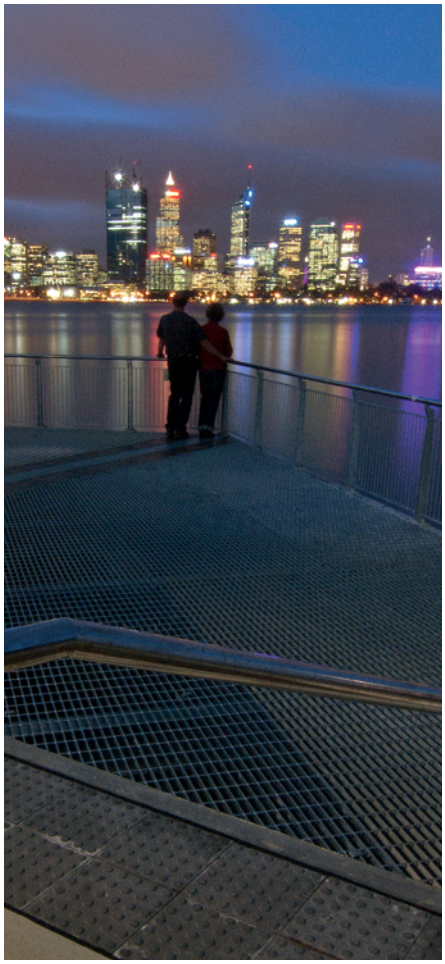
WORKING TOGETHER

City of South Perth_Asset Management Plan

2013–2023

City of South Perth

OUR MISSION

WORKING TOGETHER TO CREATE A CITY FOR EVERYONE

OUR VISION

"We belong to an engaged and cohesive community that is linked by vibrant local centres and shared spaces. We live and travel in ways that nurture our environment; and our housing and amenities meet the diverse needs of a changing society"

VALUES

TRUST
Honesty and integrity

RESPECT
Acceptance and tolerance

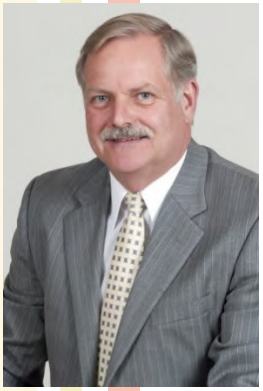
UNDERSTANDING
Caring and empathy

TEAMWORK
Leadership and commitment

CONTENTS

City of South Perth

MESSAGE FROM THE CEO



The Council continues to deliver on implementing the vision, directions and priorities outlined in the Strategic Plan 2013-2023, focusing on the key themes of community, environment, housing and land uses, places, transport and governance. Sustainability, in all its forms, is at the core of the community's expectations and underpins the Council's governance and planning framework. This allows for us to deliver a diverse, sustainable and effective range of environmental, social and economic programs to meet the ever growing needs and expectations of our community. The Council increase its emphasis on sustainability, with the Council adopting the Sustainability Strategy 2012-2015 which we believe will position us strongly in dealing with the complexities involved in planning for a sustainable future.

The City has also been developing a new Integrated Planning and Reporting Framework that will allow us to sustainability and strategically meet the needs of our community. The objective of this framework is to have a stronger focus on place shaping and well-being with an increased level of community engagement. The framework is well progressed and when completed by June 2013, will comprise a ten year Strategic Community Plan, ten year Strategic Financial Plan, four year Corporate Plan, Workforce Development Plan and Asset Management Plan. The City of South Perth conducts its business based on its corporate values.

Cliff Frewing
Chief Executive Officer

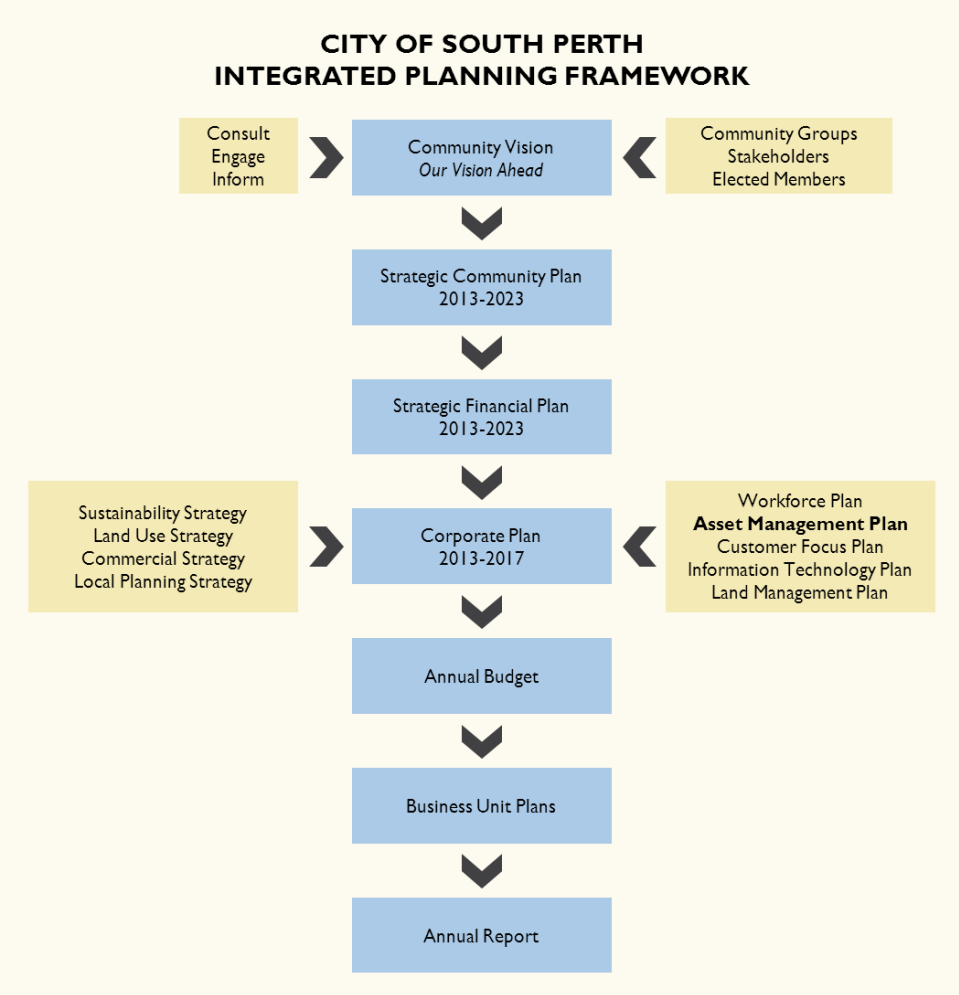
City of South Perth

INTEGRATED PLANNING & REPORTING

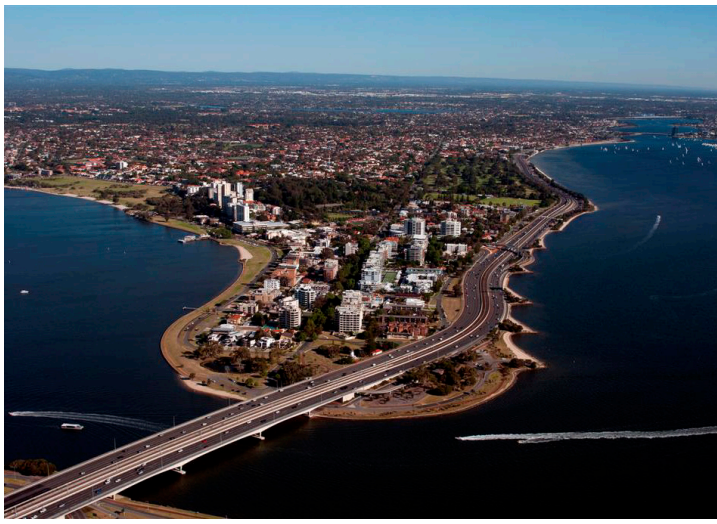
This Asset Management Plan will allow the City to meet the requirements of the Western Australian Department of Local Government Integrated Planning and Reporting Framework.

The Asset Management Plan sits alongside the long term Financial Plan, Strategic Community Plan, Corporate Plan, Workforce, Technology Plan, Land Management Plans, Business Plans, and Annual Budget determined in the Corporate Planning Model.

This Plan will be reviewed on a two yearly basis to make necessary changes in order to ensure continuity in compliance with the requirements under the existing Integrated Planning Framework. The chart below represents the City's Corporate Planning Model that has recently been adopted, and shows the relationships between the Strategic Community Plan, Long term Financial Plan, Corporate Plan, and other Plans including Asset Management Plan 2013 - 2023.



The City of South Perth is located 4km south of Perth and is known for its gracious street trees, extensive parks and gardens, attractive river foreshore areas, and leafy environment, all of which complement the unique urban village atmosphere cherished by its community. With an area of 19.9km2, the City offers a highly urbanised environment, dominated by residential land uses and a number of small business and retail precincts. Providing a range of dwelling types often found in a conventional garden city suburb, and a mix of medium to high density housing types, the City supports a population of approximately 45,281 as at 30 June 2012 with approximately 10,000 choosing to work in the City every day, and a range of small to medium size businesses and commercial activity.



Surrounded by the Swan River to the north and west, Town of Victoria Park and City of Canning in the east and the Canning River in the south, the City has substantial river foreshores and, together with other reserves, parks, sports grounds and golf courses, representing approximately 660ha amounting to one third of its total area.

Major attractions of the City include the internationally known Swan and Canning Rivers, Sir James Mitchell Park, Perth Zoo, South Perth Community Centre and Library, Royal Perth Golf Club, Collier Park Golf Course, George Burnett Park and Leisure Centre, Milyu Nature Reserve and local boutique retail precincts.

Our History

South Perth was first gazetted as a Roads Board on 19 June 1892, and held its first meeting as a Roads Board on 19 September 1892. Ten years later the Roads Board became a Municipality before reverting back to its original status as a Roads Board in 1922. South Perth was proclaimed a City on 1 July 1959.

Substantial residential growth took place in the 1950s and 1960s, aided by improvements in access from the construction of roads and bridges. The area comprising South Perth has changed since originally being gazetted as a Roads Board. In 1955, a large portion of Southern South Perth (Waterford, Manning and Salter Point) was transferred from the administration of the Canning Roads Board to the City of South Perth.

The City's mission statement "Working Together to Create a City for Everyone" outlines the purpose and core business of the City of South Perth. This statement identifies the important roles of the community, the Council and the staff in ensuring that the strategies outlined in the Strategic Plan 2013-2023 can be achieved.

INTRODUCTION

The Asset Management Plan 2013-2023 has been prepared by the City of South Perth's Asset Management Working Group (AMWG) and provides core resource information for service providers and users of the City's network of facilities.

The City of South Perth delivers a variety of services to the community and in doing so, must ensure that the assets supporting these services are managed in a way that guarantees maximum performance for the lowest 'whole of life' cost.

The Asset Management Plan identifies responsibilities, maintenance standards and inspection regimes required to manage civil liability. It must also demonstrate that the City, as the asset infrastructure authority, is responsibly managing the assets under its control.

Assets Snapshot

LENGTH OF ROADS: 203KM

PATHWAYS: 256KM

PUBLIC OPEN SPACES 74

BUILDINGS AND FACILITIES: 91

The City of South Perth Facilities Asset Management Plan (Asset Management Plan) is intended to provide:

- Improved understanding of the assets managed by the Infrastructure Services Directorate;
- Improved understanding and forecasting of asset related management options and costs;
- Improved confidence levels in forward works programs and funding requirements; and
- Guidance for the City in taking steps toward advanced asset management planning.

Asset Management Policy

Council adopted Policy P688 Asset Management in July 2007. The objective of this Policy is to ensure that the City has systems and processes in place to maximise its ability to continue to deliver services on a sustainable basis. Services delivered by the City will depend on Infrastructure Assets provided to a Level of Service determined by the Council that is affordable to the community in the long term. A copy of the policy is available on the City's website.

Asset Management Strategy

This strategy activates the Asset Management Policy by ensuring assets supporting the delivery of services to the community are cost effectively managed over their lifecycle and take into consideration community expectations for levels of service (time, quality and value for money). The strategy achieves this by using an organisational wide approach and commitment to respond to the following questions:

- What assets do we currently have?
- What is our current asset management position?
- Where do we want to be?
- How will we get there?
- How will we fund the asset maintenance and improvement identified in the Asset Management Plans; and
- What is our desired level of service?

Goals and Objectives

The City exists to provide key services to our community. Some of these services are facilitated by infrastructure assets. The City has acquired infrastructure assets by 'purchase', by contract, by construction by City staff and by donation of assets constructed by developers and others to meet increased levels of service.

The City's goal in managing infrastructure assets is to meet the required level of service in the most cost effective manner for present and future consumers. The key elements of infrastructure asset management are:

- Taking a whole life cycle approach;
- Developing cost-effective management strategies for the long term;
- Providing a defined level of service and monitoring performance;
- Understanding and meeting the demands of growth through demand management and infrastructure investment;
- Managing risks associated with asset failures;
- Sustainable use of physical resources; and
- Continuous improvement in asset management practices.

Asset Management Goals

1. Document the services/levels of service to be provided and the costs of providing the service,

2. Communicate the consequences for levels of service and risk, where desired funding is not available.

3. Provide information to assist decision makers in trading off levels of service, costs and risks to provide services in a financially sustainable manner.

Strategic Objectives

This Asset Management Plan is prepared under the direction of Council's vision, mission, objectives and desired outcomes.

Community Create opportunities for an inclusive, connected, active and safe community	• Develop and facilitate services and programs in order to meet changing community needs and priorities. • Facilitate and foster a safe environment for our community. • Create opportunities for social, cultural and physical activity in the City. • Encourage the community to embrace sustainable and healthy lifestyles. • Develop effective processes to listen, engage and communicate with the community.	This Asset Management Plan will address this theme by; • Ensuring that we manage the assets in a way that makes us adaptable and responsive to the needs of our customers; and • By ensuring that our assets safe for all users.
Environment Enhance and develop public open spaces and manage impacts on the City's built and natural environment.	• Identify and implement opportunities to improve biodiversity of the City's key natural areas and activity centres. • Increase community awareness of climate change risk through leadership, adaptation and mitigation. • Improve the amenity of our streetscapes and public open spaces while maximising their environmental benefits.	This Asset Management Plan will address this theme by: • Creating a template for how our assets will be managed to ensure the environment is enhanced or at least maintained at current levels.
Housing and Land Uses Accommodate the needs of a diverse and growing population.	• Develop a Local Planning Strategy to meet current and future community needs, cognisant of the local amenity. • Develop integrated local land use planning strategies to inform precinct plans, infrastructure, transport and service delivery. • Develop and promote contemporary sustainable buildings, land use and best practice environmental design standards.	This Asset Management Plan will address this theme by: • Being used to inform decisions relating to land use planning strategies.

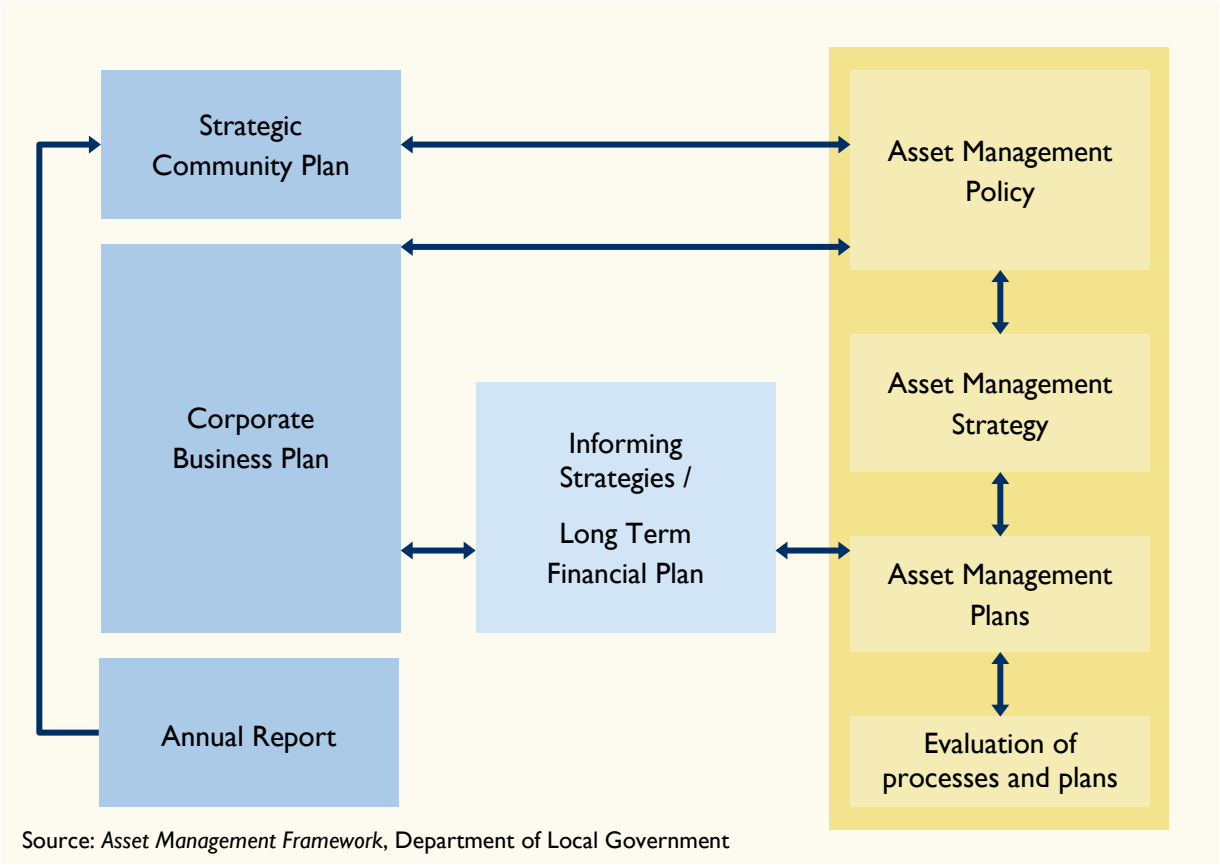
Places Develop, plan and facilitate vibrant and sustainable community and commercial places.	• Encourage and facilitate economic development. • Review and manage the impact of the proposed development and transport planning for the Curtin University Precinct and Bentley Technology Park Precinct. • Facilitate optimal development of the Civic Triangle Precinct. • Develop and implement a Land Management Strategy for City land.	This Asset Management Plan will address this theme by: • Well-managed and maintained assets will encourage economic development; and • Being used to contribute to the Civic Triangle Precinct project.
Infrastructure and Transport Plan and facilitate safe and efficient infrastructure and transport networks to meet the current and future needs of the community.	• Advocate for, implement and maintain integrated transport and infrastructure plans in line with best practice asset management and safe system principles. • Provide and maintain a safe, efficient and reliable transport network based on safe system principles. • Facilitate a pedestrian and cycle friendly environment. • Advocate for and facilitate effective management of Swan and Canning River foreshore infrastructure. • Advocate for the Canning Bridge Transit Orientated Development, South Perth Railway Station and the Manning Road off-ramp.	This Asset Management Plan will address this theme by: • By contributing to a safe, efficient and reliable transport network within the City • Being used to complement any integrated transport and infrastructure plans developed;
Governance, Advocacy and Corporate Management Ensure that the City has the organisational capacity, advocacy and governance framework and systems to deliver the priorities identified in the Strategic Community Plan.	• Develop and implement innovative management and governance systems to improve culture, capability, capacity and performance. • Develop and maintain a robust Integrated Planning and Reporting Framework comprising a 10-year financial plan, four-year corporate plan, workforce plan and Asset Management Plan. • Continue to develop best practice policy and procedure frameworks that effectively guide decision-making in an accountable and transparent manner. • Implement a customer relationship management system that provides a high level of customer responsiveness and satisfaction. • Advocate and represent effectively on behalf of the South Perth community	This Asset Management Plan will address this theme by: • Contributing to the City's 10 year financial plan; • Integrating with the City's corporate documents; and • Identifying resource and capacity issues relating to the City's road network.

Corporate Document Relationships

This Asset Management Plan integrates with key legislative requirements and City documents (adopted and in development). The City has adopted a corporate asset management framework similar to that detailed within the WA Asset Management Framework and Guidelines.

The Integrated Planning and Reporting Framework involves the development and implementation of a number of key documents, including:

- Asset Management Policy
- Asset Management Strategy
- Asset Management Plan



Source: *Asset Management Framework*, Department of Local Government

ASSET MANAGEMENT PRACTICES

Accounting / Financial Systems

The City's Financial Services department is responsible for the accounting and financial management systems of the City.

The City complies with the *Local Government Act 1995* and *Local Government (Financial Management) Regulations*. The City produces an Annual General Purpose Financial Report in accordance with Australian Accounting Standards.

Capital /maintenance threshold

The capital threshold is defined as the value of expenditure on non-current assets above which the expenditure is recognised as capital expenditure and below which the expenditure is charged as an expense in the year of acquisition.

Capital thresholds are currently discussed and agreed to on a case-by-case basis. Expenditure over these limits on an asset is classed as Capital expenditure and capitalised against the asset. An asset is only considered capital if it is expected to have a useful life greater than 12 months.

Capital Investment Strategy

The City determines its capital investment by identifying various assets to be considered using Pitney Bowes "Confirm" Asset Management System. The resulting projects are budgeted and included in the City's capital works program. The capital works program is then reviewed by City staff to ensure local experience and knowledge is included in the determination.

Opportunities for Improvement

1. Linking of the customer service system to the corporate asset register to link requests to asset records. This will increase the data flow between systems, which will lead to improved levels of service and reduced costs.
2. Aligning of project and maintenance costs recording to the Asset Management Plan requirements.
3. Improvement of all asset registers, revaluation of assets and unit rates per road hierarchy level.
4. Align business processes for new capital projects to include whole-of-life requirements i.e. operational, maintenance and renewal impacts and potential income sources.

Asset Management Systems

The Director Infrastructure Services is responsible for the City's asset management systems and all associated data. The 'Confirm' Asset Management System includes a number of asset registers in various stages of development, and when completed will contain the dates each asset was acquired, Renewal Life, Renewal costs, and Useful Life. 'Confirm' is manually linked to the financial system.

It should be noted that this is the first AMP that has been prepared for the City in the new required format. As such whilst this Plan is reasonably comprehensive for certain data sets, it must also be considered as a "first cut plan" which will require ongoing refinement. Some of the data upon which this AMP is based, is somewhat low in confidence. As a result, a number of improvement actions have been identified and will be improved as data is collected and assessed.

Opportunities for Improvement

1. Review of accuracy and currency of asset data.
2. Development of applicable level of service for various assets in conjunction with the community.
3. Improved project cost accounting to record costs against assets.
4. Develop a hierarchy for all assets, identifying parent/child relationships, and linked to levels of service.
5. Develop Level of Service based on performance criteria / needs rather than anniversary treatments.

Risk Management Plan

The timely identification and responsible management of business, physical and financial risk is a key component of effective corporate governance. The City is a diverse organisation which faces a number of risk exposures in its daily operations. The risks faced by the City relate not only to the increasingly litigious nature of modern society but also to events which could interrupt the delivery of service or impact on the quality of service delivered to the community. Listed below are the major asset-related risks that have been identified by the City's Risk Management Committee and Asset Management team.

Asset Management Risks	Type	Priority Rating
Lack of confidence in asset register data leading to poor forward works forecasting	Financial Loss Damaged Reputation	High
Financial gap between required level of service and funding levels	Financial Loss	High
Drainage system failure	Financial Loss Business Interruption	High
Road pavement failure	Personal Injury Financial Loss Damaged Reputation	Medium–High
Structural damage to City buildings / Structural integrity of City buildings	Personal Injury Financial Loss Business Interruption	Medium
Loss of Power to Pump Stations	Financial Loss	Medium
Plant & equipment failure	Financial Loss Business Interruption	Medium

We will endeavour to manage these risks within available funding by:

- Reviewing asset inventory, include newly acquired assets, and revaluate network; and
- Defining appropriate levels of service and pursuing alternate funding avenues.

RENEWAL GAP ANALYSIS

This section analyses the variance between the predicted full life cycle cost (including operations, maintenance, renewal, upgrade, but excluding new growth), and planned expenditure. This variance indicates the life cycle gap, showing insufficient asset expenditure, or a surplus, showing excessive expenditure. This gap indicates whether further work is required to manage required Levels of Service and funding to eliminate any funding gap.

Providing services in a sustainable manner will require matching of predicted asset expenditure to meet agreed Levels of Service with planned capital works programs and available revenue. These predicted expenditures may be compared to budgeted expenditures in the 10 year period to identify any funding shortfall.

In relation plant & equipment and IT, adequate funding is provided on an annual basis to maintain the assets to the required standard. A combination of municipal funds and reserve funds are used to provide the desired level of funding.

Renewal expenditure is defined as expenditure on an existing asset or on replacing an existing asset, which returns the service capability of the asset up to that which it had originally. It is periodically required expenditure, relatively large (material) in value compared with the value of the components or sub-components of the asset being renewed. As it reinstates existing service potential, it generally has no impact on revenue, but may reduce future operations and maintenance expenditure if completed at the optimum time, e.g. resurfacing or re-sheeting a material part of a road network, replacing a material section of a drainage network with pipes of the same capacity or resurfacing an oval.

