with Council's expectations, is compliant with relevant environmental legislation and recognises the Environment Management Plan and Drainage Agreement in place.

1.6 RELATED STUDIES & STRATEGIES

Key documents that have informed the strategic direction of open space management in recent years are listed below:

- 2008/2018 Sustainable Environment Strategy (August 2008)
- Recreation Plan 2004-2013 (September 2004)
- Sporting Reserves and Facility Development Guidelines (May 2003)
- Open Space Plan 2004-2014 (May 2004)

Other relevant Council studies and strategies are listed and summarised in Attachment 3. This Asset Management Plan draws on the analysis and principles presented in relevant documents. It does not duplicate work carried out within other documents.

It is important to note that both the Open Space Plan and the Sporting Reserves and Facility Development Guidelines are due to be reviewed during 2011/12. These will inform the future direction of passive and active open space management within the municipality.

In particular, extensive collaboration has occurred in the development of both this Open Space Asset Management Plan and the Open Space Plan to ensure that this document is consistent with the overarching vision of open space outlined in the Open Space Plan. While this Asset Management Plan is due to be finalised before the Open Space Plan, links between the plans are documented throughout this plan, assumptions are qualified where required and it is acknowledged that some aspects of this plan may need to be revised at a future date as a result of recommendations and direction from the Open Space Plan. The table below outlines how the Open Space Plan is expected to align with this asset management plan.

OSAMP Chapter	Relationship to revised Open Space Plan
1 Introduction	Revised Plan is one of the key strategic documents that are related to this Plan
2 Open Space Assets	Revised Plan is expected to incorporate: a revised passive open space hierarchy which can be: • Included as a parameter in future ranking of capital works projects; • Inform development of appropriate maintenance, design and other service levels for different hierarchy classifications; • Align maintenance budgets with asset criticality as defined by the hierarchy
4 Meeting Community Expectations	The revised Open Space Plan is expected to: • Provide more detail regarding stakeholder needs and expectations. • Document broad customer service levels in a manner that can be translated, at a later date, into technical service levels. • Include measurable target service levels that Council can aim to achieve when upgrading the passive open space network • Propose a methodology for future community engagement with regard to open

OSAMP Chapter	Relationship to revised Open Space Plan
	space.
5 Understanding Demand	The revised Open Space Plan is expected to explore demand for passive open space in more detail.
7 Service & Lifecycle Management	The revised Open Space Plan considers nine open space lenses which represent the services that open space assets support. *(Biodiversity, Sustainable Futures, Water Management, People, Cultural Heritage and the Arts Leisure & Recreation, Play for all, Economic Development, Travel, Movement and Connectivity)* It is expected that the revised Open Space Plan will: • Recommend service adjustments • Provide strategic direction for Council's future approach to Asset Option Analysis, Design and Creation (including upgrades). • Include a revised workflow method for integration of decision makers that involves consideration of all services/lenses. • Consider the scale and layout of open space and indicate key factors to be assessed when considering disposal opportunities.
8 Financial Sustainability	The predictive financial model presented in this Chapter should be updated in the future to incorporate the financial impact of implementing asset upgrades and disposals likely to be recommended in the revised Open Space Plan. Any recommended changes to maintenance service levels should also be costed by the Parks Services team and incorporated into the model to determine the impact on long term financial sustainability.
9 Improvement Recommendations	Implementation of the following improvement projects will draw on information expected to be detailed in the revised Open Space Plan: Project 4. Review Operating Budget Structure Project 11. Review Maintenance Service Levels Project 14.Service Level- Community Consultation Project 23 Service –Asset Management Integration Project 26 Update Predictive Model

Table 1 – Relationship between the Open Space AMP and the revised Knox Open Space Plan

1.7 RESPONSIBLE COUNCIL DEPARTMENTS

A number of Council departments are involved in the management of Council's open space assets. The Sustainability department is responsible for setting the strategic direction of Council's passive open space network and conservation sites. The Youth Leisure and Cultural Services department has this responsibility for all active open space sites.

Maintenance is managed by two teams. The Bushland Crew maintains and renews all conservation sites, while the Parks Services team is responsible for the maintenance of passive and active open space.

Other internal stakeholders include:

- Works Services
- Assets
- City Planning
- Strategic Economic Development
- Governance
- Project Delivery

Responsibilities of all departments involved in open space asset management are discussed in Chapter 7 of this plan.

A Reference Group made up of representatives from all relevant Council departments was established during the development of this plan. The Reference Group was consulted throughout the process to ensure the plan accurately represents current practice, to assist in the identification of gaps, to provide relevant information and to ensure that improvement recommendations are reasonable.

1.8 PLAN IMPLEMENTATION & REVIEW

All internal stakeholders have a significant role to play in the delivery of sustainable open space asset management and the implementation of improvement recommendations presented later in this Plan.

The Asset Strategy team is responsible for the review and update of this Plan. It is expected that the Plan will be reviewed and updated every five years. The review will focus on updating the predictive financial model, presented in Chapter 8, and monitor the implementation of recommended improvement actions.

Chapter 2   Open Space Assets

CHAPTER 2 - SUMMARY

- Council's public open land has been classified as follows:
    - Active Open Space – 220.7 ha
    - Passive Open Space – 432.1 ha
    - Conservation Sites – 129.5 ha
    - Other Open Space Land – 108.5 ha
- Public open space ownership and maintenance responsibilities within the City is shared with others:
    - Council owned and maintained sites – 657.8 ha (828 sites)
    - Council owned sites that are maintained by others – 114.7 ha (11 sites)
    - Sites maintained by Council but owned by others – 118.3 ha (48 sites)
- Formal agreements, that include documentation of demarcation of responsibilities, have not typically been developed for sites wholly, or partly owned, by parties other than Council. This makes it difficult for Council officers, including customer service staff, to be sure of Council's responsibilities when questions regarding maintenance responsibility are posed.
- Adoption of a hierarchy supports efficient open space asset management practices by providing rationale for variation of standards across each classification. Council currently has a hierarchy of Active and Passive Open Space sites. There is no hierarchy for Conservation Sites. The revised Open Space Plan is expected to include a more detailed Passive Open Space and Conservation Site hierarchy.
- Financial valuation is not reflective of the value that the community places on open space. Council's Public open space land and infrastructure components have a combined value of $627M. The land component represents 33% of Council's total fixed asset and land portfolio ($1.8B). The open space infrastructure assets represent only 1.4% of this.
- Since 2006/07, the maintenance budget for open space has been increasing. In 2010/11, Council spent $8,400 per ha.
- The current format of the maintenance budget makes it difficult to decipher the type of work undertaken during the course of the year. Clear distinction of routine and reactive maintenance expenditure on passive and active open space is not available.
- Since 2008/09, there has been a decline in renewal funding. In 2010/11, open space renewal funding ($1.25M) represented 6.9% of the total renewal program ($18.077M).
- Investment in open space new/upgrade projects has been increasing since 2006/07. In 2010/11 it was $3.45M and represents almost 12% of the total New/ Upgrade budget.
- Council is able to finance most open space capital projects via the Open Space Reserve with minimal reliance on rate funding. This Reserve has been growing in recent years and growth is expected to continue as significant infill development, continues.
- Improvement recommendations:
    - Develop demarcation agreements and a GIS Layer to display demarcation of ownership and maintenance responsibilities with other authorities including Melbourne Water and Parks Victoria
    - Develop an approach for non-financial valuation of open space
    - Review operating budget structure to facilitate more accurate reporting of maintenance expenditure, to enable future analysis to clearly demonstrate to the community the financial impact of adjustments to the standard of open space maintenance.

2.1 INTRODUCTION

Open space is critical to the visual character of the municipality and essential to the health and wellbeing of the local community. Council is currently responsible for the management of approximately $1.8 billion worth of land and infrastructure assets (current replacement cost). In 2009/10, open space land represented 33% of Council's total land and asset base. On the other hand, open space assets make up only 1.4% of the asset base. Although these assets are minor in a financial sense they contribute to the useability of the network and must therefore be managed appropriately. A list of open space asset types is provided in Attachment 2.

This Chapter outlines Council's existing open space asset portfolio. The following aspects are described:

- Open space classifications
- Responsibilities of ownership and occupancy
- Passive and active open space hierarchies
- Open space asset remaining life estimates
- Asset valuations
- Recent maintenance, renewal and upgrade expenditure

2.2 OPEN SPACE CLASSIFICATIONS

To facilitate management of all open space owned and/or maintained by Council, the open space portfolio has been classified into four (4) categories, each with distinct management needs. Definitions of each category are provided below. A detailed listing of open space sites is provided in Attachment 1. It is worth noting that many sites include a combination of open space classifications.

Active Open Space   **220.7 ha**

General: Playing surfaces designed for multiple formal sporting activities and outdoor games. These are suitable for use by various sporting groups and include: football, cricket, baseball and soccer grounds.

Specialist: Playing surfaces designed to provide for a single sport such as: lawn bowls, tennis, netball, golf. The management of these open space areas is specialised and distinct from the management of general active open space.

(Note that Active Open Space may support both Structured and Unstructured Recreation.)

Passive Open Space   **432.1 ha**

Land developed to improve the visual character of the urban
environment.   Space for informal recreation, socialising, play,
performance, relaxation and exercise (such as walking and cycling).
Road closures are included in this classification (7.6 ha) as well as tree
reserves (47.7 ha).

Conservation Sites   **129.5 ha**

Significant natural heritage areas where fragments of the pre-European
ecosystem have been preserved and reinvigorated.

(For the purposes of this plan, the term 'conservation' is used
consistently to refer solely to the conservation of the natural
environment.)

Other Public Open Space Land   **108.5 ha**

Sites owned (or partially owned) by Council that have no current
assigned use.

(includes Stamford Park and Eastern Regional Precinct sites which are
currently under development)

Figure 2 – Open Space Land (distribution by category definitions)

Figure 3 below, illustrates the distribution of each category of public open space within the municipality.

Figure 3 – Open Space Land Classifications

2.3 PUBLIC OPEN SPACE OWNERSHIP

The breakdown of ownership and maintenance responsibility of active and passive open space land within the municipality is shown in Table 2.

Description	Active	Passive	Conservation	Other	Total
Council owned and maintained	**88.1 ha**	**385.8 ha**	**102.8 ha**	**81.1 ha**	**657.8 ha**
Includes the majority of open space sites within the municipality, major reserves and road closures. Tree reserves (47.7 ha) are also included in this figure as they contribute in some way to the open space network,					828 sites
Council owned but not maintained	**111.4 ha**	**1.2 ha**	**0 ha**	**2.0 ha**	**114.7 ha**
Includes some miscellaneous parcels of land and bowls clubs, where the sites are maintained by other parties. Waterford Valley (110 ha) is also included in this figure as it contributes in some way to the open space network, although it is managed by others.					11 sites
Council maintained but not owned	**21.2 ha**	**45.1 ha**	**26.7 ha**	**25.3 ha**	**118.3 ha**
Includes sites such as Eastern Recreation Precinct, Wantirna Reserve, Lewis Park and Bayswater Secondary College, which are entirely or part maintained by Council but owned by other authorities.					48 sites

Table 2 – Open Space Land (distribution by ownership/maintenance)

Notes:

1.   17 sites have shared ownership

2.   All area calculations exclude carpark areas or Council owned land which is not open space (e.g. Council building sites)

The vast majority of public open space subject to this plan is both owned and managed by Council. On the other hand, forty eight (48) public open space sites within the municipality are either wholly or partly owned by parties other than Council, yet are maintained by Council. Formal agreements, that include documentation of demarcation of responsibilities, have not typically been developed for these sites. This makes it difficult for Council Officers, including customer service staff, to be sure of Council's responsibilities when questions regarding maintenance responsibility are posed.

The full listing of these sites is located in Attachment 4.

Owners of these sites include the following:

- VicRoads
- Melbourne Water
- Crown Land
- Department of Sustainability and Environment
- Department of Education
- Neighbouring Councils
- Vic Track
- Private owners

The Knox Sporting Reserves & Facility Development Guidelines noted that Council should not underestimate the risk associated with Council using sporting ovals owned by others (including the Department of Education) as, in the absence of clear agreements, these could be withdrawn from community use.

As indicated in Table 2, Council owns 11 sites that it does not maintain, including the Waterford Valley Golf Course site. As outlined in Council's Building Asset Management Plan, ownership of land implies ownership of fixtures constructed on that land. While it is possible to identify an array of legal obligations and risks, such as those imposed by various Acts,

Regulations and common law, the principal obligations and risks facing Council, as a land owner, are those relating to injuries caused to people present on these sites.

Information detailed within formal agreements (leases, licences or seasonal tenancy agreements), or by Committee of Management status, in the case of Government land, is integral to the complete understanding of the respective roles, obligations and risks pertaining to the use of public open space sites. This is particularly significant in instances where assets have been constructed on Council-owned land by a party other than the land owner.

2.4 HIERARCHY

The International Infrastructure Management Manual recommends that core asset management plans identify critical assets and events. Critical assets are defined as those which have a significant consequence if they become unable to deliver the expected service level. To this end, the establishment of an asset hierarchy is an important part of the process of identifying critical assets.

Adoption of a hierarchy supports efficient open space asset management practices by providing rationale for variation of standards across each classification. Once adopted, the hierarchy can be used to prioritise delivery of the following programs:

- Renewals
- Upgrades
- Inspections

The hierarchy could also be used to refine current maintenance service levels. In particular, defect intervention levels and target timelines for rectification of issues could be adjusted to prioritise repair of assets that have a higher priority hierarchy classification.

2.4.1 Active Open Space

The Knox Sporting Reserves and Facilities Development Guidelines were developed in 2003 and are currently being reviewed. These guidelines describe the hierarchy applicable for both building infrastructure and sports fields on active open space within the municipality. The hierarchy reflects the use of the sites. It was developed based on Council's objectives, the needs of local residents and the expectations of local clubs and associations. Consequently, a four-tiered hierarchy was formulated to cater for Regional, Municipal, Local and School Level facilities. A number of sites have multiple hierarchy classifications (e.g. one oval may be Municipal, while the adjacent one may be Regional). The hierarchy reflects the capacity of each reserve and its associated facilities to cater for the needs of community sports groups and is used to assist with the planning and development of sporting infrastructure.

Hierarchy Classification	Description	Number of locations
Regional	Club competes at the top end of the competition organised by the relevant association and spectator numbers are high. Examples of Regional Level facilities already provided in the municipality include: Bayswater Park No1 Oval, Knox Park Athletics Track, Gilbert Park and Knox Regional Netball Centre	1 oval 1 athletics track 1 softball facility 1 netball facility

Municipal	Typically designed to cater for the senior clubs that compete in the municipality, but do not compete at the Regional Level. Some clubs using Municipal Level facilities will field senior and junior teams. It is proposed that the Municipal Level facilities cater primarily for senior teams.	19 ovals/pitches 1 tennis facility 1baseball facility 1 BMX track 1 dog obedience area
Local	Designed to cater primarily for junior level sport. However, they may also be used by adult teams at the lower end of the competition standard, or by clubs that have teams playing at more than one reserve.	35 ovals/pitches 11 tennis facilities 6 netball facilities 1 athletics track (grass) 4 baseball facilities
School	Owned and managed by the Department of Education, Knox City Council has entered into agreements to undertake ground maintenance work, in return for community access to school sports grounds. The arrangement provides local schools with a low cost method of maintaining grounds and the community with access to additional sports grounds.	8 ovals/pitches 1 netball facility

Table 3 – Active Open Space Hierarchy

Source: Knox City Council Sporting Reserves and Facilities Development Guidelines (May 2003)

Development standards aligned with each hierarchy level are outlined in Chapter 4 and Appendix 2 of Council's Sporting Reserves & Facility Development Guidelines (May 2003). These guidelines are due to be reviewed in 2011/12. Until then, the existing document provides guidance for Council and clubs regarding future development of pavilions and the following open space assets:

- Playing Surfaces
- Cricket Practice Wickets
- Fencing
- Sports Lighting

Aside from these development guidelines, the hierarchy is currently not used to prioritise capital works (renewal and upgrade) nor is it used to inform the frequency and service levels of maintenance activities undertaken on Council active open space. There is an opportunity, once the guidelines are reviewed, to utilise the hierarchy in capital works prioritisation and in setting appropriate maintenance, renewal and design service levels.

2.4.2 Passive Open Space

The original Open Space Plan 2004-2014 categorised all Council open space into four main levels of hierarchy. The hierarchy features are summarised in the table below.

Hierarchy Classification	Size / Catchment	Number of Sites
Regional	Greater than 4 ha Regional Catchment	4
District	Mostly 2 - 4 ha District Catchment	36
Local	Mostly 0.5 - 1.0 ha Within approx. 500 m of most dwellings	134

Neighbourhood	Less than 0.5 ha Includes road closures Within approx. 300 m of most dwellings	230

Table 4 – Passive Open Space Hierarchy

Source Knox City Council Open Space Plan 2004-2014

Although the hierarchy above is likely to be superseded shortly, the initial categorisation of each open space site was based predominantly on size. The same hierarchy was adopted for both the active and passive components. While there is some degree of alignment with this hierarchy and the hierarchies for active open space and playgrounds, there are also a number of inconsistencies. For example, Stud Park Reserve is listed as a District Park (Open Space Plan 2004-2014) but as a Local Level facility (Sporting Reserves and Facilities Development Guidelines May 2003).

The Open Space Plan is currently being reviewed. The review is intended incorporate a revised passive open space hierarchy which will consider a broader range of features than just site size and catchment. In a similar fashion to active open space, there is an opportunity to utilise the revised hierarchy in future capital works prioritisation and in setting appropriate service levels.

2.5 ANNUAL ASSET VALUATIONS

Council's annual financial reports are prepared in accordance with relevant accounting standards, including AASB 116, as well as Council's Fixed Asset Accounting Policy. In line with these standards, assets purchased or constructed which have a value above the prescribed threshold level, are recorded as non-current assets. Assets with a value below the threshold level are treated as expenditure in the year of purchase.

The value of Council's open space is reported in Council's annual financial statements under two categories:

- Land & Buildings
- Infrastructure

The fair (market) value of all Council owned land is determined every second year by external independent valuers, and reviewed in intervening years. In 2009/10, the value was reported as $682M. This figure includes open space land, as well as other Council owned land such as that used for Council buildings, tree reserves and property not accessible to the community. Land classified as open space accounts for only $601M of the total $682M.

It is worth noting that in accordance with Fair Value Asset Valuation Methodologies (Valuer-General Victoria), Council land used for parks and open space is generally perceived to be restricted in a number of ways, and its current use is often regarded as its highest and best use. Therefore assuming there is no active market, valuers need to consider as much as possible the sales evidence from comparable sales and then apply discount factors for the restrictions in use for that type of land. Therefore, open space land values tend to reflect restrictions or overlays associated with particular sites. Open space land that has minimal likelihood of changing use or significant restrictions on use is likely to have its rate discounted to a greater extent. To this end, conservation sites may be valued at a lower rate than adjacent undeveloped properties. It is important to note that the financial value of public open space does not necessarily reflect the social or community value of a particular parcel of land.

The infrastructure component of open space (denoted 'Parks Equipment and Furnishing' in Council's annual financial reports) is carried at cost and not subject to the fair value review and revaluation process of most other Council infrastructure assets. A formal valuation was undertaken by the Assets department in 2004. However, this data is now supplemented on an annual basis with at cost valuations of works arising from new, upgrade and disposal projects undertaken during the year in question. This includes projects such as netball court upgrades, oval renewals, new cricket nets and bulk barbecue renewals. These records are maintained by Council's Finance department.

In 2009/10, the at cost value of all Council Parks Equipment and Furnishing assets was reported as $31M. This category includes sports fields, tennis courts, netball courts, skate bowls, cricket nets and playgrounds. Given that playground assets (valued at approximately $5M) are not considered in this Plan, open space assets (as listed in Attachment 2) have a current at cost value of $26M. This relatively low valuation occurs because the cost of most individual open space assets is generally well below Council's adopted threshold of $10,000, for Parks Equipment and Furnishing. Minor works involving installation of open space assets such as barbecues, bins or picnic furniture are therefore rarely capitalised. Benchmarking has determined the adopted accounting practice is consistent with other Councils. The principle of straight line depreciation is applied to determine the written down value, based on an assessment of consumed economic life.

The figure below shows considerable growth in the value of open space land and minor growth in the valuation of open space assets in recent years. When the land and infrastructure components of Council's open space are aggregated, they have a combined value of $627M. While the land component represents 33% of Council's total fixed asset and land portfolio ($1.8B), the open space infrastructure assets represent a mere 1.4% of this total value.

| Year | Land | | Parks Equipment & Furnishings | | | |
| | Market Value | | At Cost Value | | Written Down Value | |
	Total* $'000	Open Space Only $'000	Total ** $'000	Open Space Assets Only $'000	Total ** $'000	Open Space Assets Only $'000
2007/08	$456,492	Unknown	$26,717	$22,079	$17,632	$14,732
2008/09	$456,240	Unknown	$28,971	$23,974	$19,283	$16,220
2009/10	$682,117	$600,951	$31,191	$25,936	$21,395	$18,265

Table 5 – Open Space asset valuations

*   Includes all Council Owned land (i.e. Council building sites etc)
**   Includes playground assets

2.6 ECONOMIC LIFE ASSUMPTIONS

Council's Finance department typically uses an economic life of 50 years for all open space assets. This life assumption is generally higher than the average useful life adopted by others.

In terms of active sports fields (ovals, tennis courts etc), according to the Municipal Association of Victoria's Benchmarking Study, conducted in 2008, Other Councils typically use between 20 and 50 years as the economic life for these assets, with the average being close to 30 years. To bring Council's economic life assumptions into line with those adopted by other Councils a life of 30 years has generally been adopted for these assets.

The useful lives, illustrated in Table 6, are considered to be representative of the useful lives of various open space assets. The lives presented here are based on useful lives documented by Integrated Open Space Services (IOSS Pty Ltd) in their Parks Base database and useful lives reported by Council's open space contract auditor (Macutex Pty Ltd).

Asset Class	Asset Type	Average Useful Life (years)
Art & Heritage	Plaque Fountain Monument/Sculpture/Artwork	30 20 20
CCTV Camera	CCTV Camera	10
Fencing	Bollard Linear	12 20
Fixed Sport Infrastructure	Cricket pitch synthetic Cricket practice net	10 15
Lighting (not attached to Council building)	Sports General Park Security	30 30
Park Furniture	Seat Picnic table Flagpole Planter box Dog bag dispenser Bike rack single Bike rack multiple Drinking fountain Barbecue unit	15 15 12 10 5 10 10 10 15
Retaining Walls (>500m high)	Retaining Walls (>500m high)	30
Shade Structure (non building)	Shelter/Rotunda/Gazebo Shade sail	20 15
Signage	Park identification	15
Staircase		20

Table 6 – Open Space assets – Expected Life

Source: Parks Base database (IOSS Pty Ltd)

Open Space condition audit 2011 (Macutex Pty Ltd)

The predictive financial model, presented later in Chapter 8, informs Council's Long Term Financial Strategy. The model predicts Council's future asset renewal requirements based on assumptions regarding asset deterioration rates. The useful lives, presented in the table above, have been used in the model to predict the expected annual deterioration rate for these assets. For example, an asset with a life of 20 years is expected to deteriorate at a rate of 5% per annum.

2.7 ASSET AGE

Council does not systematically capture the date of construction of open space assets, therefore it is difficult to determine an accurate age profile of open space assets.

2.8 RECENT EXPENDITURE

Funding allocations at each stage of the asset lifecycle impact on the standard to which the asset class is able to perform. Lifecycle cost components are illustrated in Figure 4 and described below. Financial sustainability requires a balance between the maintenance, renewal and disposal of existing assets and the delivery of new and upgraded assets.
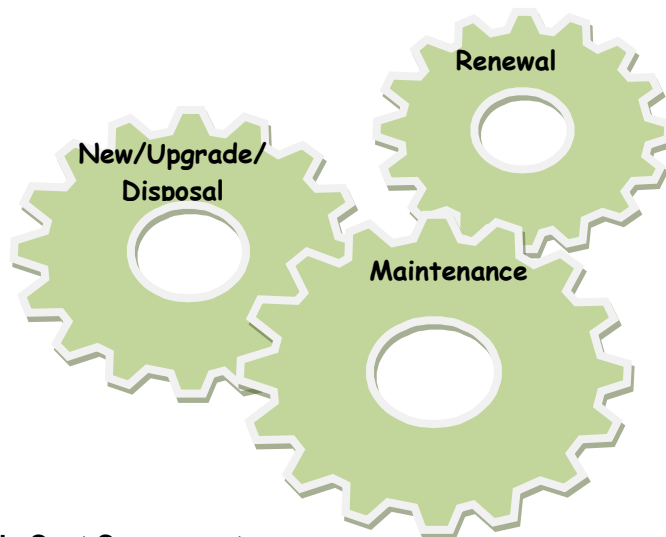
Figure 4 – Lifecycle Cost Components

- Maintenance expenditure is required to ensure Council's open space network is safe and functional.
- Renewal expenditure is required to reinstate obsolete assets, or rehabilitate open space assets that have deteriorated to such an extent that they have become unserviceable.
- New/Upgrade expenditure results from ongoing strategic assessment of the functionality of the network. Upgrades enable an increase in the standard of service that can be supported.
- Disposal costs are generally absorbed into the expenditure for asset renewal or upgrades. Disposal of land, can also provide a source of income and enable associated future maintenance and renewal expenditure to be reallocated to other open spaces

The figures in this section of the report summarise recent trends in Council expenditure for maintenance, renewal and upgrade of open space.

2.8.1 Maintenance

Maintenance of open space assets is a complex endeavour which enables the natural and built environments to complement each other in supporting a number of outdoor activities. Challenges are constantly faced by Council as it aims to provide assets for community use in a form that meets expectations, retains asset functionality and ensures assets deliver their service potential for as long as possible.

Natural assets such as trees, grass, vegetation and waterways require a maintenance regime that responds to the impacts of seasonal variations. For example, more frequent mowing is required in the spring and summer. Constructed assets are somewhat easier to plan for as their maintenance requirements are generally not affected by weather patterns. As assets age, however, they become more prone to failure and require maintenance intervention to address issues when they occur.

Since 2006/07, the maintenance budget for open space (including Bushland) has been gradually increasing. Over this period there has been an additional $1.6M investment in open space maintenance as illustrated in Figure 5 below.
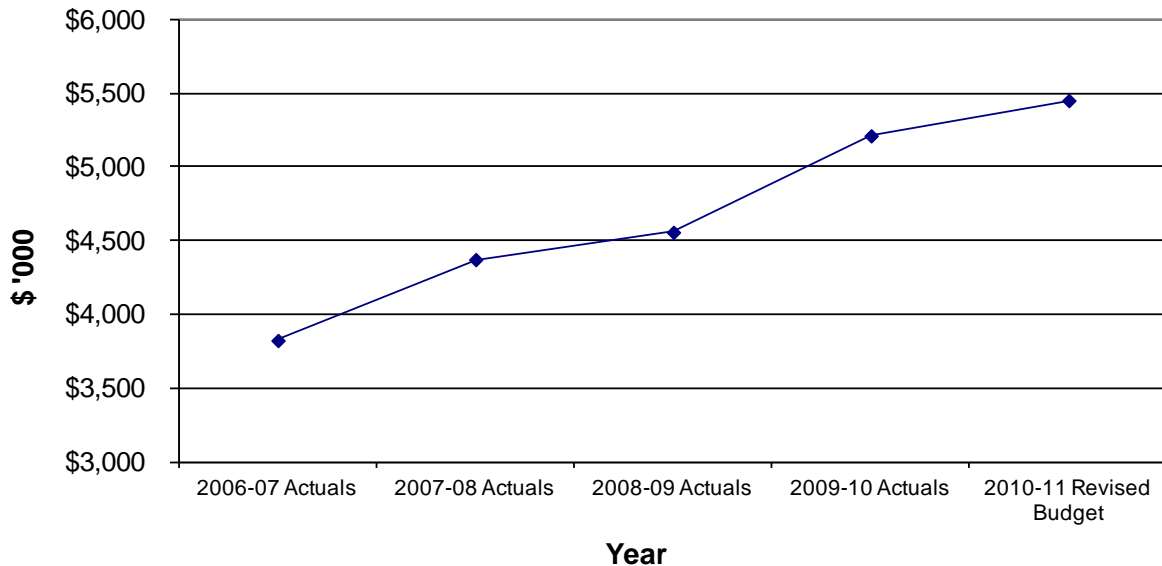
Figure 5 – Open Space Maintenance Expenditure 2006/07 – 2010/11

Figure 6 below shows the significant increases to Council's open space maintenance budget over the last four years with increases in the order of 14% for 2007/08 and 2009/10. These increases in actual expenditure can be attributed to one or more of the following factors:

- Cost escalation indexation
- Expansion of services
- Increase in service levels
- Provision of lifecycle costs via the annual budgeting process for recently completed new and upgraded assets
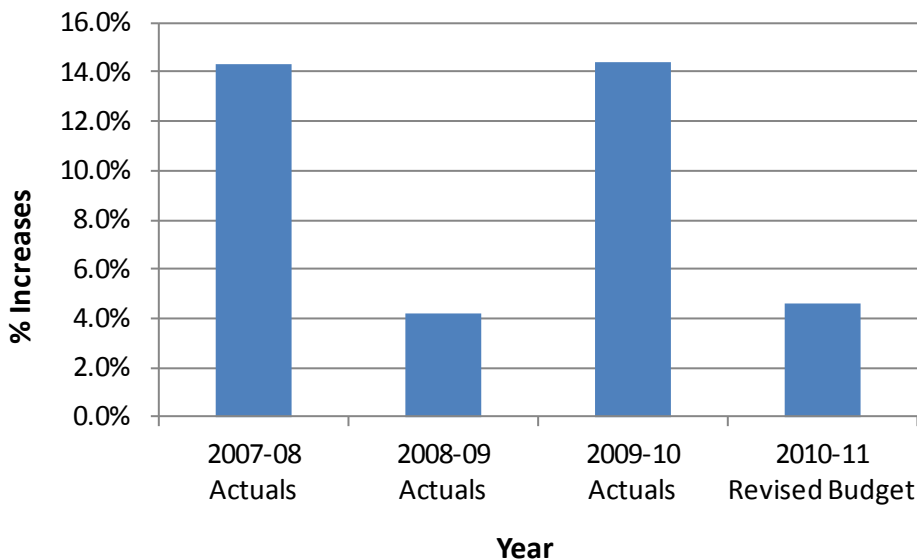
Figure 6 – Increases to Open Space Maintenance Expenditure 2006/07 – 2010/11

Figure 7 below shows that since 2006/07 there has been a total of $655K in new initiatives or expansions to open space maintenance. This service expansion has included investment in a strengthened Bushland Management team, increases in skate bowl maintenance, park tree maintenance, bushland tree maintenance, bushfire preparedness, native vegetation protection and indigenous vegetation plantings. The 2009/10 budget enabled the biggest service expansion year with an injection of $360K into the open space and bushland maintenance budgets. This increased investment represented an 11% increase in the budget on top of the standard cost escalation index.

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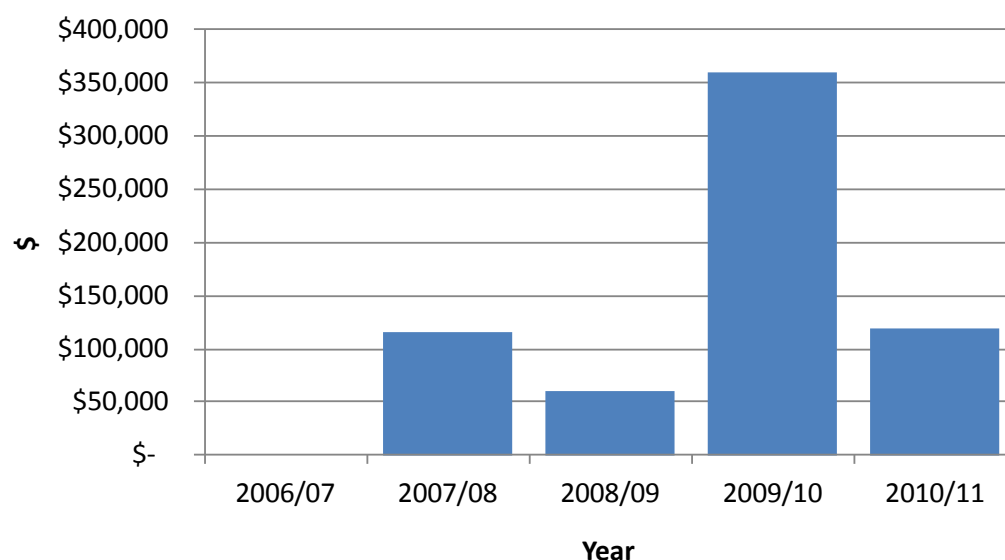
Figure 7 – New Open Space Maintenance Initiatives 2006/07 – 2010/11

The investment in new open space maintenance initiatives displays a strong commitment by Council to improve the appearance of not only passive open space sites, but also the bushland areas which have heritage and cultural importance to the City. The Black Saturday fires of 2009 have been the impetus for Council to consider open space maintenance and ensure that it is able to respond and prepare appropriately for the bushfire season. Funds have also been provided to ensure compliance to changes in legislation with the introduction of the Net Gain provisions of the Environment and Planning Act 1987. Table 7 details the value of these new initiatives and where the funds have been directed.

Year	$	New Initiatives
2006/07	$0	Nil
2007/08	$115,000	Gilbert Park Skate Park Maintenance & Bushland Management Resources
2008/09	$60,000	Bushland Management Resources
2009/10	$360,000	Bushland Tree Maintenance, Native Vegetation Protection Measures, Indigenous Vegetation & Park Tree Maintenance
2010/11	$120,000	Lewis Park Skate Bowl Maintenance & Bushfire Preparedness
TOTAL	$655,000	

Table 7 – Open Space New Initiatives Funding 2006/07 – 2010/11

It should be noted that over the past five years Council's open space network has increased by 18.8 ha or 3% (total area). Table 8 below, considers the magnitude of the open space network compared to the amount of maintenance budget provided. It can be seen that, as the inventory has grown, Council has been working consistently to keep pace with the required maintenance and has even managed to increase the amount it expends per hectare from $6.0K in 2006 to $8.4K in 2010.

Year	Area (Ha)	Maintenance $ ('000)	$ ('000) per Ha
2006/07	632.2	3,824	6.0
2007/08	647.1	4,373	6.8
2008/09	649.8	4,558	7.0
2009/10	649.8	5,212	8.0
2010/11	651.0	5,451	8.4

Table 8 – Open Space Maintenance Funding Per Hectare 2006/07 – 2010/11

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When considering the maintenance activities and the associated cost of providing these services, Figure 8 below illustrates the distribution of funding. As presented, passive and active open space maintenance accounts for the majority of the budget whilst the bushland management and tree maintenance budgets are also substantial.
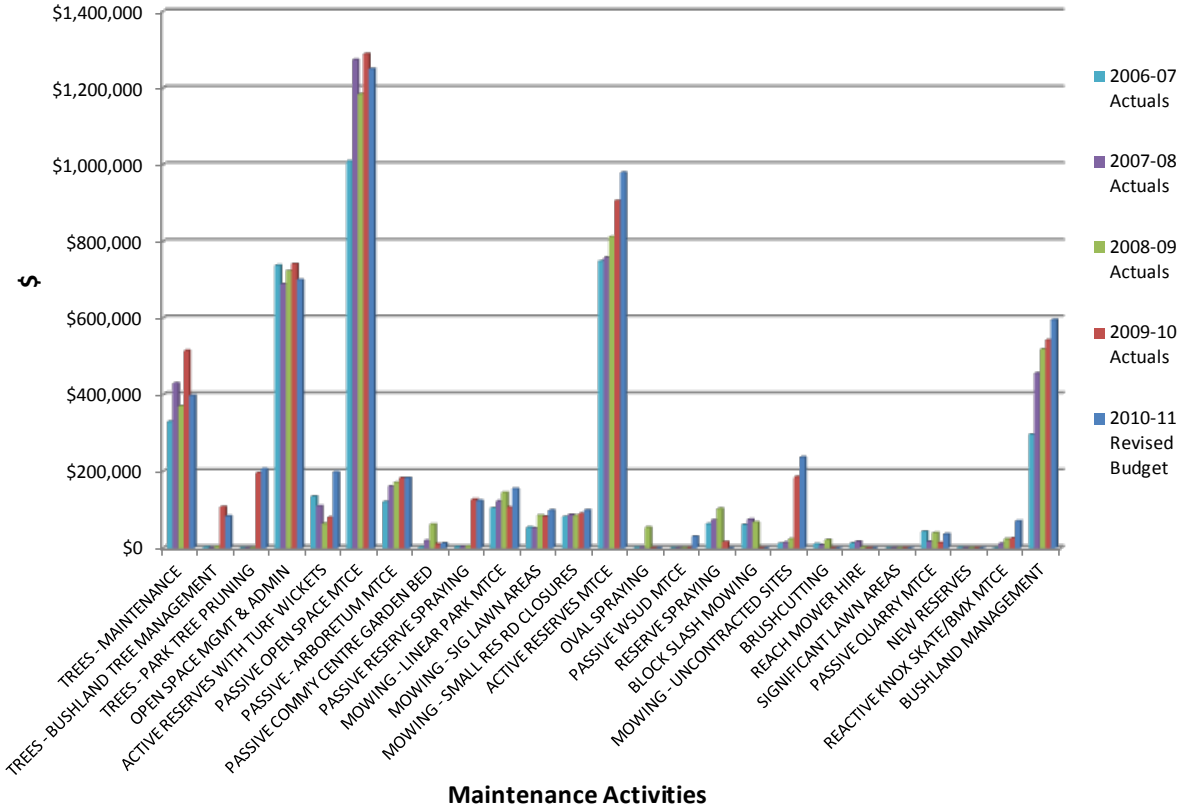
Figure 8 – New Open Space Maintenance Activities Expenditure 2006/07 – 2010/11

Upon closer examination of these figures, it can be observed that the maintenance activities are either classified in accordance with the asset category (e.g. trees), location of works (e.g. Arboretum) or work type (e.g. brush cutting). The current format of the maintenance budget makes it difficult to decipher the range of work undertaken during the course of the year. Consideration should therefore be given to aligning the budgets with routine and reactive maintenance activities and the open space hierarchy, once developed as part of the Open Space Plan. This will facilitate future reconciliation between funding and the maintenance service levels enable future analysis to clearly demonstrate to the community the financial impact of adjusting the standard of open space maintenance.

Upon reflection, it appears that Council is providing an appropriate amount of operating expenditure for open space assets. Council's investment in operating and maintenance budgets has been increasing over the last five years. When considering the effectiveness of this increased expenditure on Council's maintenance approach, it is important to consider the community's views on the success of these programs. Section 4.5, which looks at recent community satisfaction surveys undertaken over the last eleven years, provides some guidance. Feedback sourced from the community, albeit at a high level, indicates there is some dissatisfaction when considering Council's open space assets with the desired target set in the Council Plan only being achieved twice over the last eleven years. This brings into question whether the increased funding is achieving the desired outcomes. Further work needs to be undertaken to understand the community's expectations and adjust service levels and budgets accordingly.

2.8.2 Renewal

Between 2006/07 and 2008/09 there was a steady increase in open space renewal funding from $1.0M to $1.96M as illustrated in Figure 9 below. However, since 2008/09 there has been a decline of $700K resulting in the 2010/11 allocation of $1.25M. In 2010/11 the open space renewal funding represented 6.9% of the total renewal program ($18.077M).
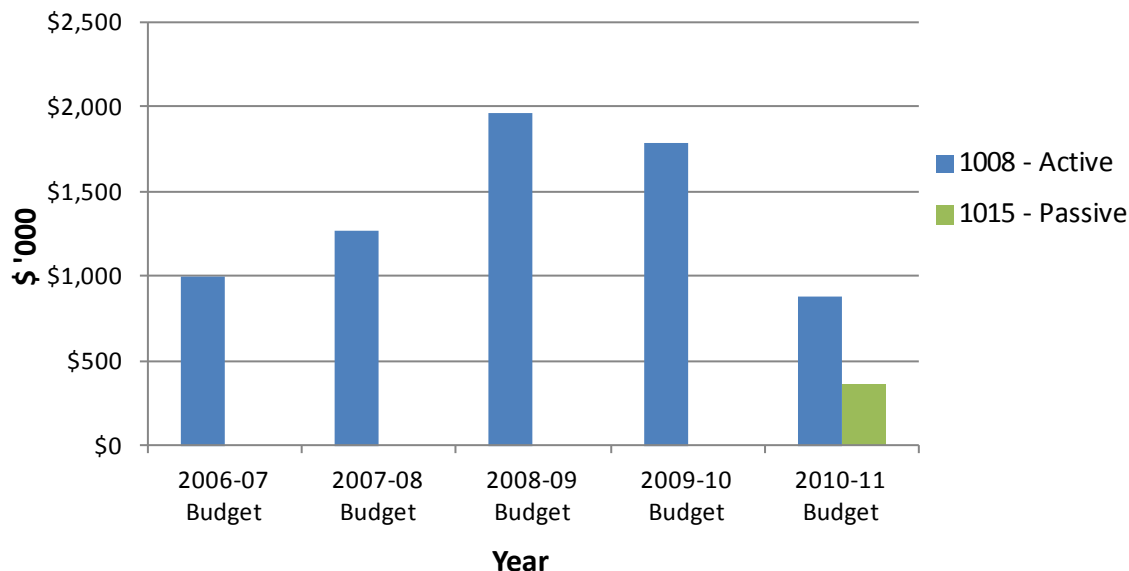
Figure 9 – Open Space Renewal Expenditure 2006/07 – 2010/11

2010/11 was the first year in which the open space renewal program was split into two components, Active and Passive. This was done to enable a more equitable spread of funding and to provide an opportunity to track expenditure more easily. Historically, the majority of renewal funding has been allocated to active open space assets (sports fields, netball courts, tennis courts, etc). This trend is reflective of the vocal nature of the community groups who have established a relationship with the open space sites that support their activities.

As discussed in Section 2.5, depending on the value of works, a significant amount of renewal funding is expensed, in accordance with the accounting standards and relevant Council policies. As a result, the actual capitalised value of expenditure on the renewal of open space assets is understated. The magnitude of the discrepancy is demonstrated in Figure 10 below. It should be noted that it is difficult to forecast the amount of expensing that will occur from one year to the next due to the variability of the annual program of works.
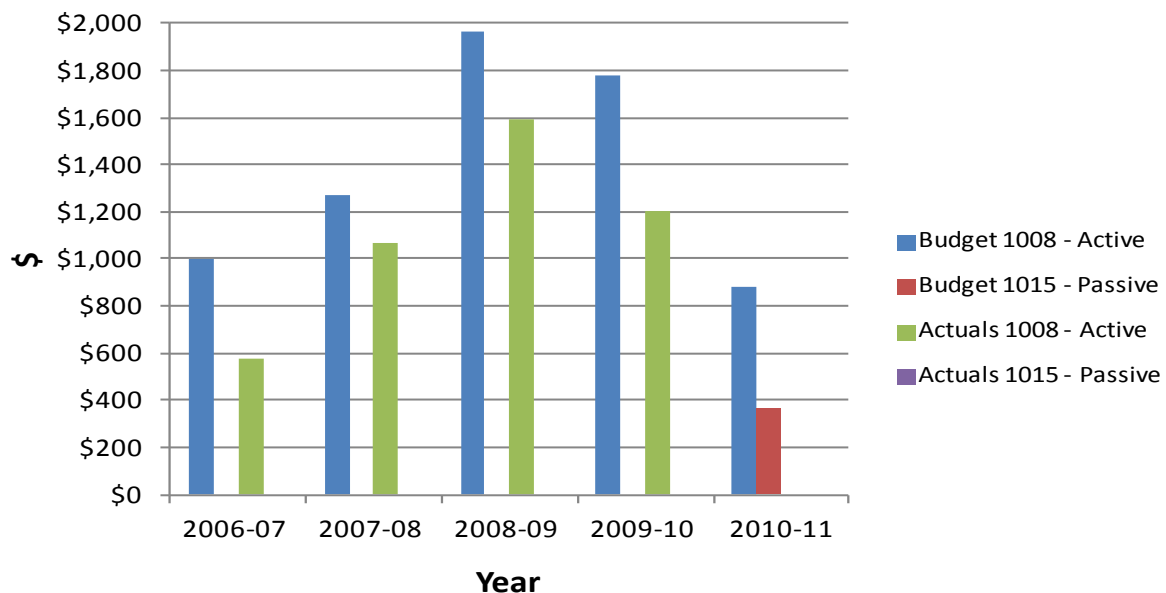
Figure 10 – Capitalisation of Open Space Renewal Expenditure 2006/07 – 2010/11

In summary, when considering the amount of renewal funding provided over the last five years, it appears to have varied considerably from one year to another, reflecting a gap in Council's knowledge of the level of renewal funding required to sustain these assets. This knowledge gap has been addressed by the asset audits conducted during the development of this Plan and the predictive financial modelling presented in Chapter 6 and Chapter 8 respectively.

2.8.3 Upgrade

The Discretionary Rate Funding Allocation Policy (last revised in 2010) informs the magnitude of funds available for new and upgrade projects and the approach in distributing these funds. In accordance with the policy, the new/upgrade component of the capital works program is "discretionary", meaning that it is not critical expenditure that Council must outlay. If Council does nominate to provide funding for New/Upgrade projects it may only do so after all other funding commitments have been honoured, e.g. operating expenditure, legal requirements, renewals and major projects.

Council's new/upgrade component of the capital works program comprises 23 sub-programs which have accompanying ranking criteria designed to prioritise works considering triple bottom line principles. Projects are evaluated against the ranking criteria and ordered highest to lowest. These lists are then presented to Council annually during the budget process for consideration of funding. Whilst the priority of the ranked lists is generally observed, Council has the discretion to fund any project as detailed within the sub-program.

There has been increasing investment in open space new/upgrade projects, since 2006/07. Figure 11 below, demonstrates the actual expenditure over the last five years. The spike experienced in 2010/11 is attributed to the development of the regionally significant Eastern Recreation Precinct.
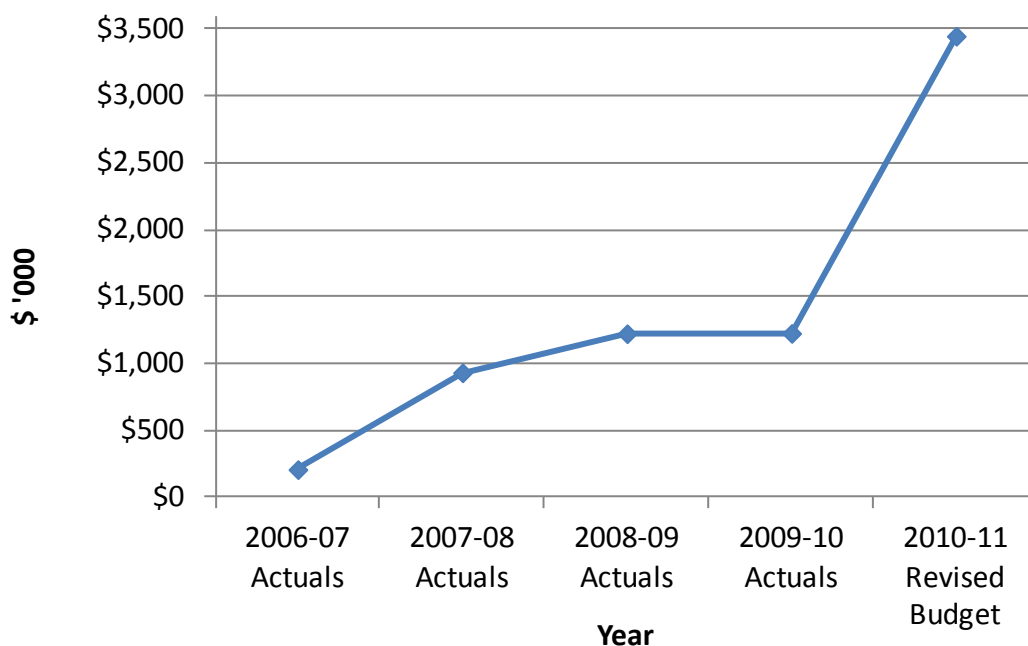
Figure 11 – Open Space- New/Upgrade Expenditure 2006/07 – 2010/11

When reviewing the amount of open space new/upgrade expenditure over the last four years, it is interesting to note that it has been constant as a proportion of the overall funding available for all new/upgrade projects; refer to Table 9 below.

	2007-08 Actuals '000	2008-09 Actuals '000	2009-10 Actuals '000	2010-11 Revised Budget '000
Open Space New/Upgrade Program	$933	$1,225	$1,227	$3,449
Total New/Upgrade Funding	$7,995	$8,098	$10,815	$28,883
% of New/Upgrade Budget	11.7%	15.1%	11.3%	11.9%

Table 9 - Open Space New/Upgrade Funding Distribution 2006/07 – 2010/11

Note: The discrepancy between budget and actual figures is a reflection of Council's capitalisation threshold for open space assets.

Council has recognised the importance of investing in open space assets and the budget allocations, over the last four years, are a testament to this. The budget allocations also reflect the fact open space assets, (particularly active open spaces) are utilised by well organised and vocal community groups who strongly advocate for quality assets to support their activities.

Recent growth in investment in the enhancement of Council's open space network, is also a reflection of the growth in Council's Open Space Reserve (refer Table 10 below). Contributions to this reserve have been driven by a strong demand for residential infill development (where provision of a cash contribution for open space development is provided by developers who are unable to provide adequate public open space within their development site).

	2006-07 Actuals '000	2007-08 Actuals '000	2008-09 Actuals '000	2009-10 Actuals '000	2010-11 Revised Budget '000
Open Space Funding - CWP	$1,095	$1,200	$1,696	$1,860	$1,718

Table 10 – Open Space Reserve New/Upgrade Funding 2006/07 – 2010/11

Note: The discrepancy between Tables 9 & 10 is due to the pre-policy practice of Council of using some Open Reserve funds for pavilion enhancements.

Recent creation of structure plans for principal and major activity centres, as identified in Melbourne 2030 and Council's Municipal Strategic Statement, has resulted in higher density development being encouraged and facilitated by Council. The sustainability of this higher density development is reliant on a receptive property market. Council's Strategic Economic Development department has forecast that there will be enough land available to sustain the current rate of growth in the short-term (5 years). Confirmation of this forecast will require further investigation by the Strategic Economic Development department. This work is programmed to occur in 2011/12. Whilst Council is experiencing significant infill development, contributions to the Open Space Reserve will continue. This enables Council to finance open space capital projects via the Unstructured Recreation New/Upgrade program with minimal reliance on rate funding.

The figure below illustrates the distribution of new and upgrade funding across the three program areas: passive, active and bushland. On balance, the majority of funding has been channeled into active recreation. The anomaly over this period was in 2009/10 where there was greater investment in passive open space. Another key observation when looking at the funding split is the lack of any funding being provided for bushland areas. This may be due to the fact that Council has not purchased any bushland areas over this time (new assets) and that upgrade expenditure has been deemed operational in nature.
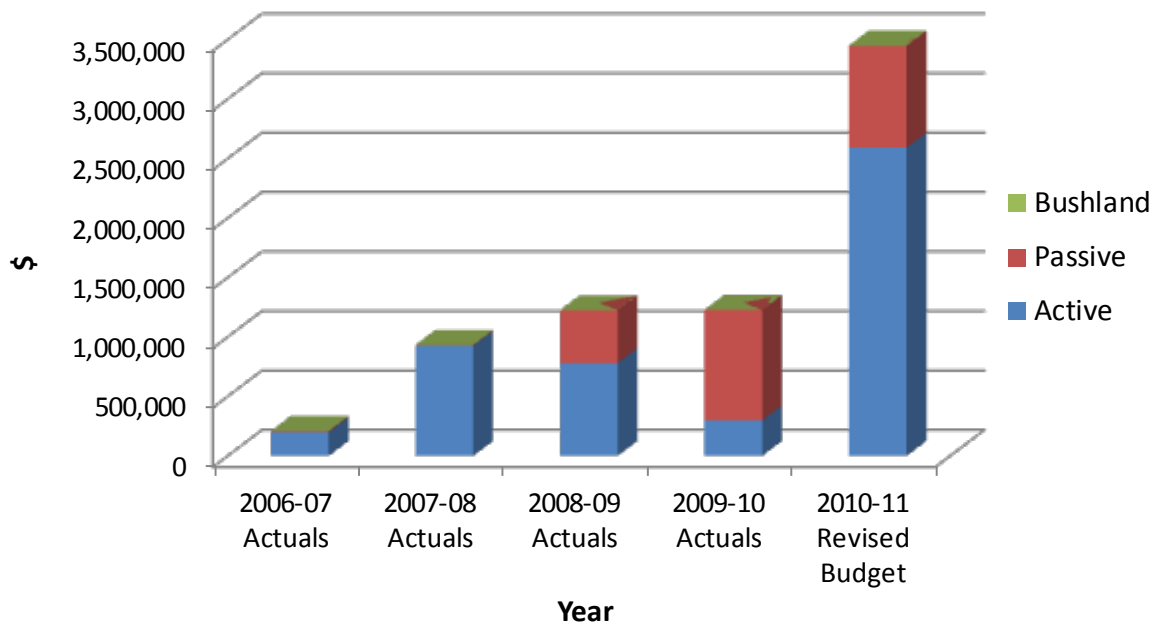
Figure 12 – Open Space Maintenance New/Upgrade Funding Split 2006/07 – 2010/11

It is anticipated that the funding split will begin to weigh more heavily in favour of passive recreation as a result of a policy position, taken by Council (February 2010), which prevents funding from the Open Space Reserve from being used for pavilion improvements and requires it to be spent only for assets associated with the enhancement of open space areas.

Figure 13 below, illustrates the total capital expenditure on open space, over the previous five years. In 2010/11, this included the construction of the Eastern Recreation Precinct (all new assets). As Council's open space assets increase, Council is faced with the challenge of understanding, and responding to, ongoing maintenance and renewal requirements.
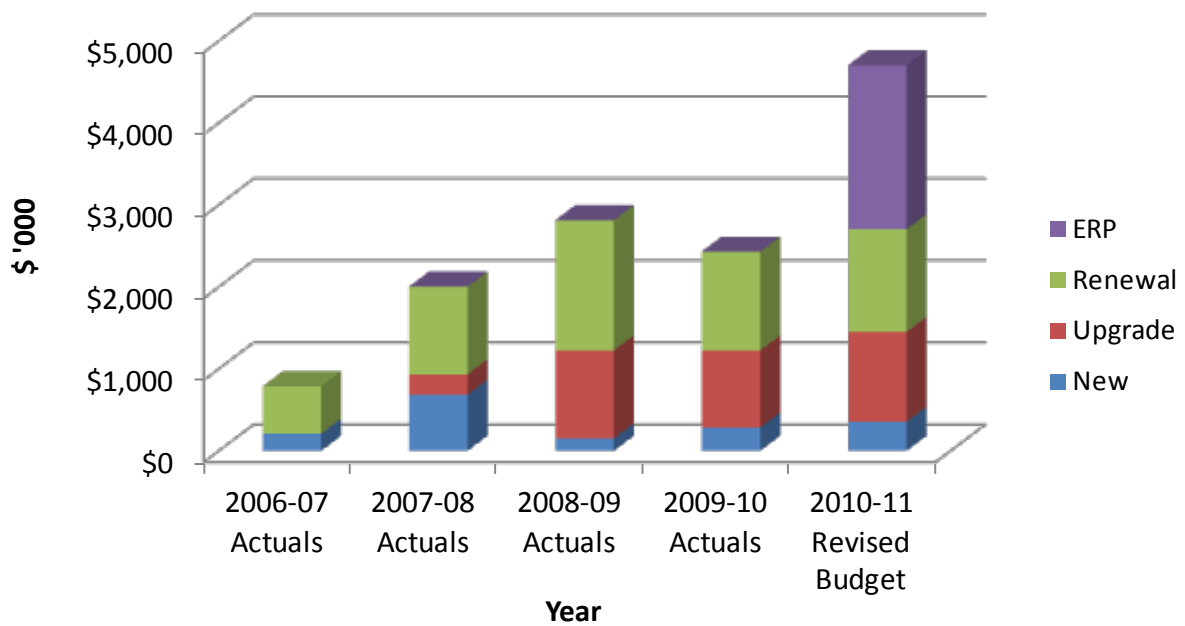
Figure 13 – Open Space Maintenance Total Capital Funding 2006/07 – 2010/11

Repeated condition auditing can be expected to improve Council's understanding of the deterioration patterns of many open space assets and enable refined estimates of economic lives to be used to inform required levels of renewal funding.

Improved data management techniques, ongoing condition audits and implementation of lifecycle cost allocations in accordance with Council's Asset Management Policy, will facilitate the continual provision of appropriate maintenance and operating funds to service new and upgraded assets as they are created or procured.

Further work is also required, as discussed later in this document, to develop service levels for maintenance, renewal, upgrade and new assets. This will provide a basis for Council to determine the true cost of open space asset provision. Well defined service levels which quantify community expectations regarding the quality of Council assets will facilitate informed discussion as to the appropriateness of Council's asset management practices and ultimately the capital works and operating budgets.

2.9 IMPROVEMENT RECOMMENDATIONS

Project 1. Document Demarcation Agreements

It is considered important that demarcation agreements be developed for all open space land within the municipality where the maintenance responsibility is shared with other authorities including:

- Melbourne Water
- Department of Sustainability and Environment/ Parks Victoria
- Neighbouring Councils
- Department of Education

Council should take a proactive role by initially documenting Council's current understanding of the demarcation, and then arrange for these agreements to be discussed and ultimately signed off by representatives of the other authorities. It is recommended that the Parks Services team lead this project, which may be undertaken in conjunction with a similar project recommended in the Drainage Asset Management Plan (DAMP Project 2.4), which suggested that a Melbourne Water Drainage Reserve layer be developed in GIS to clearly indicate the delineation of maintenance responsibilities in drainage reserves.

A preliminary listing of sites for which agreements are required is provided in Attachment 4.

Project 2. Develop GIS Layer to Document Demarcation

Following on from Project 1, described above, it is recommended that a GIS layer be developed to clearly delineate the areas where Council and other authorities have responsibility for open space maintenance. The GIS layer should reflect the content of the demarcation agreements to be developed as a result of Project 1.

It is recommended that this project be undertaken in conjunction with an improvement project presented in the Drainage Asset Management Plan (DAMP) Recommendation 3.4 which suggested that a Melbourne Water Drainage Reserve layer be developed in GIS to clearly indicate the delineation of maintenance responsibilities in drainage reserves.

Project 3. Non-Financial Valuation of Open Space

In order to understand the true value of open space, it is recommended that Council investigate methodologies to better understand and report on the ecological, conservation and community value of open space sites.

A GIS Layer could be created as a result of this project to communicate the value to other Council Officers and the community.

Project 4. Review Operating Budget Structure

To support more accurate monitoring of maintenance expenditure on open space, it is recommended that the operating budget be restructured. It is considered important to ensure that the budget restructure facilitates reporting of maintenance expenditure by the Parks Services team.

Separate reporting of expenditure on maintenance activities undertaken by Park Services in: passive open space, active open space, road reserves, car parks and Council building sites is recommended. It is also considered important that expenditure on routine maintenance be captured and reported separately from reactive maintenance expenditure. Consideration should also be given to aligning the budgets with the open space hierarchy, once developed as part of the Open Space Plan.

Chapter 3　Asset Information Management

CHAPTER 3 - SUMMARY

- Information systems used to store open space data include:
    - Geographic Information System (GIS) Latitude
    - Lifecycle (contains asset register and works order system for maintenance management)
    - Events Perfect (for management of sporting facility bookings)
    - Pathway (lease register)
    - Excel spreadsheets to manage particular aspects of open space including.
        - Bin register
        - Mowing sites
        - Bushland management activities

- Data management responsibilities are unclear.

- New asset creation and modifications are not captured consistently in all Council systems. Formal asset handover, that includes details of how new assets should be maintained are not always provided to the Park Services team.

- Common site identifiers are not used in disparate databases and reports making it difficult to analyse available data and keep all systems up to date.

- Discrepancies in Council's GIS layers were found during the development of this plan. A temporary layer has been developed to correct the errors found and to classify all open space sites.

- Improvement recommendations include:
    - Define ongoing data management responsibilities
    - Update open space related GIS layers and Council's asset register and make these available to staff
    - Update the Events Perfect database to align with unique site identifiers stored in the Asset Register
    - Amend the Sites of Biological Significance report to align with unique site identifiers stored in the Asset Register
    - Update Council's public road register to include all rights of way that have a constructed access way that is available for general public use

3.1 DATA MANAGEMENT – INFORMATION SYSTEMS

Council does not have a complete formal dataset regarding all open space sites and assets applicable to this Plan. Council's open space asset knowledge exists predominantly spatially on its Geographic Information System (GIS) Latitude, and to a lesser degree in the asset register of its corporate asset management system (Lifecycle). Ongoing data management work is undertaken primarily by Asset Strategy and Information Technology to collate and verify data discrepancies and ensure new assets are recorded appropriately. A body of work to improve the quality of available data commenced during the development of this Plan. It has been identified that further ongoing work is required.

In addition to GIS and Lifecycle, a number of Council departments maintain informal databases (largely Excel spreadsheets) to manage particular aspects of open space. For example, Parks Services maintains an inventory of sites subject to mowing services, whilst the Biodiversity team manage spreadsheets that capture work done at sites containing significant vegetation. Council's formal open space data management systems are discussed in this section.

3.1.1 Geographic Information System (GIS) Latitude

Open space is recorded and displayed on a number of layers within Council's GIS.

- Layer 87 – Knox Maintained Land
- Layer 88 – Public Land
- Layer 90 – Council Properties
- Layer 150 – Significant Conservation Sites
- Layer 187 – Parks Mowing
- Layer 125 – Recreation Layer

The main layer representing open space is layer 87 – Knox Maintained Land. This layer is maintained by Asset Strategy and is used by staff to determine whether Council is responsible for the maintenance of a particular site. Layer 125 details the locations of the active open space sites. The following sporting surfaces are captured: tennis courts, netball courts, sporting ovals, golf clubs, bowling clubs, cricket pitches and cricket practice areas. Other active open space sites (such as the BMX track and Athletics site) are grouped together as Recreation Facilities.

During the review of available open space data, it was found that the Sites of Biological Significance Report (prepared by Biosphere Pty Ltd) identified all sites of biological significance but did not relate these to the unique site identifiers stored in Layer 150 – Significant Conservation Sites. It is therefore recommended that when this report is reviewed, the unique GIS identifiers be used so that recommendations and status of each site can be readily represented on Council's GIS layer which is visible to all staff.

Amendments to the open space related GIS layers are generally made on an ad hoc basis when new information comes to hand or discrepancies are identified.

During development of this Plan, layer 87 was found to contain a number of discrepancies. For example, it was found that some right of ways had been classified as open space. It is recommended that these rights of way be reviewed and that those located on land classified as Road Reserve, be added to Council's public road register, if they contain a constructed access way that is available for general public use.

Considerable work has been undertaken to improve the accuracy of layer 87 and consolidate all other open space spatial data. Using layer 87 as a basis, and also referencing the conservation, mowing and Council land information, a temporary layer has been created by Asset Strategy. This layer has been verified, to ensure it reflects all public open space that is known to be either owned or maintained by Council. Further work is required to update the GIS information provided to all Council staff.

3.1.2 Lifecycle – Asset Register

Open space asset data is currently stored in the asset register of Council's asset management system (Lifecycle) in line with the following structure.

Category

- Parks and Recreation

Sub Categories

- Reserves
- Netball Court
- Tennis Court
- Athletics Track

For Reserves, the asset register includes the following fields:

- Asset Name
- Asset Description
- Address
- Suburb
- GIS link

For Netball Courts, Tennis Courts and Athletics Tracks, includes the following fields:

- Asset Name
- Asset Description
- Street Name
- Suburb
- GIS link

As can be seen, the data contained within the asset register relates to overall site/land characteristics, as well as selected active open space playing surfaces, but does not contain data relating to open space assets such as park furniture, barbecues etc. Not all specialist open space surfaces have been captured

Preliminary attempts to reconcile the existing asset register and the updated GIS data suggest that the open space details stored in the asset register are mostly superseded. It is therefore recommended that the open space asset register be recreated from scratch. This could be undertaken using the inventory and condition audit data collected for the development of this plan, and described in Chapter 6, as well as the amended GIS layer 87.

The update of the register will also provide an opportunity to incorporate all specialist active open space surfaces including: baseball/ softball diamonds, cricket pitches, soccer fields.

3.1.3 Lifecycle – Work Order System

The Work Order system is linked to the asset register by way of the unique site IDs for each open space site. These sites IDs (or park parent numbers) enable Work Orders to be tagged to a specific location, much in the same way as road segments provide unique IDs for Council's road reserve.

All reactive maintenance work recorded in Council's Work Order system since 2005 have been tagged to a relevant site ID. This enables Council to analyse the history of customer requests for maintenance at each site as discussed later in this plan.

3.1.4 Other Databases

Events Perfect/Pathway

Events Perfect is Council's Bookings Management software – the Recreation team uses it to manage bookings of Council sporting facilities (ovals, pavilions, tennis courts, netball courts, cricket nets, etc). The system is configured with an entry for each reserve available for hire in the municipality. (i.e. not all Council reserves have an entry in the system). The initial implementation of Events Perfect triggered a process to ensure the consistent naming of reserves. This process has resulted in consistent reserve naming between Events Perfect and Council's property land information (Pathway) and document management (Dataworks)

systems. There is perhaps merit in ensuring records in Events Perfect have extra fields to link them to a site ID (parent) and an active open space ID.

There is no policy on the hire of passive open space for casual use. These types of requests are usually directed to Parks Services who advise potential users that passive open space can be used but cannot be booked or reserved. No records are kept of these requests.

Pathway – Lease Register

Council maintains a centralised lease and licence register of properties used by third parties. The register details the tenant, premises, rent, agreement status, agreement expiry, commencement dates and comments. The database is stored in Pathway and is difficult to search.

An improvement project was identified during the development of the Knox Building Asset Management Plan (BAMP recommendation 3.6) to review and update Council's leases/ licences/ occupancy agreements including the property occupancy register which is currently stored in Pathway. It is recommended that this project be expanded to include the establishment of agreements for open space sites that are used by Council but owned by others.

Bin database – Excel Spreadsheet

The Waste Management team maintains a spreadsheet that lists the location of bins in Knox, including those in open space. The spreadsheet is used to store an inventory of bin, type, size and condition. The data is linked to Council's GIS system which maps the location of all Council owned bins.

3.2 CAPTURING NEW ASSETS & ASSET MODIFICATIONS

In order for Council to be confident that it has a reliable understanding of the public assets that it is responsible for, it is considered important that Council have in place robust procedures for capturing new assets and asset modifications.