A funding gap exists when there is insufficient capacity to fund asset renewal and other expenditure necessary to be able to appropriately maintain the range and level of services the existing asset stock was originally designed and intended to deliver. The service capability of the existing asset stock should be determined assuming no additional operating revenue, productivity improvements, or net financial liabilities above levels currently planned or projected. A current funding gap means levels of service have already or are currently falling. A projected funding gap if not addressed will result in a future reduction of existing levels of service.

In the first year of implementing the Integrated Planning and Reporting Framework, certain information gaps have been identified - particularly in relation to some asset classes where the development of comprehensive asset Management Plans is 'in progress' but not yet finalised. This has necessitated the use of some informed estimates to complete the datasets and calculations required to create a complete, responsible and sustainable long term financial model and to present the required key performance indicators.

For some asset classes such as drainage, plant & equipment, foreshore assets and technology, comprehensive asset management plans have yet to be finalised - however these will be progressed in line with the fair value accounting initiative in the upcoming year.

It should also be noted that for some asset classes, financial data used in calculating asset related financial ratios has not yet been subject to the extent of rigorous analysis and financial modelling that we would like to have underpinning a comprehensive asset management plan. Where such dataset are incomplete or insufficiently validated at this time, current forward works schedules have necessarily been used as proxies for required capital expenditures. These values are regarded as reliable proxies for initial modelling, but as the Asset Management Plans are further refined, the data currently compiled for the in-progress Asset Management Plans will be subjected to robust analysis and all KPI ratios will be recalculated and will continue to be monitored with a view to introducing remedial strategies if the need for such is identified.

For those asset classes for which the comprehensive asset Management Plans are still 'in progress' , a Schedule of Required Asset Renewal Expenditures has been compiled from forward capital expenditure programs and is presented as an attachment to this Asset Management Plan.

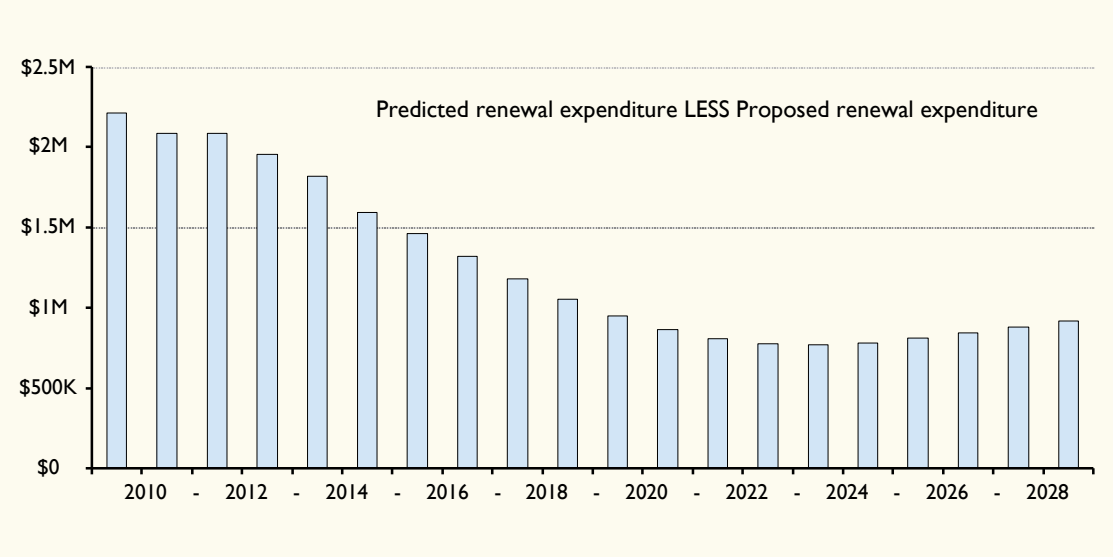
The City has listed the projected funding gap graphs for the following asset classes:

- Buildings
- Pathways
- Roads

The Parks and Drainage Plans are not sufficiently developed to determine funding gaps.

Building Asset Renewal Gap

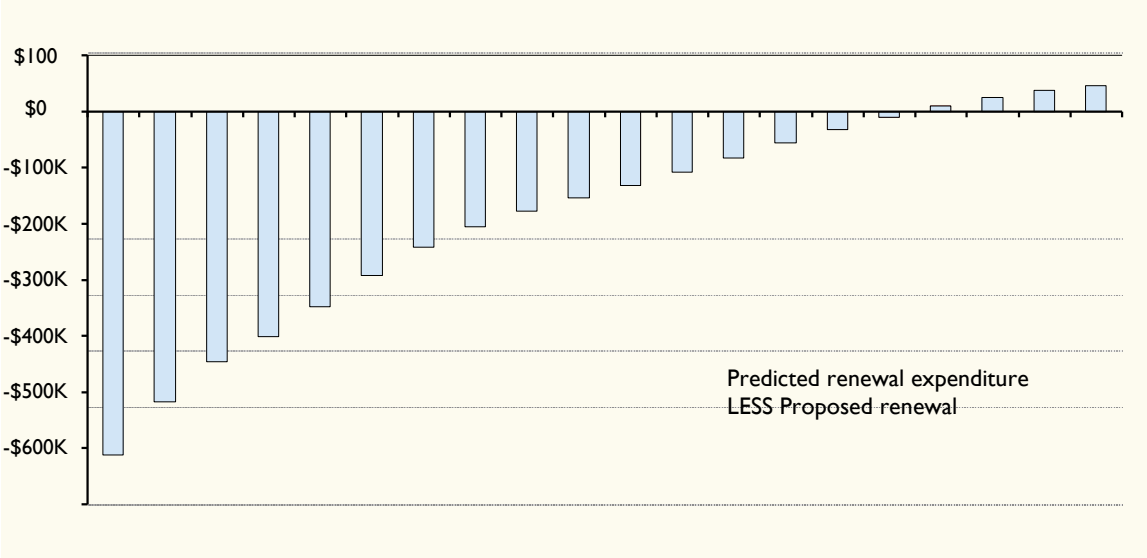
The following graph shows the annual renewal funding gap over a 20 year modeling period.



The predicted renewal requirement for year one (1) of the model is $3,302,100. The City is currently spending (on average) $1,092,206/annum on renewal. If the annual average expenditure on renewal is closer to the 4 year average of $1.8m going forward, then the renewal modeling results will be significantly different to the results presented here and should be remodeled.

Pathways Asset Renewal Gap

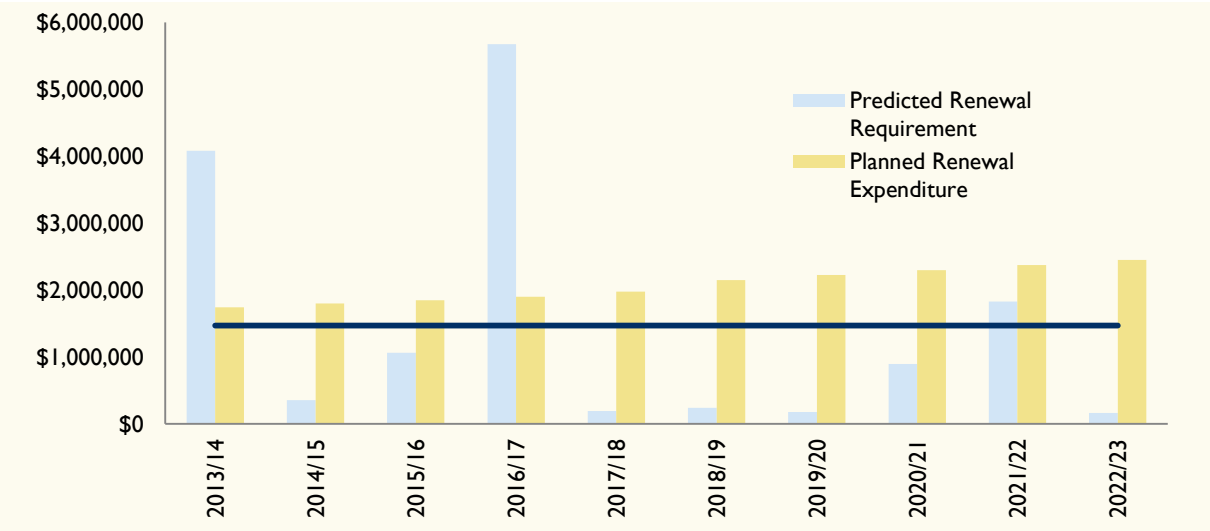
The following graph shows the annual renewal funding gap of combined pathways over a 20 year modeling period.



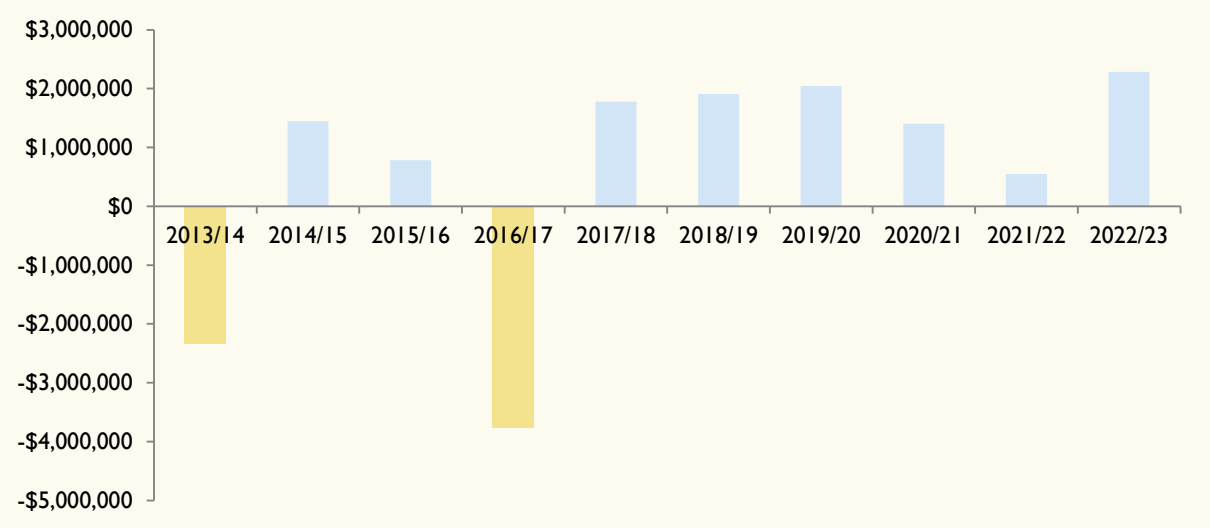
The predicted renewal requirement for year one (1) of the model is an overspend of $612,216. Council is currently spending (on average) $724,077/annum on renewal of combined pathways.

Roads Asset Renewal Gap

As indicated in the Long Term Financial Plan, the City intends to spend an average of $2,076,703 per annum on renewals over the life of this AMP. The predicted average amount required per annum for renewals based upon asset condition and age is $1,468,237. This indicates that the City is planning to spend an average of $608,466 above what is required on road renewals per annum.



The following graph shows the annual renewal funding gap of road surfaces over the life of this plan.



The average projected renewal expenditure (surface only), required over the 10 year planning period is $937,483 per year. This figure only covers the resurfacing and kerbing of the network over the life of this plan, and does not take into account any requirements for the pavement structure.

Further Information

Attachment 1
Supplementary Schedule of Required Asset Renewal Expenditure 2013-2023
For those asset classes for which the comprehensive asset Management Plans are still 'in progress' , a Schedule of Required Asset Renewal Expenditures has been compiled from forward capital expenditure programs and is presented as an attachment to this Asset Management Plan.

Attachment 2
Building and Facility Asset Management Plan
Prepared by the City of South Perth's Asset Management Working Group (AMWG) and provides core resource information for service providers and users of the City's network of facilities.

Attachment 3
Cycling & Pedestrian Pathways Asset Management Plan
Prepared by the City of South Perth's Asset Management Working Group (AMWG) and provides core resource information for service providers and users of the City's 256km network of pathways.

Attachment 4
Public Open Space Asset Management Plan
This plan contains information for 27 Public Open Space asset categories comprised of playground equipment, park furniture, hardscape, reticulation, lighting, softscape and structures.

Attachment 5
Road Asset Management Plan
This plan is concerned with the City's road network and its components as follows:
- Roads: Sealed & unsealed surface
- Road Pavement

Attachment 6
Drainage Asset Statement
The City of South Perth has a land area of 19.9km2 and to date has surveyed 63 of 142 stormwater drainage catchment areas, which in turn covers approximately 50% of the known drainage network.

CITY OF SOUTH PERTH

ASSET MANAGEMENT PLAN - SUPPLEMENTARY SCHEDULE OF REQUIRED ASSET RENEWAL EXPENDITURE 2013/2014 - 2022/2023

Description	Ref	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	
Calculation of Required Renewal Funding												
Asset Categories with Completed AMP												
(Derived from AMP Values)												
Roads - Surface & Kerbing		1,468,237	1,512,284	1,550,091	1,588,843	1,628,565	1,669,279	1,711,011	1,753,786	1,797,631	1,842,571	16,522,298
Paths Network		724,000	466,500	480,495	494,910	509,757	525,050	540,801	557,025	573,736	590,948	5,463,223
Buildings - Excluding Aged Care Facility		1,258,408	1,296,160	1,335,045	1,375,096	1,416,349	1,458,840	1,502,605	1,547,683	1,594,114	1,641,937	14,426,237
Parks Asset Renewals		1,000,000	1,030,000	1,060,900	1,092,727	1,125,509	1,159,274	1,194,052	1,229,874	1,266,770	1,304,773	11,463,879
Sub Total		4,450,645	4,304,944	4,426,531	4,551,577	4,680,180	4,812,442	4,948,469	5,088,368	5,232,250	5,380,230	47,875,637
Asset Categories with 'In Progress' AMP												
(Using Forward Capital Budget as a Proxy)												
Other Roads Network Components		100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,000,000
Drainage Network		825,000	850,000	850,000	900,000	900,000	900,000	950,000	950,000	1,000,000	1,000,000	9,125,000
Fleet & Plant Replacement		930,000	1,150,000	1,150,000	1,150,000	1,150,000	1,150,000	1,150,000	1,150,000	1,150,000	1,250,000	11,380,000
River Walls / Foreshore Assets		1,000,000	1,000,000	1,000,000	1,000,000	2,000,000	500,000	0	0	0	0	6,500,000
Environmental Management		350,000	360,500	371,315	382,454	393,928	405,746	417,918	430,456	443,370	456,671	4,012,358
Aged Care Facility - Building Renewals		368,400	229,320	338,493	248,033	357,954	268,272	379,003	290,163	401,769	313,840	3,195,247
Waste Management Assets		375,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	1,050,000
Grant Funded Building Renewal Upgrades		925,195	0	0	0	0	0	0	0	0	0	925,195
Sub Total		4,873,595	3,764,820	3,884,808	3,855,487	4,976,882	3,399,018	3,071,921	2,995,619	3,170,139	3,195,511	37,187,799
Total		**9,324,240**	**8,069,764**	**8,311,339**	**8,407,064**	**9,657,062**	**8,211,460**	**8,020,390**	**8,083,987**	**8,402,389**	**8,575,741**	**85,063,437**

Buildings and Facilities
Asset Management Plan

City of South Perth

Version 1
June 2013

Date: 18 June 2013

Version 1.0

Approved for Release by: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

Stephen Bell
Director Infrastructure Services
City of South Perth

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Time Period of the Plan:	The AMP covers a 10 year period.
Asset Management Plan Review Date:	The AMP is reviewed every 4 years, and updated within 2 years of each Council election.

Table of Contents

1 Introduction

The Building & Facility Asset Management Plan (BAMP) has been prepared by the City of South Perth's Asset Management Working Group (AMWG) and provides core resource information for service providers and users of the City's network of facilities.

The City of South Perth delivers a variety of services to the community and in doing so, must ensure that the assets supporting these services are managed in a way that guarantees maximum performance for the lowest 'whole of life' cost.

The commitment of the Infrastructure Services Directorate to improve both the asset management planning and strategies for the City of South Perth, is the first step on the path to confidence in our ability to deliver services today and into the future

An Asset Management Plan identifies responsibilities, maintenance standards and inspection regimes required to manage civil liability. It must also demonstrate that Council, as the asset infrastructure authority, is responsibly managing the assets under its control.

The City of South Perth Buildings & Facilities Asset Management Plan (BAMP) is intended to provide:

- Improved understanding of the assets managed by the Infrastructure Services Directorate;
- Improved understanding and forecasting of asset related management options and costs;
- Improved confidence levels in forward works programs and funding requirements; and
- Guidance for the City in taking steps toward advanced asset management planning.

The key issues highlighted by this Asset Management Plan are:

- the need to document current processes and practices
- the need to seek customer opinion on:
  - the value and importance placed on facility assets
  - the level of service expected from facility assets
  - the cost to provide a range of services
  - their future expectations for service delivery

The BAMP includes recommendations that the following projects be developed:

- an AM Practices Improvement Strategy
- an Asset Disposal Strategy
- a Capital Evaluation Process
- a 10 year maintenance program
- a 10 facilities assets renewal program
- performance measurement tools

The BAMP aims to underpin the Council's second largest asset group, that being the network of community facilities. A well maintained and functioning facilities network is vital in providing community well-being and productivity.

The City recognises that it has limited resources and finite capacity to raise revenue to maintain, renew and provide new infrastructure assets, including new buildings and facilities. Therefore a well-considered holistic approach is required to ensure informed decisions are being made when it comes to managing community assets as part of the City's primary role under the Local Government Act 1995, that is, to provide good governance to the district.

2 Function & Hierarchy

A facility's function decides its strategic importance within the network. It takes into account the key principles which impact in determining the functional level of service as part of providing a sustainable range of facilities to the community.

The determination of what constitutes an "appropriately maintained" facility is defined by the hierarchy of the individual facility. Facility hierarchies are used to assign priorities for action and response times to facilities of different importance. The facilities that are ranked higher are considered to be of higher significance as they deliver more critical core services and/or have high usage rates. These facilities should therefore attract a higher level of service than assets of lesser significance.

To enable the network of facility assets to be prioritised in order of importance, a functional hierarchy has been developed.

Consideration has been given to every identified facility in terms of the function it performs. The Functional Facility Hierarchy (FFH) is a key determinant in assisting Council in deciding on the allocation of funds for the management of facilities.

The City of South Perth's Functional Facility Hierarchy is categorised as follows;

Category 1 – State Significance: Public facilities utilised to deliver services of significance to the State or Nation. An example would be the State Library, State Hockey Stadium, Subiaco Oval, a nationally important environmental centre or facility of State or National historical

significance. Generally only one facility of this nature would exist in the state. A facility of this nature would have a high frequency of usage and could be expected to be multi-purpose or be specific to the purpose. These types of facilities are generally under the control of the State or Federal Government or private enterprise however can often be located on land under the control of local government. There are no facilities of this nature in the City of South Perth.

Category 2 – Regional Significance: These types of facilities provide for functions that are of regional significance, i.e. a large proportion of users come from outside of the district. An example would be a regional recreation centre. Generally only one facility of this nature would exist within the region. A facility of this nature would have a high usage rate and could be expected to be multi-purpose or single purpose.

Category 3 – District Significance: These types of facilities provide for functions that are of significance to the district. They are used mainly by people living within the local authority and from across the local authority. Examples would be the local authority administration facility, district library or skate park. Facilities of this nature would have high frequency of use and could be multipurpose or single purpose.

Category 4 – Local Area Significance: These types of facilities provide for functions that are of local significance. They are used mainly by people living within a suburb or local area. Examples would be a toilet block at a local park or a local fishing jetty.

Category 5 – Neighbourhood Significance: These types of facilities provide for functions that are of immediate neighbourhood significance. They are mainly used by people within a block or two of where they live or equivalent to the 400m Ped Shed identified in liveable neighbourhoods.
A list detailing each facility and its classification in the FRH is attached at Appendix "2"

The FFH forms the Classification or top layer of the asset hierarchy. The hierarchy is then further broken down into type and component;

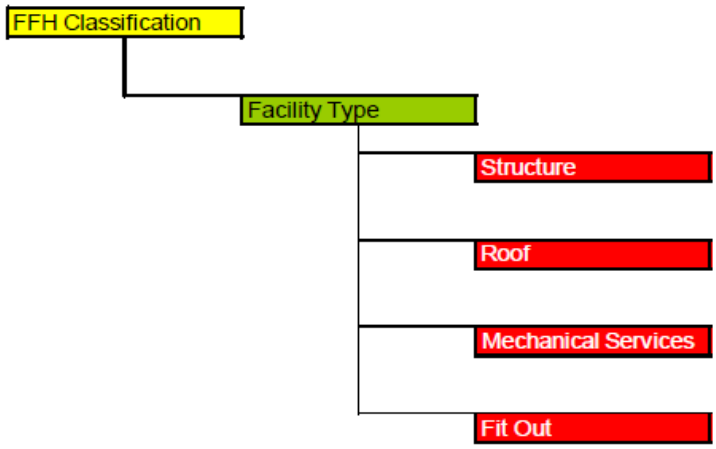


Figure 1

3 Legislative Requirements

Federal legislation that relates to the management of facility assets include (but not limited to the following);

- Local Government (Financial Assistance) Act 1995

4 Physical Parameters

The City of South Perth has 91 buildings/facilities under its control. These are valued at an estimated replacement cost of $48m. This figure is considered to be too low and should be updated to reflect current valuations. As an example CT Management Group has recently completed a number of Building Asset Management & Condition Review reports for nearby local governments.

The process included calculation of an up to date building renewal estimate. Utilising rough averages of building renewal values, an average from three nearby local governments yields an average renewal value of $768,369/building. Applying this to City of South Perth's 91 buildings results in a renewal estimate of the order of $69.9m (a 45.8% increase).

LGA	Number	Replacement Value	Avg
Town of Cambridge	72	59,343,821	824,220
Town of Victoria Park	110	80,079,626	727,997
Town of Mosman Park	26	20,397,359	784,514
Total	**208**	**159,820,806**	**768,369**

Table 6.1: Other Local Government Valuations

Of course, this figure could be highly variable and dependent upon a number of factors such as the mix of building types, sizes, age, condition etc. Nonetheless it is felt that the likely figure would be closer to $70m than $48m.

This is a significant issue and will affect the accuracy of the financial modeling contained within this report. This was discussed with City of South Perth staff and it was decided to run the renewal modeling based on the $70m figure rather than the $48m figure.

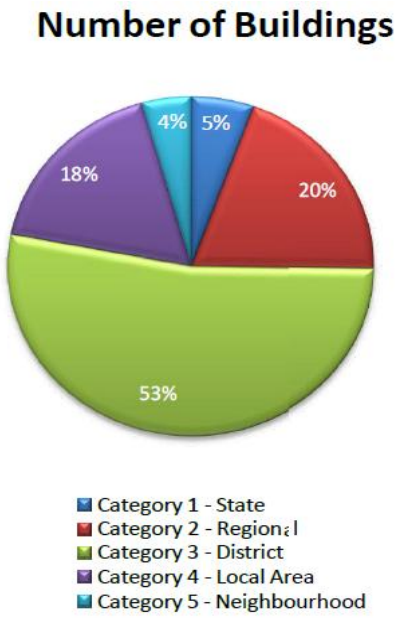
The range of facilities is diverse and includes toilet blocks, administration and depot offices and sheds, sporting facilities and clubrooms, halls, child care centres, heritage facilities, pre-schools, waste management facilities, libraries, a dog pound and various sheds, gatehouses and workshops scattered throughout the suburbs of South Perth, Manning, Karawara, Waterford and Salter Point.

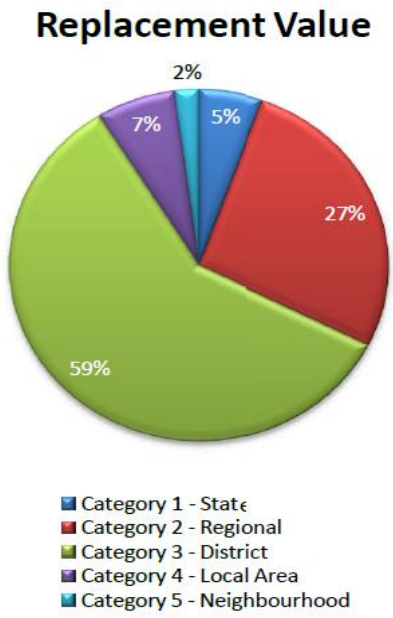
Kensington, Como, the City of South Perth' facilities are distributed between each classification of the Functional Facility Hierarchy as follows:

Functional Facility Hierarchy	Number	%	Current Values	Adjusted Values	%
Category 1 - State	5	5%	2,630,000	3,834,540	5%
Category 2 - Regional	18	20%	12,924,400	18,843,775	27%
Category 3 - District	48	53%	28,146,600	41,037,743	59%
Category 4 - Local Area	16	18%	3,251,000	4,739,958	7%
Category 5 - Neighbourhood	4	4%	1,000,000	1,458,000	2%
Total	**91**	**100%**	**47,952,000**	**69,914,016**	**100%**

Table 6.2: Hierarchy by Valuation

The following graphs show the extent in terms of the total network of each of the classifications of the facilities hierarchy both by area and length.





5 LEVELS OF SERVICE

This section details the methodology used to provide an example of Levels of Service that the City could set out to achieve and provide.

The Levels of Service measures also allow the City to ensure that its Buildings & Facilities are fit for purpose and provided at an efficient cost. As such, it is important to ensure that the Service Levels reflect the City's Strategic Community Plan 2013 - 2023 outcomes and funding allocated in the respective Annual Budget.

By considering the City's objectives and values, particularly focusing on those which conflict or appear frequently, two sets of high level service levels were created:

- Community Levels of Service; and
- Technical Levels of Service.

Community Levels of Service - relate to the service outcomes that the community wants in terms of safety, quality, quantity, reliability, responsiveness, cost effectiveness and legislative compliance.

Community levels of service measures used in the AMP are:

- Function — Does it meet users' needs?
- Safety — Is the service safe?
- Quality — How good is the service?

Technical Levels of Service - Supporting the community levels of service are operational or technical measures of performance. These technical measures relate to the allocation of resources to service activities that the council undertakes to best achieve the desired community outcomes:

- Technical service measures are linked to annual budgets covering:
- Operations – the regular activities to provide services (e.g. condition inspections);
- Maintenance – the activities necessary to retain an assets as near as practicable to its original condition (e.g. repair of an asset);
- Renewal – the activities that return the service capability of an asset up to that which it had originally (e.g. asset replacement); and
- Upgrade – the activities to provide a higher level of service (e.g. additional assets within a public open space) or a new service that did not exist previously (e.g. a new park bench).

6 Key Asset Information

Key Asset Information focuses on the overall age and condition profile of the asset, based on its general performance, known condition and age.

6.1 Age and Condition Profile

The City Environment department, part of the Infrastructure Services directorate, is

responsible for the overall management of the City's facilities assets.

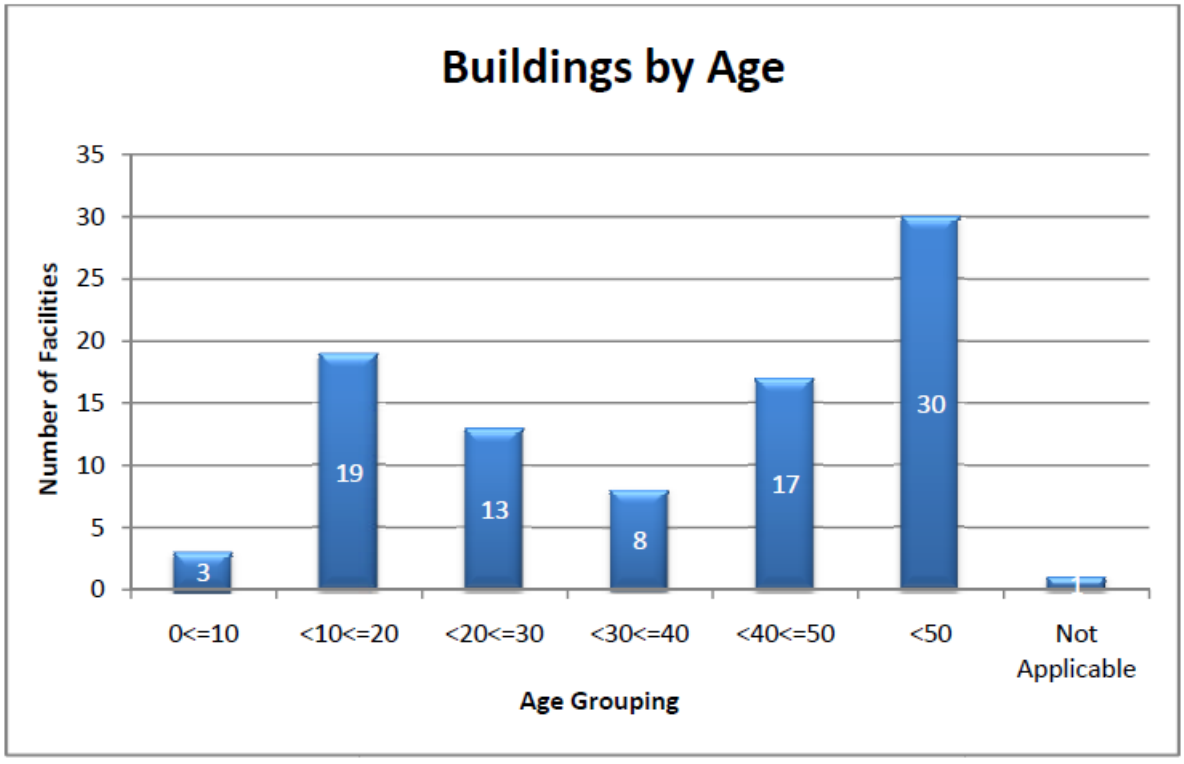
City Environment, and more specifically, the Building Maintenance Coordinator, stores and maintains information in relation to each asset on the Buildings Master List, including:

- name
- location
- total renewal value
- condition of each component
- renewal value of each component
- age

In 2004, the City commissioned a consultancy group (Tungsten) to undertake a Condition Audit on all of the City's facility assets and to identify any maintenance requirements on each facility and its constituent components.

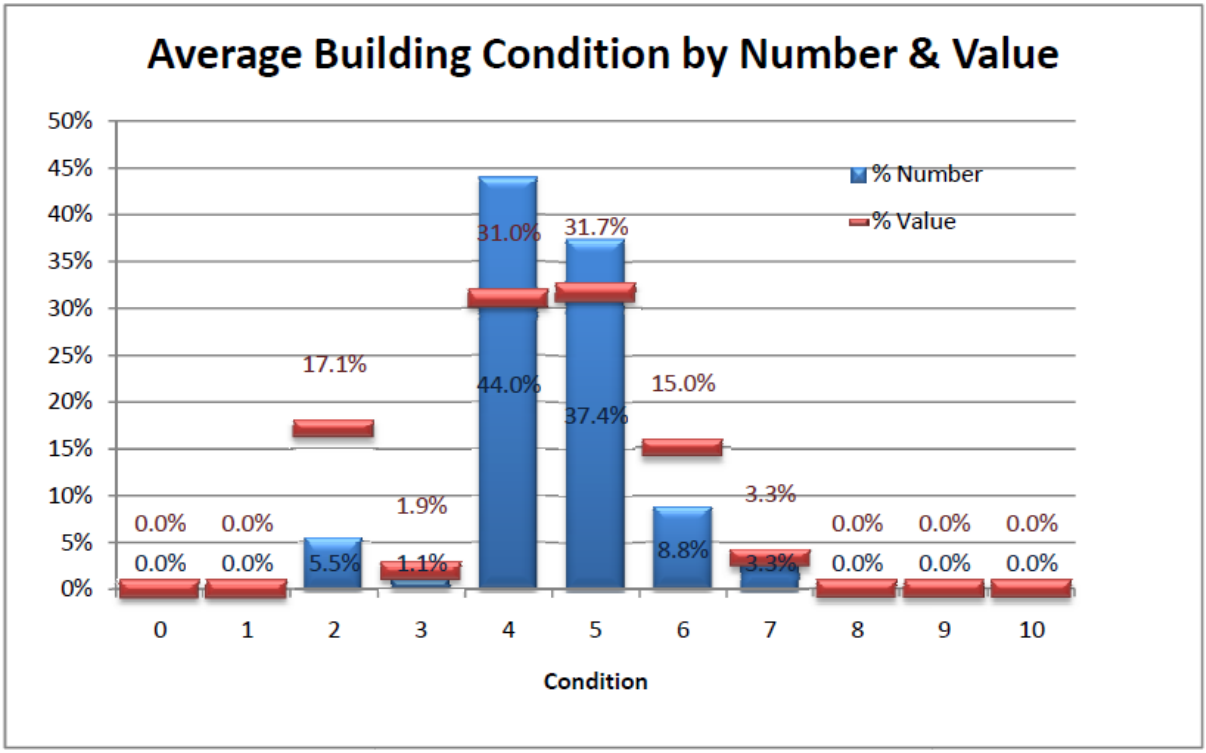
The City was provided with a hardcopy report titled *Building Condition Asset Management Strategy* and an Access database called *Building Condition Audit Database*, both of which have acted as an asset inventory for the facilities portfolio to date.

The findings of the audit resulted in a five (5) year maintenance plan and indicative maintenance expenditure patterns over a 15 year cycle that address defect and preventative maintenance needs. The report also addressed asset performance, optimisation of usage, longer term commercial opportunities and compliance to various Codes and Standards.



Graph 6.2 – Facilities by Age Profile

The following graph shows the condition profile of the building portfolio by both by the number of buildings in each condition expressed as a percentage of the total number of buildings and the value of buildings within each condition, also expressed as a percentage of the total value of buildings.



Graph 6.3: Average Condition Profile

7 Asset Condition

Facilities have a vast range of factors that influence their usability. From an asset management perspective, the various factors fall into one of the following groups:

- Fitness for Use
- Fitness for Purpose

Fitness for Use is a measure of a facility's physical condition relative to its condition when first constructed or refurbished. This measurement takes account of the current condition of the structure, architectural finishes and services supporting use by the occupants. Fitness for Use has been the basis of the facility condition audit undertaken. When rating fitness for use, the City of South Perth uses a standard scale of 0 -10, where 0 = new and 10 = total deterioration. Examples of these conditions are set out below.

CONDITION RATING	DEFINITION
0	A new building or recently rehabilitated back to new condition.
1	A near new building with no visible signs of deterioration often moved to condition 1 based upon the time since construction rather than observed condition decline.
2	A building in excellent overall condition. There would be only very slight condition decline but it would be obvious that the asset was no longer in new condition.
3	A building in very good overall condition but with some early stages of deterioration evident, but the deterioration still minor in nature and causing no serviceability problems.
4	A building in good overall condition but with some obvious deterioration evident, serviceability would be impaired very slightly.
5	A building in fair overall condition deterioration in condition would be obvious and there would be some serviceability loss.
6	A building in fair to poor overall condition. The condition deterioration would be quite obvious. Building serviceability would now be affected and maintenance cost would be rising.
7	A building in poor overall condition deterioration would be quite severe and would be starting to limit the serviceability of the building. Maintenance cost would be high
8	A building in very poor overall condition with serviceability now being heavily impacted upon by the poor condition. Maintenance cost would be very high and the asset would be at a point where it needed renewal
9	A building in extremely poor condition with severe serviceability problems and needing renewal immediately. Could also be a risk to remain in service
10	A building that has failed, is no longer serviceable and should not remain in service. There would be an extreme risk in leaving the asset in service.

The following are some examples of building condition in the latter phases of building life.

Condition 6




The above photographs show components of buildings where their deterioration is now becoming quite obvious. They are at a stage where their serviceability is starting to become limited with increasing maintenance costs.

Condition 7




The above photographs show buildings with significant problems that are at the point where intervention is required otherwise damage will be caused to other building components or the risk to injury of people increases significantly. This deterioration would be starting to limit the serviceability of the buildings with maintenance costs becoming high.

Condition 8




The above buildings are affected by age or poor ground conditions. The buildings are in very poor overall condition with their serviceability being heavily impacted and structural integrity being compromised. Maintenance costs would be very high. The buildings would be at a point where their complete renewal would be considered.

Condition 9


Age and neglect of maintenance has heavily impacted on the above buildings. They are in extremely poor condition with severe serviceability problems. They are in need of renewal immediately.

Fitness for Purpose is a measure of a facility's match to its current or intended use. It considers the minimum feature set required and additional features desirable to enhance the usability of a facility. Fitness for Purpose is tied to the use of a facility rather than the asset itself and takes account of changing requirements for different features over time. In terms of Fitness for Purpose, a facility initially fit for its intended purpose may cease to be so as standards and expectations change. Determination of a facilities fitness for purpose has not been considered, but will be developed in future revisions of this plan.

7.1 Current Condition

A detailed inspection of facilities was commissioned by the City and undertaken under a previous consultancy in 2004. The final report entitled, *Building Condition Asset Management Strategy, Tungsten, 21st September 2004* summarises the findings and makes several recommendations in relation to the City's facilities. These were:

- *"the number of facilities that remain in poor condition...present high risks to the City in terms of its image and reputation and in terms of the City successfully and effectively continuing to meet and deliver its community services and needs through these facility assets. As some of these facilities have a high community profile and are used extensively by the public for public purposes, there are added risks and responsibilities that the City should address as soon as practicable possible."*

- *"...a number of the City's buildings have significant heritage, cultural and aesthetic value and significance"... "these types of facilities present high cyclical maintenance liabilities to the City and if not proactively managed through maintenance programs, can quickly reduce the remaining economic life of the facility, leading to compromised service delivery outcomes and reduced community benefits. It will be imperative for the City to consider its ongoing options and commitments for these facilities and make planning decisions regarding their longer term future."*

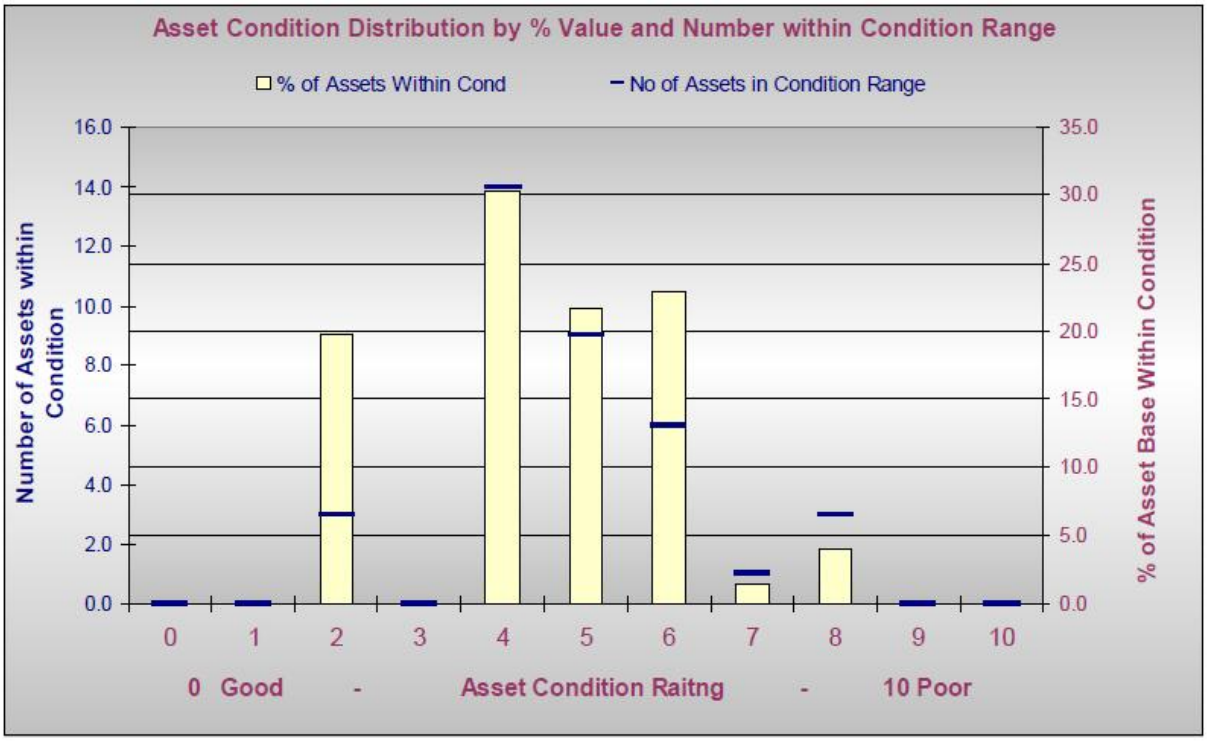
- *"There is a likelihood that a number of facilities...may have a diminishing utilisation and functionality, due to the way in which community needs and preferences have changed in the past 40-50 years". "Similar to heritage facilities, there is a significant ongoing maintenance and compliance liability... The City will need to further review these facilities and their usage in terms of its overall strategic plan as it may be aligned to community needs and service delivery strategies."*

Projected yearly maintenance costs are heavy over the first 3 years of the maintenance program as the facilities are brought up to the required standard of maintenance as required by the City.

The current condition of all major building components is as follows;

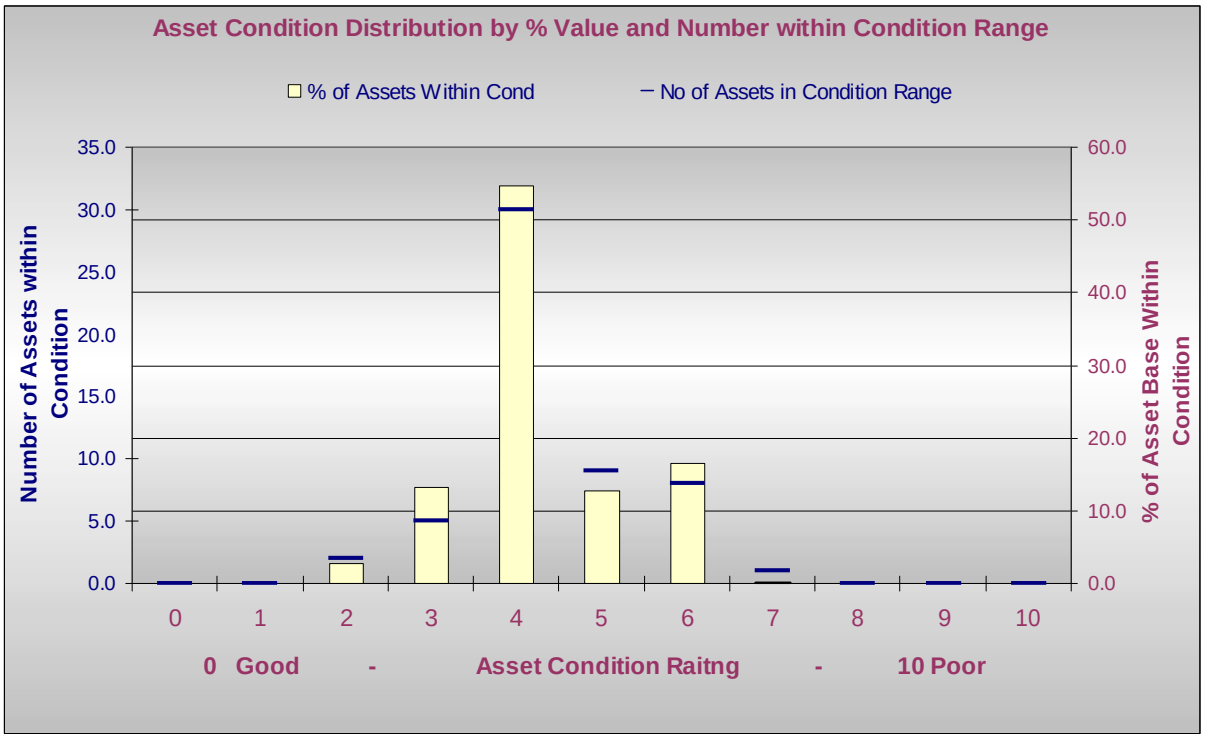
Asset Set No.	26	27	28	29	30
% of the Required Exp Being Met	67	0	118	36	90
Av Unit Renewal Cost $	$603,654.7	$80,320.8	$38,914.5	$43,870.4	$203,026.2
Asset Group	Buildings Group	Buildings Group	Buildings Group	Buildings Group	Buildings Group
Asset Set Description	Structure Long Life	Structure Short Life	Roof Structure	Mechanical Services	Building Fit Out
Asset Quantity	74	17	91	75	84
Units	No	No	No	No	No
Total Asset Group Renewal Cost $	$44,670,448	$1,365,454	$3,541,223	$3,290,278	$17,054,199
Annual Renewal Exp.	$301,449	$20	$119,050	$58,979	$612,728
Annual Maintenance Exp.	$73,684	$8,731	$82,415	$247,245	$412,075
Retreat. Intervention Condition	**7.0**	**8.0**	**6.0**	**7.0**	**7.0**
Return Cond after Renewal	0	0	0	0	0
Life to Condition 10 in Years	**100.0**	**60.0**	**35.0**	**20.0**	**25.0**
Life in years to Intervention Level	97.0	97.0	95.0	95.0	97.0