3.2.1 New Open Space Sites – Subdivisions & Land Transfers

The majority of new open space sites arise from subdivisions. New open space resulting from private sector land development projects is processed by the Planning team and inspected by the Asset Preservation team. As part of the handover process (EI-100/1 Handover Process for Subdivisions), the Development Engineer (Planning) issues a memorandum to the Manager–Operations, Manager–Engineering Services and Manager–Assets, notifying them of handover and supplying relevant handover information, plan of subdivision and titles. Parks Services receive the handover information but are not provided with an automatic increase in the affected maintenance budgets to account for lifecycle costing, meaning the team has to absorb the maintenance costs for new sites into existing budgets. Asset Strategy uses the handover memorandum, drawings and field measurements to update the Council Properties and Knox Maintained Land layers on the GIS. Unique site IDs are created through this process. The asset register in Lifecycle is also updated with the land information.

The above process is generally effective for large projects. Minor subdivisions, or transfers of land, that do not involve significant civil works, however, are generally not captured via the process described above. Instead, notification is circulated by the Governance team via Council's document management system, Dataworks. Asset Strategy receives the new title information and updates the land information on the Council Properties, Recreation Facilities and Knox Maintained Land layers on the GIS, as well as the asset register. Unique site IDs are created through this process.

In both cases described above, the open space assets, such as park furniture are not captured via this process. As a result, only the land information associated with new open space sites is kept up to date.

3.2.1 New Open Space Sites – Capital Works Program

New open space sites are rarely attained through Council's Capital Works Program. If they are, there is an existing process (Process EI-100/2 Handover Process for All Capital Works Projects) to enable asset data to be updated accordingly. This process involves the relevant Project Manager issuing a Works Authorisation Certificate prior to works commencing. This document contains information including preliminary drawings and a bill of quantities. Once the project is completed, the relevant Project Manager issues a Capital Works Handover Memorandum to the Manager–Operations, Manager–Engineering Services and Manager–Assets. This memorandum provides information on the Certificate of Practical Completion and Final Completion date, as well as a final bill of quantities and as-constructed drawings. While the Works Authorisation Certificates are regularly issued, Handover Memoranda highlighting that the projects have been completed are not consistently issued. Asset Strategy uses the Works Authorisation Certificate and Capital Works Handover Memorandum to update the land information contained in the GIS layers (Council Properties, Recreation Facilities and Knox Maintained Land), as well as the asset register. Open space assets such as park furniture are not captured via this process.

In accordance with Council's Asset Management Policy, the Parks Services team receives additional operating funds to allow for the maintenance of new open spaces resulting from Capital Works projects. Discussions with the Parks Services team however, suggest that although funds are received, they do not always receive formal asset handover that includes details of how the new assets should be maintained.

3.2.2 Asset Modifications (Renewal & Upgrades)

Due to the nature of this asset class (predominantly land in nature), no renewal or upgrade data is recorded in Council's GIS or asset register.

3.3 IMPROVEMENT RECOMMENDATIONS

Project 5. Define Ongoing Data Maintenance Responsibilities

Council stores open space data in a range of systems:

- GIS
- Pathway
- Lifecycle Asset Register
- Lifecycle Work Order System
- Events Perfect
- Multiple spreadsheets

It is therefore recommended that the Asset Strategy team work with all internal stakeholders to define ongoing data management roles and responsibilities for all open space asset data maintained by Council. It is recommended that this project form part of a broader initiative to gradually decentralise asset data management responsibilities and practices to the appropriate decision makers.

The objective of this project is to ensure continued improvement in the integrity and coordination of open space asset data. When data management responsibilities have been defined, it is considered important that the Assets department continuously monitor the effectiveness of decentralised data management.

Project 6. Update GIS Layers & Asset Register

It is recommended that this project be undertaken in conjunction with Project 1 and Project 2, outlined in the previous Chapter. All open space related GIS layers should be reviewed and rationalised to improve the quality of information available. The temporary spatial layer and database that have been created during the development of Plan should form the basis of an updated GIS layer 87- Knox Maintained Land.

This updated layer 87 is expected to become an open space maintenance responsibility layer that differentiates between responsibilities of Parks Services, Bushland Crews and other authorities (incl. Melbourne Water, Parks Victoria and others)

This project should also include updating the Tree Reserves (which are currently stored as a separate class on GIS layer 90 – Council Properties).

When the GIS layers have been updated, it is important to ensure that Customer Service and other staff are trained so that they are able to interrogate the new GIS layers.

Council's current approach to ensuring that data stored in GIS and the asset register (Lifecycle) should be reviewed to ensure information is captured accurately in both systems.

During delivery of this project, the updated layer 87, and the recent open space audit data (discussed later in this Plan), should be used to update Council's asset register (Lifecycle). Consideration should then be given to the ongoing maintenance of the open space asset register. It may be found that it is only feasible to update the open space asset data (excluding land and specialist sports playing surfaces) when asset audits are conducted. If this is the case, it is important that the accuracy of available data is communicated to all decision makers.

Project 7. Update Events Perfect Database

It is recommended that the Events Perfect database be updated so that the unique identifier for each site is consistent with the relevant unique site ID that is stored in Council's asset register (Lifecycle). This will facilitate future analysis of asset utilisation.

Project 8. Amendments to Sites of Biological Significance Report (at next review)

It is recommended that when the Sites of Biological Significance Report (prepared by Biosphere Pty Ltd) is next reviewed, Council's unique site identifiers (stored in GIS Layer 150) be used. This will enable recommendations and changes to the status of each site to be readily represented on Council's GIS layer which is visible to all staff.

Project 9. Update Public Road Register

It is recommended that rights of way that have been classified as open space be reviewed, by the Asset Strategy team, and that those located on land classified as Road Reserve, be added to Council's public road register, if they contain a constructed access way that is available for general public use.

It is important that a title search, and site visit be conducted before adding rights of way to Council's public road register. Gazettal may be required in accordance with the Road Management Act and supporting regulations.

Chapter 4   Meeting Community Expectations

CHAPTER 4 - SUMMARY

- Levels of service essentially act as management targets that facilitate decision making. The setting of service levels enables Council to balance conflicting priorities and assess the performance of Council's asset management strategies.

- Customer service levels have not been clearly documented for Knox open space.

- Technical service levels have been developed for open space maintenance. Documentation of service levels for all other asset lifecycle phases has been less rigorous. Current technical service levels are reported in this chapter – desired service levels can only be informed by better understanding of community expectations.

- Council's current understanding of community needs and expectations reported in this Chapter is based on literature review, community satisfaction surveys and customer request trends.

- A literature review highlights the benefits of quality public open space. It suggests the look, feel and function of the urban landscape are influenced by the quality of open space. Public open space supports play and promotes a more active, healthy population and gives individuals increased opportunities to develop social and support networks.

- The latest Local Government Community Satisfaction Survey (LGCSS) rated Council's Recreational Facilities and Appearance of Public Areas categories a score of 74 and 62 respectively. Recreational Facilities have generally been rated more highly than the appearance of Council's Public Areas.

- The most common open space maintenance requests raised by customers in 2010:
    - Mowing - undeveloped Blocks & Reserves
    - Litter Clearing - Dumped/ Dangerous
    - Fallen Limb or Fallen Tree Removal
    - Pruning - Trees & Shrubs
    - Miscellaneous Furniture - Structural Maintenance

  The high volume of requests can be interpreted as community dissatisfaction with the level of service currently provided by Council.

- No requests were raised for the following activities by customers during 2010:
    - Sports Oval Mowing
    - Open Space Maintenance - Cemetery
    - Sign Obstruction - Pruning
    - Skatebowl Cleaning
    - Turf Wicket Maintenance (including Wicket Table)
    - Concrete Cricket Pitch Maintenance
    - Treat Algal Bloom – Water Feature
    - Litter Clearing – Dumped – Water Feature
    - Maintain Light Infrastructure – Water Feature
    - Pump/ Filter Maintenance - Arboretum & Cemetery

  The absence of requests can be interpreted as community satisfaction with the level of service currently provided by Council.

- Improvement recommendations include:
    - Review maintenance service levels to address areas where some level of community dissatisfaction is apparent
    - Document maintenance service levels for Conservation sites in a manner that is consistent with all other Council maintenance activities managed via the Work Order System (Lifecycle)
    - Upgrade the Work Order System (Lifecycle) to enable future monitoring of delivery of routine maintenance programs
    - Document and test service levels with the community

4.1 INTRODUCTION

Open space in Knox provides an attractive leafy setting for a range of formal and informal community activities. In order to meet community expectations, it is considered important that Council understand what the community values in terms of open space.

This Chapter describes Council's current understanding of community needs and expectations as derived from community satisfaction surveys and customer request trends. Current service levels are also described. It is acknowledged that further work is required to better document Council's current and desired service levels and to ensure that they are aligned with community expectations. The revised Knox Open Space Plan, due to be completed in 2012, is expected to provide more detail.

The approach adopted in this Chapter, is consistent with the recommendations of the IPWEA International Infrastructure Management Manual (2006). It is also in line with the asset planning and management objectives developed by the Local Government and Planning Ministers' Council and documented in a set of Nationally Consistent Frameworks. In particular, Framework 2 - Asset Planning Management highlights the Federal government's intention for State and Territory governments to develop mechanisms to ensure that local Councils:

- Define levels of service in consultation with the community
- Establish cost and quality standards for services delivered from Council assets
- Regularly review services in consultation with the community to determine the financial impact of a change in service levels

The IPWEA International Infrastructure Management Manual (2006) suggests that for a Core Asset Management Plan the organisation will need to:

- Understand and define customer groups
- Document existing understanding of customer needs based on previous consultation, complaints records etc.
- Document existing levels of service arising from legislation, previous customer consultation and strategic goals, and report performance as far as possible
- Identify additional levels of service as a future improvement
- Include a future consultation strategy

The objective of the National Framework and IPWEA International Infrastructure Management Manual (IIMM) is to ensure that service delivery is aligned with expectations within the context of financial and other practical constraints.

4.2 EXTERNAL STAKEHOLDERS

Figure 14 and Table 12 outline key external stakeholders in the provision, management and use of public open space within the municipality. External stakeholders include various government departments, sporting associations, community groups and private parties. Each group has different needs and expectations and is likely to use different parameters when judging Council's service delivery performance.
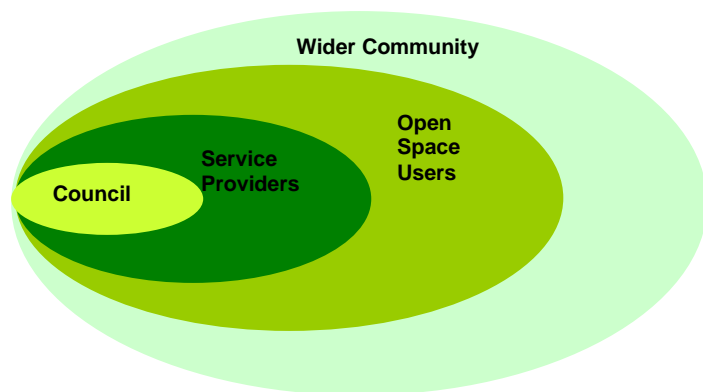
Figure 14 – Open Space Customer Groups

Service Providers	Open Space Users	Wider Community
Sporting clubs	Sports players	Residents/ property owners living near parks and reserves
Private land developers	Walkers	Visitors to and through the municipality
Maintenance contractors	Cyclists	State and federal government authorities (incl. DoE, DSE, Parks Vic, Melbourne Water)
Event organisers	Picnickers	
	Visitors to the municipality	
	Friends groups	
	Dog walkers	
	Melbourne Water	
	Advisory Groups	
	Friends Groups	

Table 11 – Open Space Customer Groups

Effective asset management requires Council to gain an understanding of what all key stakeholders value and to use this information to provide a balanced response to the needs of all.

It is expected that the revised Knox Open Space Plan will seek to better understand and document the expectations of all stakeholder groups, mainly with respect to passive open space.

4.3 LEVELS OF SERVICE

Levels of service essentially act as management targets that facilitate decision making. They define the standard at which Council aims to provide open spaces for community use. The setting of service levels enables Council to balance conflicting priorities and assess the performance of Council's asset management strategies.

The IPWEA International Infrastructure Management Manual (2006) defines two service level types:

Customer Service Level	How the customer receives the service (e.g. fewer than x playground accidents per year)
Technical Service Level	How the organisation provides the service (e.g. Inspect playgrounds equipment in accordance with national standards)

The level of service that can ultimately be provided by Council is affected by factors such as:

- Legislative requirements (refer Attachment 5)
- Council's strategic mission and objectives (as discussed in Chapter 1)
- Availability of resources and financial constraints
- Guidelines developed by various sporting bodies (e.g. International Hockey Federation has a Guide to Installing Hockey Pitches and Facilities)

4.3.1 Customer Service Levels

Customer service levels have not been clearly documented for Knox open space.

It is expected that the revised Open Space Plan will begin to consider customer expectations and document the customer service levels for each level of the open space hierarchy in a manner that can be translated, at a later date, into technical service levels. These technical service levels can then be used to inform Council's future operating and capital works programs.

Together the technical and customer service levels can be used to communicate the costs and benefits of Council's open space management approach.

4.3.2 Technical Service Levels

Detailed technical service levels have been developed for open space maintenance and are presented in Attachment 6. Documentation of service levels for all other asset lifecycle phases has been less rigorous.
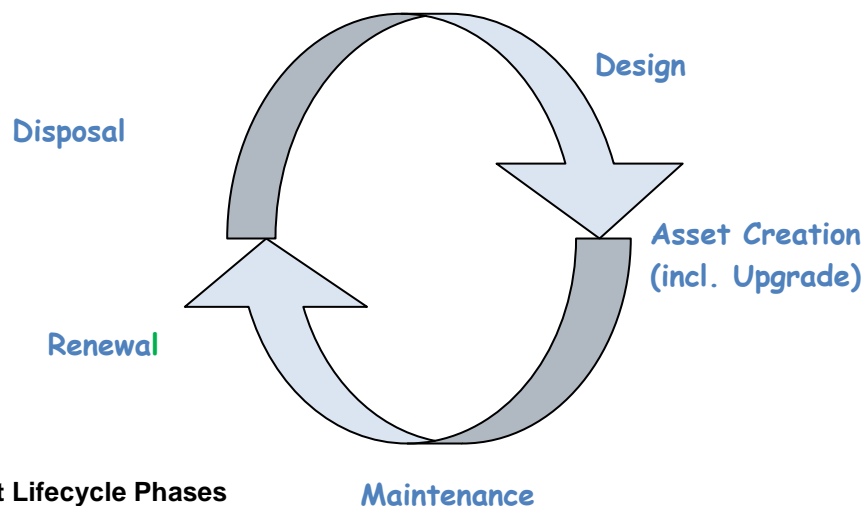
Figure 15 – Asset Lifecycle Phases

a) Design Service Levels

Council has a limited range of documented design standards for open space assets.

Active Open Space

Detailed Knox specific design standards have not been documented. Generally active open space assets are designed in accordance with relevant Australian Standards and sport specific guidelines prepared by relevant sporting bodies. The Knox City Council Sporting Reserves and Facilities Development Guidelines (May 2003) provide some description of the design standards applicable for each of the following active open space assets.

- Playing Surface (cricket and football only)
- Fencing of Reserves
- Fencing of Playing Surfaces
- Irrigation Systems
- Drainage Systems
- Synthetic Cricket Practice Wickets
- Turf Cricket Practice Nets

- Turf Wickets
- Competition Lights
- Training Lights

Passive Open Space

In 2007, the Sustainability Department, with support from landscape consultants Aspect Pty Ltd and internal consultation developed a number of standard designs for open space assets, street furniture and landscape details. This standard palette was endorsed by the Executive Management Team (EMT) and is currently located centrally on Council's record management system, Dataworks. The standard designs provide a consistent design framework for new and renewal works programs, and exist for the following open space assets:

- Fences
- Tree Guards
- Spade Edges
- Garden Beds
- Tubestock Plantings
- Pot Plantings
- Barrier Plantings
- Maintenance Vehicle Access Gates
- Seating
- Signage
- Picnic Settings
- Barbecues
- Drinking Fountains
- Bicycle Hoops

These standard designs have yet to be fully approved by Council's Standards Committee. Preparing them in Council's standard format and addressing some minor conflicts with other standard drawings will ensure they can form part of the overall suite of Council standards.

General

In terms of open space signage for identifying reserves, the Knox City Council Signage Guidelines 2011 define the sign designs for the following park classifications:

- Neighbourhood
- Major Recreation
- Minor Recreation

Signage has progressively been installed for a number of reserves across the municipality based on a prioritised listing of sites managed by Parks Services.

The revised Open Space Plan is expected to include design guidelines aligned with a revised hierarchy of open space.

b) Asset Creation (including Upgrade) Service Levels

The Knox Municipal Strategic Statement (MSS) includes provision 56.05-2 Public open space provision objectives. An extract form the municipal statement is provided in Attachment 3.

The Knox MSS broadly sets out Council's desired service level for public open space provision. The MSS was developed in consultation with the community and suggests that public open space should:

- Be suitable for its intended use.
- Be of an area and dimensions to allow easy adaptation to different uses in response to changing community active and passive recreational preferences.
- Be integrated with flood ways, urban water management systems, waterways and other water bodies and encumbered land that is accessible for public recreation.

- Incorporate natural and cultural features where appropriate.
- Include links to existing or proposed future public open spaces where appropriate.
- Maximise opportunities for passive surveillance.

For passive open space, the MSS objective is to provide a network of well-distributed neighbourhood public open space with the following features:

- Local parks within 400 metres safe walking distance of at least 95 percent of all dwellings.
- Where not designed to include active open space, local parks should be generally 1 hectare in area and suitably dimensioned and designed to provide for their intended use and to allow easy adaptation in response to changing community preferences.
- Additional small local parks or public squares in activity centres and higher density residential areas.
- Linear parks and trails along waterways, vegetation corridors and road reserves within 1 kilometre of 95 percent of all dwellings.

For active open space, the MSS objective is to provide active open space of at least 8 hectares in area within 1 kilometre of 95 percent of all dwellings that is:

- Suitably dimensioned and designed to provide for the intended use, buffer areas around sporting fields and passive open space
- Sufficient to incorporate two football/cricket ovals
- Appropriate for the intended use in terms of quality and orientation
- Located on flat land (which can be cost effectively graded)
- Located with access to, or making provision for, a recycled or sustainable water supply
- Adjoin schools and other community facilities where practical
- Designed to achieve sharing of space between sports.

Council capital upgrade projects tend to be consistent with the delivery of the objectives set out in the Knox MSS.

In the case of active open space, the table below summarises the types of open space assets considered appropriate for each of the active open space hierarchies as defined in the Knox City Council Sporting Reserves and Facilities Development Guidelines (May 2003). This document, due to be updated during 2012, applies primarily to cricket and football ovals, and their associated facilities.

Other strategic documents (such as the Tennis Facilities Plan) that are developed by the Leisure Services team are expected to document service level targets for other more specialist sports.

Open Space Asset	Regional	Municipal	Local	School
Playing Surface - Top Soils	Imported	Local	Local	Local
Playing Surface - Ground Profile	Domed	Domed	Domed	Flat
Fencing of Reserve	✓			
Fencing of Playing Surface	✓	✓	✓	
Irrigation System	✓	✓	✓	
Drainage System	✓	✓	✓	
Synthetic Cricket Practice Wickets	4	3	2	
Turf Cricket Practice Nets	4			

Open Space Asset	Regional	Municipal	Local	School
Turf Wickets	✓			
Competition Lights	✓	In designated circumstances	Subject to special need	
Training Lights	✓	✓	Subject to special need	

Table 12 – Active Open Space – Asset Creation (upgrade) Service Levels

Currently, passive open space upgrades are considered on a case by case basis. There are no clearly documented, measurable target service levels that Council aims to achieve when upgrading the passive open space network. It is expected that these will be documented to some degree in the soon to be updated Open Space Plan.

c) Maintenance Service Levels

Routine and reactive open space maintenance service levels were documented in 2006 and are presented in Attachment 6. These relate to the maintenance of active and passive open space sites. Discussions with Parks Services, responsible for the delivery of these maintenance activities, suggest that the routine maintenance service levels, documented here, have not been kept up to date and therefore, do not accurately reflect the work undertaken on site.

Maintenance service levels for Conservation sites are currently under development by the Bushland Management team. The bushland maintenance service level document currently outlines the key tasks for each month at each site. For each task, a number of factors are defined as illustrated in the example below:

- Site – X
- Task – Vegetation Management
- Target – Grassy Weeds
- Zone – Whole
- Method – Brush cut
- Required Outcome – Reduce the amount of weed seed standing
- Comments – Focus on the cleared area.

Further work is required to better document maintenance service levels for conservation sites in a manner that is consistent with other maintenance activities undertaken by Council and captured in Council's Work Order System (Lifecycle).

d) Renewal Service Levels

Council has not yet documented the age or condition level at which open space assets will be renewed. A subjective and inconsistent approach to asset renewal is currently undertaken, sometimes as a result of asset failure or a risk management issue.

e) Disposal Service Levels

Council has developed a Sale of Land and Buildings Policy which contains a number of general principles to be considered when assessing the suitability of Council land for sale. The principles of this policy could essentially be viewed as service standards for disposal. The current approach is that potential sales are generally investigated on an ad hoc basis, primarily in response to community or councillor requests. Assessment is carried out against each of the principles of this policy. Reference is also made to a draft prioritised list of sites that was developed more than five years ago by an Asset Management Working Group that had been established for the purpose of identifying land surplus to Council's requirements.

4.4 EXISTING UNDERSTANDING OF CUSTOMER NEEDS

To date, key drivers of community satisfaction with regard to Council open spaces have not been determined. These may include among many other factors:

- Council's responsiveness to asset repair issues raised
- Asset condition
- Aesthetics
- Accessibility
- Regulatory Compliance
- Availability
- Safety
- Functionality

Clear performance targets have only been set for responsiveness to asset repair requests. (Refer reactive maintenance activities documented in Attachment 6). These targets have not been explicitly tested with the community.

Council investigates community expectations in a number of ways:

- Informal interactions between Council officers and the community as part of normal daily activities.
- Formal consultation during the development of open space master plans and strategies.
- Council staff participation in Sports Club Development Networks, Advisory Groups and Friends Groups.
- Community satisfaction surveys
- Review of Community requests
- Review of strategies, studies and other relevant specialist literature

4.4.1 Literature Review

A literature review highlights the benefits of quality public open space. It suggests the look, feel and function of the urban landscape are influenced by the quality of open space. A high-standard of active open space encourages community participation in sporting activities. It supports play and promotes a more active, healthy population and gives individuals increased opportunities to develop social and support networks. Well developed and maintained passive open space promotes wellbeing and provides the community with opportunities to escape the pressures of the city; enjoy passive leisure activities and appreciate the value of significant historical sites, remnant native flora and fauna.

Key benefits of well distributed, diverse, accessible and well- maintained open space, linked together by attractive walking and cycling trails include:

- social spaces for family and friends to gather
- areas conducive to relaxation and contemplation
- opportunities for formal and informal sport and recreation
- refuge for the protection of indigenous and endangered flora and fauna
- habitat for birds and wildlife
- opportunities to educate the community
- flood protection by channelling stormwater runoff and diverting it away from private property
- attractive neighbourhoods with green buffers that separate residential areas from nearby traffic
- pleasant locations for community festivals and events
- protection of sites of historical, environmental and cultural significance
- community gardening opportunities
- absorption of greenhouse gas emissions and other air pollutants
- a positive impact on real estate values

It can be reasonably expected that the Knox community expect Council's open space network to provide the above listed benefits.

The following sections of this Plan summarise the results of recent community satisfaction surveys and trends in customer requests open space maintenance..

4.5 RECENT COMMUNITY SATISFACTION SURVEYS

Council participates in the annual Local Government Community Satisfaction Survey (LGCSS) which is coordinated by the Department of Planning and Community Development. Until 2008, Council also participated in the Integrated Open Space Services (IOSS) Park User Satisfaction Benchmark Survey. This section of the plan describes the findings of the most recent surveys. It must be noted that the survey results described in this Chapter present an incomplete view of community expectations. Further work is required to identify key community satisfaction drivers.

4.5.1 Local Government Community Satisfaction Survey

The Local Government Community Satisfaction Survey (LGCSS) provides Council with feedback on community satisfaction each year. Council performance is benchmarked against the performance of 77 other Victorian Councils. Although the survey is pitched at a relatively high level, it does provide Councils with information about how their performance is rated over time by the communities they represent.

Council performance is given a score out of 100 for a number of key result areas. Only two of the available categories can be used to measure satisfaction regarding open space management. These are the Recreational Facilities and Appearance of Public Areas categories. It must be recognised, however, that these two categories include other assets (such as pavilions or shopping strips) which do not fall within Council's definition of open space.

Output Indicators set out in the Knox Council Plan 2009-2013 indicate that Council aims to achieve a score of 72 and 69 for the Recreational Facilities and Appearance of Public Areas categories respectively. Figure 16 below summarises Council's performance over the past eleven years. The current target for Recreational Facilities has been achieved in seven of the eleven years and was most recently given a score of 74. Recreational Facilities have generally been rated more highly than the appearance of Council's Public Areas.

The most recent survey, received at the time of writing this Plan, reported a satisfaction rating of 62 for the Appearance of Public Areas which is a significant decrease from previous years. Although this may be attributed to dissatisfaction with other factors, such as VicRoads median strips or shopping centres (both not technically part of open space), it does warrant further investigation to determine the true source of dissatisfaction.
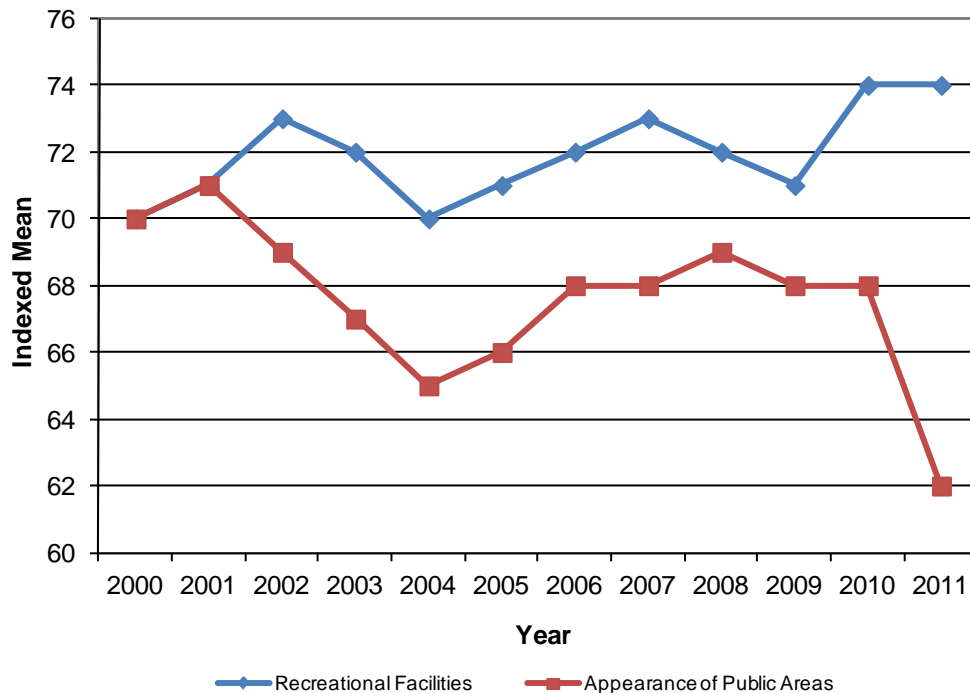
Figure 16 – Local Government Community Satisfaction Survey Results 2000-2011

The LGCSS includes an open ended question "Reasons why Council needs to improve on Recreational Facilities or Appearance of Public Areas" which provides respondents with an opportunity to indicate areas where they believe Council performance could be improved. In 2010 and 2011, the most common responses relating directly to open space suggested that improvement could be achieved by "better maintenance of parks and gardens, more frequent slashing/mowing of public areas and more frequent/better removal of litter in parks and gardens" suggesting some minor level of dissatisfaction with the current maintenance service standard.

4.5.2 Park User Satisfaction Benchmark Survey

The Integrated Open Space Services (IOSS) Park User Satisfaction Benchmark Survey is conducted for a number of Councils nationally. The survey has been developed to:

- Provide information about park users and park usage
- Measure park users' satisfaction with the level of park maintenance within a management area
- Provide a confidential means for comparison of results on an intra-regional and inter-regional basis
- Obtain park users' requirements for facility/service provision

The program involves conducting generic park user intercept surveys in parks and reserves. Knox participated in the program in 2001, 2004, 2005, 2006, 2007 and 2008. The level of response requested by Council varied between the years, with 63 responses in 2001, and 200 responses in 2006 and 2007. Surveys were typically undertaken in eleven reserves within the municipality with varying uses and hierarchies. From the six surveys in which Knox participated, the most common reasons for users visiting the reserves in question were:

- Children's Play
- Animal Recreation
- Exercise (unstructured)
- Social/Family Activities

50

Park users were asked to assess their satisfaction with the maintenance levels of up to twenty four different park assets (ranging from garden beds and grass length to barbecues and pathways).

The overall mean satisfaction levels for maintenance are depicted in Figure 17 below. It can be seen that Knox's satisfaction score has ranged between 7.4 and 7.8 over the period of this program. For each of the surveys in question, Knox scored equal or above the Melbourne Region average, placing it in the top cohort of Melbourne Councils. While the community appears to be relatively satisfied with the maintenance of Council's open space, the survey did elicit a number of varied comments regarding improvement opportunities.
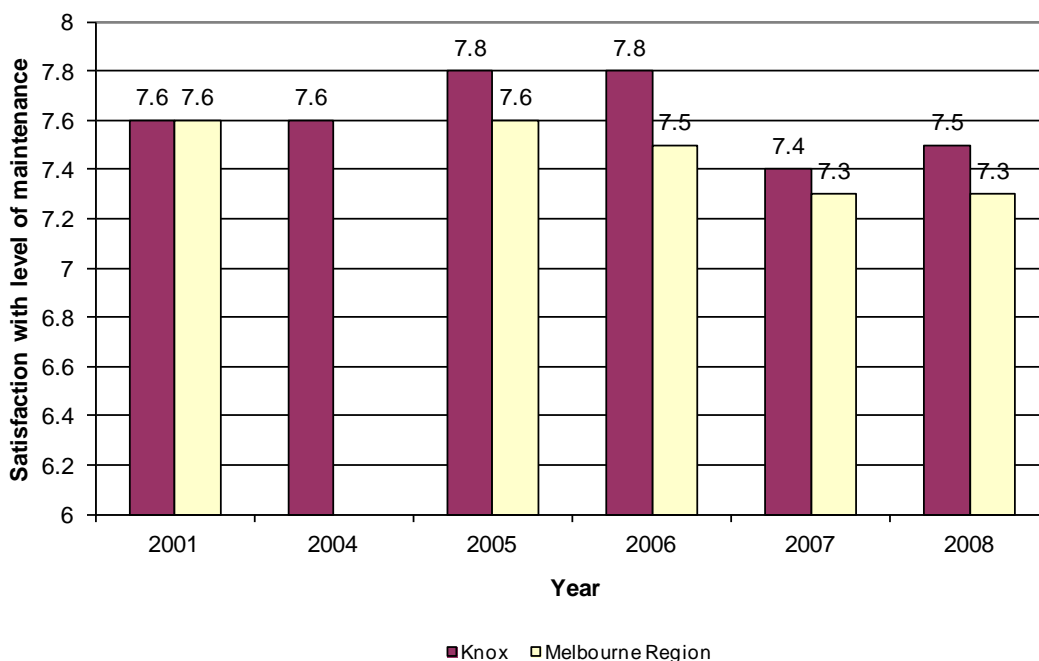
Figure 17 – Park User Satisfaction Benchmark Survey Results 2001-2008

Aside from the perspective of general interest statistics, there is limited scope for this type of benchmarking survey to drive significant improvements to the conduct of Council's business without having a better appreciation of other Councils' budgets and practices with respect to open space maintenance management. It is for this reason, along with the survey cost, that Knox has not participated in the program in recent years.

4.6 CUSTOMER REQUEST TRENDS

Customer satisfaction can be indirectly measured through Council's Works Order system (Lifecycle) by analysing the most common and least common maintenance requests received from customers. Table 13 below, indicates the open space maintenance activities that were requested most often by customers during the 2010 calendar year.

Activity Code	Maintenance Activity	No. customer requests (CRS) 2010
POS-REA-041	Mowing - undeveloped Blocks & Reserves	225
OS-REA-013C	Litter Clearing - Dumped/ Dangerous	204
OSV-REA-035	Fallen Limb or Fallen Tree Removal	202
OSV-REA-039	Pruning - Trees & Shrubs	100
FUR-REA-061	Miscellaneous Furniture - Structural Maintenance	98

Table 13 – Most common customer requests for maintenance (Jan – Dec 2010)

The high number of community requests, could be interpreted as an indication of community dissatisfaction with the current maintenance service levels for these activities.

Discussion with Parks Services has resulted in a number of suggestions to reduce the number of customer requests in these instances.

Rather than simply increase the frequency of passive open space mowing, one suggestion is that capital funding be approved to allow for the replacement of two front deck mowers with mowers with an increased deck (wings). Wing deck mowers may result in productivity gains. Their introduction could enable the mowing frequency to be increased by one week without additional human resources. However, as plant and machinery capital funding is largely fixed, a thorough analysis of this service should be undertaken in the first instance to ensure the most appropriate course of action is adopted.

In the case of tree pruning, the funds from a recently introduced routine program have been diverted to fund reactive tree pruning. Therefore, a short-term increase to the reactive tree pruning budget should enable the routine program to continue as intended. The introduction of routine tree pruning can be expected to lead to a reduction in fallen limbs and community requests for tree pruning.

The Parks Services team has indicated that it is not considered feasible to introduce routine programs for dumped litter collection or removal of fallen limbs because there is little pattern to these events occurring. The team has suggested that these issues are best addressed through a reactive approach.

A reduction is requests for maintenance and replacement of miscellaneous furniture can be expected if a renewal program is established and informed by regular condition audits, or the introduction of a dedicated inspection program.