Structure Long life

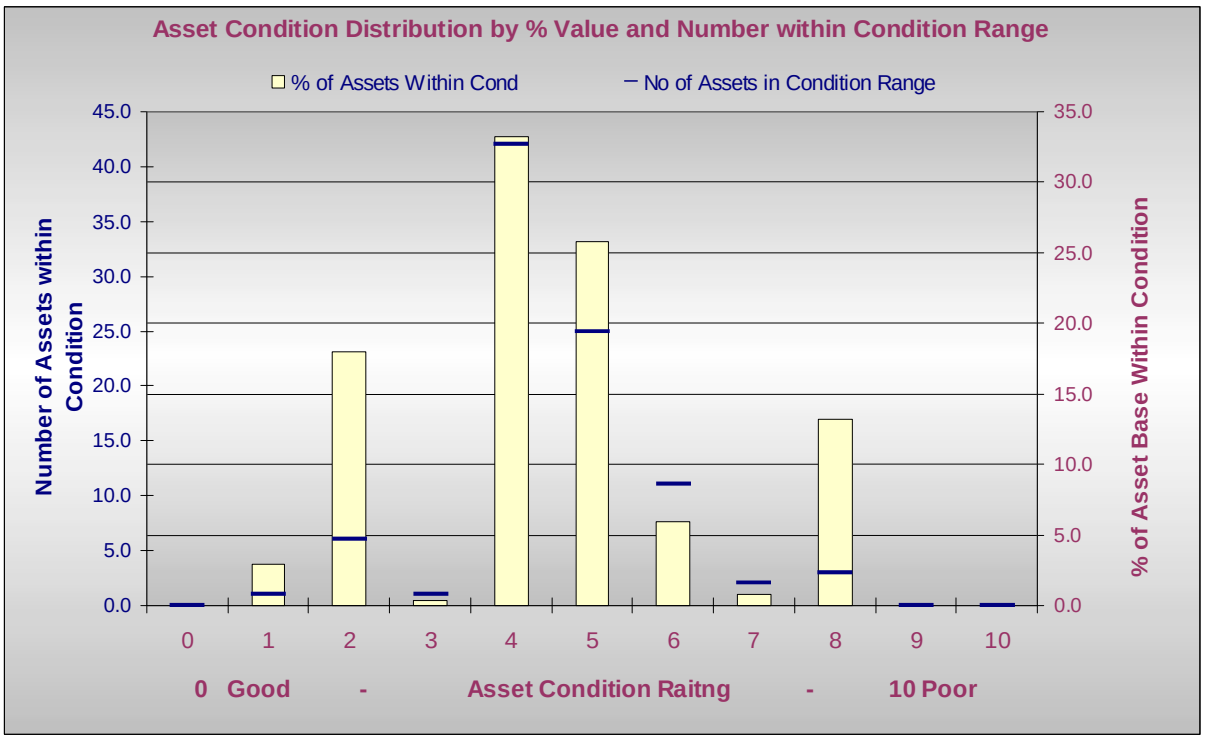


5.0

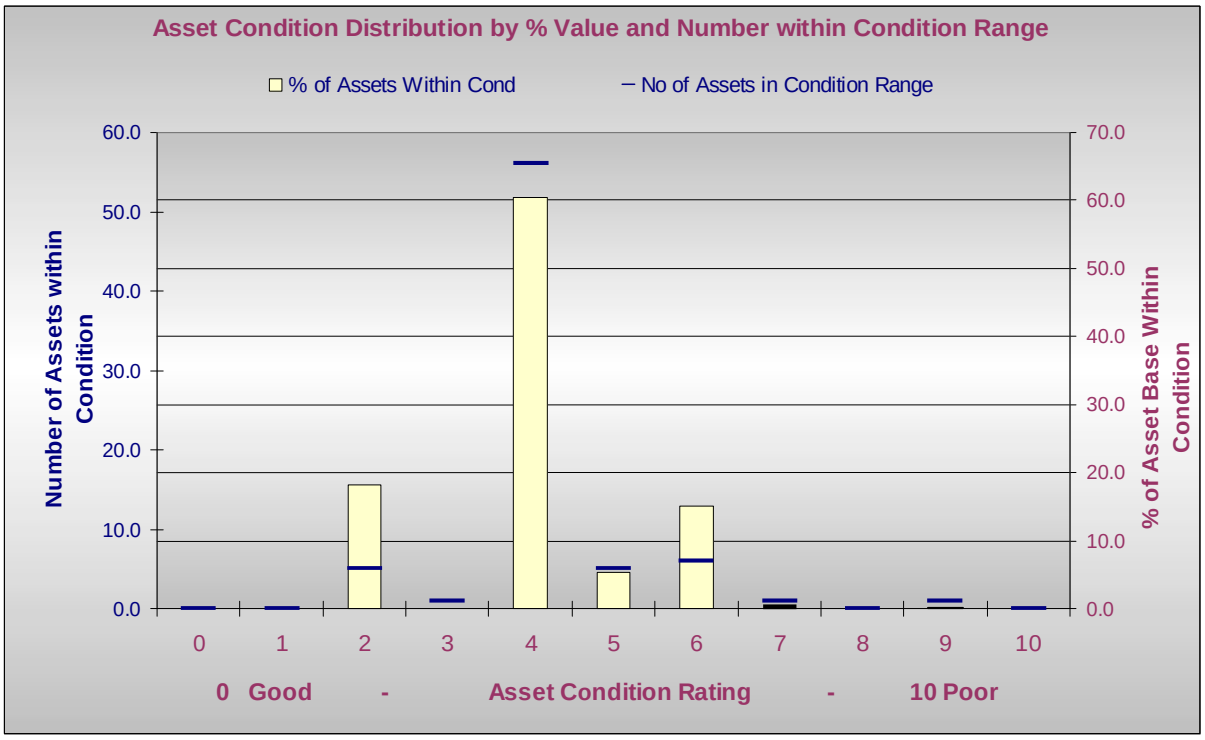
Structure Short Life



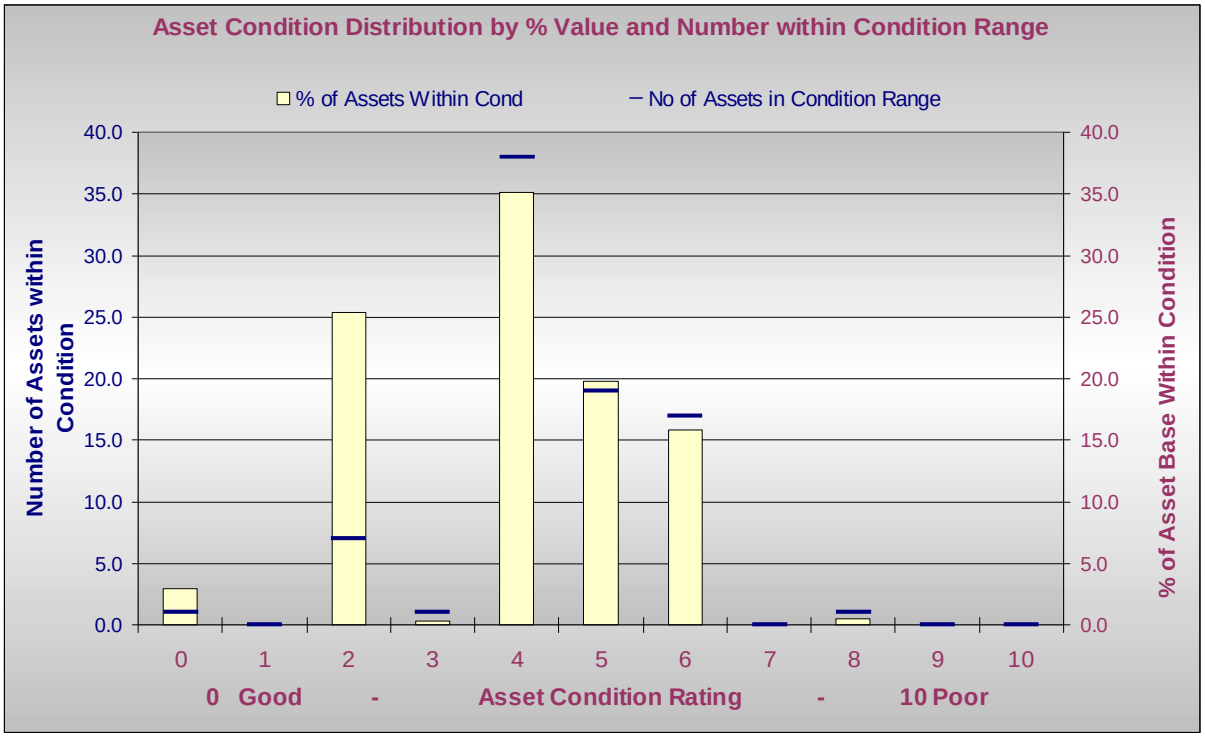
Roof



Mechanical Services



Fit-out

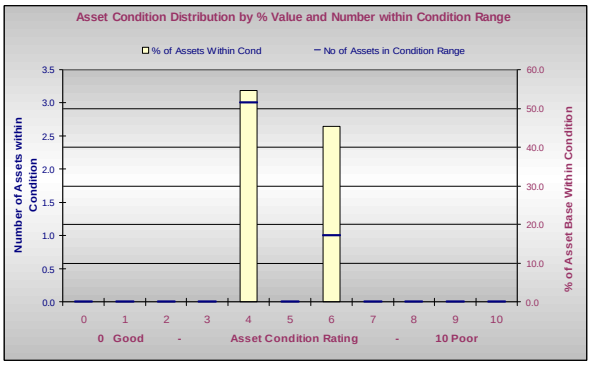


Current based on Hierarchy

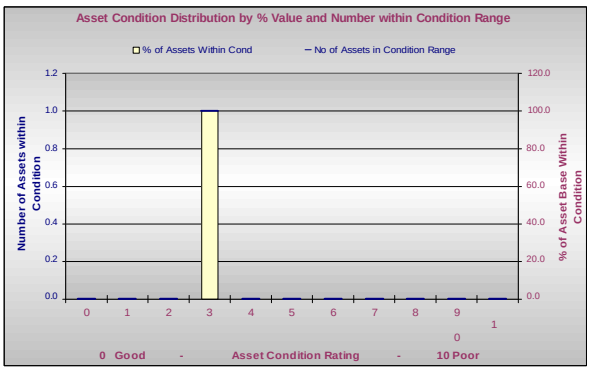
Category 1 – State Significance

Asset Group	Buildings Group - Cat1 - State Significance				
Asset Set Description	Struct Long Life	Struct Short Life	Roof	Mechanical Services	Fit Out
Asset Quantity	4	1	5	2	5
Units	No	No	No	No	No
Total Asset Group Renewal Cost $	$1,720,789	$35,750	$135,118	$62,750	$675,592
Retreat. Intervention Condition	8.0	8.0	8.0	8.0	8.0
Total Asset life in Years	120.0	80.0	60.0	25.0	25.0
Av Unit Renewal Cost $	$430,197.37	$35,750.00	$27,023.68	$31,375.00	$135,118.42

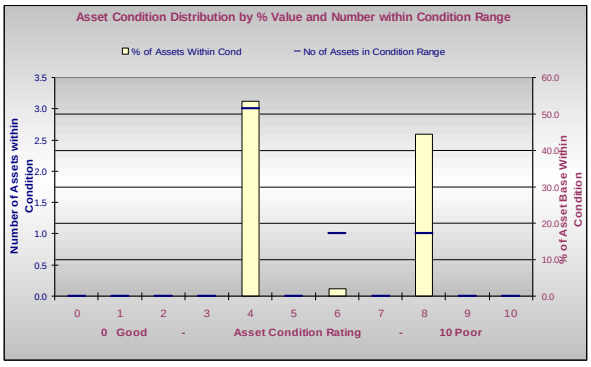
Structure Long life



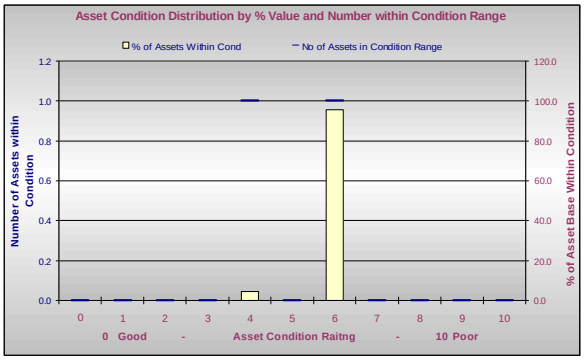
Structure Short Life



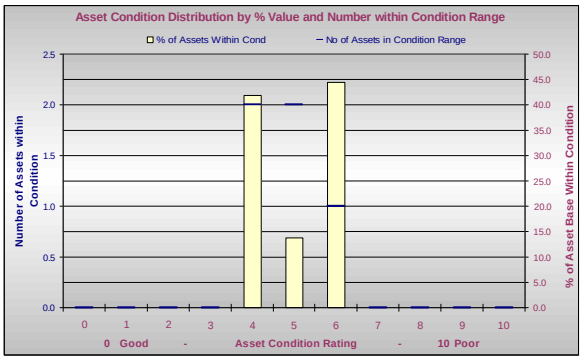
Roof



Mechanical Services



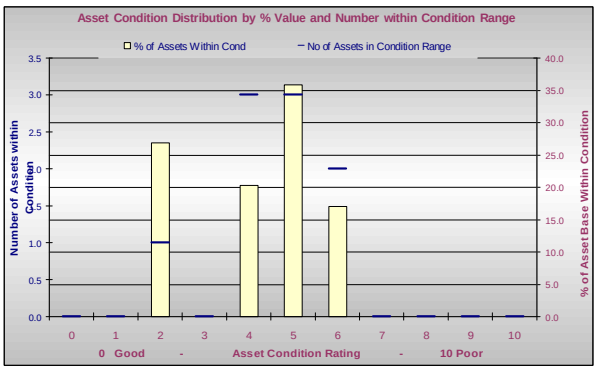
Fit-out



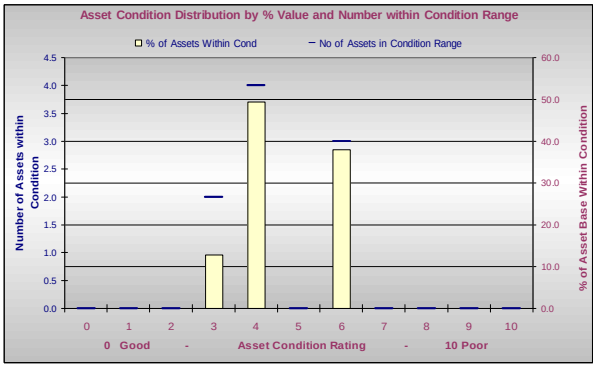
Category 2 – Regional Significance

Asset Group	Buildings Group - Cat 2 Regional Significance				
Asset Set Description	Struct Long Life	Struct Short Life	Roof	Mechanical Services	Fit Out
Asset Quantity	9	9	18	17	17
Units	No	No	No	No	No
Total Asset Group Renewal Cost $	$7,369,916	$1,249,663	$663,045	$659,887	$2,981,889
Retreat. Intervention Condition	8.0	8.0	8.0	8.0	8.0
Total Asset life in Years	120.0	80.0	60.0	25.0	25.0
Av Unit Renewal Cost $	$818,879.60	$138,851.40	$36,835.81	$38,816.86	$175,405.26

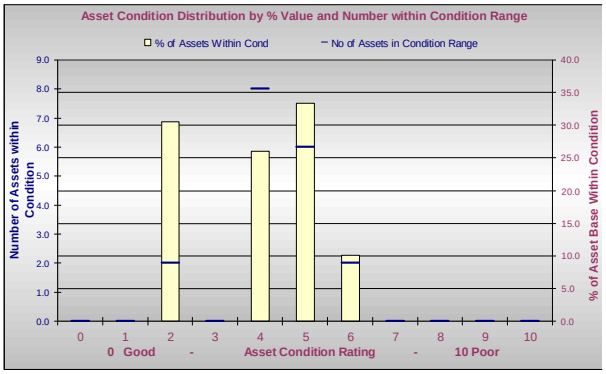
Structure Long life



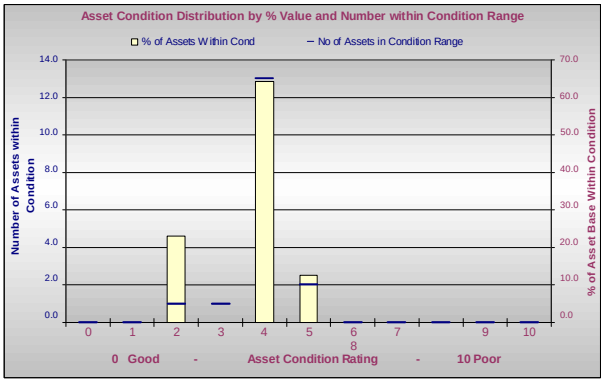
Structure Short Life



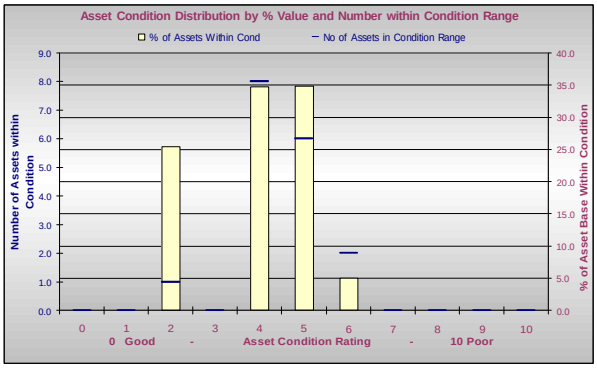
Roof



Mechanical Services



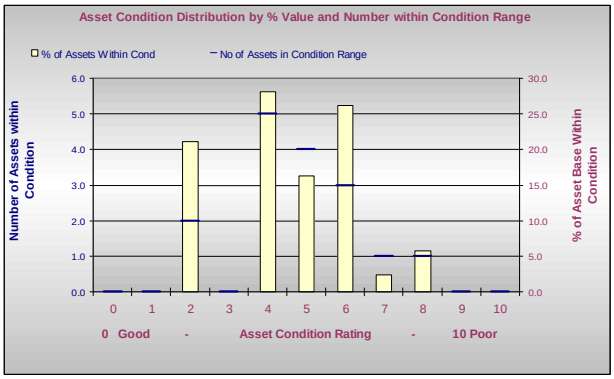
Fit-out



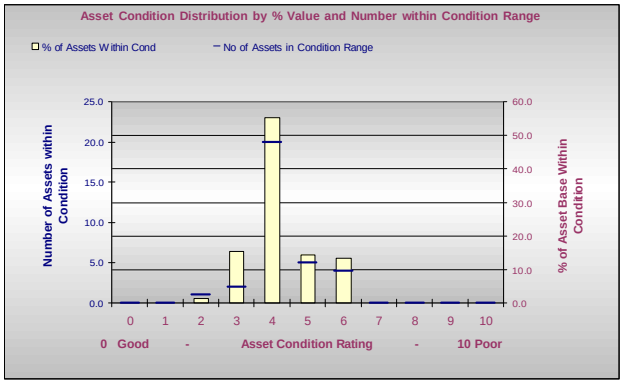
Category 3 – District Significance

Asset Group	Buildings Group - Cat 3 - District Significance				
Asset Set Description	Struct Long Life	Struct Short Life	Roof	Mechanical Services	Fit Out
Asset Quantity	16	32	48	39	43
Units	No	No	No	No	No
Total Asset Group Renewal Cost $	$13,443,950	$4,959,287	$1,415,634	$1,336,525	$6,991,204
Retreat. Intervention Condition	8.0	8.0	8.0	8.0	8.0
Total Asset life in Years	120.0	80.0	60.0	25.0	25.0
Av Unit Renewal Cost $	$840,246.84	$154,977.73	$29,492.37	$34,269.87	$162,586.14

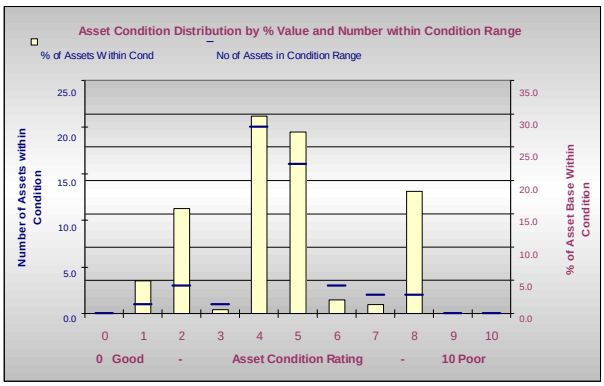
Structure Long life



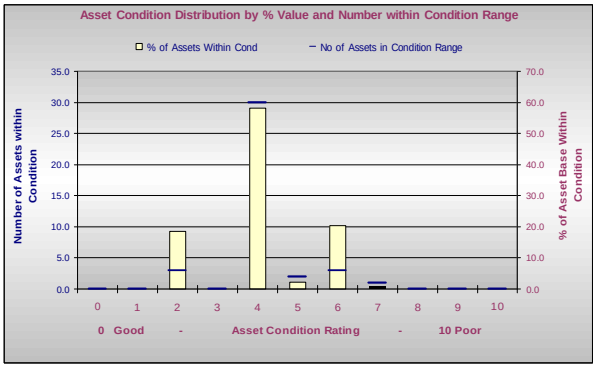
Structure Short Life



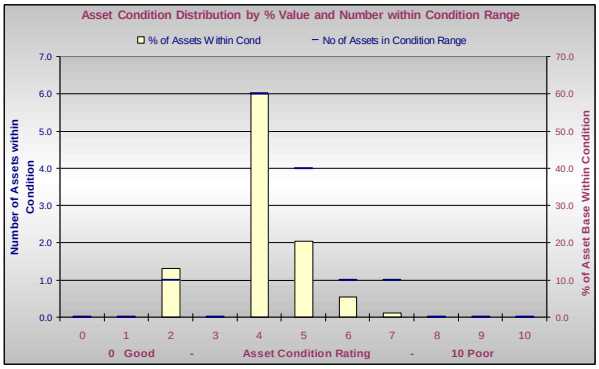
Roof



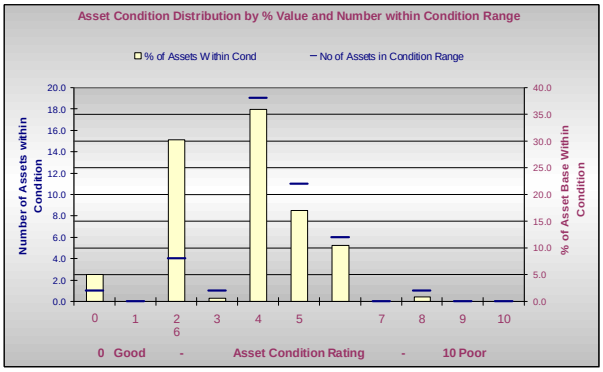
Mechanical Services



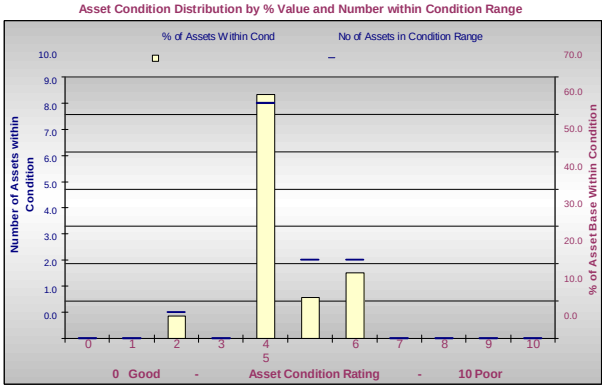
Structure Short Life



Fit-out



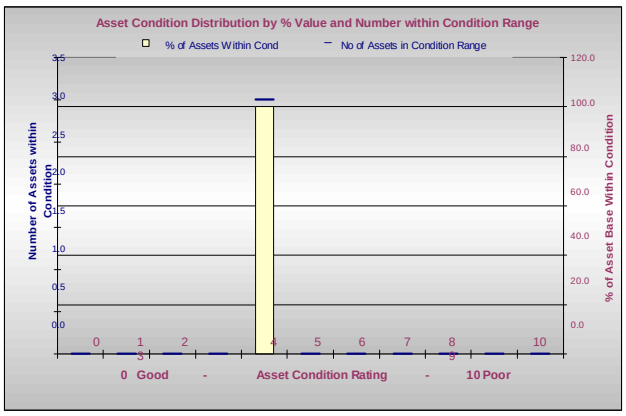
Roof



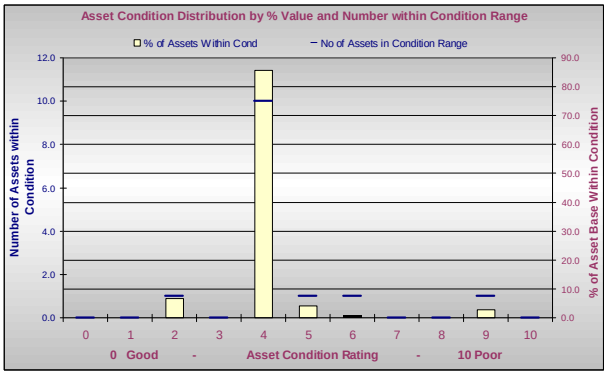
Category 4 – Local Significance

Asset Group	Buildings Group - Cat 4 - Local Significance				
Asset Set Description	Struct Long Life	Struct Short Life	Roof	Mechanical Services	Fit Out
Asset Quantity	3	13	16	14	15
Units	No	No	No	No	No
Total Asset Group Renewal Cost $	$1,144,000	$997,911	$164,762	$147,300	$797,026
Retreat. Intervention Condition	8.0	8.0	8.0	8.0	8.0
Total Asset life in Years	120.0	80.0	60.0	25.0	25.0
Av Unit Renewal Cost $	$381,333.32	$76,762.40	$10,297.65	$10,521.43	$53,135.09

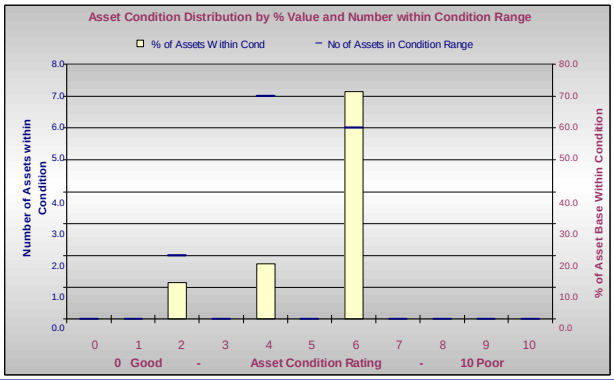
Structure Long life



Mechanical Services



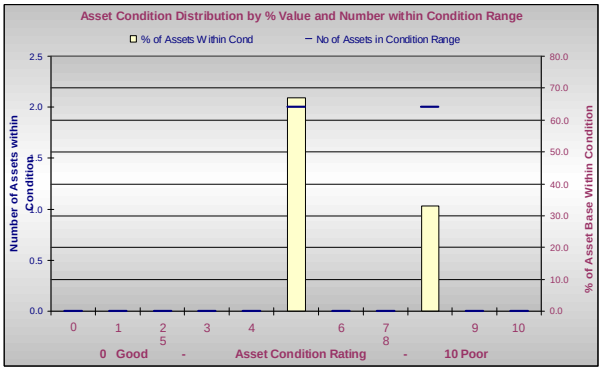
Fit-out



Category 5 – Neighborhood Significance

Asset Group	Buildings Group - Cat 5 Neighbourhood Significance				
Asset Set Description	Struct Long Life	Struct Short Life	Roof	Mechanical Services	Fit Out
Asset Quantity	4	0	4	3	4
Units	No	No	No	No	No
Total Asset Group Renewal Cost $	$650,000	$0	$50,000	$50,000	$250,000
Retreat. Intervention Condition	8.0	8.0	8.0	8.0	8.0
Total Asset life in Years	120.0	80.0	60.0	25.0	25.0
Av Unit Renewal Cost $	$162,499.99	$0.00	$12,500.00	$16,666.67	$62,500.00

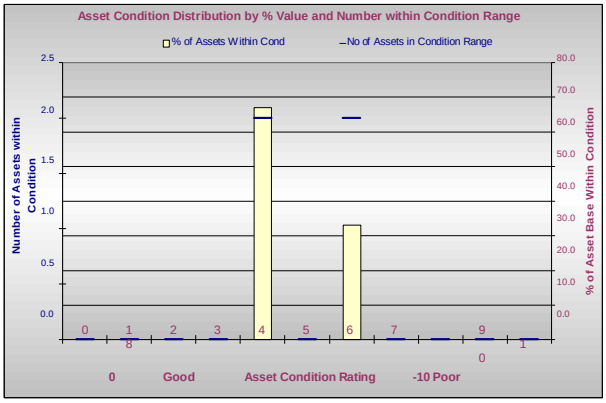
Structure Long life



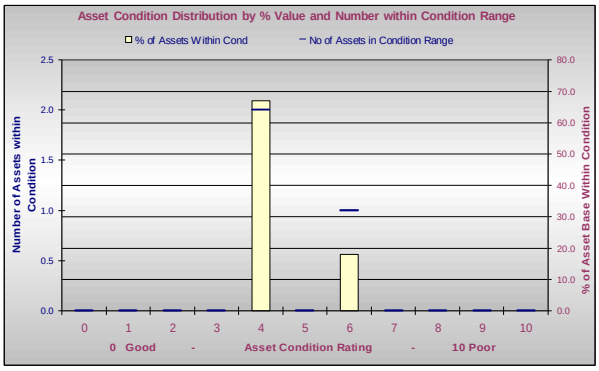
Structure Short Life

No Short life Structures

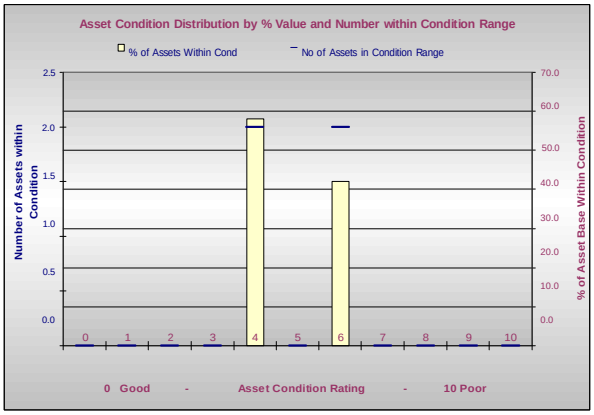
Roof



Mechanical Services



Fit-out



8 Asset Valuations

A valuation of the City's facilities is undertaken each year. Insured replacement values are traditionally based on experience and gut feel, which is a potential risk for the Council.