The following open space maintenance activities generated no customer requests during the 2010 calendar year. It should be noted that data has only been able to be analysed for requests received through Council's Customer Response System.

Activity Code	Maintenance Activity
AOS-REA-041A	Sports Oval Mowing
CE-REA-001	Open Space Maintenance - Cemetery
SI-REA-020A	Sign Obstruction - Pruning
SK-REA-003	Skatebowl Cleaning
TW-REA-001	Turf Wicket Maintenance (including Wicket Table)
TW-REA-003	Concrete Cricket Pitch Maintenance
WF-REA-001	Treat Algal Bloom – Water Feature
WF-REA-002	Litter Clearing – Dumped – Water Feature
WF-REA-003	Maintain Light Infrastructure – Water Feature
WF-REA-004	Pump/ Filter Maintenance - Arboretum & Cemetery

Table 14 – Least common customer requests for maintenance (Jan– Dec 2010)

The low number of requests can generally be interpreted as the community being satisfied with the level of service currently provided by Council with respect to these activities. For instance, the low number of requests relating to Sports Oval Mowing most likely reflects the regular frequency of routine mowing in these locations, the result of which is a low level of complaints. (Conversely, if requests for this activity are received directly through Leisure Services, then they are not captured by this analysis.) Having a dedicated maintenance officer at the cemetery and a dedicated cricket wicket curator effectively results in no community requests for maintenance of these assets. The absence of community requests for maintenance of Council water bodies in open space can be interpreted as implying community satisfaction with the current approach to maintenance of these relatively new assets.

4.7 COMMUNITY CONSULTATION

4.7.1 Aligning Service Levels with Community Expectations

The Knox Open Space Plan is expected to include a methodology for future community engagement with regard to open space. The objective of future consultation will be to empower the community to participate in the process of understanding the purpose and value of local open space.

Compliance with the objectives of the National Asset Management Framework, which is assessed via the MAV STEP Program, requires Council to consult with the community in order to have confidence that Council's service levels are aligned with community expectations. This level of community consultation has not yet been undertaken and is expected to be difficult to implement. The figure below illustrates conceptually, how Council budgets and technical service levels support the delivery of services that are aligned with community expectations and Council Plan Themes.

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Council Plan Themes
Sustainable Natural Environment

Community Expectations
Describe expectations regarding the service outcomes from a customer's perspective

Community Service Levels
Document how customers determine whether the expected outcomes are being met.

Technical Service Levels
Establish measurable service and asset performance targets and use these to define what Council should be doing to deliver Customer Service Levels in a sustainable manner consistent with Council's strategic direction.

Capital & Operating Budgets

Figure 18 – Relationship between Technical Service Levels and Community Expectations

In order to have confidence that Council's approach to open space asset management associated budgets are aligned with community expectations, a staged approach is recommended. In the first instance, development of the revised Knox Open Space Plan is expected to incorporate extensive community consultation and enable Council to document the following:

- Council Plan Themes that will guide Council's future approach to open space management
- Community expectations regarding public open space
- Measurable community service levels which can later be used to measure the effectiveness of changes to Council's open space asset management approach.

When desired community service levels have been documented, these should be tested with the community. Potential changes to the current technical service levels can then be developed and costed, taking into consideration the effects of other factors that influence asset management processes, priorities and outcomes.

An example of how the above framework may be used is provided in the table below.

Council Plan Themes	Healthy Connected Communities	Sustainable Natural Environment
Community Expectations	Sporting grounds are safe for use by people of all ages	Ecosystems are healthy and retained for the enjoyment of future generations
Community Service Levels	No injuries to people using Council's open space sites	No loss of habitat for native wildlife
Technical Service Levels	**Activities** Routine and Reactive Maintenance programs (as documented in Attachment 6) **Performance Target** 90% of maintenance activities are completed on time	**Activities** • Acquisition of significant sites • Placement of covenants on titles • Impose environmental management plans on private land owners • Net Gain Policy **Performance Target** Positive Net Gain

Table 15 – Sample framework for documentation of service levels

Recognising that open spaces and other services delivered by Council, all compete for the same pool of limited capital and operating funds, further community consultation is then required to test whether the community is satisfied with potential service level changes and any associated cost differential. In order for the community to make an informed decision, it is considered important that costed service delivery options are presented for a range of service standards. This would best be achieved by presenting service levels for all Council assets as a group and providing a balanced viewpoint of all services currently delivered by Council and the associated costs. In the absence of sufficient data for all Council services and assets, it is recommended that a pilot project be undertaken to involve the community in the review of service levels for open spaces alone (refer Improvement Project 14).

4.8 IMPROVEMENT RECOMMENDATIONS

Project 10.   **Create Maintenance Activity – Nature Strip Planting**

Whilst analysing maintenance request data stored in Lifecycle, it was identified that Parks Services maintenance activity OSV-REA-001 Replanting Trees & Shrubs had the most customer requests. On close investigation, however, it was found that over 50% of these issues related to customer requests to have trees planted in nature strips. The inappropriate recording of these requests under activity OSV-REA-001 Replanting Trees & Shrubs is most likely the result of an equivalent activity not existing within the Work Order System for Roadside Vegetation. It is therefore recommended that a new activity be defined by the Parks Services team and added to the Work Order System by Asset Strategy to ensure requests for planting are recorded appropriately in future years. Council's Road Management Plan should be updated to incorporate any new activities to be undertaken in Council roadways.

Project 11.   **Review Maintenance Service Levels**

In order to reduce the number of common customer requests, and better meet community expectations, a thorough review of maintenance activities should undertaken. All changes to the maintenance service levels must be updated in the Work Order System (Lifecycle) to ensure ongoing data integrity.

The review should be undertaken by the Parks Services team in collaboration with the Open Space & Landscape Design team and reconsider the appropriateness of current reactive maintenance intervention levels, with a particular focus on activities with high numbers of customer requests:

- POS-REA-041 Mowing - Undeveloped Blocks & Reserves
- OS-REA-013C Litter Clearing - Dumped/ Dangerous
- OSV-REA-035 Fallen Limb or Fallen Tree Removal
- OSV-REA-039 Pruning - Trees & Shrubs
- FUR-REA-061 Miscellaneous Furniture - Structural Maintenance

Where appropriate, a higher standard of intervention could be set, or additional routine maintenance activities could be introduced.

Based on the analysis reported in this Chapter, a number of other changes are recommended:

1. Consider capital funding to enable the replacement of two existing front deck (2m) mowers with wider front deck (4m with wings) mowers. The change would only affect two of the fleet of eight mowers dedicated to passive open space mowing. The cost for this has been estimated at $70,000 every five years.

2. Consider using data from regular open space condition audits to inform a program of park furniture maintenance and renewal.

3. Consider an increase to the reactive maintenance budget for open space tree pruning to allow the routine program to continue as intended. An estimate of $200,000 has been suggested (as this is the amount currently diverted to the reactive program from the routine program), although it is recommended that this is progressively built up over four years so that the impact on request data can be monitored.

4. Consider adjusting inspection, maintenance and renewal service levels to align with revised park hierarchy as defined in the Open Space Plan.

Project 12.   **Document Maintenance Service Levels – Conservation**

In order to facilitate monitoring of maintenance activities at Conservation Sites, it is recommended that the Biodiversity team document current maintenance service levels in a format that is consistent with all other maintenance activities undertaken by Council and recorded in Council's Work Order System (Lifecycle). This will provide Council with a better understanding of the service provided and facilitate future data analysis to improve the quality of Council's conservation sites.

Project 13.   Upgrade Lifecycle – Routine Maintenance

Council has recently developed a module within Lifecycle to support the management of routine maintenance activities in Council buildings. It is recommended that the Asset Strategy team seek to expand this functionality to facilitate the management of all open space routine maintenance activities. The upgraded system should include improvements to the GIS integration and an ability to provide for different service levels for different hierarchy classifications.

Depending on the outcomes of Project 12 the Lifecycle upgrade could also include the introduction of functionality to support the Bushland Crew in the delivery of the maintenance programs at Conservation Sites.

If possible, the Lifecycle upgrade could also include the introduction of functionality to support a mobile routine open space inspection program in a manner that is consistent with the system currently in place for the inspection of road and road related assets.

In the event that an alternative maintenance management system is introduced, to replace Lifecycle, the ability to record and monitor delivery of routine maintenance activities should be a functional requirement of the new system.

Project 14.   Service Level – Community Consultation

It is recommended that the Sustainability team, in conjunction with Corporate Planning and Performance lead a project to document and test service levels with the community.

It is recommended that this project build on the work done to develop this Plan and the Open Space Plan. The project should seek to document potential changes to the current service levels and the associated cost implications. This information can then be used to consult with the community in order to determine the optimum investment that delivers Council open spaces at a standard and cost that is acceptable to the majority of stakeholders.

The framework presented in section 4.7.1 of this Plan provides a starting point for consideration by the project team. In practice, this project may form part of a broader initiative to formalise and standardise Council's approach to integrated service and asset planning and the project scope should therefore be considered in conjunction with Project 23 Service – Asset Management Integration Project.

Chapter 5   Understanding Demand

CHAPTER 5 - SUMMARY

- Information presented in this Chapter is intended to complement more detailed and ongoing strategic demand management and service planning work undertaken by the following teams:
    o Biodiversity
    o Open Space & Landscape Design
    o Leisure Services
- In order to remain responsive to community expectations, Council must remain abreast of changes in all factors likely to affect community demand for public open space.
- Factors that influence community expectations and demand for public open space include:

    Built Environment

    o Increasing dwelling density
    o Ageing assets
    o Construction of significant new assets (e.g. Eastern Recreation Precinct)
    o Encroachment by private property owners onto public open space

    Natural Environment

    o Climate change and the resultant increased intensity of storm and drought events

    Social & Cultural Environment

    o Uneven distribution of population growth throughout the municipality
    o Ageing population

    Legal & Political Environment

    o Federal government introduction of nationally consistent frameworks for: assessing financial sustainability; asset planning and management; financial planning and reporting
- Given that the municipality is largely developed, there is limited opportunity for Council to increase the amount of open space available for public use. Open space asset management must therefore continue to focus on improving the amenity of existing public spaces.
- A number of demand management strategies are available for Council:

    o Planning Scheme Controls – to trigger development constraints and ensure appropriate developer contributions are made.

    o Enforcement of Land Title Boundaries – to ensure public access to public open space is maintained.

    o Support Sporting Clubs – to optimise the use of sporting infrastructure and limit the impacts of overuse

    o Seek Partnerships with other authorities and the private sector – to maximise the number of facilities available for public use

    o Community Awareness Initiatives – to inform the community of available public open space
- Improvement recommendation:
    o Continue to use demand management strategies
    o Review encroachments and enforce land ownership boundaries

5.1 INTRODUCTION

Community wellbeing is affected by the quality of Council's public open space network. In order to remain responsive to community expectations, Council must remain abreast of changes in all factors likely to affect community demand for public open space.

Two Council departments are responsible for setting the strategic direction for Council's public open space within the municipality. The Sustainability department is responsible for conservation and passive open space. Youth Leisure & Cultural Services is responsible for active open space. Both departments seek to enhance existing sites and meet community demand for open space. Teams within these departments charged with this responsibility are:

- Biodiversity
- Open Space & Landscape Design
- Leisure Services (including Strategic Leisure Planner)

Ongoing work enables Council to understand, influence and respond to community demand. Strategic documents developed by these teams often include an analysis of demand and enable Council to better predict and respond to changes. Key Council documents that consider demand include:

- Open Space Plan 2004-2014 (due to be reviewed 2011/12)
- Play Space Strategy 2010
- Sporting Grounds & Facility Guidelines (due to be reviewed 2011/12)
- Recreation Plan 2004-2013 (due to be reviewed in 2011/12)
- Tennis Facilities Plan 2011
- Knox Basketball Infrastructure Review 2008
- Eastern Region Soccer Strategy 2008

The revised Open Space Plan is expected to explore demand for passive open space in more detail.

The information presented in this Chapter is therefore intended to complement ongoing strategic demand management and service planning work undertaken by the above teams.

5.2 FACTORS INFLUENCING DEMAND

Council delivers services and manages its asset portfolio within a complex operating environment.

Figure 19 illustrates key aspects of the operating environment.
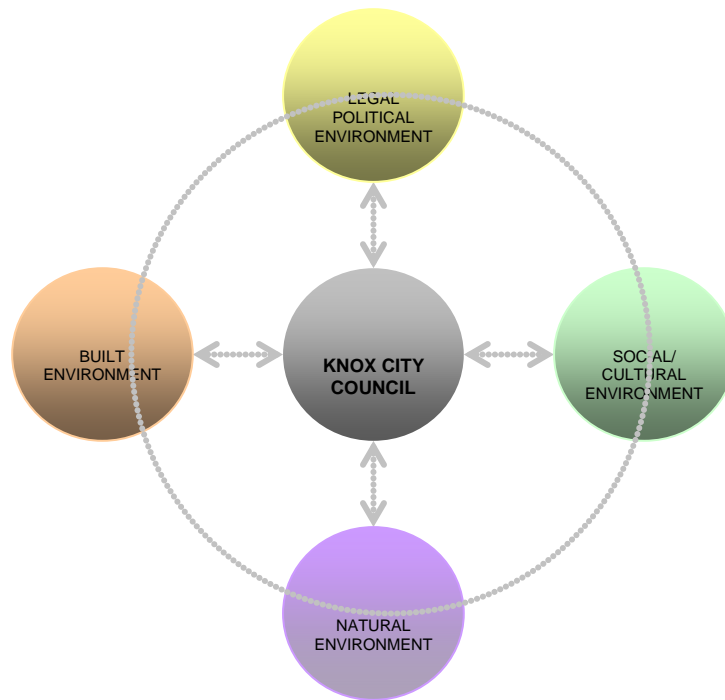
Figure 19 – Aspects of Council's Operating Environment

The ever-changing operating environment poses a number of challenges and opportunities that influence Council's approach to the provision and management of public open space. Community expectations and demand for open space are also affected by changes in the operating environment.

Each aspect of the environment has been considered in this Chapter. The table below highlights some factors that affect demand.

Factor	Description	Expected Impact
Built Environment		
Increasing Dwelling Density	Increasing density of dwellings resulting from subdivision of residential lots and Government policy (Melbourne 2030 & Melbourne @ 5 million plans) (ABS Forecast provided by ID Consulting predicts a 17% increase in the number of dwellings in the City of Knox between 2010 and 2030. The number of dwellings is predicted to increase from 55,993 to 65,556)	An increase in demand for public open space is likely due to a reduction in private open space available to residents. Appropriate vegetation controls and provision of clear access ways for emergency services must be maintained to protect dwellings and residents. An increase in demand for open space to assist in stormwater drainage management.
Ageing Assets	Deteriorating condition of assets Asset obsolescence as new designs are developed	Increased demand for timely asset renewal and upgrade
Eastern Recreation Precinct Development Project	This project includes construction of a modern sport recreation precinct in Wantirna South. From an open space point of view, the precinct will include: • 2 flood-lit synthetic soccer pitches • Open grassed areas for informal recreation • Landscaping • Grassed field for model aero club	Enhances the supply of soccer pitches within the municipality to meet growing demand in this sport. A decrease in demand on existing soccer facilities in adverse weather conditions.

Factor	Description	Expected Impact
Environmental Weeds	Increasing urbanisation has brought with it the introduction of environmental weeds that threaten biodiversity	Ongoing demand for Council to protect and enhance significant vegetation. Increasing importance is placed on the need to ensure significant vegetation is not destroyed.
Encroachment	Increasing Council awareness of encroachment onto public open space	Increasing demand on Council resources to actively minimise encroachment while improving the surveillance of public open space.

Natural Environment

Factor	Description	Expected Impact
Climate Change	More intense and frequent storms and more severe drought periods.	More challenging conditions for the maintenance of open space. New initiatives are required to manage the change: • warm season grasses • water harvesting

Social & Cultural Environment

Factor	Description	Expected Impact
Population Growth	Uneven growth, with increases focused in the suburbs of Scoresby and Knoxfield.	Greater use of public open space by residents living in Scoresby and Knoxfield, where dwelling density is also expected to increase.
Ageing population	An increase in the number of residents over 65 years old is expected to continue in future years. Most of the Knox population will continue to be under 50 and consist of young families.	Demand for traditional football ovals may decrease. Demand for a broader range of lower impact sports may increase. A broad range of sporting facilities will continue to be required to meet demand from people under 50 years of age. Demand for safe, well lit and readily accessible passive open space may increase. Demand for aesthetically pleasant open space land is expected to continue.

Legal & Political Environment

Factor	Description	Expected Impact
National Asset Management Assessment Framework	Introduction of National Reporting Frameworks: • Criteria for Assessing Financial Sustainability • Asset Planning and Management • Financial Planning and Reporting	Increased asset reporting requirements. Council will need to demonstrate improved asset knowledge and asset data management. There is an expectation that Council can demonstrate clear links between service levels and current and future community expectations

Table 16 – Summary of Factors Influencing Demand

5.2.1 Built Environment

The existing built environment within Knox is the result of a long history of urban development as the municipality has evolved from farmland and underdeveloped open space into a vibrant metropolitan area with more than 155,000 residents. Many Knox suburbs developed rapidly during the 1970s and 1980s. This rapid development has left Council with a legacy of small, poorly developed and under-utilised open space sites. More recent development has been focused in Rowville and Lysterfield.

Table 17 indicates that the majority of Knox has been developed for residential use, with a significant land mass providing for public open space.

Land Use	Area (sq. km)	% of Knox
Residential	59.8	52.5
Public Open Space	16.1	14.1
Industrial	6.5	5.7
Road	7.1	6.2
Services	6.4	5.6
Extractive Industry	5.2	4.6
Rural Living	3.9	3.4
Private Community, Recreation, Educational & Religious Purposes	3.0	2.6
Other Use	6	5.3

Table 17 – Land Use

Given that the municipality is largely developed, there is little opportunity for Council to increase the amount of open space available for public use. The area of privately held land that is considered to be available for significant Greenfield subdivision development is minimal and difficult to quantify. Considering that current planning provisions nominate a minimum contribution for public open space in the order of 5 to 8.5% of the developed land, Council is unlikely to have any significant increase to its open space network via this approach. Another means of increasing open space within the municipality would be the use of contributions in the Open Space Reserve to acquire more land. This would require a detailed program of land acquisition and would need to be based on accurate demand data reflecting this requirement. Targeted and strategic acquisition of land does have the advantage of allowing additional open space to be provided where the demand is greatest, not necessarily where recent development has occurred. In the meantime, open space asset management must continue to focus on improving the amenity of existing public spaces.

Eastern Recreation Precinct Project

This significant project will result in the creation of a major new sport and recreation precinct in Wantirna South. Local, regional and state level basketball, netball, gymnastics, soccer and model aeroplanes will all be provided for.

The site will be readily accessible and have ample parking facilities, pavilions and grandstands. Open space assets to be developed in stage one include:

- Two flood-lit synthetic soccer pitches suitable for all weather, day and night time use. One of the pitches will accommodate nine smaller 5-a-side pitches suitable for junior matches and training.
- Grassed field for the Victorian Association of Radio Model Soaring
- Open grassed areas for informal recreation
- Substantial landscaping including groups of predominantly native and indigenous trees

The project effectively addresses some of the growing demand for soccer facilities, reducing some of the significant demand on existing facilities. For example, the soccer pitches will enable some elite games to be transferred to this precinct. Furthermore, the all weather nature of the pitches will allow additional games to be transferred in adverse weather conditions. On the other hand, the provision of smaller pitches for 5-a-side games and the attraction of users from outside the municipality may increase demand for similar facilities at other Council open space locations.

Increasing Dwelling Density

Figure 20 below, illustrates the predicted growth in dwelling density within the municipality as forecasted by the Australian Bureau of Statistics. The greatest increase in density is expected in Wantirna South, Scoresby, Knoxfield and Bayswater.
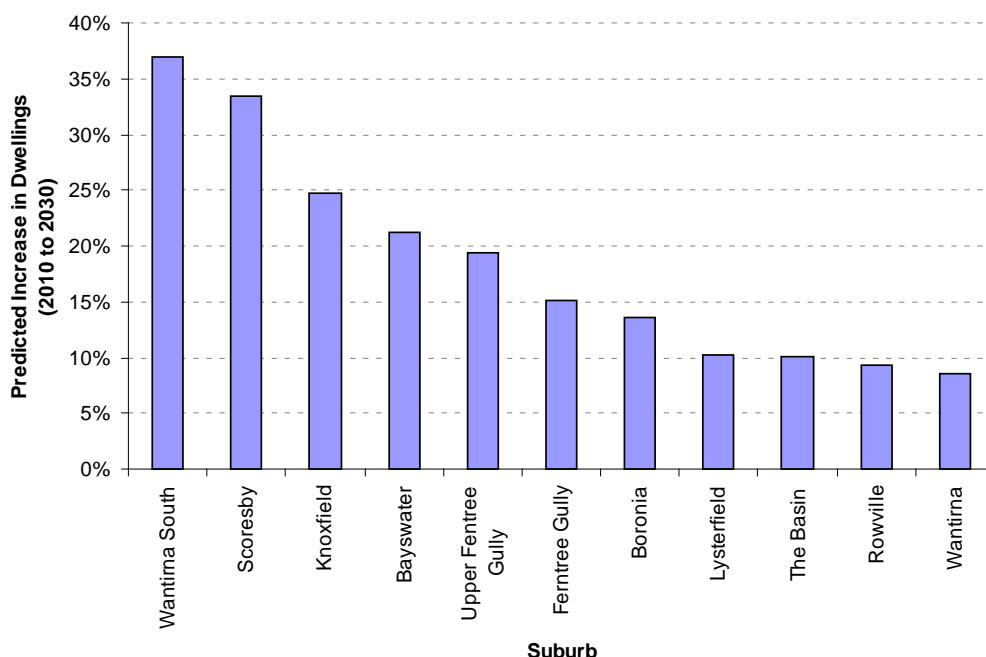
Figure 20 – Predicted Growth in Dwellings (2010 to 2030)

Source: Australian Bureau of Statistics and Forecasts by ID Consulting (Date January 2010)

More intensive development is expected to continue in future years as land owners construct additional dwellings, or multi-unit developments, on land that traditionally supported a single house.   The tendency toward increasing housing density results in a reduction in private open space available for use by residents and is therefore likely to result in an increasing demand for public open space.

Unobstructed open space land plays an important role in facilitating effective stormwater management. Overland flow paths and retarding basins within open space enable people and property to be protected during major storm events. Increased surface runoff, as a result of increasing dwelling density, places increasing demand on the stormwater drainage system. This is a significant issue, particularly in the older established suburbs where much of the drainage system is already operating at capacity during periods of high rainfall.

As urban development intensifies (particularly at the foothills of the Dandenong Ranges), it must be managed appropriately to minimise the impact of bushfire on private property and public open space. This requires appropriate vegetation controls and provision of clear access ways for fire fighters and escape routes.

Environmental Weeds

Over the years, urban development has brought with it the introduction of a range of environmental weeds that impact biodiversity due to weed invasion of native vegetation. It is important that Council continue to work on the protection and enhancement of significant native vegetation. Planning overlays, land acquisition and appropriately qualified maintenance crews are all important to ensure significant vegetation is not destroyed.

Encroachment onto Public Open Space

During the development of this plan, it was found that some property owners have encroached onto public open space. This generally occurs where private property shares a boundary with Council owned public open space, particularly linear reserves and rights of way.

In a number of instances, encroachment on to public open space has been found to obstruct Council's stormwater management system. Obstruction of overland flows results in upstream flooding of roadways and private property. It is therefore, considered important that Council undertake a process to identify these sites and advise affected land owners to remove their assets from Council land in order to allow for general public use and effective stormwater management. This is consistent with recommendation 8.5 of Council's Drainage Asset Management Plan which recommended introducing proactive overland flow path management particularly where private fences and structures impede overland flow paths and drainage easements.

Addressing encroachment issues at sites that impact the stormwater drainage system should be a priority. In other cases, where there is no adverse impact on the drainage system, it may be appropriate (if deemed surplus) to transfer ownership of some land to the adjoining land owners. These assets can then be removed from Council's asset register and the liability of ownership reduced.

5.2.2 Natural Environment

Climate Change

Changing weather patterns pose significant challenges for the management of public open space. The management of sportsgrounds and vegetated areas are particularly affected.

In recent years, the municipality has experienced:

- Water shortages due to increased the periods of drought
- More frequent and intense rainfall, winds, hail and electrical storms
- Longer and more intense heat spells
- Changes to ground water levels
- Increased bushfire risk

This has influenced all levels of government to support carbon emission reductions and improve energy and water efficiency. Council has taken up the challenge, and demonstrated its intention to provide leadership in the area of environmental sustainability through a number of high-level initiatives:

- Knox Revolving Energy Fund
- Sustainable Water Use Plan Knox City Council 2006-2015
- The Knox Greenhouse Action Plan 2003-2010
- Knox 2008-2018 Sustainable Environment Strategy
- Environmentally Sustainable Development Policy 2007
- Net Gain Policy

On a micro level for open space, Council has implemented programs for the installation of:

- Warm season grasses
- Water harvesting infrastructure

It is important when introducing these new initiatives to deal with climate change that sufficient resources are also provided for ongoing asset management to ensure the ongoing benefits are realised.

Warm Season Grasses

The planting of warm season grasses has enabled sporting ovals to be used with minimal irrigation as well as vastly improving the quality of their surfaces. This has effectively reduced Council's sports field watering requirements and expenditure, and increased the level of service. At the same time however, the planting of warm season grasses has imposed a significant challenge for maintenance crews, particularly with respect to increased fertilising requirements and the need for improved mowing technology.

Before warm season grass conversions, traditional mowers (slashers) were the only suitable alternative for maintaining ovals. However, higher quality ovals with warm season grasses are more suited to the use of more efficient (twice the width) and better quality cylinder gang mowers. These mowers enable routine mowing tasks to be undertaken more quickly. There is also a perception that premium ovals' surfaces can be maintained at a higher standard

with these gang mowers than is possible with the existing mowers. At this stage, Council's capital works budget for renewal and upgrade of plant and machinery has not been adjusted to allow for any upgrade of existing plant and machinery. In a similar vein, vehicle maintenance staff skills would possibly need to be developed to enable them to maintain more sophisticated plant considered necessary to maintain warm season grasses in an appropriate condition.   There is, however, a considerable cost (initial and ongoing) in upgrading to cylinder gang mowers – this requires further analysis and justification by way of a business case. (Refer improvement Project 11 Review Maintenance Service Levels).

Water Harvesting Infrastructure

Residents, businesses and Council have dealt with drought conditions by capturing and reusing stormwater. These partnership opportunities are expected to continue into the future. As Council introduces water harvesting infrastructure to the open space network, budgets and resources must also be adjusted to allow for future replacement and ongoing regular maintenance of the rain water tanks and associated plumbing fixtures.

5.2.3 Social & Cultural Environment

The 2006 Census reported a Knox population of 146,742 based on responses to the place of usual residence. Since this time, ID Consulting has provided forecasted population data for the City of Knox. The most recent population forecast for 2011 is 155,620 residents, with the following features:

- More than 16,500 families with children under 15 years of age
- Nearly 30,000 children under 15 years of age
- >10% of residents aged 65 years and older
- a fairly even distribution between male and female residents
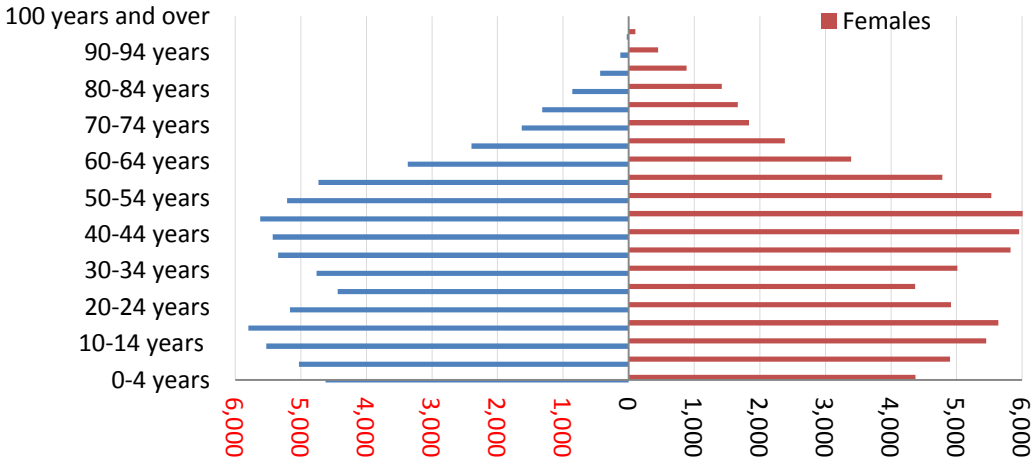
Figure 21 – Knox Age-Sex Profile (2006)

Source: Australian Bureau of Statistics, 2006 Census of Population and Housing Cat. No.2068.0

Population Growth

Figure 22 below illustrates uneven population growth is predicted across the municipality. Knoxfield and Wantirna South are expected to see the greatest overall increase in population, suggesting an increase in demand for public open space in these suburbs.
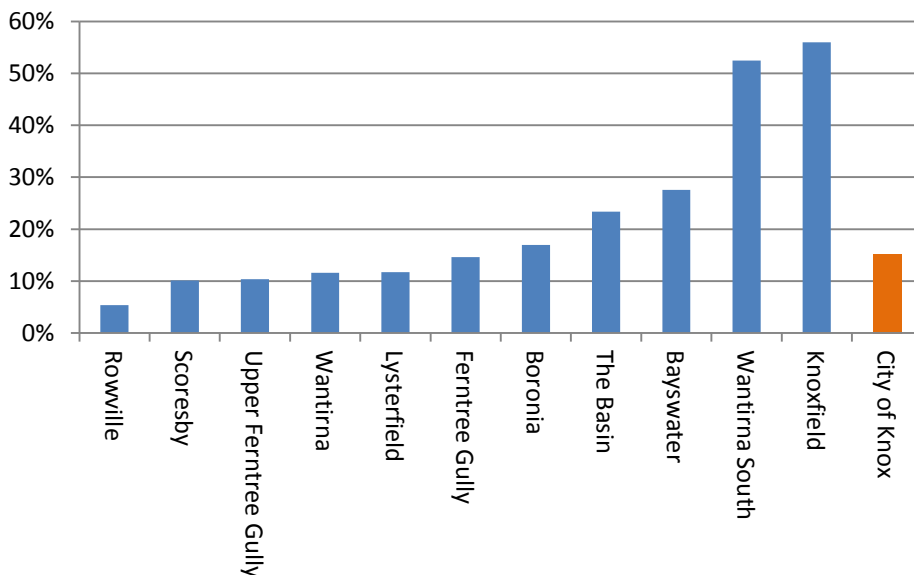
Figure 22 – Projected Population Growth, Knox Suburbs, 2006-2031

Note: Above graph is based on population summary data reported in the City of Knox Population and Household Forecasts (created 15/10/2010 by ID Consulting).

Supporting population summary data, as reported by ID Consulting in 2010, suggests that the suburbs of Boronia, Bayswater, Knoxfield, Rowville, Scoresby and The Basin are expected to attract families and older adults and retirees, while losing relatively large numbers of young adults leaving home. Wantirna is expected to experience a loss through migration in young adults leaving home to establish new households elsewhere. Ferntree Gully is expected to attract family households as the area regenerates. These predicted changes in the composition of each suburb can be expected to result in changing community expectations and needs.

Ageing Population

The Australian Bureau of Statistics 2006 Census reported that the population for Knox was almost 145,000. The table below shows the changing age structure between 2001 and 2006.

Age structureage group (years)	City of Knox						
	2006			**2001**			
Enumerated data			Melbourne Statistical Division %			Melbourne Statistical Division %	Change 2001 to 2006
	number	%		number	%		
0 to 4	8,968	6.2	6.3	9,883	7.0	6.4	-915
5 to 11	14,048	9.7	8.8	15,579	11.0	9.4	-1,531
12 to 17	13,689	9.5	7.8	13,436	9.5	7.9	253
18 to 24	14,409	10.0	10.2	13,675	9.7	10.2	734
25 to 34	18,473	12.8	14.9	20,460	14.5	16.0	-1,987
35 to 49	33,798	23.4	22.7	33,994	24.0	22.5	-196
50 to 59	19,873	13.7	12.2	17,020	12.0	11.5	2,853
60 to 69	11,067	7.6	7.9	8,376	5.9	7.3	2,691
70 to 84	8,367	5.8	7.5	7,361	5.2	7.3	1,006
85 and over	2,044	1.4	1.6	1,624	1.1	1.4	420
Total	144,736	100.0	100.0	141,408	100.0	100.0	3,328

Table 18 – History of Knox Age Profile Changes (2001 to 2006)

Source: City of Knox Community Profile 2006 and 2001 Enumerated Census Information for City of Knox (created 6/07/2008) by ID Consulting

The chart above indicates that when compared with the Melbourne Statistical Division, the City of Knox had a larger proportion of people in younger age groups (0 to 17) and a smaller proportion of people in older age groups (60 +).

Population projections up to the year 2031, undertaken by ID Consulting, indicate that the Knox population will increase by almost 18% between 2006 and 2031. The graph below

provides a breakdown of predicted growth by age group. The chart below suggests an ageing population.
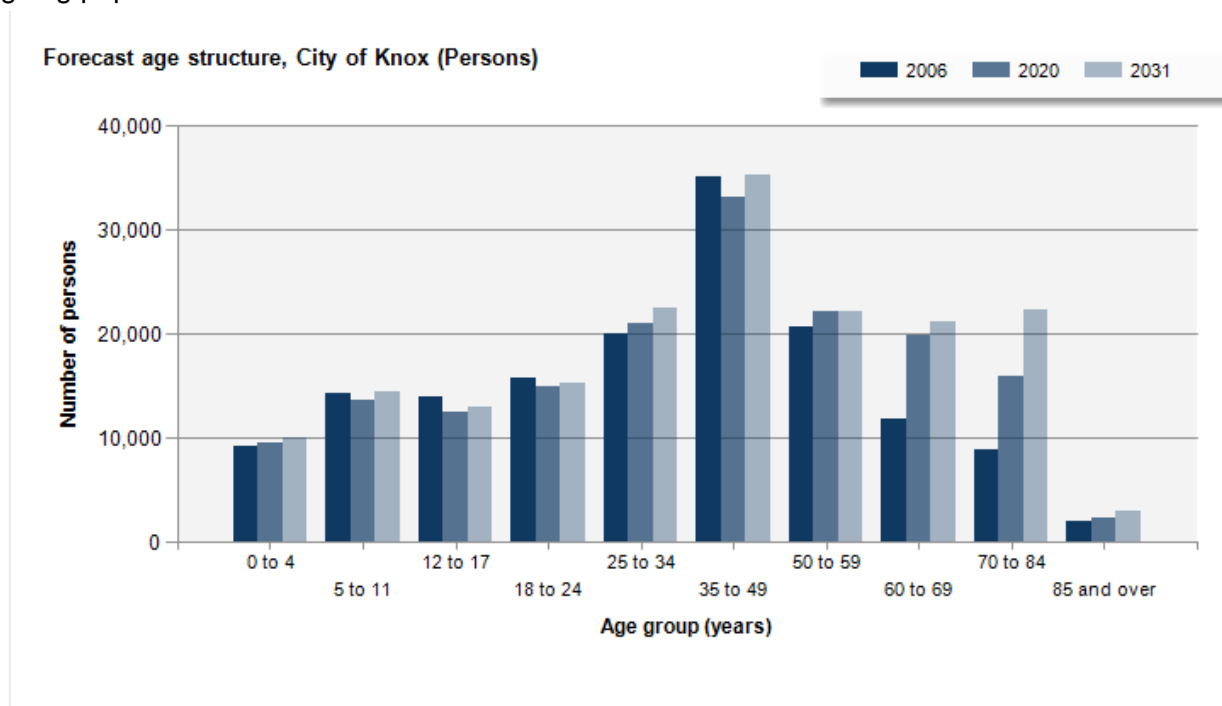
Figure 23 – City of Knox - Forecast Age Structure 2006 to 2031

Source: ID Consulting, Forecast Age Structure City of Knox (Persons), http://forecast2.id.com.au/Default.aspx?id=114&pg=5210

Note: Population numbers for the 2006 base year illustrated in the graph above, are derived by ID Consulting from the Australian Bureau of Statistics Estimated Resident Population figures which differ from the Census count as they factor in population missed by the Census, and population overseas on census night.

The ageing population can be expected to result in an increasing demand for low impact sports and recreational activities. A gradual shift away from traditional high impact sports, such as football, can be expected amongst older residents. Demand for safe, well lit and readily accessible passive open space may also increase.

Consistent with the findings of the Knox Recreation Plan, it is considered important that Council continue to provide Disability Discrimination Act compliant infrastructure to enable an ageing population to continue to actively engage in sport and recreation. Master plans and open space improvement projects should consider the needs of people with disabilities and seek to improve accessibility.

It must be noted that despite an ageing population, the 35 to 49 age group is predicted to remain stable with increases in population aged 25 to 34. The majority of the Knox population is expected to continue to consist of young families for many years to come. These residents are expected to continue to expect a broad range of sporting facilities and parklands that are aesthetically pleasing.

5.2.4 Legal & Political Environment

Federal and State Government strategic directions, policies, regulations, standards and guidelines all influence Council's approach to service delivery. Political influence is exerted through:

- Regulations and legislation
- Grant funding conditions
- Community education campaigns
- Actions of the Local Government and Planning Ministers' Council

A list of relevant legislation and regulations is provided in Attachment 5, together with a list of Council standards and guidelines that have been developed to support the appropriate provision and management of Council's open space network. This list is not exhaustive.

The introduction of three local government frameworks developed by the Local Government and Planning Ministers' Council is an example of how the Federal government imposes obligations on Councils.

1. Criteria for Assessing Financial Sustainability
2. Asset Planning and Management
3. Financial Planning and Reporting

These three frameworks have a significant impact on influencing best practice approaches regarding asset management. More stringent controls on asset planning, reporting and data management are expected to be developed.

Short political terms at all levels of government result in an ever-changing political landscape. As a result, the regulatory framework does not remain static. Council has a duty to remain abreast of all changes in regulations, standards and guidelines that affect the provision and management of public open space. The Municipal Association of Victoria (MAV) currently uses the National Asset Management Assessment Framework when assessing Council's asset management performance. Councils are expected to demonstrate a transparent link between current and proposed service levels and community expectations, and funding to demonstrate long term sustainability.

5.3 DEMAND MANAGEMENT STRATEGIES

It is generally accepted that wherever Council provides a well-connected and maintained open space network, community wellbeing is improved. Increased opportunities for social and physical activity improve residents' health and sense of connectedness.

Council has a range of tools at its disposal to ensure effective and efficient management of open space assets. These tools include the following non-asset related solutions:

- Planning scheme controls
- Enforcement of land title boundaries
- Support of Sporting Clubs
- Partnerships with other service providers and land owners
- Community awareness campaigns
- Removal of obstructions to passive surveillance

Demand can also be met through the provision of open space facilities within adjoining municipalities. It is anticipated that other strategic Council documents will include demand management strategies applicable to specific sites.

Planning Scheme Controls

Council is responsible for the local planning system. The Knox Planning Scheme, including the Municipal Strategic Statement (MSS), identifies the long term direction for land use and development within the municipality. It provides the rationale for zones and overlays that automatically trigger development constraints in environmentally significant areas. It also provides for open space contributions when land development projects are undertaken.

Relevant aspects of the MSS are summarised in Attachment 3.

Enforce Land Ownership

Encroachments onto public open space must be carefully assessed and controlled to ensure unauthorised private development does not occur on Council land. Management of these issues can be expected to result in improved access to existing sites without the need for land acquisition and mitigate the possibility of adverse possession claims.

Support Sporting Clubs

Sporting clubs can be supported to more effectively use sporting grounds to which they have access. There are opportunities for Council to continue to assist with timetabling of training sessions and matches between, and within, clubs to maximise the usage of all facilities while minimising the damage that can occur due to overuse.

Partnerships

Council engages with other authorities to maximise the facilities available for community use. It is considered important that Council continue to seek opportunities to share open space facilities with private land owners and other levels of government (including the Department of Education) to maximise the number of sporting ovals, and other facilities available for public use. Care must be taken when developing partnership agreements to ensure that there are overall community benefits and responsibilities are clearly defined.

Community Awareness

There are a number of ways Council can inform the community of passive and active open space available within the municipality. These include:

- Improved signage to support walking and cycling through the network of open space sites
- Construction of missing pathways that link parks and other public spaces so that people can more easily move through the municipality
- Inclusion of information brochures with other correspondence provided to the community, such as rates notices, or the website.

Passive Surveillance

It is generally accepted that community perceptions regarding the safety of a park impact on the desire to visit. It is therefore important that Council seek to improve perceptions of safety of open space sites. Opportunities to maximising passive surveillance should be actioned wherever possible. Clear lines of site from roadways and adjoining properties can be maximised by removing visual obstructions such as solid fences or thick vegetation.

5.4 IMPROVEMENT RECOMMENDATIONS

Project 15. Review Encroachments and Enforce Land Ownership

It is recommended that Council's Property Management team review the land titles where encroachment is evident, and then commence the process of ensuring illegally constructed assets are removed. The initial focus should be on sites where Council's drainage system is adversely impacted.

Some small parcels of land, which are essentially just used to access private property, may have no value as part of Council's public open space, or drainage network. Where appropriate, ownership of surplus sites should be transferred to adjoining land owners.

A preliminary listing of sites to be investigated has been documented.

Chapter 6   Asset Performance

CHAPTER 6 - SUMMARY

- Asset performance was assessed via a field audit, a review of maintenance history and insurance claims.
- The audit found that Council's open space assets were generally in good condition.
- The majority of open space sites were found to have:
    - Clear access and egress points on multiple sides at least 1.8 m wide
    - Good levels of visibility with less than 50% of the perimeter blocked by non transparent fencing
    - More than 80% of the surface area free of features such as trees, shrubs and garden beds
    - Low levels of shade coverage
- A review of maintenance data stored in Council's Work Order System (Lifecycle) indicated that:
    - Maintenance officers are responding to and addressing issues that have been raised within the target timeframes.
    - Some delays in addressing reported graffiti is evident.
    - The number of maintenance issues being raised through customer requests has been gradually increasing.
    - Many customer requests have been assessed by maintenance officers as posing "No Hazard" implying one of the following scenarios
        - The defect reported did not exceed Council's maintenance intervention levels
        - Council does not have responsibility for maintenance of the reported defect (eg. the site is owned and maintained by others).
        - The reported defect was found to be a duplicate (i.e. the issue had already been raised and was being addressed under an existing work request).
- Since 1994, open space assets have only accounted for 11 of the 265 public liability insurance claims raised. There have been no claims reported since 2002. This may be due to reforms to relevant legislation.
- Improvement recommendations include:
    - Review of the reactive maintenance service delivery approach
    - Upgrade to Council's Work Order System (Lifecycle) to capture the reason why officers record an issue as "No Hazard"
    - Internal training to encourage more proactive reporting of maintenance issues by staff

6.1 INTRODUCTION

Council needs to understand the condition of its assets in order to properly maintain them. Open space asset failure occurs when the assets become obsolete or cease to perform as intended.

An open space asset audit was conducted during 2011 to complement and verify data collected in previous audits. This Chapter summarises the open space audit findings. Recent history of open space maintenance is also discussed, together with Council's history of insurance claims. Open space related risks identified on Council's corporate risk register are also summarised.

6.2 AUDIT SCOPE

The audit undertaken in 2011, gathered condition data and verified existing information relating to the inventory of open space assets.

The audit excluded the following sites that are currently being redeveloped:

- Stamford House
- Eastern Recreation Precinct
- Land currently leased to others

Tree reserves were also excluded from the audit, resulting in 650 sites in total being audited.

The auditors collected the following information for each site:

- Photograph
- Inventory of open space assets
- Condition rating of selected assets
- Access/ egress rating
- Percentage of the site perimeter that is considered transparent, i.e. where fencing does not restrict passive surveillance
- Percentage of the site surface free of garden beds, shrubs, trees and water bodies
- Shade coverage
- Utilisation (number of people on site at the time of the audit)

It is intended that future audits follow the format of this audit to ensure consistency for benchmarking purposes. Repeated surveying will ensure Council has a good understanding of the inventory of assets. Over the long term, the data collected will improve Council's ability to predict asset deterioration and act to maximise the useful life of the audited assets.

6.3 AUDIT RESULTS

6.3.1 Open Space Asset Inventory

The table below summarises Council's inventory of open space assets, as collected during the most recent audit. This data will ultimately be entered into Council's Asset Register, and has formed the basis of the financial forecasting in Chapter 8.

Asset Class	Asset Type	Quantity
Art & Heritage	Plaque Fountain Monument/Sculpture/Artwork	18 no. 2 no. 33 no.
CCTV Camera (not attached to building)		0
Fencing - bollard	Internal Property Perimeter (non shared) Sport	4115m 6323m 0m

Asset Class	Asset Type	Quantity
Fencing - linear	Internal Property Perimeter (non shared) Sport	13,744m 24,858m 16,387m
Fixed Sport Infrastructure	Cricket pitch Cricket practice net Cricket practice pitch	49 no. 27 no. 88 no.
Kerb & Channel (edge of ovals only)	Barrier Rollover	1920m 4082m
Lighting (not attached to Council building)	Sports General Park Security	415 no. 139 no.
Park Furniture	Seat Picnic table Flagpole Planter box Dog bag dispenser Bike rack single Bike rack multiple Drinking fountain Barbecue unit	587 no. 78 no. 7 no. 0 4 no. 0 3 no. 17 no. 16 no.
Retaining Walls (>500m high)		1131m
Shade Structure (non building)	Shelter/Rotunda/Gazebo Shade sail	57 no. 3 no.
Signage	Park identification Unauthorised (e.g. community placed signage)	147 no. 0
Staircase (greater than 3 steps)		75 no.
Water harvesting infrastructure (non building)		18 no.

Table 19 – Open Space Asset Inventory

6.3.2 Condition

The following open space assets were audited for condition by Macutex Pty Ltd in 2011.

- Fencing – linear
- Cricket practice pitches
- Cricket practice nets
- Cricket pitches
- Retaining Walls
- Shade Structures
- Staircases

The condition rating system described in the table below was applied to each asset audited.

Condition Rating	Description	Recommended Action	% Remaining Life
1 – Excellent	Asset is as new	No additional maintenance required	95%
2 – Good	Asset is functional and displays superficial defects only	Minor maintenance intervention may be required. No component replacement required.	75%
3 – Fair	Asset is functional but shows signs of moderate wear & tear	Minor maintenance intervention and/or minor component replacement maybe required	50%

Condition Rating	Description	Recommended Action	% Remaining Life
4 – Poor	Asset functionality is reduced. Asset has significant defects affecting major components	Significant ongoing maintenance intervention or major component or asset replacement required	25%
5 – Failed	Asset is not functional	Asset requires decommissioning and/or replacement	5%

Table 20 – Condition Rating Descriptions

The current condition distribution of audited assets is represented in the graphs below. This data, combined with anecdotal evidence from the auditors and from Council staff, suggests that Council's open space assets are generally in relatively good condition, with generous remaining lives.
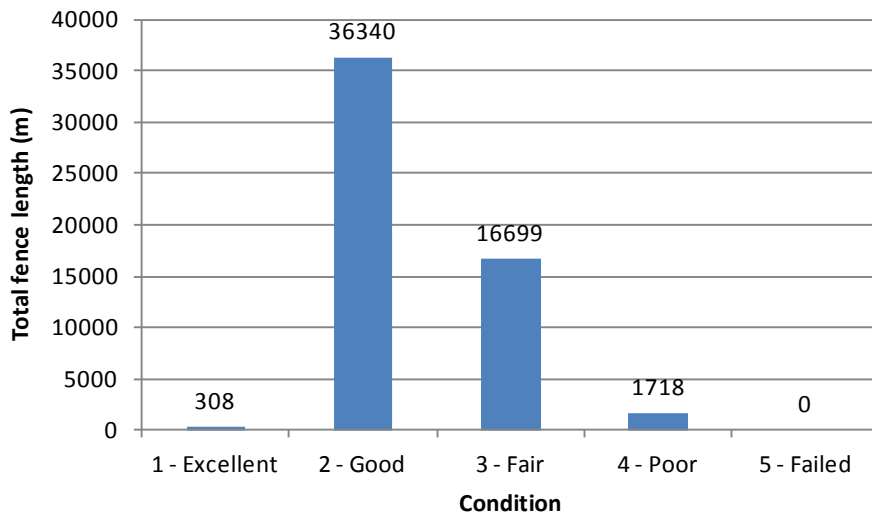
Figure 24 – Condition distribution of linear fencing (2011)
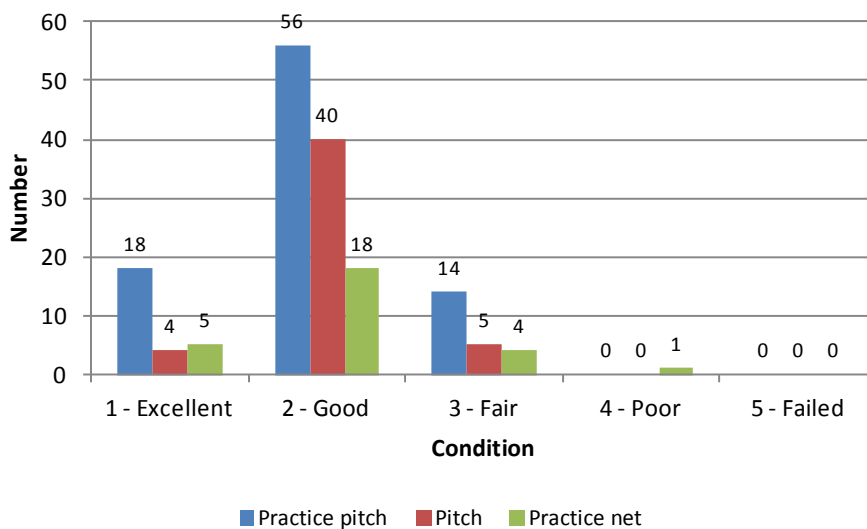
Figure 25 – Condition distribution of cricket infrastructure (2011)
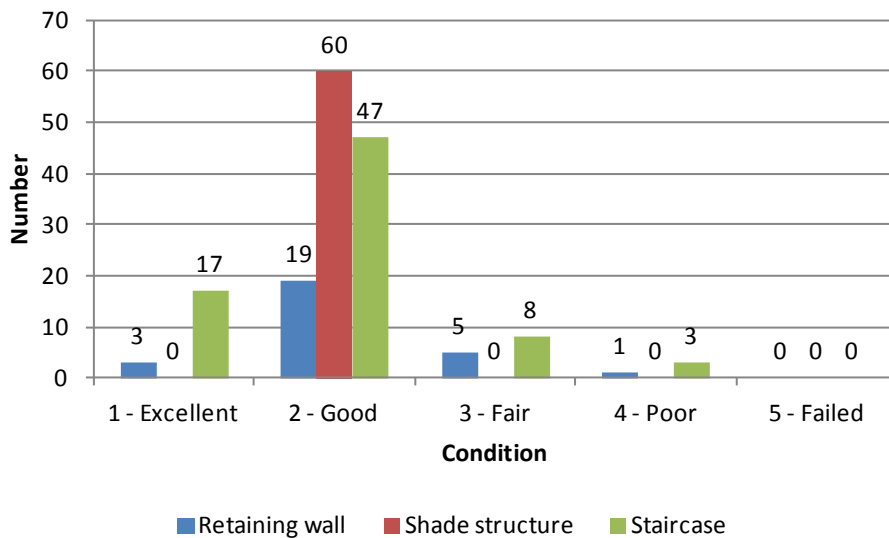
Figure 26 – Condition distribution of open space structures (2011)

A previous condition audit, conducted in 2008 by Macutex Pty Ltd, assessed the condition of the following specialist active open space assets:

- Tennis Courts
- Netball Courts
- Athletics Tracks

The chart below summarises the number of tennis and netball courts in each condition at the time of the audit. A number of poor or failed courts have either been renewed or identified since the audit. However, anecdotal evidence suggests that a number of courts that were in good or fair condition have now deteriorated to a status of poor. This is to be expected given that the life of these assets is only 15 years which suggests a deterioration rate of 6.7% pa – which has typically not been matched by adequate renewal funding.
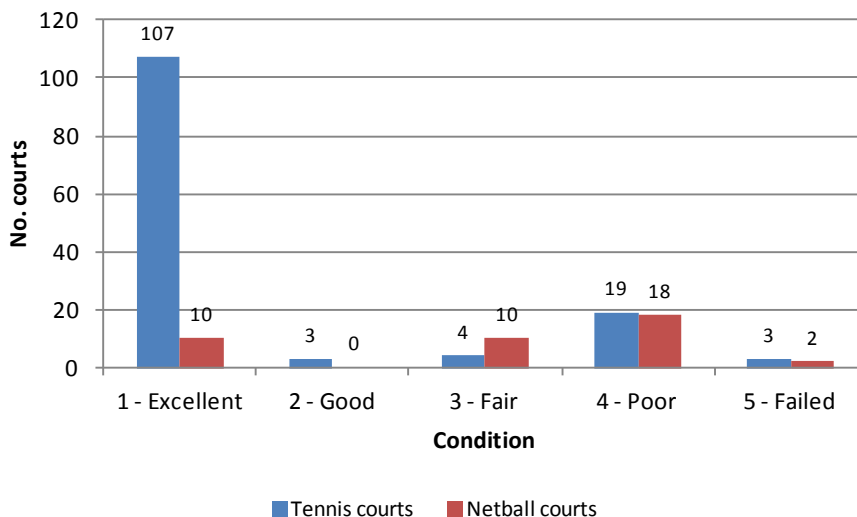
Figure 27 – Condition distribution of tennis and netball courts (2008)

6.3.3 Access/ Egress Rating

The access and egress of each site was assessed using the rating definitions presented in Table 21.

Access/ Egress Rating	Description
Excellent	Access/egress is available on at least two sides of the site (constructed or un-constructed), these access/egress points are at least 1800mm wide and there are no obstructions to these access/egress points.
Good	Access/egress is available on one side of the site (constructed or un-constructed), this access/egress point is at least 1800mm wide and there are no obstructions to this access/egress point.
Fair	Access/egress is available on at least one side of the site but there are moderate obstructions to this access/egress or it is narrow.
Poor	No access/egress is available or there are significant obstructions to access/egress.

Table 21 – Site Access/Egress Rating

The percentage of sites in each rating category is presented in the chart below. It is clear that the majority of sites audited have excellent or good access and egress. It can therefore be concluded that Knox's open space is very accessible to the community.
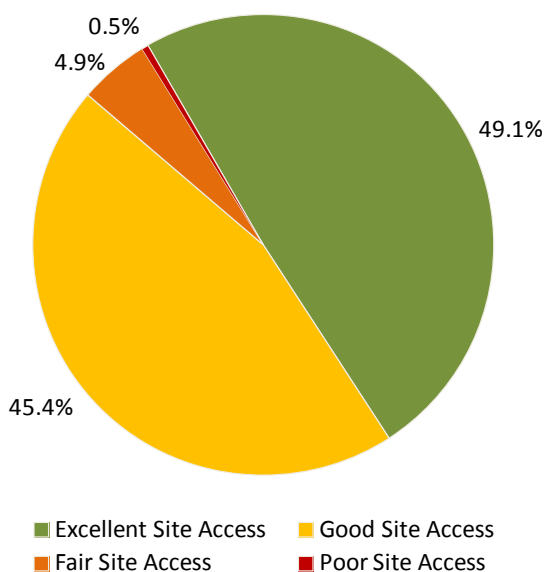
Figure 28 – Site Access/Egress distribution

6.3.4 Site Visibility

The audit identified the percentage of the perimeter of each site that is considered transparent, i.e. where there is no fencing, or where the existing fence does not restrict passive surveillance. Transparent fencing included open fencing such as chain mesh or solid fencing that is less than 1.2m in height. For example, a site which is fenced its entire perimeter, but half of that is fencing less than 1.2m high or open/chain mesh fencing, would be deemed as 50% transparent.

The chart below summarises the transparency assessment. Due to the fact that open space that is classified as road closures, rights of way or road islands are mostly transparent (open

on all sides), these sites have been presented separately in the chart. The overall data suggests that most active and passive open space sites can be easily seen from neighbouring property, although there are 184 sites which have less than 30% perimeter transparency. Opportunities may exist with some of these sites to increase passive surveillance through different fencing standards with neighbouring properties.
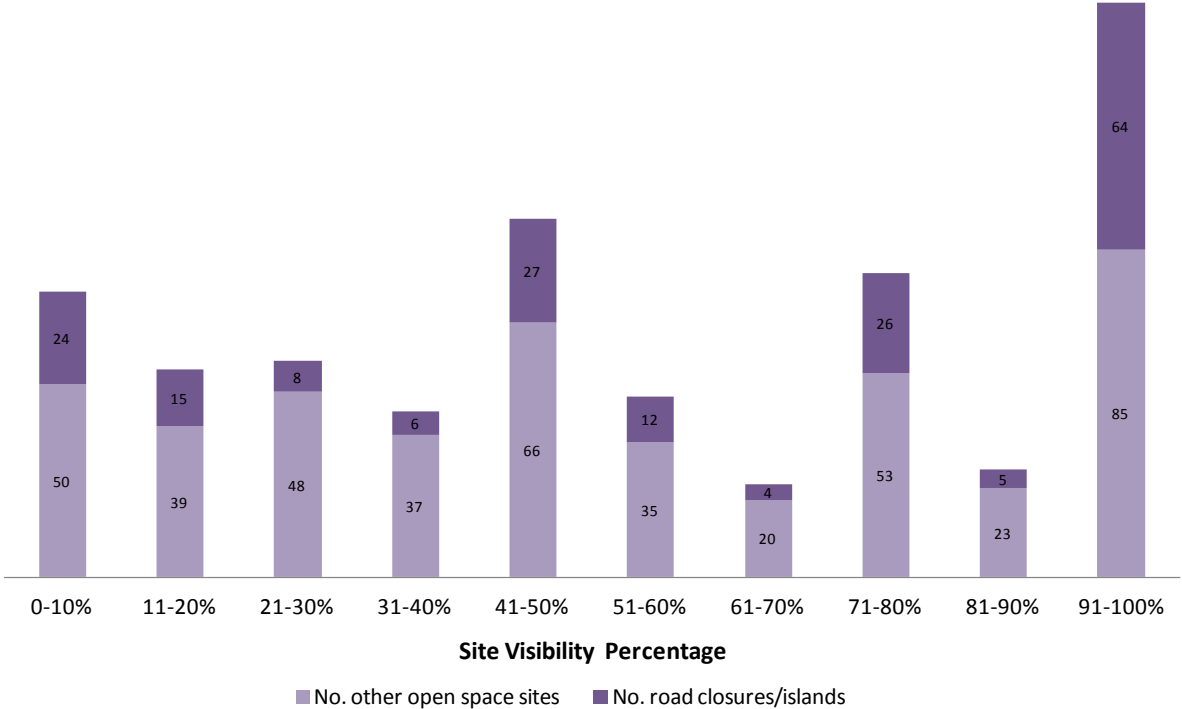
Figure 29 – Site visibility distribution

6.3.5 Available Surface for Play and Recreation

The auditor estimated the percentage of each site's surface area which was free from features such as garden beds, shrubs, trees and lakes. This provides an indication of the area available for community recreation use.

The chart below summarises the available space. It suggests that a significant proportion of Knox open space can be utilised for play and recreation, both active and passive in nature. Due to the fact that open space classified as road closures, rights of way or road islands are mostly clear of assets, these sites have therefore been presented separately in the chart.
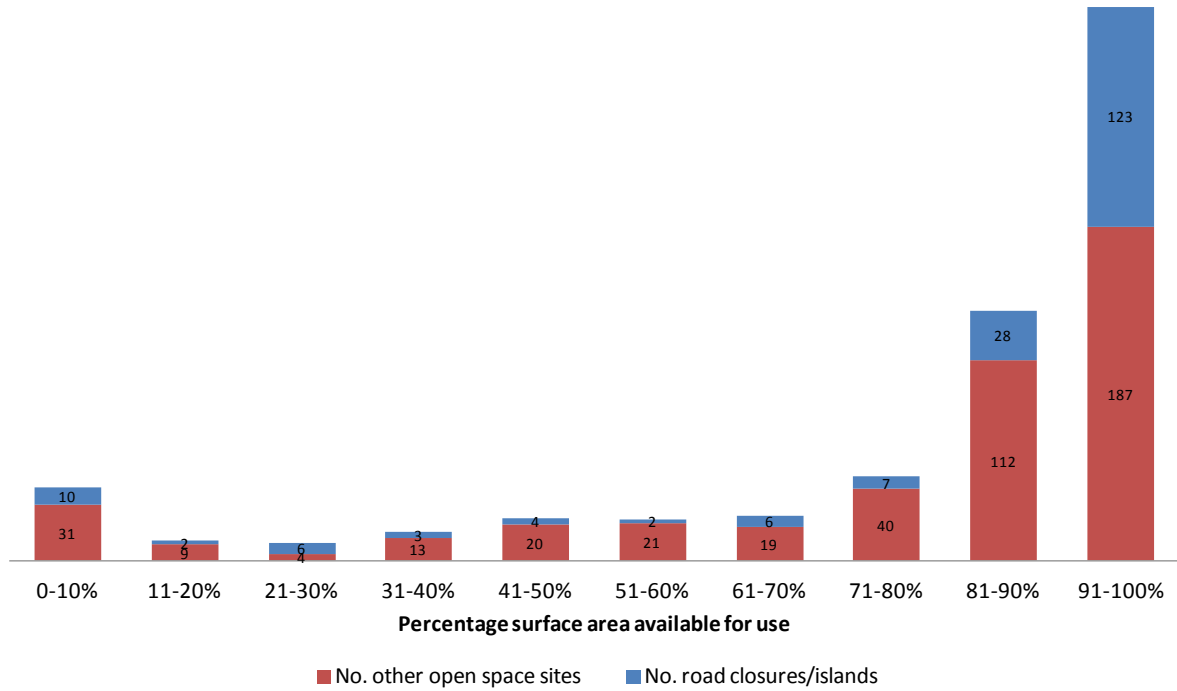
Figure 30 – Surface area available for use

6.3.6 Shade Coverage

In order to be able to determine the shade characteristics of sites, the auditor used aerial photography in conjunction with the site audit to estimate the percentage of the site's surface which falls under tree canopies. The chart below suggests that a significant number of sites have limited shade coverage.
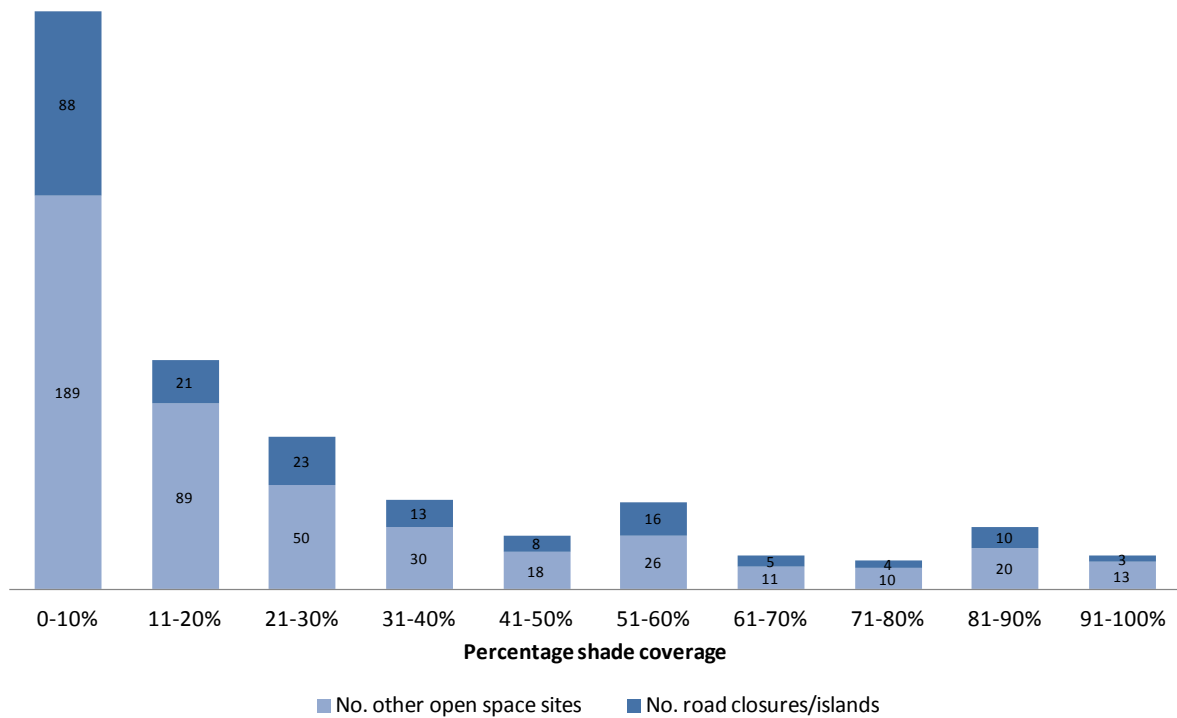
Figure 31 – Shade Percentage

6.4 MAINTENANCE HISTORY

6.4.1 Routine Maintenance

The Knox Work Order System (Lifecycle) does not have the capacity to measure the delivery of Council's routine maintenance service activities. These are generally managed by various Operations department supervisors using a range of spreadsheets and other methods. This makes it difficult to objectively assess delivery of the documented service levels. (Improvement Project 13 Upgrade Lifecycle – Routine Maintenance is recommended to address this gap).

Performance can be indirectly measured by monitoring the quantity and type of reactive requests received. An inadequate routine maintenance program can be expected to give rise to more customer requests than a program that has been designed to meet community service level expectations.

6.4.2 Reactive Maintenance

The Knox Work Order System (Lifecycle) monitors the delivery of Council's reactive maintenance service levels. Table 22 below summarises the source of all open space maintenance requests received during the period January 2006 to December 2010. As no routine hazard inspections are undertaken for open space, the source of requests is limited to those from customers as well as ad hoc inspections undertaken by Council's Parks Services staff.

The table below, indicates that the number of issues overall has remained relatively constant over the five year period. However, the number of issues being raised through customer requests has been gradually increasing.

Issue Identified by	No. Issues Identified				
	2006	2007	2008	2009	2010
Customer Request (including After Hours Call-outs)	1036	1029	1059	1305	1376
Ad hoc Inspection	674	587	693	453	413
Total	1710	1616	1752	1758	1789

Table 22 – Reactive Maintenance - Source of Requests

Data source: Work Order System (LifeCycle) January 2006 to December 2010

The increase in customer requests has coincided with a significant drop in ad hoc requests initiated by maintenance crews, suggesting that crews may have become less proactive in reporting and addressing issues before they are reported by a customer. It also may reflect the fact that some mowing works are undertaken by contractors who are less likely than Parks Services staff to raise other issues they encounter during the course of their works. In 2006, when the Work Order System was introduced, 40 % of issues addressed by the Parks Services team were initiated by Parks Services staff. In 2010, only 23% of issues addressed were identified by staff. Another possible reason for the high level of customer requests may reflect customer dissatisfaction with the level of service that Council provide. The community may expect Council to do more or different maintenance than it is currently providing. Further investigation of the community's satisfaction with Council's current maintenance intervention levels is warranted to inform future changes to maintenance service level standards. Additional research is considered particularly important given the significant decline in customer satisfaction regarding the appearance of public spaces (as reported in the Local Government Community Satisfaction Survey and discussed in section 4.5.1.)