Useful life is used to determine the current value of the asset. The following lifecycles are based on the IPWEA's "International Infrastructure Management Manual" (2006) but adjusted to better reflect the local environment of the City of South Perth. Limited information on each facilities remaining useful life is available. This will be addressed in

future versions of the Asset Management plan as resources and data collection methods become available. The figures quoted provide a basis for future allocation of useful life for all elements of the facility.

Facility Element	Type	Years/Life
Short Life Structures	Timber framed walls, timber floors, timber roof frame, timber cladding	60 years
Long Life Structures	Masonry/steel walls, concrete floor, steel/timber roof frame	100 years
Roof	Steel, tiles	35 years
Mechanical	Air conditioning, heating units etc.	20 years
Fit out	Kitchens, storage, shelving, carpets etc.	25 years

9 Operations & Maintenance

9.1 Operations and Maintenance Strategy

Currently the City of South Perth has no formalized long term strategy for the ongoing maintenance and renewal of its buildings and facilities or a capital evaluation process to assess need and whole of life costs of capital projects.

The Buildings and Assets Coordinator maintains a spreadsheet of buildings and calculates anticipated expenditure for the ensuing year's budget, based on historical costs and long term knowledge of the building portfolio and maintenance history.

Building maintenance budget requests based on estimated need are put forward on an annual basis. Final allocation is usually based on a nominal increase of the previous year's expenditure, which is often well short of actual need.

In addition to this, some programmed maintenance activities such as painting, termite inspections etc. are allocated sufficient expenditure due to being locked into long term maintenance contracts with external service providers.

In order to address the funding shortfall in maintenance, it is recommended that a long term maintenance strategy be developed and adopted by Council.

A maintenance strategy will:

- describe the systems and procedures to be used to plan and manage maintenance work;
- specify the types of maintenance to be carried out;
- establish the order of priority for maintenance activities; and

- nominate the means of resourcing and implementing maintenance.

9.2 Maintenance Activities

The Building Maintenance section of City Environment Department undertakes the maintenance of City facilities. Typical maintenance activities provided in a City facility are listed in the table below:

Activity	Frequency
Servicing of heating and air conditioning systems	Quarterly
Roofs – Cleaning of gutters	Twice yearly
Termite control	Yearly inspections
Plumbing – unblocking drains, fixing leaks, replacing washers etc.	When required
Electrical – repairs to electrical systems	When required
Roofs – repairing broken tiles, fixing leaks etc.	When required
Internal and external walls – patching, painting and repairing etc.	When required
Windows and doors – patching and painting, repairing & replacing locks etc.	When required
Floors – general repairs, sanding revarnishing, repainting & repolishing	When required
Inspecting and maintaining essential services (fire safety equipment)	Twice yearly
Repairing vandalism (graffiti, broken windows etc.)	Immediately
Repairing fixtures and fittings	Immediately

Reactive work accounts for around 70% of the annual maintenance budget and encompasses the repair or replacement of facility elements as they wear out or are damaged. By its nature, reactive work must be carried out as the need arises and cannot be scheduled in advance (however a significant proportion can be reduced by regular inspection and forward planning for replacement ahead of failure).

10 Renewals & Replacements

Rehabilitation and renewal is the outlay in an asset to maintain the current level of service by reinstating its original life. Typical facility renewal works include replacement of existing:

- heating, cooling and air-conditioning systems;
- roofs, spouting, downpipes & ceilings;
- electrical systems and wiring;
- floors and floor coverings (carpets, tiles, floorboards, stumps);
- plumbing systems (new cisterns, hand basins etc.);
- fixtures and fittings (cupboards, white goods, shelving etc.);

- doors, windows and window treatments (blinds, curtains, UV protection etc.);
- replacement of internal partitioning;
- signage.

11 Financial Projections

Financial forecast models assist in predicting the future financial requirements based upon the presumption that the facilities or elements will be replaced when the condition ratings reach a predetermined condition. Preceding the use of such a model for accurate future forecasting, discussion needs to be held about what conditions will be acceptable, and for what classes or uses of facilities will the condition ratings, and intervention levels differ. Also, decisions will need to be made about affordable levels of service in order to use the predictive model of financial requirements with a better degree of accuracy.

This section presents a forecast financial summary for the next 20 years based on identified assumptions and trends and actual capital and maintenance expenditure figures averaged over the financial years 2004/05 to 2008/09 (extrapolated out from May to June in the case of 08/09). It is anticipated that the financial summary will be reviewed annually and continue to be refined as planning studies, strategies and increased financial analysis are completed.

11.1 Current Financial Position

The Moloney Renewal Model used within the WAAMI Program contains a financial modeling tool that provides Council with the opportunity and ability to predict future expenditure requirements and asset conditions based on adopted asset deterioration or consumption curves.

This Asset Management Plan considers current expenditures, both maintenance and capital, existing levels of service, and using generic asset deterioration curves, models the consumption or deterioration of the asset. Two modeling outcomes are available to Council from the asset management modeling software. The outcomes are:

- Given a fixed, or pre-determined, expenditure level the model predicts the overall average asset condition rating at a future date, and plots a bar graph of asset condition versus asset amount,

- A desired minimum asset condition level is established, and the model determines the required annual expenditure to achieve the pre-determined asset condition level.

This Plan makes a comparison between the budget-based expenditure approach (i.e. here is $200,000 – do what you can with it!) and the asset-based approach (i.e. the resources that are needed to replace the consumed or ageing asset).

In order to determine how much money needs to be spent on an asset to keep it in functional order, a decision is required in regard to when to intervene to undertake works to rehabilitate the asset. Ideally this indicator will be derived from the community consultation carried out in section 3 when determining levels of service. However in the absence of that information, this plan has utilised the Officers knowledge and current practice to determine

intervention levels.

In the Moloney Renewal Model, the intervention point is known as the Retreatment Intervention Condition Level (RICL). The RICL is the point at which the asset component has deteriorated to such a condition that it is economically prudent to initiate restoration works to bring the condition of that component back to new (condition zero (0)).

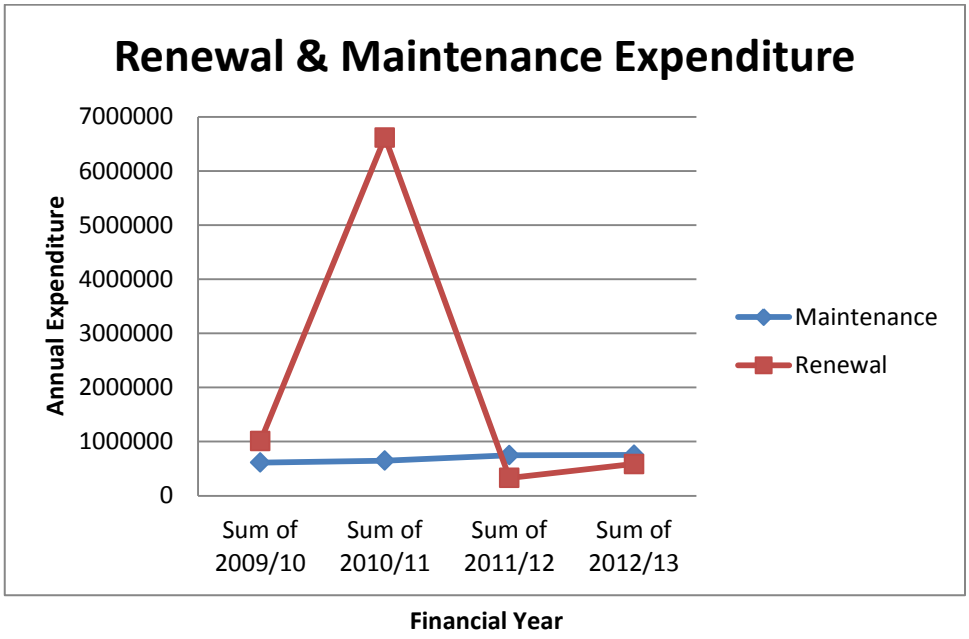
The RICL range in the Moloney model is 0 to 10. The following initial RICLs have been used for the various building components for the purposes of financial modeling within this Plan;

Component	Retreatment Intervention Condition Level (RICL)
Structure (Long Life)	7
Structure (Short Life)	8
Roof	6
Mechanical Services	7
Fit out	7

Therefore, for instance, once a long life structure deteriorates to condition 7, the model allocates sufficient expenditure to restore the structure to a condition of 0 (new). On this basis the Moloney model has calculated a 20 year predicted expenditure model that ensures that no part of the building network falls below the nominated RICL over the 20 year period. The 20 year capital expenditure requirement is as follows:

The City of South Perth's renewal and maintenance expenditure over the past four years has been as follows:

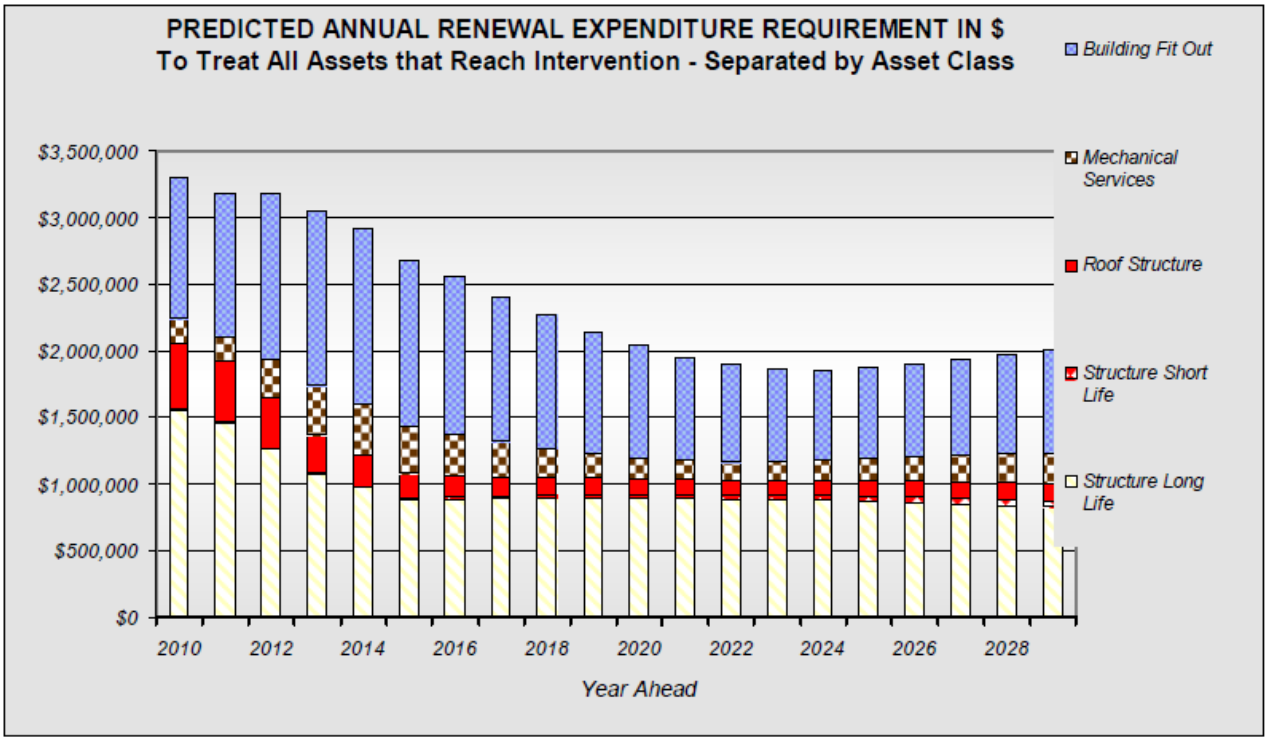
Year	Renewal	Maintenance
2009/10	1,008,617	614,139
2010/11	6,618,589	649,716
2011/12	328,795	750,492
2012/13	586,302	756,849
Average	**2,135,500**	**692,799**



A summary of building data is as follows;

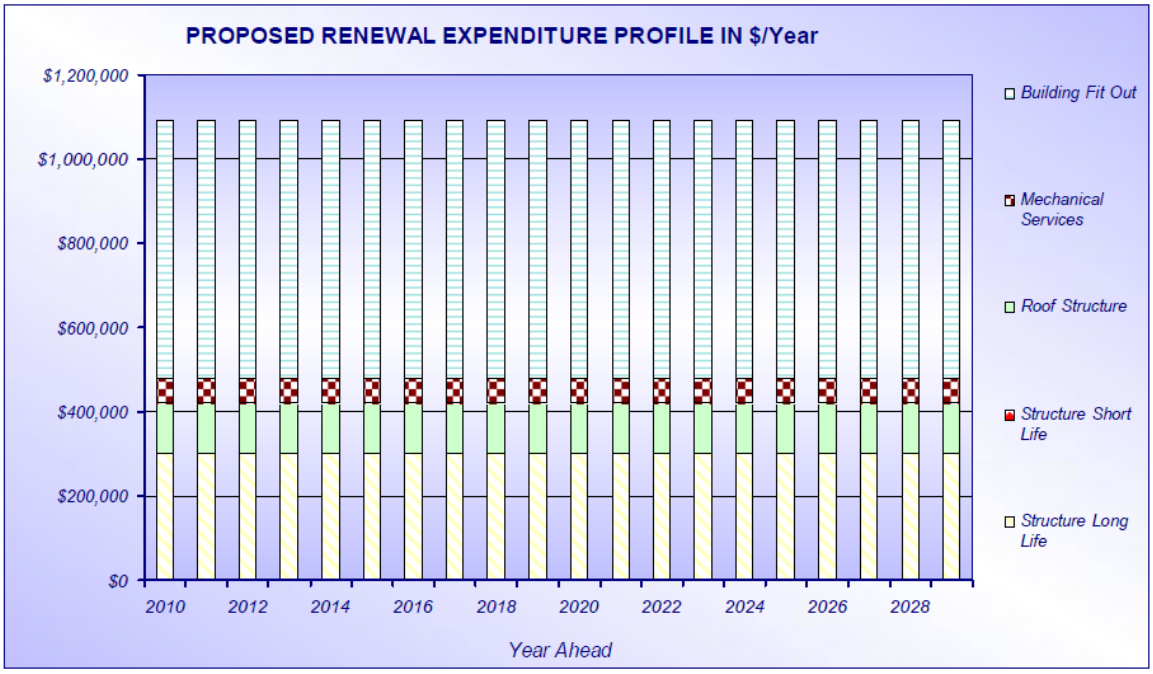
Asset Set No.	**26**	**27**	**28**	**29**	**30**
% of the Required Exp Being Met	67	0	118	36	90
Av Unit Renewal Cost $	$603,654.7	$80,320.8	$38,914.5	$43,870.4	$203,026.2
Asset Group	Buildings Group	Buildings Group	Buildings Group	Buildings Group	Buildings Group
Asset Set Description	Structure Long Life	Structure Short Life	Roof Structure	Mechanical Services	Building Fit Out
Asset Quantity	74	17	91	75	84
Units	No	No	No	No	No
Total Asset Group Renewal Cost $	$44,670,448	$1,365,454	$3,541,223	$3,290,278	$17,054,199
Annual Renewal Exp.	$301,449	$20	$119,050	$58,979	$612,728
Annual Maintenance Exp.	$73,684	$8,731	$82,415	$247,245	$412,075
Retreat. Intervention Condition	**7.0**	**8.0**	**6.0**	**7.0**	**7.0**
Return Cond after Renewal	0	0	0	0	0
Life to Condition 10 in Years	**100.0**	**60.0**	**35.0**	**20.0**	**25.0**
Life in years to Intervention Level	97.0	97.0	95.0	95.0	97.0

A significant proportion of the expenditure on 2005/06 & 2006/07 is associated with a major capital renewal/refurbishment of the Civic Centre and hence this figure skews the long term average. Hence an average of 2007/08 & 2008/09 renewal expenditure of $1,092,206 will be used to model the long term renewal.



The above graph demonstrates the capital requirements for the retention of selected asset components of the current building stock for the next 20 years and demonstrates the long term demand for funds to refurbish existing buildings if they are all to be retained in the long term, with nominated rehabilitation intervention values.

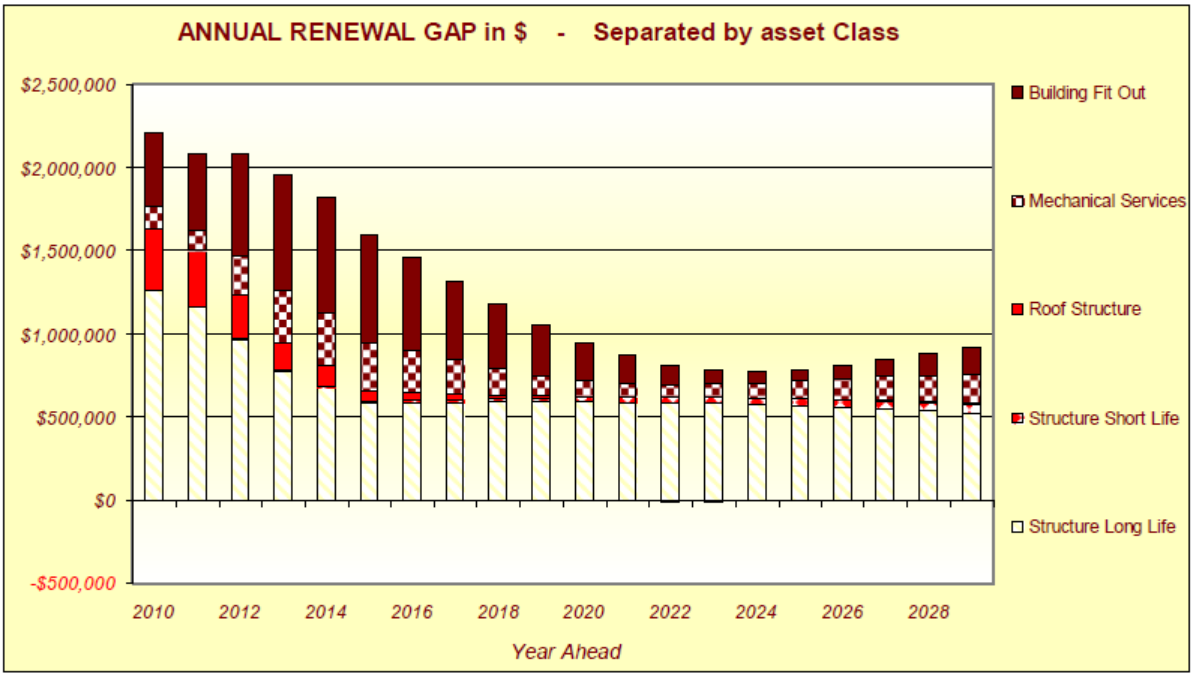
The City is currently spending an average (over the past two years) of $1,092,206 per annum renewal. The following graph extrapolates the current average allocation of asset renewal expenditure.



Note that the City of South Perth does not track renewal expenditure against major asset components such as structure, roof, mechanical services and fit out. The percentage breakup used (shown in the table below) in the modeling is based on indicative figures know to CT Management Group from other local governments that track this information. It should not be relied upon and it is recommended that the City of South Perth commence tracking this information in order to refine the modeling.

The following graph shows the annual renewal funding gap over the 20 year modeling period.

The predicted renewal requirement for year one (1) of the model is $3,302,100. Council is currently spending (on average) $1,092,206/annum on renewal. If the annual average expenditure on renewal is closer to the 4 year average of $1.8m going forward, then the renewal modeling results will be significantly different to the results presented here and should be remodeled.

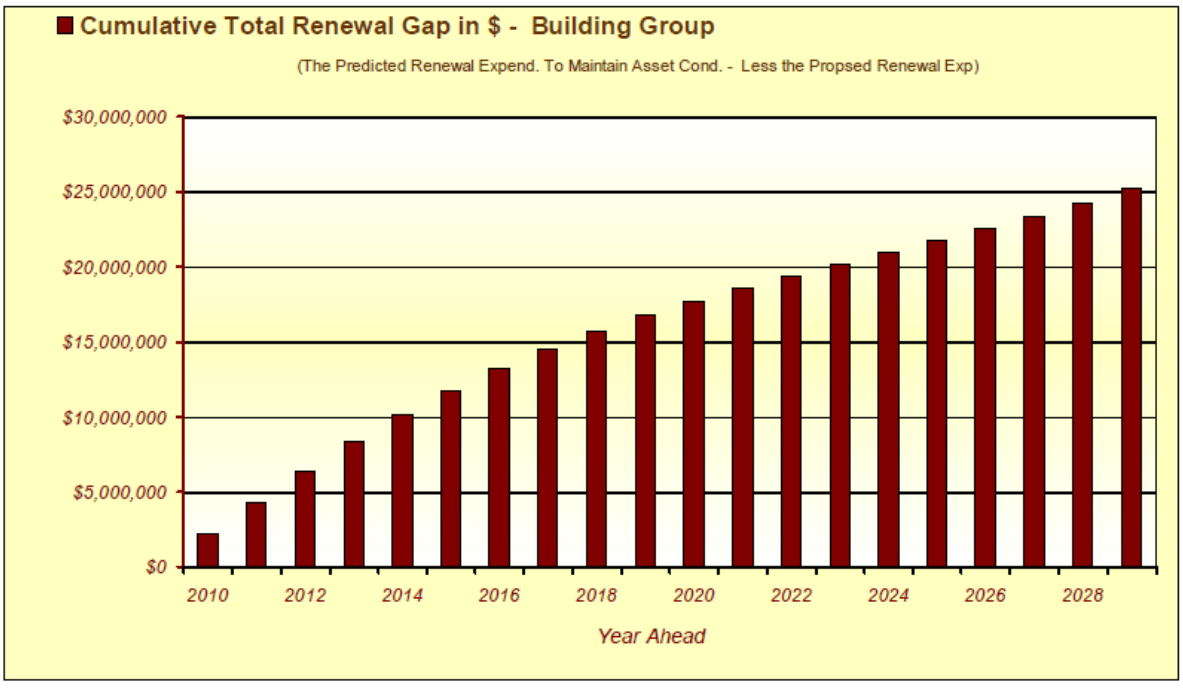


The renewal gap for year 1 is $2,209,874, meaning there is presently an under spend of $2.21m. There is obviously a building renewal backlog and once this has been caught up in

the model the renewal gap bottom out at $775k in year 2023. From there it oscillates around the long term average gap of $1,258,408.

The annual renewal requirement for the whole building network (averaged over a 20 year period) is approximately $1.258m per annum. The current average annual expenditure is approximately $1.092m per annum.

The following graph shows the cumulative renewal gap over the 20 year modeling period.

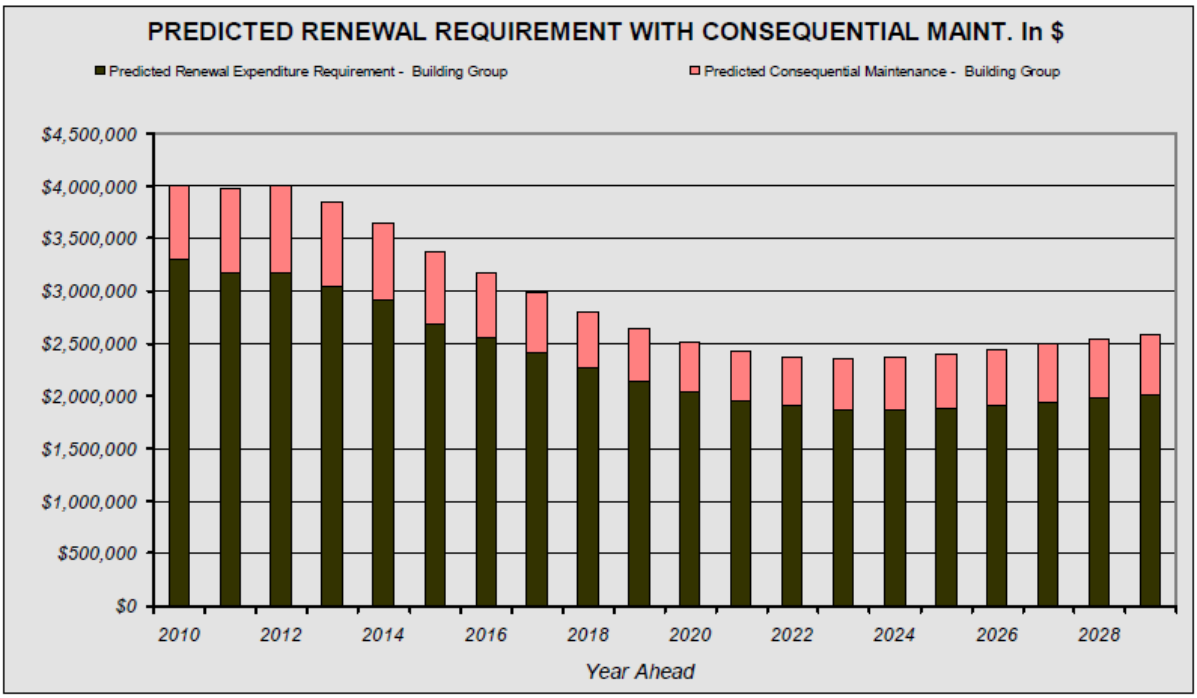


The total cumulative renewal demand over the 20 year modeling period is predicted to be $47.012 million, an average of $2,350,614 / year. The cumulative expenditure on renewal, (based on $1.092m over the past two years) equates to $21,844,120 projected over 20 years. Hence the average cumulative renewal gap is $25.168 million over 20 years or an average of $1,258,408/year.