The types of maintenance issues identified over the past five (5) years are summarised in Table 23 below. All open space reactive maintenance activities are included in this list. As can be seen, most reactive maintenance in open space is centred around tree/shrub maintenance, fencing issues and litter clearing. This is to be expected considering that there are generally no equivalent routine maintenance activities to reduce the incidence of these issues occurring.

Reactive Maintenance Activity		No. Issues Identified					
		2006	2007	2008	2009	2010	Total
OSV-REA-035	Fallen Limb or Fallen Tree Removal	217	315	291	356	349	1528
FUR-REA-032	Maintain Fencing	361	333	219	233	147	1293
OS-REA-013C	Litter Clearing - Dumped/ Dangerous	256	236	225	227	227	1171
OSV-REA-034	Tree & Stump Removal	175	163	181	163	182	864
POS-REA-041	Mowing - undeveloped Blocks & Reserves	63	65	64	156	225	573
OSV-REA-001	Replanting Trees & Shrubs	77	79	200	114	97	567
OSV-REA-039	Pruning - Trees & Shrubs	98	95	96	104	128	521
FUR-REA-061	Miscellaneous Furniture - Structural Maintenance	83	68	139	102	108	500
OS-REA-005	Graffiti Removal	72	51	81	95	80	379
FUR-REA-056	Maintain Bins	64	39	58	61	53	275
OSV-REA-047	Garden Bed Maintenance	49	39	66	32	22	208
OSV-REA-043	Pest and/or Vegetation Disease Control	20	33	35	30	60	178
OS-REA-032	Information Sign Maintenance	23	22	9	22	11	87
OS-REA-043	Weed Control / Edge trimming	20	21	4	15	16	76
POS-REA-044	Lawn Maintenance	17	10	11	8	23	69
OS-REA-074	Retaining Walls, Stairs & Minor Structure Maintenance	12	6	9	11	16	54
FUR-REA-060	Maintain External Reserve Lighting Infrastructure	15	9	11	7	5	47
FUR-REA-001A	Drinking Fountain Maintenance	9	8	6	6	10	39
AOS-REA-001	Sports Field Surface Maintenance	12	8	6	4	8	38
AR-REA-003	Open Space Maintenance - Arboretum	25	2	1	2	2	32
FUR-REA-001	Irrigation Sprinkler Maintenance	14	6	4	0	5	29
AOS-REA-008	Granitic Gravel Softball Diamonds & Cricket Net Run Ups	1	0	26	0	0	27
OSV-REA-048	Blackberry Removal	8	6	2	2	7	25
SI-REA-020A	Sign Obstruction - Pruning	1	0	4	0	6	11
CE-REA-001	Open Space Maintenance - Cemetery	6	0	0	1	0	7
SK-REA-003	Skatebowl Cleaning	1	0	1	4	0	6
AOS-REA-041A	Sports Oval Mowing	3	1	0	1	1	6
SK-REA-001	Litter Clearing - Dumped/ Dangerous - Skatebowl	2	1	0	1	0	4
WF-REA-002	Litter Clearing – Dumped – Water Feature	2	0	1	0	0	3

Reactive Maintenance Activity		No. Issues Identified					
		2006	2007	2008	2009	2010	Total
SK-REA-002	Graffiti Removal - Skatebowls	0	0	1	0	1	2
WF-REA-004	Pump/ Filter Maintenance - Arboretum & Cemetery	1	0	1	0	0	2
WF-REA-003	Maintain Light Infrastructure – Water Features	1	0	0	0	0	1
TW-REA-001	Turf Wicket Maintenance (including Wicket Table)	0	0	0	1	0	1
WF-REA-001	Treat Algal Bloom – Water Features	1	0	0	0	0	1
TW-REA-003	Concrete Cricket Pitch Maintenance	1	0	0	0	0	1
AOS-REA-013	Bike Rack Repair	0	0	0	0	0	0
AOS-REA-041B	Sports Field Surrounds Mowing	0	0	0	0	0	0
FUR-REA-062	Basketball Ring Maintenance	0	0	0	0	0	0

Table 23 – Reactive Maintenance – Requested Activities

Data source: Work Order System (LifeCycle) January 2006 to December 2010

Note:

1. The number of issues presented in this table excludes issues captured in the Work Order System that relate to requests in roadside nature strips (i.e. those that have been incorrectly assigned).

Delivery of Maintenance Service Levels
Initial Assessment

All requests for maintenance received by the Operations Centre are assessed before actioning. This includes assigning a public safety risk rating which determines the timing of risk mitigation works. All issues rated as Extreme or High risk require temporary protection works to mitigate the risk.

In terms of performance against initial assessment timeframes, the table below illustrates that during the period January 2006 to December 2010 a total of 91.8% of issues raised by customers were assessed within the target timeframes.

There were only 5 activities where the initial assessment target timeframes were not achieved more than 80% of the time. With the exception of OS-REA-005 Graffiti Removal (323 requests), these activities tended to have low volumes of requests (less than 35).

Reactive Maintenance Activity		Target Days for Initial Assessment	% Assessed on Time
CE-REA-001	Open Space Maintenance – Cemetery	5	100.0
FUR-REA-001	Irrigation Sprinkler Maintenance	5	100.0
SK-REA-003	Skatebowl Cleaning	5	100.0
TW-REA-001	Turf Wicket Maintenance (including Wicket Table)	5	100.0
WF-REA-001	Treat Algal Bloom – Water Feature	5	100.0
WF-REA-002	Litter Clearing - Dumped– Water Feature	5	100.0
WF-REA-004	Pump/ Filter Maintenance - Arboretum & Cemetery	5	100.0
SI-REA-020A	Sign Obstruction - Pruning	3	100.0
AOS-REA-001	Sports Field Surface Maintenance	5	97.2
OSV-REA-043	Pest and/or Vegetation Disease Control	5	96.3
FUR-REA-061	Miscellaneous Furniture - Structural Maintenance	5	95.7
OS-REA-013C	Litter Clearing - Dumped/ Dangerous	5	95.1
POS-REA-044	Lawn Maintenance	5	95.1
OSV-REA-035	Fallen Limb or Fallen Tree Removal	5	94.6
FUR-REA-032	Maintain Fencing	5	94.6
POS-REA-041	Mowing - undeveloped Blocks & Reserves	5	94.2
OSV-REA-047	Garden Bed Maintenance	5	93.1

Reactive Maintenance Activity		Target Days for Initial Assessment	% Assessed on Time
OS-REA-043	Weed Control / Edge trimming	5	91.4
FUR-REA-001A	Drinking Fountain Maintenance	5	90.9
OSV-REA-001	Replanting Trees & Shrubs	7	90.8
FUR-REA-056	Maintain Bins	5	88.8
OSV-REA-039	Pruning - Trees & Shrubs	5	88.3
OS-REA-032	Information Sign Maintenance	5	87.9
OSV-REA-034	Tree & Stump Removal	5	87.6
OS-REA-074	Retaining Walls, Stairs & Minor Structure Maintenance	3	86.8
FUR-REA-060	Maintain External Reserve Lighting Infrastructure	5	86.4
OSV-REA-048	Blackberry Removal	5	86.4
AOS-REA-041A	Sports Oval Mowing	5	80.0
AR-REA-003	Open Space Maintenance - Arboretum	5	76.9
OS-REA-005	Graffiti Removal	1	71.5
TW-REA-003	Concrete Cricket Pitch Maintenance	5	0
WF-REA-003	Maintain Light Infrastructure – Water Features	5	0

Table 24 – Initial Assessment Performance

Data source: Work Order System (LifeCycle) January 2006 to December 2010

Note:

1. Only activities requiring initial assessment (i.e. issues arising from customer requests) are shown in the table.

The distribution of risks, associated with defects reported by customers during the period January 2006 to December 2010, is presented in Figure 32 and Table 25 below. It is worth noting that the majority of issues that are raised by the community ultimately end up being classified as "No Hazard". In other words, on inspection or evaluation by Council staff:

- The defect observed did not exceed Council's maintenance intervention levels (as documented in Attachment 6)
- Council does not have responsibility for maintenance of the reported defect (eg. the site is owned and maintained by others, but customers incorrectly perceive it to be the responsibility of Council).
- The reported defect was found to be a duplicate (i.e. the issue had already been raised and was being addressed under an existing work request).

The quality of the data recorded by Council Officers in the Work Order System, when classifying an issue as "No Hazard," was largely incomplete. In the majority of cases, no reason was provided to indicate why the issue was classified as "No Hazard." An upgrade to the Work Order System (Lifecycle) is therefore warranted to introduce validation so that a reason must be provided when an issue is classified as "No Hazard". This validation will facilitate better data collection and enable more in depth analysis.
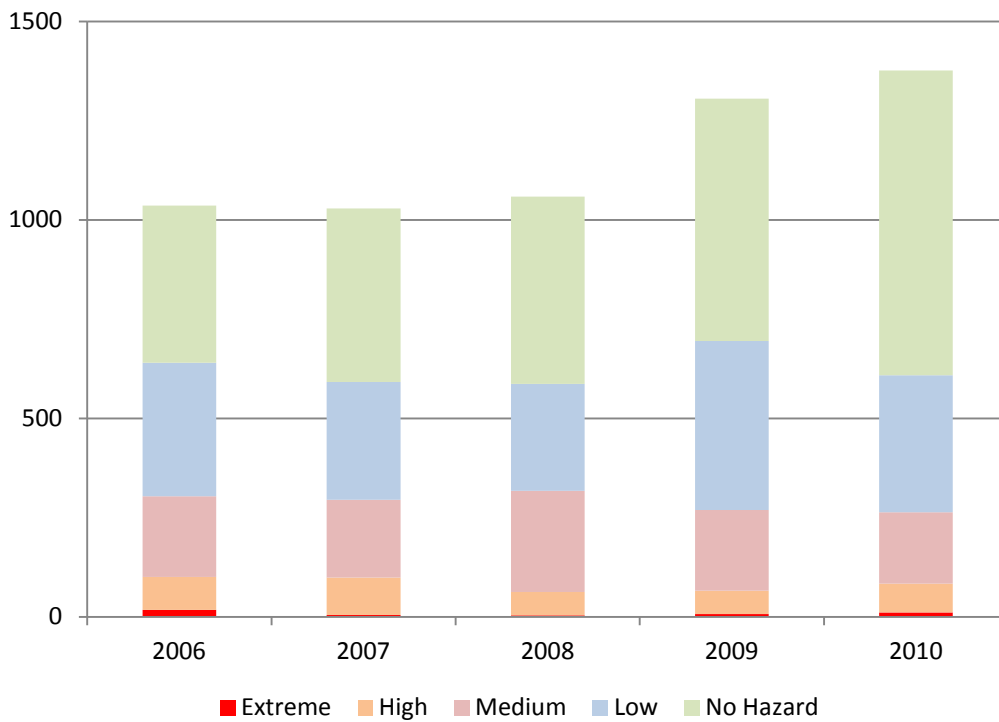
Figure 32 – Public Safety Risk Distribution (Jan 2006-Dec 2010)

	No. Issues Identified - Customer Requests Only				
Identified Risk	**2006**	**2007**	**2008**	**2009**	**2010**
Extreme	18	5	4	7	11
High	83	94	59	59	73
Medium	203	196	255	203	180
Low	336	297	269	426	345
No Hazard	396	437	472	610	767
Total	1036	1029	1059	1305	1376

Table 25 – Public Safety Risks Attributed to Customer Requests (2006-2010)

Temporary Protection Works

Issues rated as an Extreme or High risk require Council to undertake temporary works to mitigate the risk. The table below illustrates that during the period January 2006 to December 2010 a total of 556 issues required temporary works. As can be evidenced in the table, temporary works were generally completed within the target timeframes (overall 96.2%).

Reactive Maintenance Activity		**Target Days for Temporary Protection Works**	**Number of Requests Assessed as Extreme or High**	**% Temporary Protection Works Completed on Time**
FUR-REA-061	Miscellaneous Furniture - Structural Maintenance	5	31	100.0
OS-REA-005	Graffiti Removal	1	23	100.0
OSV-REA-034	Tree & Stump Removal	5	21	100.0
OSV-REA-039	Pruning - Trees & Shrubs	5	18	100.0
FUR-REA-056	Maintain Bins	5	9	100.0
OS-REA-074	Retaining Walls, Stairs & Minor Structure Maintenance	3	8	100.0

Reactive Maintenance Activity		Target Days for Temporary Protection Works	Number of Requests Assessed as Extreme or High	% Temporary Protection Works Completed on Time
FUR-REA-001A	Drinking Fountain Maintenance	5	7	100.0
AR-REA-003	Open Space Maintenance - Arboretum	5	7	100.0
OS-REA-032	Information Sign Maintenance	5	6	100.0
FUR-REA-001	Irrigation Sprinkler Maintenance	5	5	100.0
SK-REA-003	Skatebowl Cleaning	5	5	100.0
OSV-REA-047	Garden Bed Maintenance	5	5	100.0
FUR-REA-060	Maintain External Reserve Lighting Infrastructure	5	2	100.0
AOS-REA-001	Sports Field Surface Maintenance	5	1	100.0
OS-REA-043	Weed Control / Edge trimming	5	1	100.0
WF-REA-004	Pump/ Filter Maintenance - Arboretum & Cemetery	5	1	100.0
SI-REA-020A	Sign Obstruction - Pruning	3	1	100.0
SK-REA-002	Graffiti Removal - Skatebowls	1	1	100.0
CE-REA-001	Open Space Maintenance – Cemetery	5	1	100.0
OS-REA-013C	Litter Clearing - Dumped/ Dangerous	5	80	97.5
OSV-REA-043	Pest and/or Vegetation Disease Control	5	35	97.1
OSV-REA-035	Fallen Limb or Fallen Tree Removal	5	236	94.9
FUR-REA-032	Maintain Fencing	5	36	94.4
OSV-REA-001	Replanting Trees & Shrubs	7	12	75.0
POS-REA-044	Lawn Maintenance	5	4	75.0

Table 26 – Temporary Protection Works Performance

Data source: Work Order System (LifeCycle) January 2006 to December 2010

Note:

1.   Only activities requiring temporary protection works in the given timeframe have been represented in the table.

Rectification Works

During the period January 2006 to December 2010, a total of 5230 issues required maintenance works to rectify the issue identified. As can be seen in the table below, rectification works weren't completed in the target timeframes as consistently as temporary works. However, in most cases, more than 90% of rectification works were completed on time (overall 92.8%).

Reactive Maintenance Activity		Target Days for Rectification Works	Number of Issues Requiring Rectification Works	% Rectification Works Completed on Time
FUR-REA-001	Irrigation Sprinkler Maintenance	96	13	100.0
SI-REA-020A	Sign Obstruction - Pruning	32	10	100.0
SK-REA-001	Litter Clearing - Dumped/ Dangerous - Skatebowl	5	4	100.0
WF-REA-002	Litter Clearing – Dumped – Water Features	120	1	100.0
AOS-REA-041A	Sports Oval Mowing	64	1	100.0
FUR-REA-056	Maintain Bins	96	213	97.2
FUR-REA-032	Maintain Fencing	120	999	96.9
OSV-REA-001	Replanting Trees & Shrubs	250	182	96.7
OSV-REA-035	Fallen Limb or Fallen Tree Removal	96	1078	96.3
AOS-REA-008	Granitic Gravel Softball Diamonds & Cricket Net Run	64	27	96.3

Reactive Maintenance Activity		Target Days for Rectification Works	Number of Issues Requiring Rectification Works	% Rectification Works Completed on Time
	Ups			
OS-REA-013C	Litter Clearing - Dumped/ Dangerous	64	680	95.3
AOS-REA-001	Sports Field Surface Maintenance	64	21	95.2
FUR-REA-061	Miscellaneous Furniture - Structural Maintenance	150	309	93.5
OSV-REA-034	Tree & Stump Removal	120	700	92.6
OSV-REA-043	Pest and/or Vegetation Disease Control	96	53	92.5
OSV-REA-039	Pruning - Trees & Shrubs	120	404	90.1
POS-REA-044	Lawn Maintenance	64	26	88.5
FUR-REA-060	Maintain External Reserve Lighting Infrastructure	150	17	88.2
AR-REA-003	Open Space Maintenance - Arboretum	120	17	88.2
FUR-REA-001A	Drinking Fountain Maintenance	120	16	87.5
OSV-REA-048	Blackberry Removal	120	8	87.5
OS-REA-074	Retaining Walls, Stairs & Minor Structure Maintenance	120	28	85.7
OS-REA-043	Weed Control / Edge trimming	92	25	84.0
CE-REA-001	Open Space Maintenance - Cemetery	32	6	83.3
OSV-REA-047	Garden Bed Maintenance	64	131	80.9
POS-REA-041	Mowing - undeveloped Blocks & Reserves	32	66	77.3
OS-REA-032	Information Sign Maintenance	120	36	75.0
OS-REA-005	Graffiti Removal	5	159	51.6

Table 27 – Rectification Works Performance

Data source: Work Order System (LifeCycle) January 2006 to December 2010

Note:

1. Only activities requiring rectification works in the given timeframe have been represented in the table.

Overall, the performance of Council's reactive maintenance with respect to open space has been of a reasonable and consistent standard. The service levels, and/or Council's approach to service delivery should be reviewed, particularly for maintenance activities with target timeframes that cannot be regularly achieved.

In the case of OS-REA-005 Graffiti Removal, it is recommended that a change to the Parks Service team's approach to graffiti removal be adjusted so that target timeframes can be met, and graffiti removed as soon as possible. This may require a change in resources.

6.5 INSURANCE CLAIMS HISTORY

Insurance claims are managed by Council's Safety, Risk and Wellbeing team. Claims are separated into two categories:

- Public liability — where a person has been injured or property owned by others has been damaged and the claimant is seeking damages from Council.
- Property — claims made for loss or damage to Council's infrastructure including building and contents.

Overall, open space assets have not posed a significant insurance risk to Council.

Public Liability

An analysis was undertaken of all over-excess (greater than $10,000) and under-excess public liability claims between 1994 and 2011. Figure 33 shows the breakdown of all the claims made against Council during this period with a total of 265 claims being made. Over-excess claims accounted for 78 of these. It is worth noting that a number of claims were ultimately denied or did not proceed.
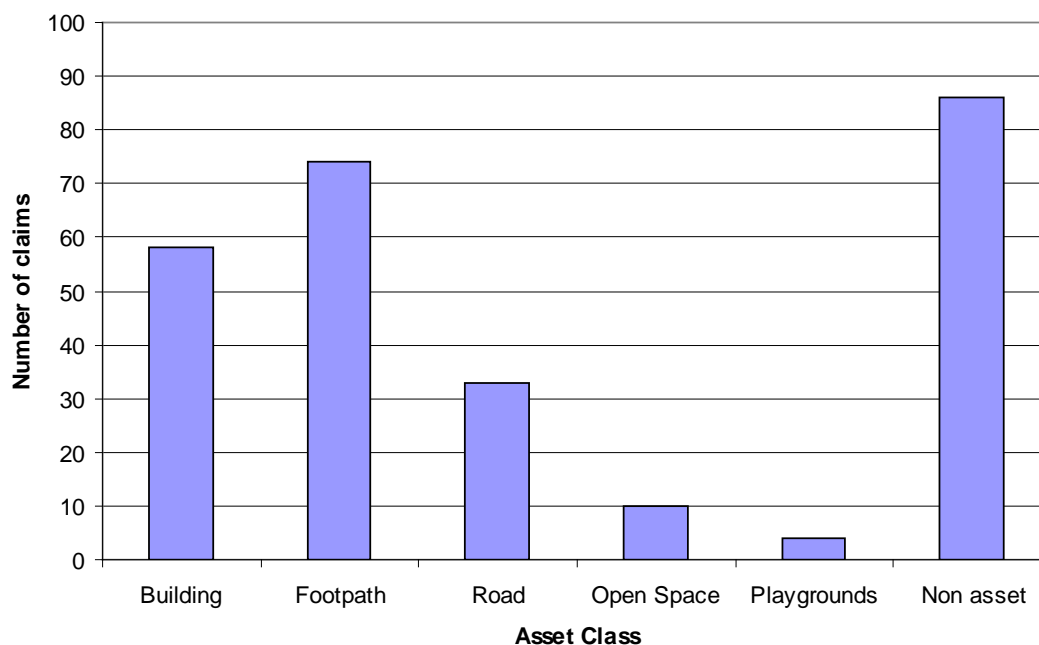
Figure 33 – Public liability claims made against Council 1994-2011

Data source: Civic Mutual Plus

By and large, open space (compared to other asset classes) has presented a minimal risk of personal injury. Since 1994, open space assets have only accounted for 11 of the 265 claims (or approximately 4% of all claims) compared to footpaths which have accounted for 74 claims (or nearly 28% of all claims).

Table 28 below, summarises the 11 claims made against Council relating to open space. The location of each incident is categorised. The cause and resultant damage/injury is also outlined. Claims tended to result from defects associated with sports playing surfaces suggesting a need for Council to be vigilant in monitoring and repairing these assets in a timely manner. Eight claims (or 70% of claims) were over excess. All over-excess public liability claims are managed by Council's insurer Civic Mutual Plus (CMP). Repair works and costs associated with under excess claims are managed by the Council department responsible for the affected asset.

Year	Location	Cause	Injury/issue		Excess
1994	Outdoor arena	Leisure sporting equipment	Injury to ankle	Caught foot in looped wire protruding from ground.	Over
1995	Outdoor arena	Playing surface	Knee injury	Trip and fell over sprinkler head	Under
1996	Outdoor arena	Playing surface	Broken wrist & unspecified back injury	Slipped on rubber matting on ramp to oval	Over
1996	Outdoor arena	Playing surface	Unspecified	Slipped on canvas mat	Over
1997	Outdoor arena	Playing surface	Injuries to right foot	Trip and fell in hole in oval	Under

Year	Location	Cause	Injury/issue		Excess
1998	Outdoor arena	Playing surface	Injury to left knee	Fell into pothole at netball complex	Over
1998	Building	Playing surface	Water damage	Runoff from netball court caused damage to other building	Over
1998	Parks & gardens	Playing surface	Cut himself	Fell on broken glass in council reserve	Under
2000	Parks & gardens	Playing surface	Fractured right foot and ankle	Fell into hole whilst walking in park	Over
2002	Reserve area	Other	Fractured right ankle	Claimant slipped on worn and broken step	Over
2002	Reserve area	Playing surface	Injury to right knee	Injured whilst playing football on council's oval/reserve	Over

Table 28 – Breakdown of public liability claims

Data source: Civic Mutual Plus

A key point to note is that since 2002, public liability claims against Council with respect to open space assets have effectively stopped. The main reason for this is likely to have been changes made to relevant State Government legislation between late 2002 and early 2004. (Limitation of Actions (Amendment) Act 2002, Wrongs and Other Acts (Public Liability Insurance Reform) Act 2002, Wrongs and Limitation of Actions Acts (Insurance Reform) Act 2003, Wrongs and Other Acts (Law of Negligence) Act 2003).

The legislative changes were intended to codify the law of negligence to shift the burden of truth to the plaintiff and broaden the base of defence against claims of negligence. The changes have effectively limited the liability of public authorities and made it more difficult for claims to be made. Changes included:

- Introduction of a threshold of greater than 5% whole person impairment and 10% psychological impairment for access to general damages.
- Proportionate liability for purely economic loss (i.e. excluding death or personal injury)
- A limitation period of 3 years from date of discoverability
- Maximum recoverable damages for gratuitous attendant care services
- Capping of general damages to $371,000 (indexed to inflation)
- Capping the loss of earnings to three times average weekly earnings
- Provision of waivers to allow people to accept risk
- Broadening what is considered 'voluntary assumption of risk,' allowing the determination of contributory negligence to be 100% (thus defeating a claim).

Despite the impact of legislative changes, it is important that Council continues to maintain and upgrade its open space assets to minimise public safety and property risks. Proactive asset management measures that reduce risk will enable Council to generate savings by reducing insurance premiums and claims. Savings can be redirected toward improvements in Council services.

Property

Limited information was available for the analysis of property claims relating to open space. Over-excess property claims (over $5,000) are managed by JMAPP. No recent under excess claims appear to have been identified.

It is important to note that all under excess claims (public liability and property) that relate to Council open space are handled by the relevant Council team/unit (such as Parks Services or Leisure Services). These units undertake the necessary corrective actions including asset

repair. Repairs are funded from the relevant department's annual operational budget. At present, the number of claims and the cost of repairs are not captured in a consistent manner. This Council practice makes it impossible to determine the true cost of addressing under excess claims. More transparent capture of this data will enable Council to determine the extent to which maintenance funding is diverted to reactively address issues identified via insurance claims. Maintenance budget allocations can then be adjusted accordingly in future years.

6.6 CORPORATE RISK REGISTER

Council's Corporate Risk Register lists a number of identified risks relating to open space assets. These risks are identified from sources such as audits (internal and external), external reports, plans and strategies and annual business planning. The identification, assessment, evaluation, treatment and monitoring of risks are undertaken in accordance with Council's Integrated Risk Management procedure. The frequency of required reporting depends on the rating level assigned to each risk. Risks currently reported in Council's risk register relating to open space assets and management are summarised in Table 29 below.

Item	Risk Category	Risk Description
Ra4.12	Asset Management	Hazards arising from passive Open Spaces including furniture. Plan to be established, including service level and risk assessment.
Ra4.13	Asset Management	Unsuitability of recreational playing surfaces
Ra4.19	Asset Management	Damage through use of grounds by regular users (including overuse)
Ra4.6	Asset management	Risks arising from poor ground conditions particularly in drought conditions at Recreation and Community Centres and grounds.
Re2.4	Environment	Hazards arising from closed landfill at Llewellyn Reserve including leachate contaminating water course. Mitigation of landfill gas.
Ro6.4	Operations Performance	Risk of injury to staff managing the site, the public accessing the site, etc, until works are undertaken to turn a former quarry (worksite) into a public park.
Rr2.5	Regulatory	Soccer goal posts not complying with the relevant standards

Table 29 – Extract of Corporate Risk Register for Open Space Assets

The risks described above are managed by relevant responsible senior officers, with residual risks generally reduced in the process. Progress is reported in accordance with the risk level and Council's Integrated Risk Management procedure.

The recent Recreation Ground Audits by Echelon included an assessment of a number of assets at selected sites and reviewed Council's risk management processes and procedures. The assessment areas focused on Turf Quality, Surface Quality, Irrigation Equipment, Other On-ground Fixtures, Cricket Nets and Suitability & Peripheral Risks. The recommendations have been recently reviewed and implementation has been prioritised by the Leisure

Services team. A number of recommendations have already been actioned, with some recommendations to be addressed further in the Tennis Facilities Plan. All other outstanding risk items are intended to be included on Council's Corporate Risk Register. Most of these relate to suitability of ground sizes resulting in cricket over-hitting risks.

6.7 IMPROVEMENT RECOMMENDATIONS

Project 16. Review Reactive Maintenance – Service Delivery Approach

It is recommended that Parks Services, in consultation with Asset Strategy, Sustainability and Youth Leisure and Cultural Services review and update the documented maintenance service levels with particular emphasis on activities where rectification time frames have not been met.

- POS-REA-041   Mowing - undeveloped Blocks & Reserves
- OS-REA-032   Information Sign Maintenance
- OS-REA-005   Graffiti Removal

In some cases, it may be found that a change in approach may be required.

This project should also incorporate further investigation of the reasons behind the reported decline in community satisfaction regarding the appearance of public places as reported in the most recent Local Government Community Satisfaction Survey. It is also recommended that this project be undertaken in conjunction with Project 11.

Project 17. Upgrade Lifecycle – System Validation

Introduce system validation so that when a request is assessed as "No Hazard", the system requires the user to enter a reason before closing the work order. A pick list of reasons that can be expanded by the user is recommended, the reasons may include:

- Duplicate Request
- Melbourne Water Responsibility
- Other Authority Responsibility
- Defect does not exceed current intervention levels

This validation is expected to enable Council to develop a better understanding of whether Council's current maintenance intervention levels are aligned with community expectations. It may also identify a need for Council to better communicate open space maintenance responsibilities of Council and other responsible authorities.

Project 18. Staff Training – Reporting Maintenance Issues

Given that the recent drop in the number of ad hoc Maintenance Requests raised by Parks Services Maintenance staff has been offset by an equivalent increase in Customer Requests, it is recommended that all Parks Services Maintenance staff be retrained in Council's approach to proactive reporting of issues identified on site. Staff should be regularly reminded and encouraged to proactively report issues that exceed Council's intervention levels.

Chapter 7   Service & Asset Lifecycle Management

CHAPTER 7 - SUMMARY

- It is considered important that this section of the Plan be read in conjunction with the revised Knox Open Space Plan

- Many internal stakeholders are involved in the provision and management of open space services.

- Open space assets support a range of services including Water Management, Play for All, Biodiversity, Leisure and Recreation, Travel Movement and Connectivity.

- Formulation and establishment of existing services has been informal and has resulted in an absence of clearly documented service targets aligned with community needs.

- Service adjustment has been somewhat informal with a reluctance to discontinue aspects of existing services.

- There is no clearly identifiable open space asset owner with responsibility for ensuring that all open space assets are managed in a coordinated manner that meets the objectives of all service owners.

- Asset Option Analysis tends to be the responsibility of each service owner and occurs in a number of different ways to meet the needs of specific sports or specific sites.

- Officers responsible for business case preparation have had difficulty in scoping and ranking capital projects and assessing the lifecycle costs of new and upgraded assets. Officers have also experienced difficulties in identifying synergies between capital works projects that form part of a program for which others are responsible.

- Design documentation and consultation varies depending on the complexity of the project. Documentation may include concept plans, engineering drawings and specifications. It is rare to include detailed consideration of future maintenance needs and lifecycle costs.

- In the absence of condition data, and with no regular asset inspection program, the development of the open space asset renewal programs has been largely reactive.

- With the exception of conservation sites managed by the Bushland Crew and the arboretum and cemetery, which have dedicated maintenance officers, all other open space sites are maintained equally.

- Recent periods of intense rainfall, following many years of severe drought, have resulted in scouring of many granitic gravel paths in open space sites. This has meant that Parks Services have had to repair many more paths than expected in order to mitigate public safety risks and restore functionality.

- Disposal of open space sites is rare. Land disposals generally only occur reactively in response to a request to acquire a Council site.

- Recommended improvement actions include:

    o Review gravel path design standard

    o Clarify asset management responsibilities

    o Adjust renewal ranking criteria

    o Review capital works programming process

    o Undertake a project to improve integration of service and asset management functions within the organisation

7.1 INTRODUCTION

Council's involvement in the provision of public open space has evolved over a long period of time. Many years ago, when urbanisation of the municipality began, the demands on Council's open space management resources were very different to the demands Council faces today. In the past, the focus was on ensuring urban development included provision for adequate public open space. Today, the focus is on enhancing existing open spaces to support a broad range of uses and enhance highly valued amenity.

The Service Delivery Lifecycle Model, illustrated in Figure 34 below, forms part of Council's Asset Management Policy. The model aims to demonstrate the integrated relationship between service and asset management. It highlights the fact that Council assets are only required to support services that exist to address community needs. A coordinated approach to managing all phases of the service and asset lifecycles is considered necessary to enable delivery of outcomes that feasibly and sustainably meet community expectations.
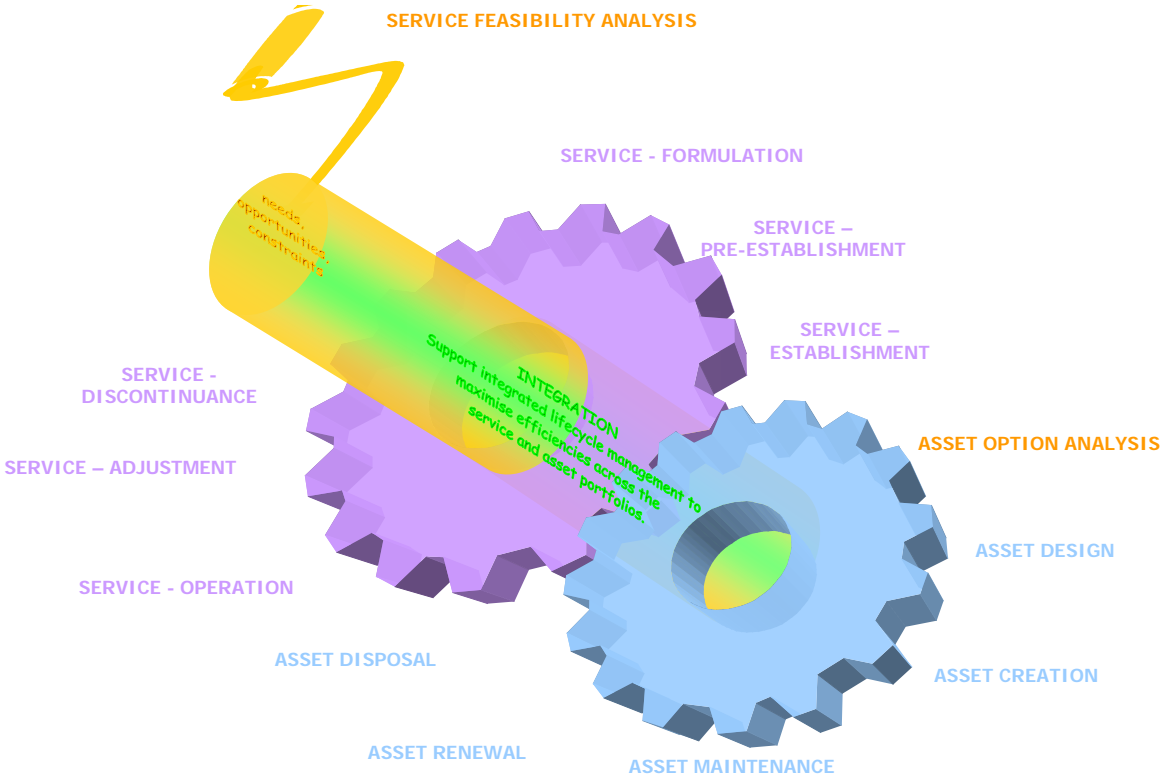
Figure 34 – Service Delivery Lifecycle Model

In this Chapter, the lifecycle model is used as a framework for the assessment of Council's current approach to open space asset management. Opportunities to improve current work practices are identified with a view to improving the outcomes experienced by the community.

7.2 INTERNAL STAKEHOLDERS

The list of internal stakeholders, presented below, highlights the fact that there are many decision makers, working in all Council directorates, which have an impact on the quality of public open space provided within the City of Knox.

Whilst the Sustainability, Youth Leisure & Cultural Services and Parks Services teams are the primary internal stakeholders, other units also have important roles to play. The diverse range of stakeholders highlights the need for an integrated approach to open space service and asset management.

- City Development
  - Sustainability
    - Open Space & Landscape Design
    - Biodiversity
    - Sustainable Futures
  - City Planning
    - Urban Planning
  - Strategic Economic Development

- Community Services
  - Youth Leisure & Cultural Services
    - Strategic Leisure Planner
    - Leisure Services

- Engineering & Infrastructure
  - Operations
    - Parks Services
    - Works Services
    - Facilities
    - Fleet Management
  - Assets
  - Engineering Services
    - Project Delivery

- Corporate Development
  - Finance
  - Governance
    - Property Services
  - Corporate Planning & Performance

7.3 PUBLIC OPEN SPACE SERVICES

To facilitate the analysis of Council's current asset management approach, the following open space services have been defined. These align with the nine themes and lenses of open space, discussed in detail in Council's revised Open Space Plan.

1. **Biodiversity** – Protect and enhance creek corridor habitat, aerial habitat, significant vegetation and natural ecosystems. Promote community understanding and appreciation of natural habitats and the value of biodiversity.

2. **Sustainable Futures** – Provide for future sustainability measures with respect to energy, food and waste.

3. **Water Management** – Maximise absorption of stormwater runoff into the natural environment to protect and enhance the quality of receiving waterways. Ensure overland flow paths are able to retain and divert stormwater runoff in a way that protects people and property from inundation, injury and loss during major rainfall events. Improve the quality of water and water corridors to protect, create and enhance wildlife, habitat and ecosystems.

4. **People** – Promote and enable community participation in the development and use of open space. Activate and enhance spaces to improve community wellbeing, sense of belonging and local identity.

5. **Cultural Heritage and the Arts** – Support the arts and other cultural pursuits. Preserve the cultural heritage of Knox.

6. **Leisure & Recreation** – Facilitate community participation in a diverse range of club-based structured sporting activities (eg. hockey, football, soccer, cricket, basketball, netball, tennis etc) as well as unstructured recreation/leisure.

7. **Play for all** – Encourage people of all ages to participate in a broad range of active, passive, solitary and communal outdoor activities (incl. walking, cycling, reading, resting, play etc.)

8. **Economic Development** – Ensure that the municipality incorporates landscaping and environmental design features that make the City an inviting and enjoyable place to be. Improve the integration of open spaces, business and industry. Promote commercial and community activities.

9. **Travel, Movement and Connectivity** – In partnership with others, create a seamless network of open spaces, facilitating free movement, easy access and sustainable transport options**.**

Most of the above-listed open space services have been operating since the City was proclaimed in 1969. Other services, such as Biodiversity, Play for all, and Local Sustainability are more recent introductions that have arisen as a result of changing community expectations.

7.4 SERVICE OWNERS

For the purposes of this Plan, a service owner is essentially the department or team that has primary responsibility for defining and communicating the strategic direction and objectives of the service. In order to effectively deliver open spaces that meet community expectations, each service owner must aim to ensure that all Council assets, people and processes work in a manner that supports delivery of desired service objectives.

The table below illustrates the current service owners for each of the above-listed open space services. Whenever a change to an open space service or site is proposed, it is considered essential that all service owners be consulted to ensure the proposed changes are in keeping with the desired strategic objectives of each service.

Service	Current Service Owner
Biodiversity	Biodiversity
Sustainable Futures	Sustainable Futures
Water Management	Project Delivery
People	Community Wellbeing
Cultural Heritage and the Arts	Cultural Planning & Development
Leisure & Recreation	Leisure Services (mainly focused on structured recreation)
Play for all	Open Space & Landscape Design (mainly focused on playgrounds)
Economic Development	Economic Development
Travel, Movement and Connectivity	Traffic & Transport

Table 30 – Current "Service Owners" of Open Space Services

Consideration of the above table highlights a significant gap. The strategic direction for the Leisure & Recreation and the Play for All services are not driven by a specific Council team. The Leisure component of the Leisure & Recreation service does not have an owner as the Youth Leisure & Cultural Services department has tended to focus on structured sports.

To address this gap, it is recommended that Council's current approach to the ownership and management of these overlapping services be reviewed.

7.5 RELATIONSHIP BETWEEN OPEN SPACE SERVICES & ASSETS

A service can be defined as a combination of tangible and intangible benefits that are produced by an organised system of labour and materials to meet a community need. In the case of open space services, the tangible benefits may include improved self confidence and wellbeing. This benefit is difficult to measure, but is likely to be felt by the community. The open space sites and supporting assets, on the other hand, are tangible. They affect the user's service experience. A site that is well designed, maintained, and well connected, can make the difference between community perceptions of a good or poor service.

The figure below is intended to illustrate that the open space assets support many different open space services. Asset management decisions should therefore be considered through the lens of each open space service that Council provides.

Figure 35 – Public open space assets support many services

Table 31 below indicates the types of Council assets that are currently made available to support each open space service. It highlights the fact that one asset is often expected to support many services and emphasises the need for an integrated approach to decision making.

Asset Class	Asset Type	Open Space Services								
		Biodiversity	Sustainable Futures	Water Management	People	Cultural Heritage & the Arts	Leisure & Recreation	Play for all	Economic Development	Travel, Movement and Connectivity
Art & Heritage	Plaque Fountain Monument/Sculpture/Artwork				✔	✔			✔	
Buildings*					✔		✔		✔	
Carparks*	Surface Pavement Kerbing								✔	✔
Drainage*	Pits Pipes WSUD treatments Spoon Drains		✔	✔					✔	✔
Fencing (incl. Bollards)	Internal Sport Property Perimeter (shared) Property Perimeter (non-shared)						✔	✔	✔	
Fixed Sport Infrastructure	Cricket pitch Cricket practice net Cricket practice pitches				✔		✔	✔	✔	
Footpaths*					✔				✔	✔
Irrigation Systems	Sprinklers Pits Pipes						✔		✔	
Land	Active Passive Conservation Other	✔	✔	✔	✔	✔	✔	✔	✔	✔
Lighting	Sports General Park Security				✔		✔	✔	✔	✔
Park Furniture	Seat Picnic table Flagpole Planter box Dog bag dispenser				✔	✔	✔	✔	✔	✔

Asset Class	Asset Type	Open Space Services								
		Biodiversity	Sustainable Futures	Water Management	People	Cultural Heritage & the Arts	Leisure & Recreation	Play for all	Economic Development	Travel, Movement and Connectivity
	Bike rack single Bike rack multiple Drinking fountain Barbecue unit CCTV Camera									
Playground Infrastructure*	Play equipment Soft fall Fencing Edging				✔			✔	✔	✔
Retaining Walls	> 500mm high <500mm high							✔	✔	✔
Road*	Surface Pavement Kerb & Channel								✔	✔
Shade Structure	Shelter/Rotunda/Gazebo Shade sail		✔		✔		✔	✔	✔	
Shared Paths*					✔				✔	✔
Signage	Park identification Regulatory Directional								✔	✔
Specialist Sporting Surfaces	Tennis Netball Athletics Baseball/Softball Bowling Basketball Skatebowl BMX tracks				✔		✔	✔	✔	
Sports fields	Cricket Football Soccer Hockey Pitches				✔		✔	✔	✔	
Staircases	Greater than 3 steps							✔	✔	✔

Asset Class	Asset Type	Open Space Services								
		Biodiversity	Sustainable Futures	Water Management	People	Cultural Heritage & the Arts	Leisure & Recreation	Play for all	Economic Development	Travel, Movement and Connectivity
	Less than 3 steps									
Water harvesting infrastructure	Rain tanks		✓	✓			✓		✓	
Vegetation	Trees Garden Beds Lawns Grasses Shrubs	✓	✓	✓	✓	✓	✓	✓	✓	

Table 31 – Relationship between Council Assets and Open Space Services

Notes:

*   **Denotes assets that are the subject of existing or future asset management plans**

7.6 COUNCIL'S CURRENT APPROACH TO LIFECYCLE MANAGEMENT

In this section of the Plan, the management objectives for each phase of the service and asset lifecycle are presented with a view to identifying gaps in Council's current approach. The reader is encouraged to read Council's Open Space Plan for more details regarding the proposed approach to horizon scanning and service lifecycle management.

7.6.1 Horizon Scanning

> Gain an understanding of Council's internal and external environment. Use this knowledge to define current service demand, community needs and expectations and predict future changes.
> Determine Council's role(s) in the provision and management of public open space.

The purpose of horizon scanning, as indicated above, is to ensure that Council proactively investigates community needs and expectations and uses this information to predict future changes in service demand. This enables Council to participate in the provision and management of open space services and assets that meet the needs of current and future communities.

Horizon scanning information is formally reported by the Corporate Planning & Performance department to the management team, at a high level, as part of Council's annual planning process. When developing their annual business plans, all managers are expected to consider the implications of the information provided. Informally, officers at all levels of the organisation scan the environment within the sector they operate and reactively adjust their work processes and services accordingly.

The Knox Open Space Plan is expected to scan the horizon by considering the operating environment that influences each of the following open space services:

1. Biodiversity
2. Sustainable Futures
3. Water Management
4. People
5. Cultural Heritage and the Arts
6. Leisure & Recreation
7. Play for all
8. Economic Development
9. Travel, Movement and Connectivity

In doing so, the Open Space Plan will effectively define Council's future role in service provision and management.

In a similar manner, a number of sport-specific strategies, including the Tennis Facilities Plan, are developed by the Youth Leisure & Cultural Services department. These strategic documents include scanning of the horizon in order to understand current demand and predict future needs. These strategic documents also form the basis of periodic adjustment of the Leisure and Recreation service for the specific sport under consideration.

7.6.2 Service Lifecycle Management

The service lifecycle phases are illustrated in Figure 36. Management objectives for each phase are outlined in Table 32.
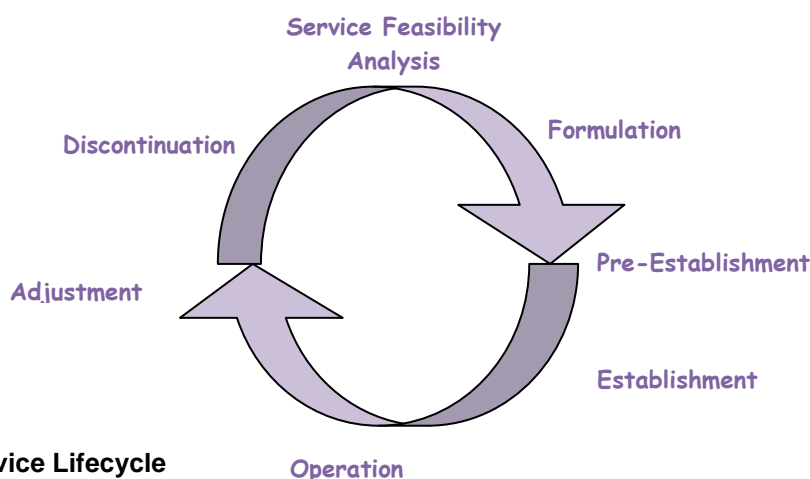

Figure 36 – Service Lifecycle

Phase	Objectives
Service Feasibility Analysis	Assess the appropriateness of current services. Determine the best approach for Council to meet current and future community needs. Define service objectives so that analysis can be undertaken to compare a range of options including: ▪ Introduction of a new service ▪ Alteration of an existing service (or aspects of a service) ▪ Discontinuation of an existing service (or aspect of a service)
Formulation	Broadly define all requirements to enable service delivery. Translate detailed service requirements into physical asset needs and measurable service standards and targets.
Pre-establishment	Design the organisation structure, systems, standards, skill sets, and performance measures required for operation and monitoring of the service. Communicate service delivery objectives to all stakeholders.
Establishment	Set up/ revise the operating structure, systems, standards, resources and performance measures required to enable operation and monitoring of the service.
Operation	Operate and monitor delivery of the service to sustainably meet community needs.
Adjustment	Undertake a service feasibility analysis to determine whether the current service is still aligned with community expectations and the operating environment. Identify service and asset adjustments required to ensure service objectives are met. Adjust internal service agreements, organisation structure, systems, resources and performance measures to ensure service objectives can be monitored and met. Communicate adjustments to affected parties.
Discontinuation	Ensure Council has a considered approach to the termination of services (or aspects of a service) no longer required in a manner that minimises community disruption.

Table 32 – Service Lifecycle - Management Objectives

In the context of the service lifecycle, it is fair to say that Council's current open space services have already been established and are primarily in the operation phase. The formulation and establishment of services has been informal and has resulted in an absence of clearly documented service targets that are aligned with community needs. Service adjustment has been somewhat ad hoc with a reluctance to discontinue aspects of existing services. An objective and thorough review of the appropriateness of existing organisation structures, processes, standards and performance measures has not been undertaken for open space services.

It is expected that the revised Open Space Plan will include recommended service adjustments that stem from Service Feasibility Analyses undertaken for all services

described in section 7.2 of this Plan. As noted previously, sport specific strategic documents and the Recreation Plan, prepared for the Youth Leisure & Cultural Services department also inform periodic adjustment of the Leisure & Recreation service.

Implementation of the Open Space Plan, Recreation Plan, various sporting studies and this Asset Management Plan will require reformulation, re-establishment and perhaps discontinuation of some Council services. An improvement project is therefore recommended to determine the best way for Council to undertake this service planning work.

7.6.3 Asset Lifecycle Management

Figure 37 below, illustrates the asset lifecycle. This section of the Plan describes Council's current approach to open space asset management with a view to identifying improvement opportunities. Technical service levels for each asset lifecycle phase were discussed earlier in section 4.3.2 of this Plan.

It is considered important that this section of the Plan be read in conjunction with the revised Knox Open Space Plan which is expected to provide high level strategic direction for Council's future approach to Asset Option Analysis, Design and Creation (including upgrades). It also expected to recommend the introduction of routine maintenance programs that are aligned with the park hierarchy/typology.
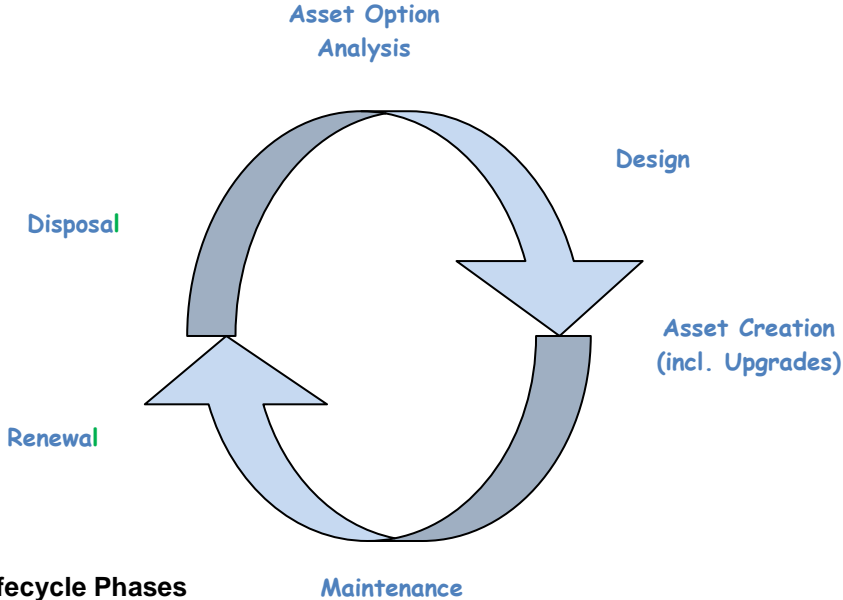
Figure 37 – Asset Lifecycle Phases

Table 33 below, summarises the Assets department's understanding of current asset lifecycle responsibilities for all assets that support open space services. It is obvious from this table that there is no clearly identifiable open space asset owner with responsibility for ensuring that all open space assets are managed in a coordinated manner that meets the objectives of all service owners. Whilst the preparation of the revised Open Space Plan will inform future asset management decision makers, it is apparent there is a need to define an open space asset owner with an ongoing coordination role.

Asset Class	Asset Type	Current - Responsible Team/Unit					
		Asset Lifecycle Phase					
		Asset Option Analysis	Design	Creation (incl. Upgrades)	Maintenance	Renewal	Disposal
Art & Heritage	**Plaque Fountain Monument/Sculpture/Artwork**	Cultural Planning & Development	Cultural Planning & Development	Cultural Planning & Development	-	-	Cultural Planning & Development
Buildings*		Leisure Services	Facilities	Facilities	Facilities	Facilities	Facilities
Carparks*	**Surface Pavement Kerb & channel**	Open Space & Landscape Design Leisure Services Traffic & Transport	Project Delivery	Project Delivery	Works Services	Construction	-
Drainage*	**Pits Pipes WSUD treatments Spoon Drains**	Project Delivery	Project Delivery	Project Delivery	Works Services	Construction	Project Delivery
Fencing (incl. Bollards)	**Internal Property Perimeter (shared) Property Perimeter (non-shared)**	Open Space & Landscape Design	Open Space & Landscape Design	Open Space & Landscape Design	Parks Services Facilities (shared fences only)	Parks Services Facilities (shared fences only)	-
Fixed Sport Infrastructure	**Cricket pitch Cricket practice net Cricket practice pitches Sporting Fences**	Leisure Services	Leisure Services	Leisure Services	Parks Services	Parks Services	-
Footpaths*		Traffic & Transport	Project Delivery	Project Delivery	Parks Services (gravel only) Works Services	Parks Services (gravel only) Works Services	-
Irrigation Systems	**Sprinklers Pits Pipes**	Open Space & Landscape Design	Open Space & Landscape Design	Parks Services	Parks Services	Parks Services	Parks Services
Land	**Active Passive Conservation Other**	Open Space & Landscape Design Leisure Services Traffic & Transport	NA	Governance	Parks Services Clubs under agreement managed by Leisure Services	NA	Governance
Lighting	**General Park Security Sports**	Open Space & Landscape Design	-	-	Facilities	Facilities	-

Asset Class	Asset Type	Current - Responsible Team/Unit					
		Asset Lifecycle Phase					
		Asset Option Analysis	Design	Creation (incl. Upgrades)	Maintenance	Renewal	Disposal
		Leisure Services					
Park Furniture	**Seat Picnic table Flagpole Planter box Dog bag dispenser Bike rack single Bike rack multiple Drinking fountain Barbecue unit CCTV Camera**	Open Space & Landscape Design	Open Space & Landscape Design	Parks Services	Parks Services	Parks Services	Parks Services
Playground Infrastructure*	**Play equipment Soft fall Fencing Edging**	Open Space & Landscape Design	Open Space & Landscape Design	Open Space & Landscape Design	Parks Services	Open Space & Landscape Design	Open Space & Landscape Design
Retaining Walls		Open Space & Landscape Design	Open Space & Landscape Design	Open Space & Landscape Design	-	-	Open Space & Landscape Design
Road*	**Surface Pavement Kerb & Channel**	Project Delivery	Project Delivery	Project Delivery	Works Services	Construction	-
Shade Structure	**Shelter/Rotunda/Gazebo Shade sail**	Open Space & Landscape Design Leisure Services	Facilities	Facilities	Facilities	Facilities	Facilities
Shared Paths*		Open Space & Landscape Design Leisure Services Traffic & Transport	Project Delivery	Project Delivery	Works Services	Works Services	-
Signage	**Park identification Regulatory Directional**	Open Space & Landscape Design Leisure Services Traffic & Transport	Open Space & Landscape Design	Parks Services	Parks Services	Parks Services	-

Asset Class	Asset Type	Current - Responsible Team/Unit					
		Asset Lifecycle Phase					
		Asset Option Analysis	Design	Creation (incl. Upgrades)	Maintenance	Renewal	Disposal
Specialist Sporting Surfaces	**Tennis Netball Athletics Baseball/Softball Bowling Basketball Skatebowl BMX tracks**	Leisure Services	Leisure Services	Leisure Services	Parks Services	Parks Services	
Sports fields	**Cricket Football Soccer Hockey Pitches**	Leisure Services	Leisure Services	Leisure Services	Parks Services	Parks Services	
Staircases		Open Space & Landscape Design	Open Space & Landscape Design	Open Space & Landscape Design	Works Services	Works Services	
Water harvesting infrastructure	**Rain tanks**	Sustainable Futures	Facilities	Facilities	Facilities	Facilities	Facilities
Vegetation	**Trees Garden Beds Lawns Grasses Shrubs**	Open Space & Landscape Design	Open Space & Landscape Design	Open Space & Landscape Design	Parks Services Biodiversity	Parks Services Biodiversity	Parks Services Biodiversity

Table 33 – Asset Lifecycle – Current Asset Management Responsibilities

As illustrated in Table 33, there is a lack of clarity regarding asset management responsibilities for a number of assets that occur within open spaces including:

- Lighting
- Retaining Walls
- Staircases
- Shade Sails
- Water harvesting infrastructure
- Public artwork
- Some specialist sports surfaces

An improvement project is therefore recommended to clarify and communicate asset management responsibilities.

a) Asset Option Analysis

> Consider the asset requirements necessary to support objectives of all open space services. Undertake analysis to ensure the best asset solutions are provided to meet service needs within physical, financial, legislative and other constraints.

Given that Council's role in the delivery of open space services is very asset focused, in that it primarily involves ensuring open space sites are enhanced and managed in a way that meets community expectations, Asset Option Analysis is considered a very important role.

There is currently no overarching methodology for undertaking Asset Option Analysis. It tends to be the responsibility of each service owner and occurs in a number of different ways to meet the needs of specific sports or specific sites within the network. It is unclear which department within the organisation is responsible for considering the options available for all Council's open space land.

In recognition of current gaps, the revised Open Space Plan is expected to consider the connectivity of the entire network and provide context to all places and all open space services within the municipality. The Open Space Plan is also expected to include a revised workflow method for place planning/ asset option analysis that involves consideration of all services/lenses. Further work will be required to embed these proposed workflow changes into the organisation.

b) Design

> Prepare requisite documentation to ensure delivered assets will meet service needs, match expected service life and be able to be created, maintained and renewed in a sustainable manner.

Open space asset design is generally funded via the capital works program. It involves two distinct phases:

- Concept Design
- Detailed Design

Both phases tend to be managed by the Program Coordinator responsible for the relevant capital works program. Design is either outsourced or undertaken by the Open Space & Landscape Design team. The Project Delivery team may assist in design of civil works for some projects.

The concept design phase tends to involve master planning, which occurs for high profile sites, such as the development of Stamford Park, the Arboretum or Boronia Park. The current process includes considerable consultation with internal and external stakeholders. For small low profile sites, the current approach is somewhat fragmented and has the potential to result in sub-optimal asset solutions and lost opportunities to improve the infrastructure and deliver outcomes that meet the objectives of each service owner.

Depending on the complexity of the project, the detailed design documentation may include engineering drawings and specifications. It is rare for the designs to include detailed consideration of future maintenance needs and lifecycle costs. As noted in section 4.3.2 a

number of standard drawings have been developed to assist designers. The revised Open Space Plan is expected to provide further assistance in the form of design guidelines for each hierarchy/typology.

c) Creation (incl. Upgrades)

> Ensure acquired and constructed assets fit with service needs within physical and financial constraints.

Given the extent of existing development, minimal new open space sites are contributed by private developers and Council rarely acquires new land to be used as public open space. Recent acquisitions have been initiated by the Biodiversity team. These acquisitions have enabled Council to conserve indigenous vegetation. Administration of land acquisition is undertaken by the Governance team.

Open space assets are generally created and upgraded as a result of capital works projects delivered under the following programs:

- 4000 – Structured Sporting Facilities
- 4014 – Unstructured Recreation

These programs are administered by Leisure Services and Open Space & Landscape Design respectively.

In addition to these two programs there are a number of other programs that can result in changes to Council's open space assets. These programs are administered by other departments and include:

- 4006 – New Footpath Construction Program and Pedestrian Facilities
- 4009 – New Bicycle/Shared Paths
- 4013 – Land Acquisition
- 4015 – Place Management
- 4017 – Drainage Upgrades
- 4021 – Sustainable Initiatives for Outdoor Structured Facilities
- 4022 – Water Quality Improvements

Since 2009, implementation of Council's Asset Management Policy and Discretionary Rate Funding Allocation Policy has meant that Council's capital works process includes project ranking and ensures lifecycle funds are allocated to enable sustainable future maintenance and renewal of created and upgraded assets.

In practice, officers responsible for business case preparation have had difficulty in scoping and ranking capital projects and assessing the lifecycle costs of new and upgraded assets. Officers have also experienced difficulties in identifying synergies between capital works projects that form part of a program that others are responsible for. A review of the synergy meetings and other aspects of the capital works programming process is therefore recommended. Visual aids that illustrate the locations of proposed capital projects could be incorporated into the synergy meetings to assist in the identification of complementary projects.

Further education and support may be required to ensure all relevant staff have the necessary skills to define the project scope and use objective ranking criteria to ensure Council funds are allocated to projects that deliver the greatest community benefit. Support in estimating lifecycle costs is also required so that affected maintenance and renewal budgets are adjusted appropriately to ensure assets can be managed over their expected service life.

Contractor Maintenance Periods

When new open space assets are created or upgraded under a contract, the Contractor is usually required to maintain the new assets for 12 months before a certificate of practical completion is signed and the assets are handed over to Council for ongoing maintenance. Discussions with the Open Space & Landscape Design team have indicated that 12 months is not long enough for vegetation to become established. As a result, upgraded parks begin to fall into disrepair or result in an increased unexpected workload for maintenance crews. A

longer contractor maintenance period, of up to 3 years, is considered more appropriate to ensure newly planted vegetation can then be maintained cost effectively by Council staff.

d) Maintenance

Preserve assets to ensure they continuously meet service expectations. Monitor asset condition and functionality. Act to repair assets, mitigate potential risks and ensure the asset is able to achieve its expected useful life

The Bushland Crew, which forms part of the Biodiversity team, is responsible for all maintenance activities within Council's conservation sites. Parks Services is essentially responsible for open space maintenance activities within other types of open space. In the case of Active open space, sporting clubs also have maintenance responsibility for some assets (eg. goal posts) as detailed in the relevant seasonal tenancy agreements. Separation of the Bushland Crew from the Parks Services team does not support knowledge sharing across maintenance staff. In the past, this separation has led to some instances of Knox's remaining natural assets being compromised by inappropriate vegetation replacement. Although vast improvements and education have occurred, there is still an acknowledged need to share knowledge between the teams.

Open space maintenance includes the three components described below: Site Monitoring, Reactive Maintenance and Routine Maintenance.

With the exception of the Arboretum and cemetery, which have dedicated maintenance officers, all other open space sites are maintained equally. Prioritisation of activities is at the discretion of the relevant team leader. It is expected that the Open Space Plan will promote the introduction of maintenance standards that vary according to the park hierarchy.

Site Monitoring

Council does not have a routine inspection program for open space. Council crews and contractors responsible for routine maintenance programs, such as mowing, are encouraged to report defects that require repair.

Playgrounds are regularly inspected in accordance with regulatory requirements.

Shared paths are inspected in accordance with the Knox Road Management Plan.

Reactive Maintenance

All reactive maintenance activities undertaken by Parks Services are listed in Attachment 6. When Council officers identify defects exceeding intervention levels, while carrying out other activities within the municipality these defects are recorded in Council's Work Order System (Lifecycle) as ad hoc work orders and result in reactive repair works.

Customer requests for asset repairs are received by the Customer Service team and assessed by maintenance crews to determine whether they exceed the intervention levels. Only requests that refer to defects that exceed intervention levels result in repair works. Temporary protection works to mitigate high and extreme public safety risks are undertaken as soon as possible.

Council's performance regarding the delivery of the current reactive maintenance programs were discussed in some detail in section 6.4 of this Plan.

Routine Maintenance

As discussed previously, in section 6.4, Council's routine maintenance programs performed by Parks Services and Biodiversity have not been documented. As a result, it is difficult to communicate the current service standard to the community. It is also difficult to monitor its effectiveness.

Weather Impacts on Gravel Path Maintenance

Recent periods of intense rainfall, following many years of severe drought, have resulted in considerable scouring of the granitic gravel paths in many open space sites. This has meant that Parks Services have had to repair many more paths than expected in order to mitigate public safety risks and restore functionality. This has put pressure on existing budgets as resources have had to be diverted from other planned activities. The repairs undertaken

have tended to involve reforming the paths and topping up granitic sand. Opportunities to divert stormwater run off, or change the surface material, to avoid future occurrences have been missed.

This recent experience highlights the need to improve communication between those responsible for various asset management phases. Better coordination of decision makers should seek to empower maintenance staff to provide feedback into the asset design processes.

e) Renewal

> Replace assets in a timely manner to ensure expected asset condition and functionality is continuously provided throughout the life of the service

There are two capital renewal programs for open spaces:

- 1008 – Active (Structured) Reserves
- 1015 – Passive (Unstructured) Reserves

Both programs are administered by Parks Services.

In addition to these programs, there are a number of other programs that can involve work that is undertaken within an open space site.

- 1003 – Drainage
- 1004 – Footpaths
- 1005 – Bicycle/shared paths
- 1011 – Carparks
- 1014 – Playgrounds

With the exception of 1014 – Playgrounds, administered by the Open Space & Landscape Design team, the other above listed programs are administered by the Construction team.

As discussed previously, the integration of capital renewal and upgrade programs that affect the same sites is difficult in practice. Despite the synergy meetings, held as part of the capital works programming process, the sheer volume of projects makes it difficult for officers to identify synergies and opportunities to combine projects. This could be facilitated by visual aids that illustrate the locations of priority projects within each program.

To date, in the absence of condition data and with no regular asset inspection program, the development of the renewal programs has been largely reactive. Renewal ranking criteria have been developed to help prioritise works. However, review of the current criteria suggests that they are very subjective and therefore unreliable. There also appears to be some confusion regarding the definition of renewal. As a result, some open space upgrade projects are funded via the renewal program. To help clarify this, the definition of renewal and upgrade is presented below:

> *Renewal* – *Expenditure on an existing asset which returns the service potential, or the life of the asset up to that which it had originally*

> *Upgrade* – *Expenditure which enhances an asset to provide a higher level of service*

In practice, Council's current approach to open space asset renewal is somewhat inconsistent. Minor assets such as seats, bollards and bins tend to be replaced when a failure or risk management issue is reported by a member of the public, a Council maintenance officer or contractor. Given the low individual replacement costs per asset these replacements are often funded via maintenance budgets. To avoid this practice in future, it is recommended that regular renewal programs be developed and aligned with the open space asset classes.

It is important that Council's renewal prioritisation emphasises asset condition and age as key drivers. The prioritisation should also acknowledge hierarchy and opportunities for alignment with strategies/plans and other capital works projects. To support this, amended renewal ranking criteria are proposed for the two capital renewal programs (1008 – Active (Structured) Reserves and 1015 – Passive (Unstructured) Reserves). Refer recommended improvement project 21.

f) Disposal

Ensure assets that have no current (or foreseeable future use) are removed from Council's asset portfolio

Financial sustainability requires a balance between the maintenance, renewal and disposal of existing assets and the delivery of new and upgraded assets. The purpose of asset disposal is therefore to ensure Council resources are not spent on maintaining and renewing assets that are no longer required. Effective asset disposal enables Council to use its limited resources for maximum community benefit.

In practice, open space asset disposals are quite rare. They are not reported separately in Council's financial reports and generally occur as a result of an upgrade project. Disposal is therefore generally driven by the Council team responsible for delivery of the relevant asset upgrade program.

Disposal of open space sites is also rare. Land disposals generally only occur reactively in response to a request to acquire a Council site. The sale of land is administered by the Governance team in accordance with the Sale of Land and Buildings Policy. An Asset Management Working Group was established, a number of years ago, with the purpose of identifying land surplus to Council's requirements for an asset disposal program. The group comprised Councillors and representatives from Planning, Engineering and Property. At this time, all Council land was reviewed and ranked against a number of criteria, including the presence of playgrounds, size and zoning. After some unsuccessful attempts to dispose of land from this prioritised list, the Group was disbanded about five years ago.

Given the importance of open space to the municipality's highly valued green and leafy environment, it is unlikely that open space sites and other assets will be disposed without replacement in the foreseeable future. The revised Knox Open Space Plan is expected to consider the scale and layout of open space within the municipality and indicate key factors to be assessed when considering disposal opportunities.

7.7 INTEGRATION OF INTERNAL STAKEHOLDERS

Given the large number of staff with some responsibility for open space management, Integration of service and asset lifecycle managers is considered critical to the successful management of open spaces. Key integration functions, considered important for the management of open spaces include those outlined in the table below.