Consequential Maintenance demand totals $11.934m over 20 years, an average of $596,729 / year. The current allocation for maintenance is $824,150. This should be investigated as it is likely (as is the case with most local governments) that a lot of this money actually is spent on renewal and therefore should be included in the renewal figures.

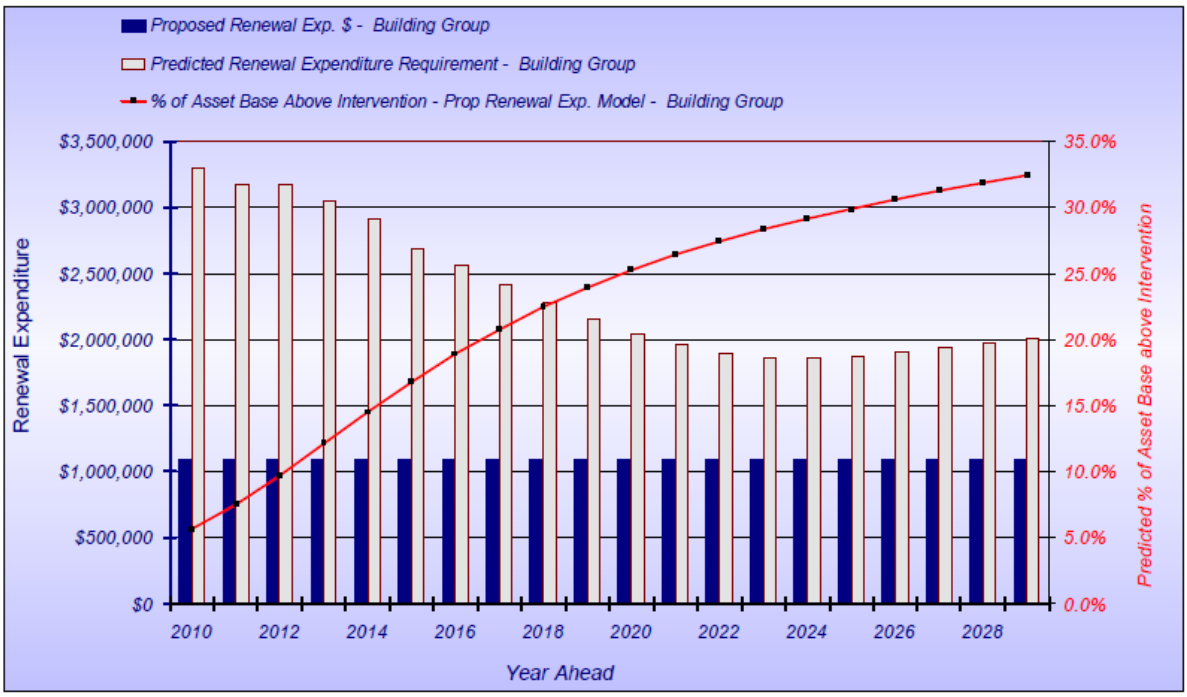
The effect of this would be reduction in the quantity of funding that the Council would need to fund to close the gap.

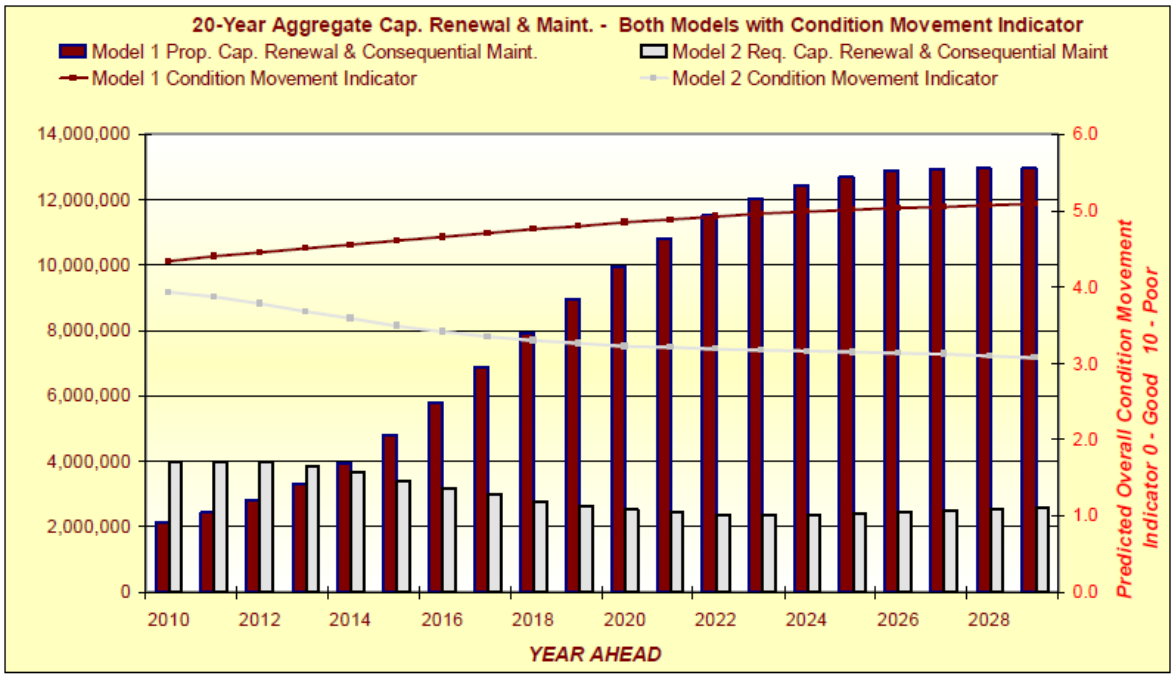
The following graph shows the predicted renewal demand plus consequential maintenance demand predicted over the 20year modeling period.



If current expenditure levels remain the same it can be expected that just over 32% of the building network will fall to a condition worse than 7 within 20 years. This would mean that on average 32% of the network will constantly be in a very poor state of repair requiring significantly more funds (based on an indicative 40% pa increase in maintenance costs) than would have been needed to renew the structure at the correct time in the first place.

This not only means that the capital expenditure required to renew will ever accumulate, but maintenance activities will become more costly and may possibly out-weigh any benefit of any short term cost saving; the latter being known as “consequential maintenance”. The next graph presents proposed vs. predicted renewal requirement and consequential maintenance, graphed against the percentage of assets above their intended RICL.





The dark red line (square markers) indicates the **average condition** of the building portfolio will decline from condition 4.3 to condition 5.0 over the 20 year forecast period, if the current levels of renewal and maintenance expenditure are maintained.

The light grey line (square markers) represents the average condition of the building portfolio over the 20 year forecast period if the required renewal and maintenance funding is provided. Under ideal funding arrangements the average condition of the building stock will increase from 4.3 to 3.0 at the end of the 20 year period.

Failure to review the Renewal and Maintenance expenditure (based on the average of the

past two years) level of funding or rationalise the asset ownership will result in a progressive significant under funding renewal programs of community buildings throughout the district. Subsequently, the Councils capacity to provide and ensure an acceptable functional level of service of all of its buildings by improvements or upgrades will be restricted by a shortfall of funds.

11.2 Funding Capacity

This section has not been considered in this "First Cut" AM Plan and will be developed in future plans.

11.3 Funding Options & Strategy

This section has not been considered in this "First Cut" AM Plan and will be developed in future plans.

12 Improvement Recommendations

A summary of the recommendations made within this Plan, are listed in order of importance. Each recommendation is explained in further detail in its respective section of this Plan:

Recommendation 1
The City of South Perth undertake a new Asset Management & Condition Review of all Council buildings to identify maintenance items, update condition ratings and calculate renewal estimates in order to undertake realistic renewal modeling.

Recommendation 2
The City of South Perth undertake a consultation process with the community to determine the value the community places on its building assets and the services they deliver.

That the results of the community consultation process be assessed and developed to influence levels of service for each FFH classification.

Recommendation 3

- *Develop performance criteria for facility assets.*
- *Categorise facility assets according to performance criteria*
- *Undertake performance measuring in accordance with key principles*
- *Ensure outcomes of performance assessments are reported to Council and used to develop maintenance schedules and set budget requirements*

Recommendation 4
Develop a Maintenance Strategy outlining the strategies and actions for the ongoing maintenance of Buildings/Facilities.

Recommendation 5
Undertake a full condition audit of the Building/Facility network.

Recommendation 6
Develop a Rehabilitation and Renewal Plan outlining the strategies and actions for the rehabilitation and renewal of assets.

Recommendation 7
Develop a Capital Evaluation Process to assess the viability of upgrades to existing or acquisitions of new assets.

Recommendation 8
Develop an Asset Disposal Strategy incorporating key principles.

Recommendation 9
Review the Financial Summary annually and refine as planning studies, strategies and increased financial analysis are completed.

Recommendation10
Improve staff access to Authority and train staff in using Authority.

Recommendation 11
Formalise roles and responsibilities in regards to asset lifecycle

Recommendation 12
Review processes associated with the Customer Action Request System in order to capture all maintenance items for future analysis with the aim of developing a comprehensive maintenance strategy.

Recommendation 13
Investigate shifts in type of use, population and demographics to determine if facilities are 'fit for purpose' and relevant for future needs.

Recommendation 14
Undertake regular customer satisfaction surveys to ensure the City maintains accurate and up to date information from the community.

Recommendation 15
Implement a centralised Asset Management software program.

Recommendation 16
Devise strategies to rationalise facilities that may not be aligned to core business activities or are surplus to requirements.

Recommendation 17
Restructure ledgers to enable the gathering of financial data according to facility component.

Recommendation 18
Undertake an annual data review to ensure the integrity of the Buildings Master List

Recommendation 19
Work closely with the Director Corporate Services to adjust budget and financial recording systems to provide better financial reporting and analysis functionality for asset

management lifecycle costing and long term renewal and maintenance requirements

Recommendation 20
Implement a process by which the cost of new, renewal, upgrade or major maintenance activities are captured and included within the Buildings Master List.

Recommendation 21
Annually inspect assets where the current condition is within 1 level of the RCIL.

Appendices

Appendix 1 – Definition of Building Asset Components

a) Substructure - *the structurally sound and watertight base upon which to build.*

Includes: foundation excavations; piers, piles, pedestals, beams and strip footings; foundation walls; drop aprons; hardcore filling; work slabs and damp-proofing or other membranes; floor structures; sub-soil drainage; ducts, pits, bases and service tunnels; entrance steps, ramps and their finishes; steps and ramps within the one floor level; structural screeds and toppings; internal swimming pools; all other work up to but excluding the lowest floor finish.

b) Superstructure

Columns — the upright supports for the upper floors and roof, forming part of a framed structure. Includes: internal and external columns, from top to base; column casings; all protective, non-decorative coatings.

Staircases — structural connections (together with their associated finishes) between two or more nominal floor levels, or between levels and the roof, plant rooms or motor rooms. Includes: the supporting framework of a staircase, its treads and risers; landings; ramps between floor levels; fire escapes; access ladders; spiral staircases; balustrades and handrails.

Roof — the structurally sound and watertight covering over the top of the facility structure. Includes: portal frames; roof construction; gables and other walls in roof spaces; parapet walls and roof balustrades; thermal insulation; roof lights; eaves, verges and fascia's; rainwater goods; internal stormwater drainage runs; awnings and open lean-to roofs; all protective, non-decorative coatings.

External walls — the vertical structures, extending from 'substructure' to 'roof', that enclose the facility. ***(****Does not include 'windows' and 'external doors').* Includes: structural walls; basement walls and tanking above lowest floor finish; curtain and window walls; external shop fronts; glazed screen walls; columns and isolated piers to non-framed (load bearing) structures; gallery and balcony walls and balustrades; solar screen walls; plant room air flow screens; all insulation to external walls; all external finishes to columns, slab edges, beams, projecting overhangs and walls; lintels and flashings at openings; ring beams and stiffening beams not integral to floor, ceiling or roof slabs.

Windows — openings in 'external walls' to provide light and ventilation. Includes: fly screens; louvres; guard grilles; remote control opening/closing gear; sun protection to windows; curtains; blinds, track and pelmets; window sills and linings; hardware and decoration.

External doors — the access ways into the facility for both pedestrians and vehicles.

Includes: frames; linings; glazing; architraves; hardware; panels and highlights (above the door frame) and other decoration; fly doors; roller shutters; garage doors; fire doors; grille and chain-wire doors; gates; service cupboard doors and thresholds.

Internal walls — vertical structures that permanently divide internal spaces into separate rooms or enclose duct and other non-usable areas. Includes: walls and piers; internal columns and isolated piers to non-framed (load bearing) structures; lintels; damp courses and bearing strips; stiffening beams not integral to floor, ceiling

or roof slabs; part height solid walls glazed over to ceiling; un-ducted air flow grilles; firewalls and smoke screens.

Internal screens and borrowed lights — structures that temporarily divide internal spaces; partitions that feature openings to allow the transfer of light through 'internal walls'. Includes: proprietary type office partitioning; glazed screens; fold away and operable walls; overhead framework and supporting beams; chain wire and grille screens; toilet partitions and screen walls; balustrades and rails not associated with staircases; all finishes and decorations.

Internal doors — passageways through 'internal walls', internal screens or partitions; provide access to service cupboards and ducts. Includes: frames; linings; glazing; architraves; pelmets; hardware and door grilles; chain wire and grille doors; toilet doors; cell and strong room doors; fire doors; roller shutters; service cupboard doors; duct access panels; fanlights and panels over them; linings to blank openings; all finishes decorations.

c) Finishes

Wall finishes — finishes and/or decoration of the interior face of any 'column', 'external wall' or 'internal wall'. Includes: finishes to internal faces of external walls and columns; acoustic wall linings; face and coloured blocks and off-form concrete; splash backs; dados; regulation wall vents.

Floor finishes — finishes to 'upper floors' and 'substructure' that are suitable for foot traffic. Includes: balcony floor finishes; skirtings; screeds; timber floor finishes; dividing strips; mats and mat wells; duct and pit covers; carpeting used as a permanent floor finish; timber and other finishes to concrete floors; finishes to steps within the floor level.

Ceiling finishes — finishes and/or decoration of all internal undersides of 'upper floors' and 'roof'; external undersides of unenclosed covered areas. Includes: suspended false ceilings; proprietary suspended ceiling systems; acoustic ceiling linings; linings to roof lights; ceiling manholes; framing to bulkheads and cornices. S

d) Fittings

Fitments — built-in or fixed items that furnish or equip a facility.

Includes: benches; cupboards; shelving; racks; seats; counters; notice boards; signs and nameplates; coat rails and hooks; mirrors; wall hatches; daises and stages. Does not include loose furniture that is not built in and is easily re-locatable.

Special equipment — items of a unitary nature available for purchase commercially, and/or of a type not covered by other elements. Includes: boiling water units; sink heaters; refrigerated drinking-water coolers; circulating fans.

e) Services

Sanitary fixtures — normal fixtures connected to the soil and waste plumbing systems, and all associated ancillaries. Includes: WC suites; urinals; basins; sinks and tubs; troughs and runnels; drinking fountains; showers; hobs; shower curtains and trays; terminal outlets integral to fixtures; soap and toilet paper holders; towel rails and hand driers.

Sanitary plumbing — systems to allow the disposal of all waste and soiled water from fixtures and equipment out to the external face of the external walls. Includes: stacks and vents; all loose traps; floor wastes; internal sewer drainage runs, pumps and ejectors; acid-resisting pipes and drains; box ducting and paintwork.

Water supply — systems to supply water from the point of entry to the facility to the points of consumption. Includes: storage tanks; pumps; water treatment plants; water heaters and coolers; reticulation pipework, including pipeline components; terminal outlets not integral to fixtures and/or equipment; controls other than those associated with equipment that consumes water; box ducting; insulation; sheathing; painting and identification; building and electrical work forming part of the water supply.

Gas services — systems to supply town, natural, simulated natural and liquefied petroleum gas from the point of entry to the facility to the points of consumption.

Includes: portable gas cylinders; booster compressors; manifolds and regulators; box ducting, painting and identification; building and electrical work forming part of the gas service; reticulation pipework and pipeline components; terminal outlets not integral to fixtures and/or equipment; gas detection systems.

Space heating — systems to heat the interior of facilities by means of convection, radiation or any other form of heating. Includes: heaters; reticulated steam, hot water or hot oil systems; warm air systems; electric floor or ceiling heating systems; fireplaces, hearths or associated work in chimney stacks; insulation and painting; controls and associated electrical work.

Ventilation — systems to circulate air within facilities by means of supply and/or exhaust systems. Includes: mechanical ventilators; non-mechanical roof ventilators; supply and/or exhaust fans; ducted systems; exhaust hoods; ducting, plant, controls and associated electrical work.

Evaporative cooling — systems to cool air within a facility by evaporative processes; such systems can also include ancillary heating. Includes: evaporative coolers; ducting, insulation, painting and associated electrical work.

Air conditioning — systems to maintain and control temperature, humidity and quality of air within predetermined limits within facilities. Includes: air conditioners; systems for cooling only; ductwork and air conditioning grilles; controls and associated electrical work.

Fire protection — systems to detect and/or extinguish fires. Includes: sprinklers and other automatic extinguishing systems; fire indicator boards; manual and automatic fire alarm installations; hydrant installations; hose reels and cupboards.

Electric light and power — systems to provide all light and power, and emergency light and power, from (and including) main distribution board to (and including) power outlets and light fittings. Includes: main distribution board; sub-mains and distribution boards; emergency lighting systems; power sub-mains to mechanical equipment; sub-mains and/or sub-circuits to other equipment and/or final sub-circuits.

Communications — systems to provide audio and video communication within a facility. Includes: all telephone cabling; public address, call, emergency warning and inter-communication systems; clock and/or bell systems; TV antennae and closed circuit TV.

Transportation — systems to move personnel and/or goods from floor to floor or area to area. Includes: lifts, hoists and conveying systems.

Special services — services or installations not covered by other elements. Includes: monitoring systems; cool rooms and process cooling; special conditioned rooms; compressed air; medical and industrial gas systems; dust extraction systems; security systems; lightning protection; stage lighting and theatre equipment.

f) External services

External stormwater drainage — disposes of rain and surface water from the site. Includes: pipe runs from the external faces of facilities; inspection pits; sumps; road gullies; culverts; box drains; grated trenches; runs from pools and fountains; outfalls and head/walls; agricultural and sub-soil drains; connections to existing runs and pits.

External sewer drainage — allows removal of waste and soiled water from the site. Includes: pipe runs from the external faces of facilities; grease gullies; inspection pits and manholes; acid resisting and special drains; dilution pits; petrol and plaster arrestors; septic tanks; collection and holding wells; absorption trenches; transpiration areas; pumps and ejectors; connections to existing runs, pits and mains.

External water supply — systems to supply water up to the external faces of facilities and up to other major consuming points external to the facility, such as swimming pools, fountains, artificial ponds, irrigation and ground watering outlets. Includes: storage tanks; water towers; pumps; water treatment plants; water heaters and coolers; reticulation pipe work, including components; terminal outlets not integral to fixtures and/or equipment; insulation; sheathing; painting and identification; meters and meter enclosures; water bores; irrigation and ground watering systems; building and electrical work forming part of the water supply.

External gas — systems to supply town, natural, simulated natural and liquefied petroleum gas up to the external faces of facilities and other consuming points external to the facility. Includes: storage cylinders and tanks; meters and regulators; meter enclosures; reticulation pipe work and pipeline components; building and electrical work forming part of the external gas supply.

External fire protection — systems to supply fire hydrant and gas vaporising agent runs up to external faces of facilities; external sprinkler systems; connection of fire protection systems between facilities. Also includes systems to detect and/or extinguish fires in fixed plant or equipment located in the open air. Includes: stand-by and booster pumps; pipe runs; storage and reticulation of gas and vaporising agents; hydrant points; overhead and underground cables for fire detection systems.

External electric light and power — systems to supply electric power to main distribution boards of facilities and to provide lighting and power to external site areas. Includes: connections to source of power supply; consumer mains; sub-station equipment; emergency generating plant; main switchboard; underground and overhead cables; pylons and all trenches for cabling; street and area lighting; illuminated signs and flood lighting.

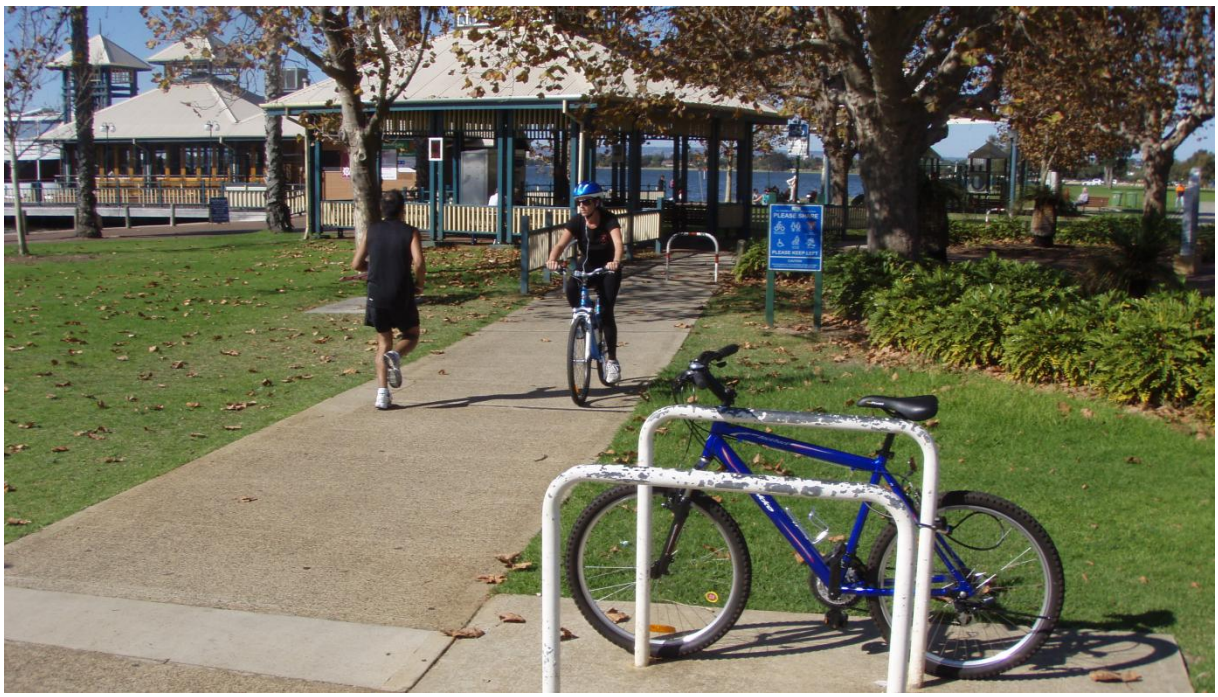
External communications — external communication cables terminating at frames of facilities; communication systems between facilities and to external site areas. Includes: underground and overhead cables; pylons; connections to existing cables; external speakers; clocks; bells; community antenna systems. **External special services — external services or installations not included in other elements.** Includes: external connections to special services; service tunnels, ducts or conduits in connection with external reticulation of services elements; dust extraction plant; incineration plant; bulk storage for medical and industrial gases.

Appendix 2 - Building Master List & Condition Rating

Build No.	Asset No.	Asset Group	Hierarchy Category	Name	Location	Renewal Value	Structure Long Life	Structure Short Life	Roof Structure	Mechanical Services	Building Fit Out	Structure Long Life	Structure Short Life	Roof Structure	Mechanical Services	Building Fit Out	Estimated Age (yrs)
68	4465	H	S	Old Mill (4465)	Melville Place, South Perth	**1,000,000**	4	N	4	N	4	684,211	0	52,632	0	263,158	174
69	4465	H	S	Old Mill Interpretive Centre (4465)	Melville Place, South Perth	**75,000**	4	N	4	N	4	51,316	0	3,947	0	19,737	7
70	4465	H	S	Old Mill Out Buildings (4465)	Melville Place, South Perth	**300,000**	4	N	4	N	5	205,263	0	15,789	0	78,947	174
71	4312	H	S	Old Mill Theatre (4312)	Mend Street, South Perth	**1,200,000**	6	N	8	6	6	780,000	0	60,000	60,000	300,000	109
72	4465	H	S	Old Mill Toilets (4465)	Mend Street, South Perth	**55,000**	N	3	6	4	5	0	35,750	2,750	2,750	13,750	52
5	**Sub Total**				**Category 1 - State Significance**	**2,630,000**											
91	**Total**																
14	4321	P	R	Collier Park Golf Club House (4321)	Hayman Road, Como	**340,000**	4	N	4	4	4	221,000	0	17,000	17,000	85,000	12
15	4321	P	R	Collier Park Golf Club Pro Shop & Offices (4321)	Hayman Road, Como	**925,000**	6	N	4	4	4	601,250	0	46,250	46,250	231,250	25
16	4321	P	R	Collier Park Golf Club Toilets - 3 (4321)	Hayman Road, Como	**105,000**	N	4	4	4	4	0	68,250	5,250	5,250	26,250	25
17	4321	P	R	Collier Park Golf Maintenance Shed (4321)	Hayman Road, Como	**250,000**	N	4	4	4	4	0	162,500	12,500	12,500	62,500	25
39	4316	C	R	George Burnett Leisure Centre (4316)	Manning Road, Karawara	**3,040,000**	2	N	2	2	2	1,976,000	0	152,000	152,000	760,000	8
40	4520	R	R	George Burnett Rugby Club Pavilion (4520)	Manning Road, Karawara	**1,290,000**	5	N	5	4	5	838,500	0	64,500	64,500	322,500	16
49		P	R	Manning Bowling Club	Challenger Ave, Manning	**1,000,000**	4	N	6	4	5	650,000	0	50,000	50,000	250,000	52
51	4311	C	R	Manning Hall (4311)	Jarman Avenue, Manning	**1,010,000**	6	N	2	5	4	656,500	0	50,500	50,500	252,500	52
52	4311	U	R	Manning Hall Shed (4311)	Jarman Avenue, Manning	**5,400**	N	6	4	3	4	0	3,510	270	270	1,350	39
53	4303	C	R	Manning Library (4303)	Manning Road, Karawara	**1,440,000**	5	N	4	4	4	936,000	0	72,000	72,000	360,000	45
55	4362	P	R	Manning Senior Citizens (4362)	Downey Crescent, Manning	**960,000**	4	N	5	4	5	624,000	0	48,000	48,000	240,000	19
63	4516	C	R	Mill Point Scout Hall (4516)	Pilgrim Street, South Perth	**334,000**	N	4	6	4	6	0	217,100	16,700	16,700	83,500	16
66	4610	S	R	Narrows Abument (4610)	Narrows Abutment, South Perth	**260,000**	N	4	4	4	6	0	169,000	13,000	13,000	65,000	39
81	4514	C	R	Salter Point Sea Scouts Hall (4514)	Elderfield Road, Salter Point	**660,000**	N	6	5	5	5	0	429,000	33,000	33,000	165,000	39
82	4612	A	R	SJMP East (4612)	South Perth Foreshore	**120,000**	N	3	5	4	5	0	78,000	6,000	6,000	30,000	39
83	4611	A	R	SJMP West (4611)	South Perth Foreshore	**125,000**	N	3	4	4	5	0	81,250	6,250	6,250	31,250	39
88	4222	S	R	Transfer Station - Gatehouse (4222)	Thelma Street, Como	**60,000**	N	6	5	N	4	0	41,053	3,158	0	15,789	27
89	4222	S	R	Transfer Station (4222)	Thelma Street, Como	**1,000,000**	5	N	5	4	N	866,667	0	66,667	66,667	0	20
18	**Sub Total**				**Category 2 - Regional Significance**												

Build No.	Asset No.	Asset Group	Hierarchy Category	Name	Location	Renewal Value	Structure Long Life	Structure Short Life	Roof Structure	Mechanical Services	Building Fit Out	Structure Long Life	Structure Short Life	Roof Structure	Mechanical Services	Building Fit Out	Estimated Age (yrs)
5		U	D	Athletic Store EJ Oval - Colorbond (TBA)	EJ Oval - South Terrace, South Perth	**6,600**	N	4	4	N	N	0	4,516	347	0	1,737	29
6	4517	R	D	Bill Grayden Pavilion (4517)	Murray Street, Como	**738,000**	4	N	4	4	4	479,700	0	36,900	36,900	184,500	49
8	4511	R	D	Challenger Pavilion (4511)	Challenger Ave, Manning	**497,000**	4	N	4	4	4	323,050	0	24,850	24,850	124,250	29
9		P	D	Civic Centre Bowling Club (TBA)	Hensman Street, South Perth	**652,000**	6	N	4	6	6	423,800	0	32,600	32,600	163,000	59
10	4305	C	D	Civic Centre Hall (4305)	South Terrace, South Perth	**1,830,000**	4	N	4	4	4	1,189,500	0	91,500	91,500	457,500	49
11	4302	C	D	Civic Centre Library (4302)	South Terrace, South Perth	**1,360,000**	4	N	4	4	4	884,000	0	68,000	68,000	340,000	51
13	2420	C	D	Collier Park Community Centre (2420)	Morrison Street, Como	**925,000**	2	N	2	4	2	601,250	0	46,250	46,250	231,250	13
18	2521	P	D	Collier Park Hostel (2521)	Morrison Street, Como	**3,440,000**	2	N	2	2	2	2,236,000	0	172,000	172,000	860,000	18
25	4512	P	D	Como Croquet Club (4512)	Comer Street, Como	**180,000**	N	4	4	4	4	0	117,000	9,000	9,000	45,000	49
26	4333	P	D	Como Perth Child Health Centre (4333)		**215,000**	N	4	7	7	8	0	139,750	10,750	10,750	53,750	56
27	4353	P	D	Como Pre-School (4353)		**245,000**	N	6	4	4	4	0	159,250	12,250	12,250	61,250	56
28	4301	B	D	Council Adminstration Building (4301)	Cnr South Terrace & Sandgate Street, South Perth	**4,000,000**	6	N	8	6	2	2,600,000	0	200,000	200,000	1,000,000	45
29	4301	B	D	Council Chambers/Reception Area (4301)	Cnr South Terrace & Sandgate Street, South Perth	**1,400,000**	4	N	1	2	0	910,000	0	70,000	70,000	350,000	50
30	4134	U	D	Depot Cement Shed (4134)	Thelma Street, Como	**2,500**	N	4	4	N	N	0	2,321	179	0	0	13
31	4502	U	D	Depot Parks Store (4502)	Thelma Street, Como	**25,000**	N	4	4	N	N	0	23,214	1,786	0	0	27
32	4134	U	D	Depot Signs Shed inc. Const Mtnce Shed (4134)	Thelma Street, Como	**4,500**	N	4	4	4	4	0	2,925	225	225	1,125	13
33	4134	U	D	Dog Pound (4134)	Thelma Street, Como	**152,000**	N	5	5	N	4	0	104,000	8,000	0	40,000	15
34		U	D	Equipment Parking Shed	Thelma Street, Como	**160,000**	N	4	4	N	N	0	148,571	11,429	0	0	13
35	4605	A	D	Ernest Johnson Oval (4605)	Hensman Street, South Perth	**224,000**	N	4	4	4	4	0	145,600	11,200	11,200	56,000	59
36	4505	R	D	Ernest Johnson Pavilion (4505)	Pilgrim Street, South Perth	**770,000**	6	N	4	6	6	500,500	0	38,500	38,500	192,500	48
37	4134	U	D	Fertiliser and Reticulation Shed (4134)	Thelma Street, Como	**85,000**	N	4	5	N	4	0	58,158	4,474	0	22,368	27
41	4503	P	D	Hazel McDougall House (4503)	Clydesdale Street, Como	**290,000**	N	4	4	5	4	0	188,500	14,500	14,500	72,500	69
42	4332	P	D	Hensman Child Health Centre (4332)	Coode Street, South Perth	**170,000**	N	4	7	4	4	0	110,500	8,500	8,500	42,500	55
43	4304	H	D	Heritage House (4304)	Mill Point Road, South Perth	**500,000**	5	N	4	4	4	325,000	0	25,000	25,000	125,000	105
44	4508	R	D	James Miller Pavilion (4508)	Jarman Avenue, Manning	**506,000**	7	N	5	4	5	328,900	0	25,300	25,300	126,500	50
45	4335	P	D	Kensington Child Health Centre (4335)	Collins Street, Kensington	**120,000**	N	4	4	4	5	0	78,000	6,000	6,000	30,000	59
46	4352	P	D	Kensington Pre School (4352)	Vista Street, Kensington	**260,000**	N	4	4	4	4	0	169,000	13,000	13,000	65,000	59
47	4522	P	D	Kensington Tennis Club (4522)	Bradshaw Crescent, Manning	**121,000**	N	4	5	4	6	0	78,650	6,050	6,050	30,250	49
48	4305	C	D	Lesser Hall (4305)		**785,000**	5	N	5	4	6	510,250	0	39,250	39,250	196,250	49
50	4334	P	D	Manning Child Health Centre (4334)		**180,000**	N	6	6	4	5	0	117,000	9,000	9,000	45,000	49
54	4355	P	D	Manning Pre School (4355)	Isabella Crescent, Manning	**320,000**	N	5	5	4	5	0	208,000	16,000	16,000	80,000	59
56	4513	P	D	Manning Tennis Club (4513)	Griffin Crescent, Manning	**310,000**	N	4	5	4	5	0	201,500	15,500	15,500	77,500	22
59	4354	P	D	McDougall Park Pre School (4354)	Henley Street, Como	**290,000**	N	5	5	4	6	0	188,500	14,500	14,500	72,500	43
62	4351	P	D	Mill Point Pre School (4351)	Labouchere Road, South Perth	**173,000**	N	5	5	4	5	0	112,450	8,650	8,650	43,250	59
64	4313	C	D	Moresby Street Hall (4313)		**295,000**	N	6	5	5	6	0	191,750	14,750	14,750	73,750	59
65	4509	R	D	Morris Mundy Pavilion (4509)	Oxford Street, Kensington	**290,000**	N	4	5	4	5	0	188,500	14,500	14,500	72,500	49
67	4134	U	D	Nursery Shed (4134)	Thelma Street, Como	**9,000**	N	4	4	N	4	0	6,158	474	0	2,368	15
73	4134	B	D	Operations Admin Building (4134)	Thelma Street, Como	**1,200,000**	8	N	8	4	4	780,000	0	60,000	60,000	300,000	15
74		U	D	Operations Centre Carport	Thelma Street, Como	**56,000**	N	4	6	N	N	0	52,000	4,000	0	0	15
78	4515	C	D	R.S.L. Hall (4515)	Angelo Street, South Perth	**380,000**	5	N	5	4	5	247,000	0	19,000	19,000	95,000	34
80		C	D	Rotary Hall (TBA)	Sandgate Street, South Perth	**310,000**	N	6	6	4	5	0	201,500	15,500	15,500	77,500	65
84		P	D	South Perth Bowling Club (TBA)	Mend Street, South Perth	**1,120,000**	N	4	5	4	4	0	728,000	56,000	56,000	280,000	59
85	4519	P	D	South Perth Lawn Tennis Club (4519)	Murray Street, Como	**460,000**	N	4	4	4	5	0	299,000	23,000	23,000	115,000	20
86	4343	P	D	South Perth Learning Centre (4343)	12 Labouchere Road, South Perth	**160,000**	N	5	3	4	3	0	104,000	8,000	8,000	40,000	-
87	4361	P	D	South Perth Senior Citizens (4361)	Coode Street, South Perth	**920,000**	N	3	5	N	4	0	629,474	48,421	0	242,105	18
90	4507	R	D	W.C.G. Thomas Pavilion (4507)	Amherst Street, South Perth	**1,700,000**	5	N	5	4	5	1,105,000	0	85,000	85,000	425,000	43
91	4603	A	D	Windsor Park (4603)	Mill Point Road, South Perth	**105,000**	N	2	2	2	2	0	68,250	5,250	5,250	26,250	6
92	4134	U	D	Workshop (4134)	Thelma Street, Como	**205,000**	N	3	5	4	4	0	133,250	10,250	10,250	51,250	15
48	**Sub Total**				**Category 3 - District Significance**												

Build No.	Asset No.	Asset Group	Hierarchy Category	Name	Location	Renewal Value	Structure Long Life	Structure Short Life	Roof Structure	Mechanical Services	Building Fit Out	Structure Long Life	Structure Short Life	Roof Structure	Mechanical Services	Building Fit Out	Estimated Age (yrs)
7	4608	A	L	Bradshaw Toilets (4608)	Bradshaw Crescent, Manning	**50,000**	N	4	4	4	4	0	32,500	2,500	2,500	12,500	49
12	4602	A	L	Clydesdale Park (4602)		**67,000**	N	4	4	4	6	0	43,550	3,350	3,350	16,750	29
19	2420	P	L	Collier Park Village Workshop (2420)	Morrison Street, Como	**200,000**	N	2	2	2	2	0	130,000	10,000	10,000	50,000	11
20	4518	R	L	Collier Pavilion (4518)	Thelma Street, Como	**450,000**	4	N	6	4	6	292,500	0	22,500	22,500	112,500	43
21	4315	P	L	Collins Street Centre (4315)	Shaftesbury Street\t, South Perth	**1,050,000**	4	N	4	4	6	682,500	0	52,500	52,500	262,500	25
22	4606	A	L	Comer Reserve (4606)	Melville Parade, Como	**230,000**	N	4	4	N	4	0	157,368	12,105	0	60,526	49
23	4510	R	L	Comer Reserve Pavilion (4510)	Melville Parade, Como	**260,000**	4	N	4	4	6	169,000	0	13,000	13,000	65,000	49
24	4609	A	L	Como Beach (4609)	Como Foreshore, Como	**335,000**	N	4	4	4	6	0	217,750	16,750	16,750	83,750	39
57	4503	U	L	McDougall Milking Shed (4503)	Ley Street, Como	**84,000**	N	6	5	9	4	0	54,600	4,200	4,200	21,000	57
58	4607	A	L	McDougall Park (4607)	Ley Street, Como	**112,000**	N	5	6	4	6	0	72,800	5,600	5,600	28,000	29
60	4940	S	L	McDougall Park Pump Station (4940)	Henley Street, Como	**18,000**	N	7	6	6	4	0	11,700	900	900	4,500	59
61	4521	R	L	Mends Street Pavilion (4521)	The Esplanade, South Perth	**75,000**	N	4	4	N	N	0	69,643	5,357	0	0	39
75	4754	U	L	Park Store Clydesdale (4754)		**120,000**	N	4	5	5	4	0	78,000	6,000	6,000	30,000	13
76	4502	U	L	Parks Shed EJ Oval (4502)	South Terrace, South Perth	**24,000**	N	5	4	4	4	0	15,600	1,200	1,200	6,000	29
77	4759	U	L	Parks Shed Karawara (4759)	Gillon Street, Karawara	**16,000**	N	5	4	4	4	0	10,400	800	800	4,000	49
79	4604	A	L	Richardson Park (4604)		**160,000**	N	5	5	4	2	0	104,000	8,000	8,000	40,000	59
16	**Sub Total**				**Category 4 - Local Significance**	**3,251,000**											
1	4345	P	N	101 Mill Point Road (4345)	101 Mill Point Road, South Perth	**270,000**	5	N	4	4	6	175,500	0	13,500	13,500	67,500	59
2	4342	P	N	18 (and 18a) Labouchere Road (4342)	18 (and 18a) Labouchere Road, South Perth	**400,000**	5	N	4	4	4	260,000	0	20,000	20,000	100,000	59
3	4341	P	N	95/97 Mill Point Road (4341)	95/97 Mill Point Road, South Perth	**180,000**	8	N	6	6	4	117,000	0	9,000	9,000	45,000	64
4	4341	P	N	99 Mill Point Road (4341)	99 Mill Point Road, South Perth	**150,000**	8	N	6	N	6	97,500	0	7,500	7,500	37,500	69
4	**Sub Total**				**Category 5 - Neighbourhood Significance**												



Cycling & Pedestrian Pathways Asset Management Plan

Version 1
June 2013

Date: 18 June 2013

Version 1.0

Approved for Release by: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

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Time Period of the Plan: The AMP covers a 10 year period.

Asset Management Plan Review Date: The AMP is reviewed every 4 years, and updated within 2 years of each Council election.

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1 Introduction

The Cycling & Pedestrian Pathways Asset Management Plan (FAMP) has been prepared by the City of South Perth's Asset Management Working Group (AMWG) and provides core resource information for service providers and users of the City's 256km network of pathways.

The City of South Perth delivers a variety of services to the community and in doing so, must ensure that the assets supporting these services are managed in a way that guarantees maximum performance for the lowest 'whole of life' cost.

The FAMP is intended to provide:

- Improved understanding of the assets managed by the Infrastructure Services Directorate;
- Improved understanding and forecasting of asset related management options and costs;
- Improved confidence levels in forward works programs and funding requirements; and
- Guidance for the City in taking steps toward advanced asset management planning.

The key issues highlighted by the FAMP are:

- the need to document current processes and practices
- the need to seek customer opinion on;
  - the value and importance placed on Cycling & Pedestrian Pathway assets
  - the level of service expected from Cycling & Pedestrian Pathway assets
  - the cost to provide a range of services
  - their future expectations for service delivery

The FAMP includes recommendations that the following projects be developed:

- an AM Practices Improvement Strategy
- an Asset Disposal Strategy
- a Capital Evaluation Process
- a 10 year maintenance program
- a 10 Cycling & Pedestrian Pathway assets renewal program
- performance measurement tools

The FAMP aims to underpin one of Council's significantly large asset groups, that being the network of cycling and pedestrian pathways. A well maintained and functioning cycling and pedestrian pathway network is vital in providing community well-being and productivity.

The City recognises that it has limited resources and finite capacity to raise revenue to maintain, renew and provide new infrastructure assets, including new and upgraded cycling and pedestrian pathways. Therefore a well-considered holistic approach is required to ensure informed decisions are being made when it comes to managing community assets as part of the City's primary role under the Local Government Act 1995, that is, to provide good governance to the district.

2 Function & Hierarchy

A pathway's function decides its strategic importance within the network. It takes into account the key principles which impact on determining the functional level of service as part of providing a sustainable mix of pathway types for the community.

Local Governments do not have the resources to maintain every asset to the same level of service. Placing the asset within a hierarchy and assigning different levels of service to each level of the hierarchy based upon important in terms of such things as risk, social benefit, function etc, enables the local government to more easily resource the particular asset class.

This means that the higher order assets attract greater resource because they carry greater risk and are of greater importance to the community. The may have shorter lead times to intervention to repair, maintain or renew the asset. Whereas assets that sit lower down the asset hierarchy, do not carry the same level of importance. Lead time to intervention is greater.

To enable the network of cycling and pedestrian pathway assets to be prioritised in order of importance, a functional hierarchy has been developed.

Consideration has been given to every identified pathway in terms of the function it performs. The Functional Pathway Hierarchy (FPH) is a key determinant in assisting Council in deciding on the allocation of funds for the management of the pathway.

When developing a functional hierarchy, it is important to take a close look at the word function. What is the function of a pathway? Too often people develop asset hierarchies based around asset type, e.g. the type (is it a concrete path, is it a slab path). The function of a slab path can be exactly the same as a concrete path, i.e. to move pedestrians safely from point A to point B. Additional functionally can be achieved if the path is a shared use path that caters both for pedestrians and cyclist. It is this differentiation that the City should try and capture within this pathway asset management plan.

The other issue that arises is the fact that pathways are often considered in short segments, from one street corner to the next, often a distance of only 100m or so. This is probably a result of the ad-hoc nature that pathway networks develop and the close association with the roadway in any given street.

It is common for a pathway along a street of some length (say 3 or 4 km) to have numerous differing segments in terms of constructed width, construction material and condition. Whilst this is true of road networks there is nowhere near the same extent of variation along any given street.

To appropriately manage the pathway network, it is recommended that the City of South Perth take a network approach and focus on the connectivity across the network of pathways. Issues such as, where are the pedestrian and bicycle traffic generators? E.g. schools, shopping centres, public transport interchanges etc.

Focusing on the transport route (which may run along several streets) will then allow the City to classify the pathway network based on function, develop standards for that function and then compare the existing network to the desired network thus driving the Operation & Maintenance Strategy, the Renewal Strategy and Capital, New, Upgrade and Rationalisation Strategy.

To do this for South Perth's network is somewhat complex as non motorised transport routes (i.e. pedestrian and bike routes) follow not only physically constructed pathways but also mark laneways on some roads and non marked routes on some roads. There is also the issue that under the Road Traffic Code 2000, it is illegal to ride a bicycle on a footpath unless the pathway is specifically marked for shared use.

The City of South Perth has taken the view that to appropriately sign and maintain shared use pathways is significantly onerous and therefore does not designate pathways as shared used. This means that in theory bicyclist are not allowed to use off road pathways (paths along a road verge). Despite this approach, a number of pathways are constructed (but not marked and signed) to a standard suitable to be utilised as shared use paths.

The end result is that cyclists ride illegally on paths designed for shared use but which are not compliant with the standards for making and signage. The issue of enforcement is one that rests with the Police and the Police do not have the resources or necessarily the will to enforce this and hence cyclists freely use these facilities.

To complicate matters further, a number of roads have line markings and pavement makings to allocate an area of the road carriageway for cyclists. These often duplicate the function of the path network.

Cyclists range in age skill and purpose. The "off road" network is mainly utilised by children and recreational cyclist (this group will be categorised as recreational cyclists), while the "on- road" network is used by sports and commuter cyclists (this group will be categorised as commuter cyclists). Recreational cyclists are generally happy to sacrifice speed and rider comfort (up and down pram ramps, crossing kerbs etc.) for a higher margin of safety bought about by off-road cycling, however they can create conflict with pedestrians. Commuter cyclists are generally happy to sacrifice a degree of safety (by riding on the road) in order to achieve a higher degree of rider comfort and to travel at high speed in order to reduce travel times between departure and destination points.

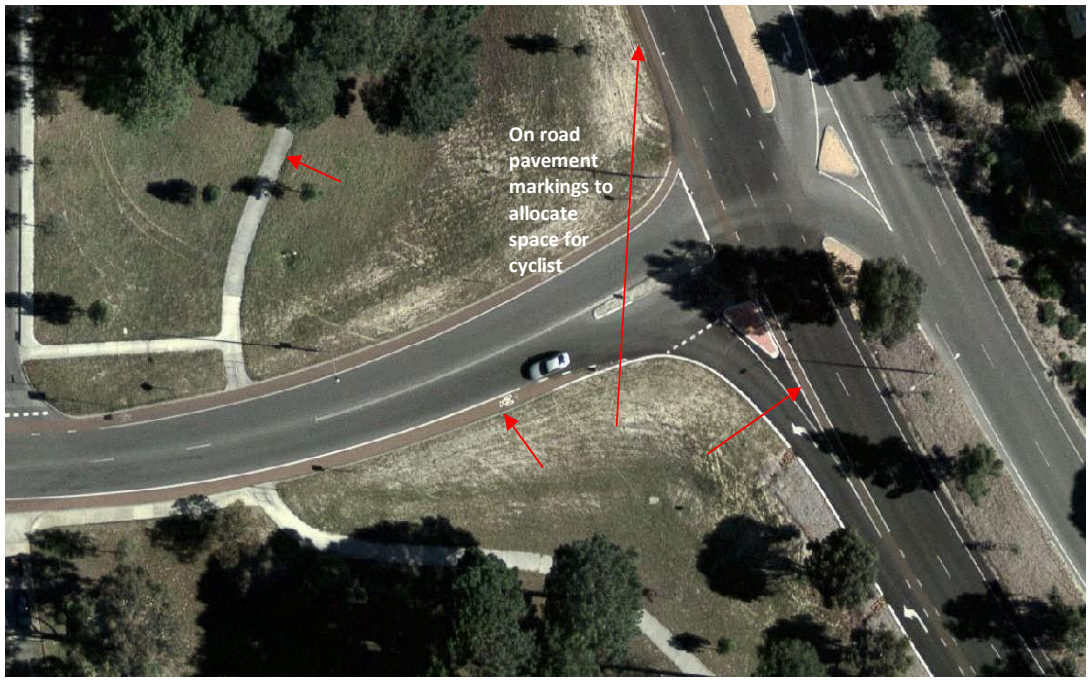


Figure 1: Duplication of "on" and "off" road cycling facilities

Therefore there are three distinct, but interrelated, networks that form the one pathway network. The three networks are as follows;

- Pedestrian network
- Recreational cyclist network
- Commuter cyclist network

Each of these networks cater for a number of subgroups of users, for example the pedestrian network caters for people who want to walk from A to B, say from one house to the next or to the corner shop, people who want to walk some distance for recreation or fitness purposes, people who jog or run for fitness purposes and people who walk as part of a longer journey utilising different transport modes, e.g. walking to work/school, to the bus stop or ferry terminal.

There is close integration between the three networks, however users of each grouping do not utilise parts of the other networks, for example pedestrians do not use the on road sections of the bicycle commuter network while cyclists, both commuter and recreational, do not (or should not) use the non-shared use sections of the pedestrian network.