Integration Function	Objectives
Access & Inclusion	Support consideration of access and inclusion initiatives within all open spaces. Ensure assets are not constructed in a manner that adversely impacts accessibility.
Communication	Support the development and implementation of internal and external communication strategies to support decision makers across all phases of the service and asset lifecycles.
Community Engagement	Support appropriate levels of community engagement at each stage of the service and asset lifecycles.

Integration Function	Objectives
Data Management	Support the management of data created and required at each stage of the service and asset lifecycles. This includes: o identification of available data sources o data collection o data processing/ analysis o data review and update o data storage, transfer & retrieval etc
Environmental Sustainability	Support consideration of environmentally sustainable initiatives at all phases of the service and asset lifecycles.
Financial Sustainability	Support assessment of lifecycle cost implications at all stages of the service and asset lifecycles. Ensure Council's long term financial plan incorporates future asset maintenance, operating , renewal and disposal costs
Governance	Ensure decision makers at all stages of the service and asset lifecycles, are aware of, and meet all legal and regulatory obligations. Ensure Council policies are developed, implemented, reviewed, updated and terminated as appropriate. Ensure third party agreements are developed, implemented, reviewed, updated and terminated as appropriate. Monitor conformance with agreements and enforce agreement conditions.
Human Resource Management	Ensure appropriate human resource strategies are developed, implemented, reviewed, updated and terminated as appropriate. Develop training programs to support service and asset management objectives.
Knowledge Management	Coordinate and support the development, retention and transfer of knowledge across the organisation via education programs and other knowledge sharing processes.
Service Integration	Align business and service plan objectives for all services that affect open space management Integrate directions from related policies and plans
Asset Integration	Optimise use of existing assets to deliver service objectives. Integrate directions from related policies and plans Ensure asset design, creation; maintenance, renewal and disposal are aligned to service needs. Ensure asset related improvement recommendations documented in adopted Council strategies and plans are considered during business planning and implemented by decision makers
Protocols, Standards & Process Development & Documentation	Support the development and implementation of processes, templates and standards to be used by service and asset managers
Performance Measurement & Reporting	Audit and monitor the following: o Compliance with regulatory requirements o Delivery of service level targets o Implementation of improvement projects

Table 34 – Integration Functions – Management Objectives

Historically, decision making has tended to be well-integrated for large high profile and complex sites. Stakeholders are consulted and their views are represented and where possible accommodated. Integration has tended to be more difficult for small scale, low-profile projects.

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Improvements in the integration of decision makers is considered necessary to ensure all Council officers work as one team with common objectives for all projects. The revised Knox Open Space Plan is therefore expected to include a proposed integration methodology.

To facilitate service planning and integration, an improvement project is recommended to build on the work done during the preparation of this Asset Management Plan and the Open Space Plan. This project described in the following section is intended to define an integration approach that can be applied to open spaces and all other Council services and assets.

7.8 IMPROVEMENT RECOMMENDATIONS

Project 19.   Revise Gravel Path Design Standard

It is recommended that the design standard for unsealed gravel/ granitic sand paths be revised to ensure that new paths and path rehabilitation works include appropriate stormwater management works to reduce scouring of these paths during periods of intense rainfall.

It is recommended that the Open Space & Landscape Design team bring the revised designs to the Standards Committee prior to adoption. The revised standard should seek to define the maximum slope at which these paths can be constructed and consider the feasibility of using alternative materials that are less susceptible to scouring.

Following on from this project, consideration should be given to the development of a capital renewal program to rehabilitate affected gravel paths (and associated drainage) at locations that have had a history of scouring issues.

Project 20.   Clarify Asset Management Responsibilities

It is recommended that Asset Strategy work with the Service Owners, and teams responsible for various asset management lifecycle phases (as illustrated in Table 33 – Asset Lifecycle – Current Asset Management Responsibilities), to   clarify responsibilities for open space assets including:

- Lighting
- Retaining Walls
- Staircases
- Shade Sails
- Public artwork
- Water harvesting infrastructure (i.e. Rainwater tanks)
- Some specialist sports surfaces (eg. Tennis Courts)

This project should include defining the responsibilities that define the role of an "Asset Owner" so that all stakeholders have a common understanding.

Project 21.   Adjust Renewal Ranking Criteria

From a renewal perspective, the financial model, outlined in Chapter 8, focuses on the importance of renewing assets in poor condition or those nearing the end of their useful life. To this end, it is important that Council's renewal prioritisation reflects this with an emphasis on condition and age to drive renewal. For the two capital renewal programs relating to open space (1008 – Active (Structured) Reserves and 1015 – Passive (Unstructured) Reserves), amended renewal ranking criteria are proposed.

The criteria allow for individual projects as well as multiple site programs across different asset classes to be prioritised under the two common renewal programs. It is recommended that these renewal ranking criteria are incorporated into Council's overall renewal ranking criteria at the earliest opportunity. While subtle amendments may be made by Program Managers as necessary, it is considered important that criteria 1-4 remain unchanged.

It is recommended that the Asset Strategy team seek to inform all affected Capital Works Delivery and Program Managers of this recommended change in ranking criteria and assist with the implementation during the next financial year.

1008 ACTIVE (Structured) RESERVES

	Criteria	Score
1.	Condition/Useful Life – Project addresses renewal of assets in poor condition	
	• Predominantly poor or failed assets, or assets nearing end of useful life	25
	• Predominantly fair assets, or assets with moderate remaining useful life	15
	• Good assets with considerable remaining useful life	0
2.	**Hierarchy** – Project addresses renewal of assets on high priority sites	
	• Predominantly regional	15
	• Predominantly municipal	10
	• Predominantly local	5
	• Predominantly school	2
	• Unknown hierarchy	0
3.	**Strategic alignment** – Project aligns with principles of Recreation Plan (or supporting plan eg. Tennis Plan)	
	• Significantly	10
	• Moderately	7
	• Slightly	3
	• Not at all	0
4.	**Integration** – Project integrates with other capital works project	
	• Yes	10
	• No	0
5.	**Risk** – Project addresses a known risk raised in an internal/external audit	
	• Yes	10
	• No	0
6.	**Sporting Club investment** – Sporting Club/s have invested in improving secondary assets that allow Council to significantly further improve overall asset	
	• Significantly	10
	• Moderately	7
	• Slightly	3
	• Not at all	0
7.	**Environment** – Project will reduce impact on the environment	
	• Significantly	5
	• Moderately	3
	• Slightly	2
	• Not at all	0
8.	**Maintenance** – Project will reduce future maintenance costs	
	• Significantly	5
	• Moderately	3
	• Slightly	2
	• Not at all	0
9.	**Utilisation** – Project will result in increased utilisation	
	• Significantly	5
	• Moderately	3
	• Slightly	2
	• Not at all	0
10.	**Participation** – Project will encourage greater participation by non traditional users: Women, disabled, juniors etc	
	• Significantly	5
	• Moderately	3
	• Slightly	2
	• Not at all	0

1015 PASSIVE (Unstructured) RESERVES

Criteria	Score
1. **Condition/Useful Life** – Project addresses renewal of assets in poor condition	
• Predominantly poor or failed assets, or assets nearing end of useful life	25
• Predominantly fair assets, or assets with moderate remaining useful life	10
• Good assets with considerable remaining useful life	0
2. **Hierarchy** – Project addresses renewal of assets on high priority sites	
• Predominantly Knox destination or high priority bushland	20
• Predominantly large neighbourhood or significant bushland	15
• Predominantly small/medium neighbourhood	5
• Unknown hierarchy	0
3. **Strategic alignment** – Project aligns with principles of Open Space Plan	
• Significantly	15
• Moderately	10
• Slightly	5
• Not at all	0
4. **Integration** – Project integrates with other capital works project	
• Yes	10
• No	0
5. **Risk** – Project addresses a known risk raised in an internal/external audit	
• Yes	10
• No	5
6. **Access & Inclusion** – Project promotes access and inclusion for all	
• Yes	10
• No	0
7. **Environment** – Project will reduce impact on the environment	
• Significantly	5
• Moderately	3
• Slightly	2
• Not at all	0
8. **Maintenance** – Project will reduce future maintenance costs	
• Significantly	5
• Moderately	3
• Slightly	2
• Not at all	0

Project 22.   Review Capital Works Programming Process

It is recommended that the Assets department, with support from Corporate Planning and Performance, and representatives from across the organisation review Council's capital works planning process and the implementation of Council's Asset Management Policy and Discretionary Rate Funding Allocation Policy. The review should consider the following:

- Business case preparation – including scoping the project works, cost and timelines
- Effectiveness of synergy meetings – including consideration of opportunities to introduce visual aids to facilitate identification of project synergies
- Lifecycle cost estimation – including consideration of staff understanding and tools to support estimation.
- Project design documentation – consider including the documentation of maintenance and renewal requirements and expected costs during the project design phase.

- Possible introduction of capital renewal subprograms aligned with open space asset classes (eg. Fencing, Fixed Sport Infrastructure, Irrigation Systems, Lighting, Park Furniture, Retaining Walls & Staircases, Specialist Sporting Surfaces, Sports fields, Vegetation)

Project 23.   Service – Asset Management Integration Project

The coincident timing of the development of this Asset Management Plan, the Knox Open Space Plan and Council's Service Planning Policy has provided a unique opportunity to advance Council's approach to integrated service and asset management. Teams from three Council Directorates have spent considerable time analysing Council's current approach from three very different perspectives and have identified many common gaps and potential service adjustments.

Implementation of the Open Space Plan, Recreation Plan, various sporting studies and this Plan is expected to require, reformulation, re-establishment and perhaps discontinuation of some Council services. This improvement project should therefore seek to determine the best way for Council to undertake this service planning work in a manner that is consistent with Council's Service Planning Policy.

This recommended project is intended to build on the work done to date. It is expected that the project will introduce organisational change to address identified gaps. It is therefore recommended that it be led by Corporate Planning and Performance, working collaboratively with Assets, Sustainability and Youth Leisure & Cultural Services.

The project scope should consider potential changes to the five organisation design dimensions, listed below, in order to achieve the desired level of integration.

- Strategy
- Structure
- Processes & Standards
- Skills & Capabilities
- Performance Measures

Potential new roles and responsibilities that may considered include:

- Creation of a new role - Open Space Planning Facilitator – to act as an "Asset Owner" for open space
- Assignment of a Service owner for the Play for All service
- Explore opportunities to improve synergies between the Bushland Crew and Park Services team to aid cross training
- Clarification of service planning and asset management responsibilities

Chapter 8   Financial Sustainability

CHAPTER 8 - SUMMARY

- Sound asset management and sustainability are not solely reliant on the provision of funds. Continual improvements to support more integrated service and asset management work practices are required to ensure assets deliver the required level of service in the most cost effective manner.

- Financially sustainable asset management requires a balanced allocation of capital and operating funds.

- A predictive financial model was developed to demonstrate the impact of different funding decisions over 20 years.

- Two alternative funding scenarios (Medium and High) were modelled to compare with the Status Quo scenario.

- The Status Quo funding scenario assumes this Asset Management Plan is not adopted and funding continues in accordance with the Long Term Financial Strategy (LTFS) and existing budgets.

- Adoption of the recommended funding scenario (Medium) would see an increase in funding for renewal and a slight increase in the maintenance and operating budgets. Funding for this scenario would ensure:
  - Assets are replaced at the end of their useful life.
  - Assets that have been condition audited would be renewed to a minimum level of service of no less than a condition 4 (Poor) in the next five years.
  - Renewal programs continue to reflect Council's commitment to warm season grass conversions and parkland and plantings renewals.
  - Maintenance expenditure would be increased to allow for the introduction of additional tree pruning to address aspects of the service that are not meeting current customer expectations.
  - A modest increase to operational funding would be provided to allow some external support for delivery of some improvement projects.

- Under the recommended funding scenario, it is important that the objectives of Council's Asset Management Policy are applied. Upon approving a new or upgrade capital works project, appropriate lifecycle funding for maintenance and operation must be determined and committed within the operational budget.

- Funding sources for open space include:
  - Rates
  - Federal and State Government Grants
  - Private and public Partnerships
  - Borrowings
  - Earnings from Asset Disposals
  - Contributions from Occupants (eg. sporting clubs)
  - Developer Contributions stored in Council's Open Space Reserve

- Improvement recommendations include:
  - Lifecycle cost training for Capital Works Program/ Delivery Managers
  - Update of predictive model to incorporate the effect of upgrades and disposals recommended in the revised Open Space Plan and other service planning documents
  - Update Recreation Minor Capital Works Scheme Policy

8.1 INTRODUCTION

In pursuit of good governance, Council must ensure the open space network is managed in a way that influences and caters for community demand. Funding allocations at each stage of the lifecycle impact the standard to which Council assets perform.

Financial sustainability requires a balance between the delivery of new assets and the maintenance and renewal of existing assets. Increasingly, Councils are required to demonstrate their capacity to manage their existing infrastructure, hence sustainable asset management is often focused on the provision of adequate renewal and maintenance funding.
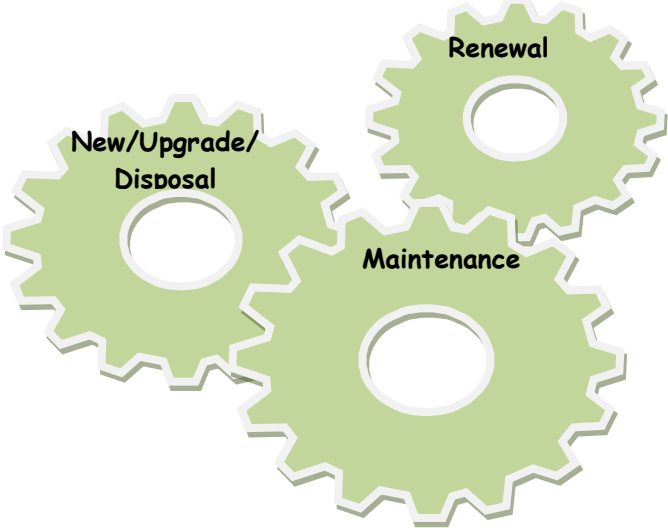

Figure 38 – Lifecycle Cost Components

The creation of new or significantly upgraded open spaces increases pressure on Council's maintenance resources and adds to asset renewal requirements at the end each asset's useful life. Delays or reductions in asset renewal also places increased pressure on Council's maintenance resources as old assets become obsolete and are more likely to fail or require greater maintenance.

Strategic assessment of community needs and satisfaction with the open space network should continue to be used to inform Council's upgrade, creation, maintenance, renewal and disposal programs. In this Chapter, a predictive model is presented as a basis for making informed open space asset management funding decisions. Sustainable funding levels are recommended and compared with the current levels. Funding sources are also outlined.

8.2 PREDICTIVE MODEL

Description

The predictive model provides renewal modelling results in a format that builds on existing knowledge and aligns with existing budget programs.

In broad terms, the model consists of two parts.

Part 1 – Condition Based Modelling

Using the present condition distribution of the asset as a starting point, the model predicts the renewal expenditure required to retain a desired minimum asset condition.

Part 2 – Useful Life Based Modelling

Using the estimated useful life of the asset and its replacement cost as a starting point, the model predicts the renewal expenditure required to enable replacement of the assets at the end of their useful life.

Condition data is currently limited to the following assets: fencing, retaining walls, shade structures, staircases, cricket practice nets, cricket practice pitches, cricket pitches, tennis courts, netball courts and athletics tracks. In these instances, a combination of approaches has been used, while the majority of other open space assets have been modelled purely on a useful life basis.

Modelling for other lifecycle phases (maintenance, upgrade, operations) is based on current expenditure as a starting point with respective scenarios detailed in the following section.

Assumptions

Time Period

The model predicts asset performance over a 20 year period

Asset Growth Rate

0.5%. This is based on the assumption of development of current undeveloped sites over a 20 year period. While the Asset Management Policy's lifecycle cost process allows for additional renewal and maintenance funding for projects under the capital works program, lifecycle costs are currently not calculated or included for contributed assets. This growth rate aims to allow for this gap. It is worth noting that increased maintenance and renewal requirements for major projects such as the Eastern Recreation Precinct are captured through lifecycle cost analyses, and therefore have not been included in this modelling.

Asset Deterioration Rate

In the absence of Knox specific historic data, the useful life of each asset class is assumed to be as listed in Table 6 – Open Space assets – Expected Life

Straight line asset deterioration is assumed. The annual rate of deterioration for each asset class is calculated as 1/Useful Life.

Maintenance Costs

The starting point for prediction of annual maintenance funding requirements is the current maintenance expenditure level of $5.451M (based on 2010/11 financial figures).

8.3 SCENARIOS MODELLED

Differing service delivery standards can be applied to each lifecycle phase. The table below summarises the range of service delivery standards examined using the predictive model.

Service Delivery Standard			
	Scenario 1 - Status Quo	**Scenario 2 - Medium**	**Scenario 3 - High**
New/ Upgrade	Fund in accordance with Long Term Financial Strategy (adjusted for inflation)	Fund in accordance with Long Term Financial Strategy (adjusted for inflation). Recommendations from the Open Space Plan and Recreation Plan to be prioritised in accordance with available funding.	
Renewal	Fund in accordance with Long Term Financial Strategy (adjusted for inflation)	For assets that were not condition audited – Fund Average Annual Asset Consumption For assets that were condition rated – Fund replacement of the backlog of condition 5 assets in 5 years then fund Average Annual Asset Consumption Include non capital commitments: Annual parkland/plantings renewal Arboretum master plan implementation (to 2014/15) Continue commitment to warm season grass conversions in addition to oval renovations.	For assets that were not condition audited – Fund Average Annual Asset Consumption For assets that were condition rated – Fund replacement of the backlog of condition 4 & 5 assets in 5 years then fund Average Annual Asset Consumption Include non capital commitments: Annual parkland/plantings renewal Arboretum master plan implementation (to 2014/15) Continue commitment to warm season grass conversions in addition to oval renovations. Increased fleet renewal budget to allow for wide deck mowers
Maintenance	Fund in accordance with Long Term Financial Strategy (adjusted for inflation)	Allow for introduction of the following maintenance programs: Routine tree pruning (by increasing reactive budget)	Allow for introduction of the following maintenance programs: Routine tree pruning (by increasing reactive budget) Routine park inspections
Operation	No change	Fund to allow introduction of all Improvement Projects over a 5 year period. Projects to be absorbed internally except where external resources are specifically required.	Fund to allow introduction of all Improvement Projects over a 3 year period, with extra external resources assumed for all projects.

Table 35 – Summary of Model Funding Scenarios

Under both Scenario 2 and 3, all new and upgrade open space projects will be informed by the updated Open Space Plan and the Recreation Plan. Both documents provide the

strategic direction for passive and active open space. In accordance with the Asset Management Policy, the approval of each new/ upgrade project shall include the allocation of lifecycle costs to the affected renewal and maintenance budgets in order to ensure the new or upgraded assets can be maintained at the desired standard.

8.4 PREDICTIVE MODEL RESULTS

Financial information presented in the graphs and tables below represents the best available data to model future provision and maintenance of Council's open space network. Future updates of the model will supersede existing data and be used to inform decision making. As can be demonstrated from the forecast calculations, there is only minimal variance between a sustainable level of asset management funding and what is currently provided by Council.
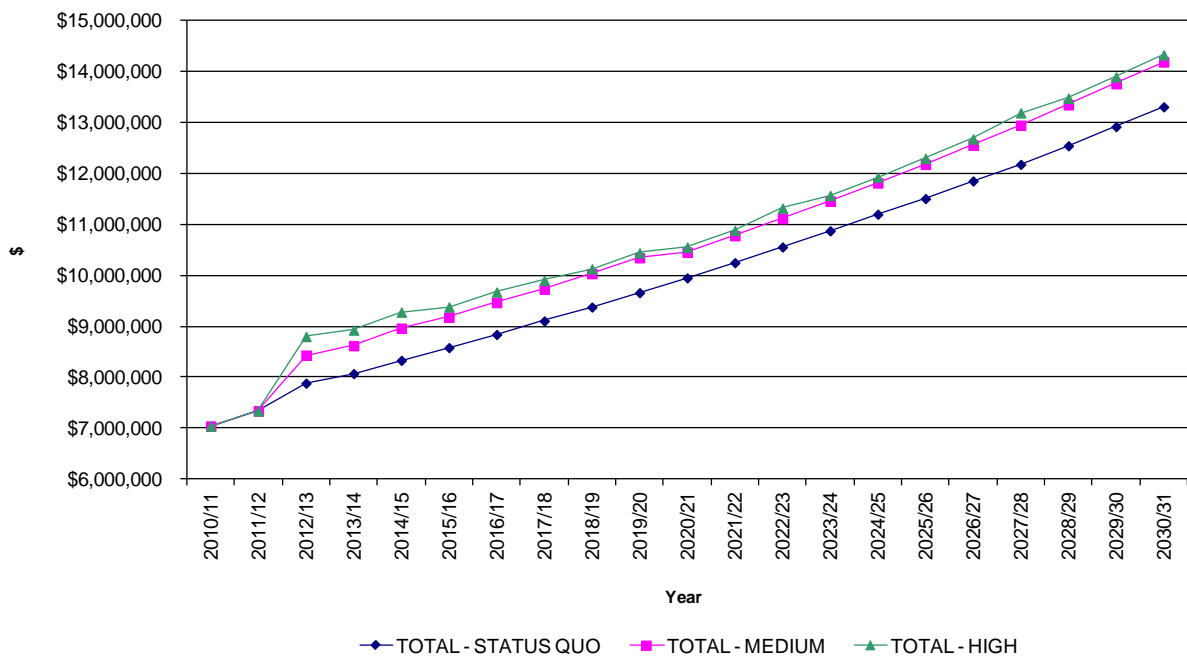

Figure 39 – Predicted Lifecycle Costs

Attachment 7 provides a summary of all predictive modelling results.

8.4.1 Scenario 1 – Status Quo

This scenario involves Council continuing to fund all phases of open space asset management in accordance with its current Long Term Financial Strategy and in accordance with existing expenditure profiles.

8.4.2 Scenario 2 – Medium

The rate of asset renewal under this scenario will ensure all assets are replaced at the end of their useful life, if required. All assets that have been condition audited will be renewed to a minimum standard of no less than a condition 4 (Poor) in the next five years. In addition to this, the Medium renewal funding scenario allows for $100k per year in parkland/LATM planting renewals (typically non capital), $100k per year until 2014/15 to continue Arboretum master plan implementation (typically non capital) and $150k per year until 2019/20 to continue Council's commitment to warm season grass conversions (in addition to ongoing oval renovations). Maintenance expenditure will be increased to allow for the introduction of activities (tree pruning) to address aspects of the service that are not meeting current customer expectations. A modest increase to operational funding is recommended to allow external support for the delivery of some improvement projects.

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8.4.3 Scenario 3 – High

The rate of asset renewal under this scenario will ensure all assets are replaced at the end of their useful life, if required. All assets that have been condition audited will be renewed to a minimum standard of no less than a condition 3 (Fair) in the next five years. In addition to this, the medium renewal funding scenario allows for $100k per year in parkland/LATM planting renewals (typically non capital), $100k per year until 2014/15 to continue Arboretum master plan implementation (typically non capital) and $150k per year until 2019/20 to continue Council's commitment to warm season grass conversions (in addition to ongoing oval renovations). Maintenance expenditure will be increased to allow for the introduction of activities (tree pruning and routine park inspections) to address aspects of the service that are not meeting current customer expectations. A more substantial increase to operational funding is recommended to allow external resources to be engaged for all improvement projects.

8.5 RECOMMENDED FUNDING LEVELS

To achieve improved asset management outcomes, a sustained commitment to the provision of adequate funding for asset renewal, maintenance and upgrade is required. The funding targets necessary to deliver sound asset management for the next five years based on delivery of the medium scenario, described above, is summarised in Table 36. This table also compares the current funding levels set out in the Long Term Financial Strategy (LTFS) to the recommended optimal levels and identifies the annual funding shortfall in both the capital and operating budgets.

Funding decisions should be based on information that justifies initial expenditure and demonstrates the longer term benefits and costs. It must be noted however that sound asset management and sustainability are not solely reliant on the provision of funds. Continual assessment and improvement of Council's asset management practices is required to ensure assets deliver the required level of service in the most cost effective manner.

PROPOSED (MEDIUM) FUNDING – OPEN SPACE ($'000)					
	2012/13	**2013/14**	**2014/15**	**2015/16**	**2016/17**
Capital Works – New/Upgrade					
Upgrades	$1,000	$900	$944	$972	$1,001
LTFS/Status Quo	$1,000	$900	$944	$972	$1,001
Funding Shortfall	**$0**	**$0**	**$0**	**$0**	**$0**
Capital Works – Renewal					
Renewal (incl. Disposal)	$1,581	$1,637	$1,694	$1,634	$1,692
LTFS/Status Quo	$1,100	$1,216	$1,252	$1,290	$1,328
Funding Shortfall	**$481**	**$421**	**$442**	**$344**	**$364**
Operating Budget – Maintenance					
Maintenance	$5,837	$6,068	$6,308	$6,557	$6,755
LTFS/Status Quo	$5,783	$5,957	$6,136	$6,320	$6,509
Funding Shortfall	**$54**	**$111**	**$172**	**$237**	**$246**

Operating Budget – Operational Improvements					
Improvement Projects	$15	$16	$16	$17	$17
LTFS/Status Quo	$0	$0	$0	$0	$0
Funding Shortfall	**$15**	**$16**	**$16**	**$17**	**$17**

Table 36 – Recommended Funding - Open Space

Under the recommended funding scenario it is important that the objectives of Council's Asset Management Policy are applied. Upon approving a new or upgrade capital works project, appropriate lifecycle funding for maintenance and operation must be determined and committed within the operational budget. It is therefore important that Council staff have the necessary skills to estimate the lifecycle costs for all new and upgrade projects.

Additional lifecycle costs are not included in the forecast figures above, as they are difficult to predict in the long term and on the assumption that they will be added to existing budgets in accordance with Council's funding allocation policies and processes.

The total renewal requirements listed above are expected to be managed within Council's existing asset renewal program in the first instance. An increase to Council's overall asset renewal program will only occur subject to future condition data that is captured for all asset classes informing the need for additional funding, or if service levels increase.

8.6 FUNDING SOURCES

Council has access to a number of funding sources to support delivery of this Open Space Asset Management Plan. Funding sources include:

- Rates
- Federal and State Government Grants
- Private and Public Partnerships
- Borrowings
- Earnings from Asset Disposals
- Contributions from Occupants (eg. sporting clubs)
- Developer Contributions (stored in Council's Open Space Reserve)

In accordance with Council's Asset Management Policy, it is expected that Council will proactively seek grants and partnership opportunities to supplement investment in asset provision and management. In the case of open space, Council has the added benefit of potential sporting club contributions and a substantial Open Space Reserve as described below.

8.6.1 Sporting Club Contributions

Council's Recreation Minor Capital Works Grants Scheme Policy, outlined in Attachment 3 was adopted in 2005. This policy is currently in use and supports the implementation of an annual program of minor upgrade projects undertaken with a range of sporting clubs.

8.6.2 Developer Contributions – Open Space Reserve

When a Developer submits an application to undertake a subdivision within the municipality, Council assesses the application. In accordance with the Subdivision Act 1988 and the Knox Planning Scheme, the Developer may be required to make an open space contribution in the form of land or cash (or possibly both). The contribution depends on the size of the development (in terms of total area and the number of lots proposed).

If Council approves the application a permit is provided with details of conditions which would include the developer contribution for open space (if warranted). This condition allows Council as the Responsible Authority to relinquish the issue of Statement of Compliance until the open space contribution is paid.

When the Developer completes all subdivision works as required by the subdivision permit, and in accordance with permit conditions, a Statement of Compliance from Council is requested. The Developer must forward the Statement of Compliance to the Titles Office in order to complete the subdivision process.

If the Developer is required to pay a cash contribution for the project then, before a Statement of Compliance is issued, Council sends the application to its independent Valuer in order to establish the value of the land which will determine the contribution figure. When Council has received the cash contribution, or the transfer of land, in accordance with the permit conditions, the Statement of Compliance is issued and any bonds held by Council are released. Council will not release the Statement of Compliance for the subdivision application until payment or transfer of land is received.

If a cash contribution is made, the funds are held within Council's Open Space Reserve. These funds can then only be used for capital works projects that enhance Council's open space assets. The Open Space Reserve may be used to purchase new land but it is predominantly used to fund new and upgrade works.

8.7 IMPROVEMENT RECOMMENDATIONS

Project 24.   Provide Lifecycle Cost Training

Given the importance of ensuring that Council's operating budgets are sufficient to maintain Council assets at a standard that is safe, and meets other community expectations, it is considered important that all Capital Works Program/Delivery Managers have a good understanding of the importance of accurate lifecycle cost estimation. It is therefore recommended that the Assets team educate all relevant staff. If necessary the capital works planning process, should also be reviewed and adjusted in a manner that ensures Program Managers allocate sufficient time and resources to the task of lifecycle cost estimation.

Project 25.   Update Predictive Model

It is recommended that the Asset Strategy team update the predictive model, presented in this Chapter to determine the impact of implementing asset upgrades and disposals likely to be recommended in the revised Open Space Plan and revised Sporting Facility Development Guidelines. Any predicted changes in funding requirements should be used to inform Council's Long Term Financial Plan.

Any recommended changes to maintenance service levels should also be costed by the Parks Services team and incorporated into the model to determine the impact on long term financial sustainability.

Project 26.   Update Recreation Minor Capital Works Grants Scheme Policy

It is recommended that the Leisure Services team review and update the Recreation Minor Capital Works Grants Scheme policy which was adopted in 2005.

Chapter 9   Recommended Improvement Projects

CHAPTER 9 - SUMMARY

- It is recommended that Council adopt the Medium funding scenario modelled in the previous Chapter. This will include the implementation of all recommended improvement projects (listed in Attachment 8) over the next five years.

- 26 improvement projects are recommended, most of which address internal operating processes and data management. For each project, the following aspects have been nominated:
  - Risk
  - Related projects
  - Responsible directorate
  - Recommended project leader (Department)
  - Expected project benefits
  - Preliminary cost and resource estimates
  - Council teams and other authorities likely to be consulted during project implementation

- Successful implementation will require each nominated Project Leader to incorporate the project into the annual business plan and, if necessary, administer a business case application to seek additional funding (if external support is required).

- In the event there are multiple stakeholders required to successfully deliver the improvement project, it will be incumbent on the nominated Project Leader to define the scope, estimate the hours required to complete the works and communicate this information to all stakeholders to ensure they too allocate appropriate time and resources to work collaboratively on the improvement project.

- Review of this Plan is expected to occur at 5 year intervals and focus on updating asset performance, the predictive model and the applicability of outstanding improvement projects.

9.1 INTRODUCTION

Implementation of the improvement projects presented throughout this plan is intended to enable Council to move toward best practice open space asset management. Open space assets will be efficiently and effectively managed in a manner that supports service objectives which are aligned with community expectations.

It is recommended that the Medium funding scenario presented in the previous Chapter be adopted. The predictive financial model includes an allowance for progressive implementation of all the improvement projects. It is expected that via changes in work practices and priorities, and minimal use of external resources, all recommended improvement projects can be progressively delivered over the next five years.

9.2 IMPLEMENTATION OF IMPROVEMENT PROJECTS

Attachment 8 summarises the improvement recommendations. It highlights the following:

- Related Projects
- Expected Project Benefits
- Risk Assessment
- Expected Extent of Impact on Efficiency
- Organisation Dimension (Structure, Strategy, Processes, Skills)
- Responsible Directorate
- Recommended Project Leader (Department Manager)
- Council teams to be consulted during project implementation
- Preliminary cost and resource estimates

Given that a number of the recommended improvement projects are interdependent, it is expected that nominated Project Leaders will seek to combine the delivery of related projects. To prioritise implementation, the consequence of not undertaking each project was assessed by the Asset Strategy team. Council's Integrated Risk Management Framework was used for this assessment.

9.2.1 Business Planning

Each Project Leader is charged with responsibility for incorporating delivery of the project into their annual business plan. Further work is therefore required by each Project Leader to define the scope of nominated projects and review the project delivery costs and resource requirements, which are all estimates at this stage.

It is envisaged that the relevant Project Leader will use the risk rating to prioritise the inclusion of the improvement projects into their annual business plan. In the event that multiple stakeholders are expected to be required to contribute to the successful delivery of an improvement project it will be incumbent on the Project Leader to define the scope, estimate the hours required to complete the works and communicate this information to all stakeholders to ensure they too allocate appropriate time and resources to work collaboratively on the improvement project.

9.2.2 Business Case Submissions

For some projects, it may be necessary for the nominated Project Leader to prepare a business case submission to seek additional funding for the delivery of the improvement project. Consideration for funding of new initiatives occurs on a biannual basis either during the development of the budget or at mid year reviews.

Each nominated Project Leader will need to define the scope of work and estimate the hours required to complete each project. It is important that relevant stakeholders be identified during the preparation of the business cases so that the extent of consultation and expected project costs can be appropriately defined. Upon receiving required funding, each Project

Leader will be expected to consult with the identified stakeholders to quarantine the required resources and time required to undertake the improvement project.

9.3 OSAMP REVIEW & UPDATES

Implementation of the improvement projects set out in Attachment 8 should be monitored on an annual basis and used to inform business planning activities and budget priorities in subsequent years.

Review of this Plan should occur at 5 year intervals and focus on updating asset performance, the predictive model and the applicability of outstanding improvement projects.

The predictive model presented, in Chapter 8, should be updated to reflect impacts of new works and improvements in Council's asset knowledge. Updates of the financial model should incorporate:

- Future condition audit results
- Changes to the improvement project priorities and expected costs
- Asset changes resulting from renewal works
- Asset changes resulting from capital upgrades
- New developments