The City of South Perth's Functional Pathway Hierarchy is categorised as follows:

2.1 City of South Perth Functional Pathway Hierarchy Criteria

	Functional Activity	Regional Route	District Route †	Connector Route	Access Route
Network Function	1 Network	Forms part of a regional transport network as an example the Perth Bicycle Network (PBN)	Forms part of a district transport network such as the South Perth Bike Routes (SPR)	Provides connectivity between neighbourhood paths and District Paths	A pedestrian only path with the primary function of providing access to properties and connecting properties to local or district routes.
Off Road Pavement Pedestrian Activity	2A Pedestrian activity occurs **off** the road pavement.	Forms part of a regional transport network, for example is a vital link for pedestrian transfer between transport modes e.g. pedestrian transfer from ferry to bus.	Forms part of a district pedestrian network to walk from one part of the district to another. Is the major pedestrian route providing access to pedestrian generators such as schools, shopping centres etc.	Forms part of a pedestrian network within a local area such as a suburb. Provides linkage between paths on District Routes and paths on Neighbourhood Routes	A pedestrian only path with the primary function of providing access to properties and connecting properties to local or district routes.
	2B Pedestrians allowed	Yes	Yes	Yes	Yes
	2B End of Trip Pedestrian Facilities	Yes	Yes	No	No

Functional Activity Criterion	Regional Route	District Route †	Connector Route	Access Route
3A Cycling activity occurs **off** the road pavement	Forms part of a regional cycling network for recreational, sport or commuter cycling, however the cycling activity takes place on a dedicated path designed for the activity.	Forms part of a district cycling network to cycle from one part of the district to another. Is a major cycling route providing access to schools, shopping centres etc.	Not applicable to cycling activities. Cycling activities at this level to occur on the road pavement intermingled with traffic.	Not applicable to cycling activities. Cycling activities at this level to occur on the road pavement intermingled with traffic.
3B Cyclists allowed	Yes	Yes	No	No
3C Lane Separation to separate flow.	Yes	No	No	No
3D Localised separation from Pedestrian usage	Yes	No	No	No
3E Shared use signage	Yes	Yes	No	No
3F End of Trip Cycling Facilities	Yes	Yes	No	No

	Functional Activity Criterion	Regional Route	District Route †	Connector Route	Access Route
On Road Pavement Cycling Activity	4A Cycling activity occurs **on** the road pavement	Forms part of a regional cycling network for recreational, sport or commuter cycling, however the cycling activity takes place on the road pavement in a dedicated bike lane designed for the activity or a lane shared with road traffic.	Forms part of a district cycling network for recreational, sport or commuter cycling, however the cycling activity takes place on the road pavement in a dedicated bike lane designed for the activity or a lane shared with road traffic.	Not applicable to cycling activities. Cycling activities at this level to occur on the road pavement intermingled with traffic.	Not applicable to cycling activities. Cycling activities at this level to occur on the road pavement intermingled with traffic.
	4B Pedestrians allowed	No	No	No	No

† District as defined by the Local Government Act 1995

The City of South Perth's pathway network is yet to be classified into the above criteria. It is recommended that this be done in future versions of the Asset Management Plan.

The FPH forms the Classification or top layer of the asset hierarchy. The hierarchy is then further broken down into type and component;

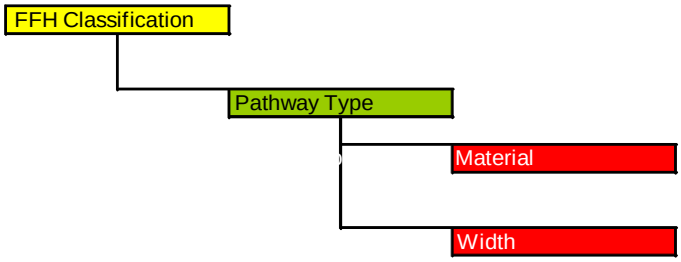


Figure 2: Asset Hierarchy Diagram

3 Physical Parameters

The City if South Perth is responsible for a network of 255.735km of pathway provided for cycling and pedestrian purposes. The network has an estimated renewal value of $28,391,726.

The prevalence of footpaths coincided with the increase in the popularity and speed of motor vehicles and the need to start to separate motor vehicles from pedestrians for safety and amenity reasons. By about the mid 50's (and possibly earlier) it was common practice for local governments to provide footpaths along main thoroughfares and some residential streets to improve amenity and safety for pedestrian.

Early pathways were generally constructed of 1 foot by 1 foot (600mm x 600mm) pre cast concrete paving slabs. Each slab was about 1½ inches (40mm) thick with slabs that were laid through driveways being up to 3 inches thick (75mm). Each slab could weigh up to 45kg each and were therefore difficult to transport and maneuver into place. The slabs were laid directly abutting each other on the natural sub-grade material that was cleared of topsoil vegetation and leveled. Little if any compaction was carried out before placement.

A slab footpath was easily constructed by a team of two people laying two slabs side by side (1,200mm wide) in a stretcher bond pattern (similar to brickwork) and hence construction methodology was low cost and simple. Slab paths are simple to add to in order to make wider or longer and a simple to deal with if utility companies need to dig up the verge/footpath to add or repair utilities after the footpath has been laid.

Due to the segmental nature of slab footpaths, the slabs themselves are prone to movement on Perth's coastal sand sub-grades. Sand is washed out from beneath slabs, tree roots push up slabs and grass grows in the joints between slabs. These issues and more lead slab footpaths to easily become uneven and consequently become a trip hazard to pedestrians.

In the 80's & 90's, cycling became more and more popular in Perth for recreation, sporting and commuting purposes. Prior to this, pathways were predominantly utilised

by and provided for pedestrians. The added function of cycling meant that the 2 foot (1,200mm) wide slab footpath was too narrow for shared use with pedestrians as to pass a pedestrian meant that the cyclist needed to deviate from the footpath.

Because of the weight of the slabs, and the manual nature in which they are laid, slab paths have been a significant contributor to manual handling injuries for local government workers. Add to this the propensity for slabs to become unlevel causing trip hazards and the fact that uneven slabs and grass growing in joints and the narrowness of the pathway make them unattractive for use by cyclists, local government looked to other alternatives for pathways.

Local governments generally adopted three alternatives for slab footpaths as follows;

1. In-situ Concrete – Paths usually comprise 20Mpa concrete formed up and poured on site. The pathway is usually 100mm think, not reinforced and laid on a compacted sub-grade of natural material. The width of the path is normally determined by the intended usage but ranges from 1.5m to 2.1m and can be much wider to seal whole verges or median islands. Concrete is usually poured in batches of 5m³ with a full depth expansion joint every 10 metres and a scribed contraction joint every 2m. The surface is usually floated smooth and given a broom finish to provide a non-slip surface.

   One of the benefits of in-situ concrete is that it can be coloured or stenciled and laid in any shape. In-situ concrete paths are usually used for pedestrian and shared use paths. One of the disadvantages relate to the contraction and expansion joints. If not installed with enough attention to detail, they can cause an annoying bump for cyclists and deter cyclists from using the path.

2. Asphaltic Cement – Paths usually comprise 25mm asphaltic cement (comprising 10mm stone) laid over a 100mm layer of compacted basalt or limestone. Whilst asphalt is usually black, for pathways it is usually coloured red and consist of lateritic stone rather than crushed basalt stone.

3. Brick Paving – In areas requiring greater aesthetic appeal (such as streetscape areas) segmental brick pavers are usually used. The City of South Perth also utilises brick paving to infill odd shaped areas where in-situ concrete paths meet kerb lines and other paths in order to avoid small areas of verge which are often difficult to maintain and to retain definition of the pathway.

The following summary information has been extracted from the City of South Perth's path data file entitled COSPPaths.xls dated 17/07/2002. Because of the age of the file it is somewhat out of date and appears to be incomplete as there are no Asphalt paths detailed in the plan and there are several asphalt paths along the foreshore. However these may not be under the care and control of the City of South Perth. Nonetheless for this first cut exercise, this data has been used as the basis for the pathway Asset Management Plan.

Construction Material	Length (m)	km	%	m²	Value/m²	Renewal Cost	%
Asphalt	6,875m	6.875kms	2.7%	15,040m²	$50.00	$751,975	2.6%
Spray Seal	308m	0.308kms	0.1%	701m²	$50.00	$35,050	0.1%
Brick Paving	6,642m	6.642kms	2.6%	19,582m²	$80.00	$1,566,527	5.5%
Concrete Slab	81,161m	81.161kms	31.7%	101,771m²	$50.00	$5,088,538	17.9%
Concrete (Insitu)	157,569m	157.569kms	61.6%	255,508m²	$80.00	$20,440,676	72.0%
Gravel	1,606m	1.606kms	0.6%	2,866m²	$40.00	$114,640	0.4%
Int Concrete Brick	1,574m	1.574kms	0.6%	4,929m²	$80.00	$394,320	1.4%
Total	**255,735m**	**255.735kms**	**100.0%**	**400,396m²**		**$28,391,726**	**100.0%**

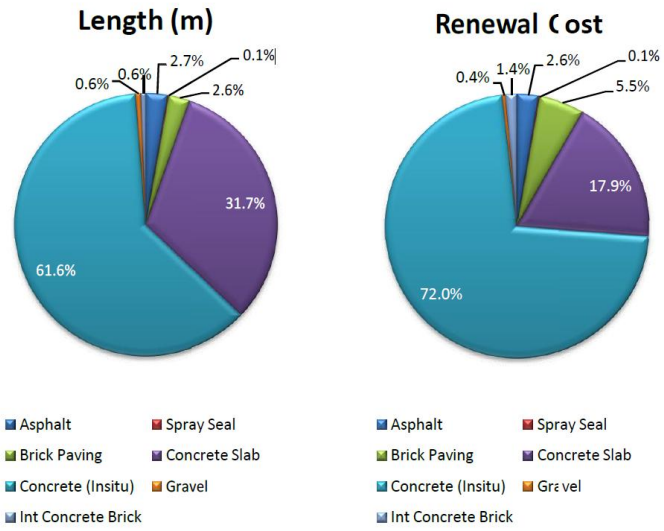
Table 1: Pathways Classified by Construction Material

The following graphs show the extent in terms of percentage that each construction material makes up the total network based on length and renewal cost.

Hierarchy – The pathway data in the COSPaths.xls spreadsheet is not classified into hierarchy. It will be easier to do this if there is some form of spatial analysis done, hence for this version of the asset management plan, the data has not been classified by hierarchy. It is recommended that this be done in future versions of the plan.

Another issue with this data is that it is very hard to verify as it is not relational (not contained within a database) and does not have any spatial aspect to it. It is recommended that the data be input to a relational database and include spatial attributes so that the network can be overlaid the digital aerial photography in a GIS and the data audited. Once this is complete, field condition data should be collected to update the model.

Concrete and brick paving infills within median islands should also be added to the database.



Graph 1 – Pathway Network Percentages by Material & Value

4 LEVELS OF SERVICE

This section details the methodology used to provide an example of Levels of Service that the City could set out to achieve and provide.

The Levels of Service measures also allow the City to ensure that its cycling and Pedestrian Pathways are fit for purpose and provided at an efficient cost. As such, it is important to ensure that the Service Levels reflect the City's Strategic Community Plan 2013 - 2023 outcomes and funding allocated in the respective Annual Budget.

By considering the City's objectives and values, particularly focusing on those which conflict or appear frequently, two sets of high level service levels were created:

- Community Levels of Service; and
- Technical Levels of Service.

Community Levels of Service - relate to the service outcomes that the community wants in terms of safety, quality, quantity, reliability, responsiveness, cost effectiveness and legislative compliance.

Community levels of service measures used in the AMP are:

- Function Does it meet users' needs?
- Safety Is the service safe?
- Quality How good is the service?

Technical Levels of Service - Supporting the community levels of service are operational or technical measures of performance. These technical measures relate to the allocation of resources to service activities that the council undertakes to best achieve the desired community outcomes:

- Technical service measures are linked to annual budgets covering:
- Operations – the regular activities to provide services (e.g. condition inspections);
- Maintenance – the activities necessary to retain an assets as near as practicable to its original condition (e.g. repair of an asset);
- Renewal – the activities that return the service capability of an asset up to that which it had originally (e.g. asset replacement); and
- Upgrade – the activities to provide a higher level of service (e.g. additional assets within a public open space) or a new service that did not exist previously (e.g. a new park bench).

5 Key Asset Information

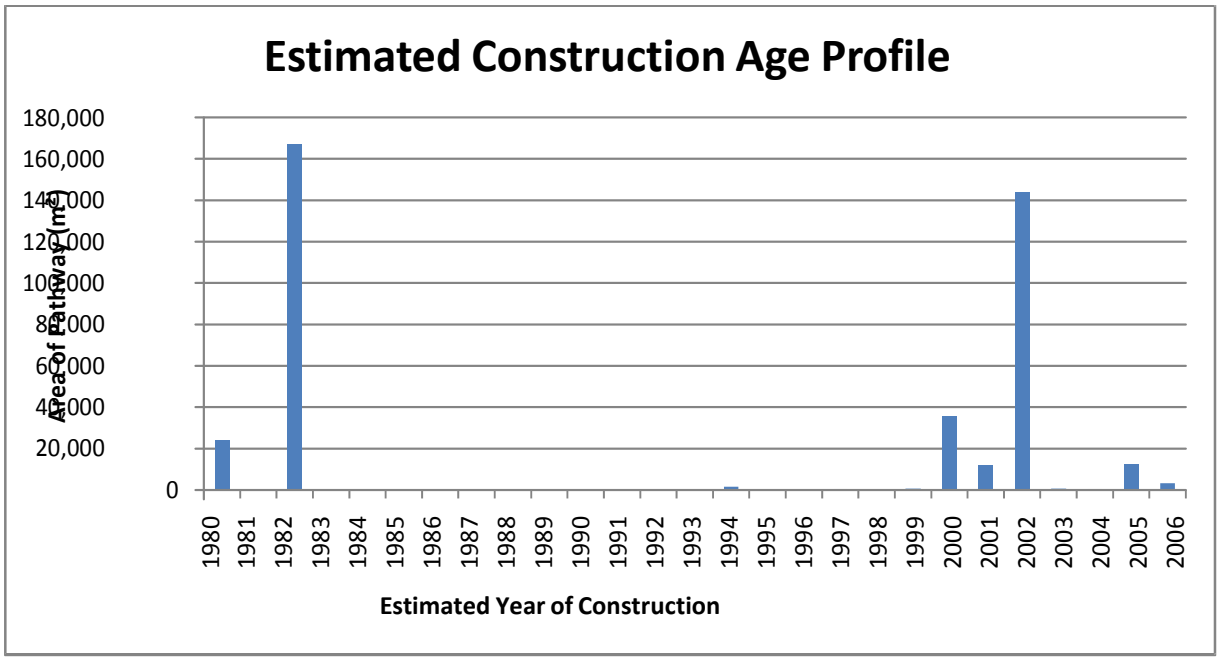
Key Asset Information focuses on the overall age and condition profile of the asset, based on its general performance, known condition and age.

Age and Condition Profile

The Infrastructure Services department is responsible for the overall management of the City's pathway assets.

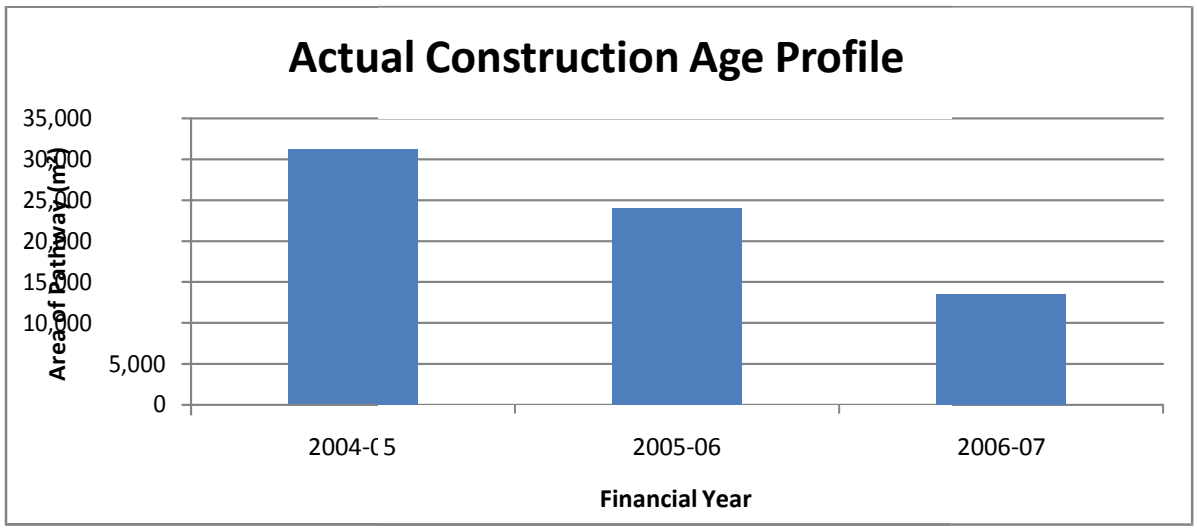
The Asset Co-ordinator is responsible for compiling asset information in relation to the pathway network. To date, this information has been stored in a Microsoft Access database called “footpaths.mdb”.

The database includes path age and condition data. However in the majority of cases path age is not known and so the database contains an estimated age field. Age estimates contained within the database are as follows;



Graph 2: - Estimated Construction Age Profile

It is clear from the information contained in Graph 6 that age estimation is of little value. The footpath database was created in February 2005 and since that time the City of South Perth has kept records of actual construction dates. To date 68,695m² of pathway out of 400,650m² of pathway (17.15%) has actual construction age information associated with the path. This information will be very valuable in the future to assist the City in monitoring construction materials and make accurate estimates of asset lives.



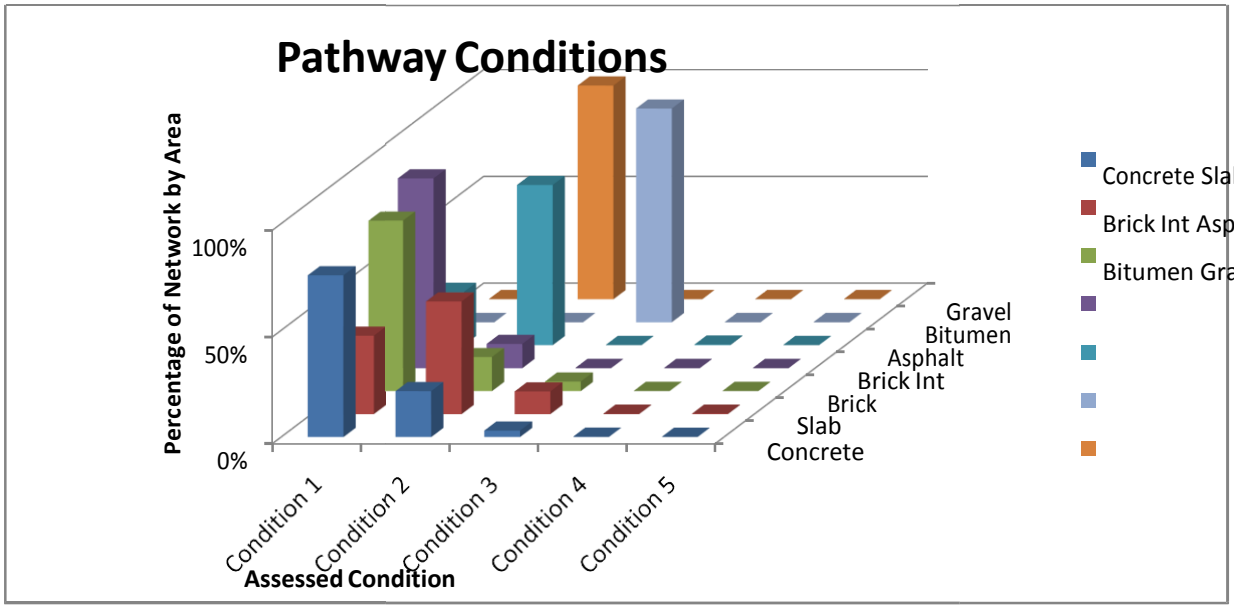
Graph 3: Actual Construction Age Profile

The methodology used to date by the City of South Perth to establish condition of the pathway network has been to score each path section with a score of 1 to 5.

Analysis of condition ratings in the footpath.mdb database shows that the condition rating is very rough and does not necessarily provide a realistic condition distribution.

Code	Material	Conditi n 1	Condition 2	Condition 3	Condition 4	Condition 5	Total
FCO	Concrete	76%	21%	3%	0%	0%	**100%**
FCE	Slab	37%	53%	10%	0%	0%	**100%**
FBR	Brick	80%	16%	4%	0%	0%	**100%**
FIN	Brick Int	89%	11%	0%	0%	0%	**100%**
FAS	Asphalt	25%	75%	0%	0%	0%	**100%**
FBI	Bitumen	0%	0%	100%	0%	0%	**100%**
FGR	Gravel	0%	100%	0%	0%	0%	**100%**

Table 2: Average Condition & Standard Deviation for each material type



Graph 4: Path Condition Profile by Constructed Material based on a 1 – 5 rating scale

6 Asset Condition

Pathways have a range of factors that influence their usability. From an asset management perspective, the various factors fall into one of the following groups:

- Fitness for Use
- Fitness for Purpose

Fitness for Use is a measure of a pathway's physical condition relative to its condition when first constructed or refurbished. This measurement takes account of the current condition of the physical integrity of the path. Future condition assessments should be based on fitness for Use. It is recommended that future condition assessments are based on the following assessment criteria using a standard scale of 0 -10, where 0 = new and 10 = total deterioration. Examples of these conditions are set out below.

CONDITION RATING	DEFINITION
0	New pathway or component recently rehabilitated to new condition.
1	As New Condition, No Visible signs of wear and tear or defects.
2	In excellent condition with only very slight condition decline (obvious no longer new).
3	In very good condition with some early signs of wear and tear commensurate with age and
4	In good condition with some obvious signs of wear and tear but no evidence of deterioration.
5	In fair condition, minor evidence of deterioration of the element which could potentially
6	In fair to poor condition with significant evidence of deterioration of the element which could lead to failure
7	In poor condition with evidence of minor isolated failure which will reduce future life, maintenance costs high.
8	In very poor condition with evidence of multiple failures and the inability to continue to satisfactorily provide the original intended purpose.
9	In extremely poor condition with significant evidence of failure of the element and failure to provide design purpose.
10	Total failure, extreme risk in leaving asset in service.

Table 3: Condition Rating Definitions

The following are some examples of pathway condition in the latter phases of the path's life.

Condition 6

Figure 3: Examples of Condition 6 Pathways

The above photographs show pathways constructed of different material types where their deterioration is now becoming quite obvious. They are at a stage where their serviceability is starting to become limited with increasing maintenance costs.

Condition 7

Figure 4: Examples of Condition 7 Pathways

The above photographs show pathways with significant problems that are at the point where intervention is required otherwise injury could be caused to uses due to tripping hazards. This deterioration would be starting to limit the serviceability of the path with maintenance costs becoming high.

Condition 8

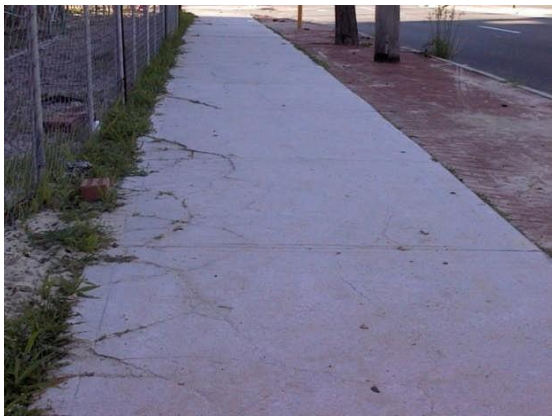


Figure 5: Examples of Condition 8 Pathways

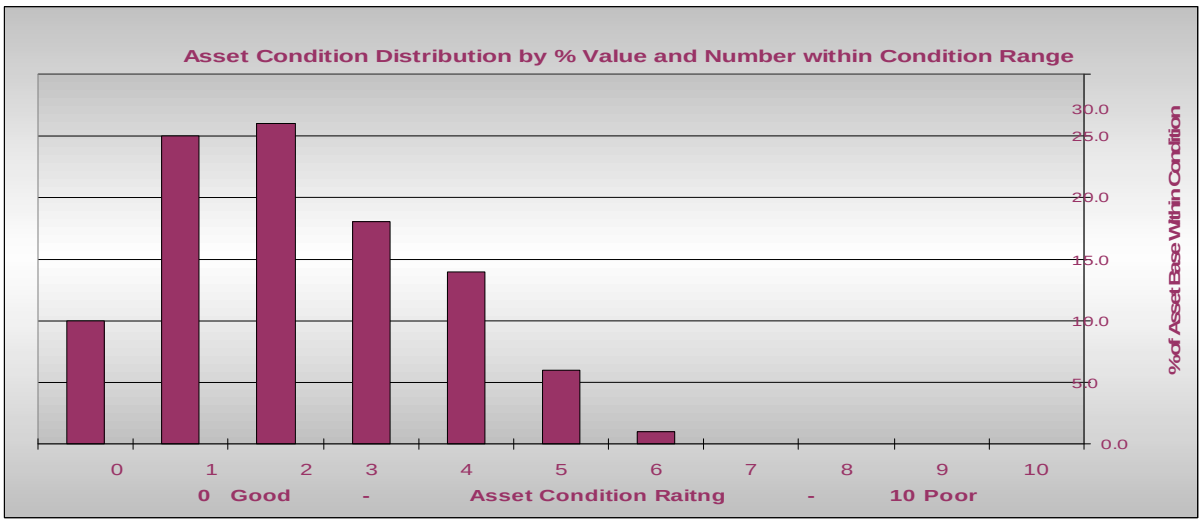
The above paths are affected by age or poor ground conditions. The paths are in very poor overall condition with their serviceability being heavily impacted and structural integrity being compromised. Maintenance costs would be very high. The path would be at a point where its complete renewal would be considered.

Fitness for Purpose is a measure of a path's match to its current or intended use. It considers the minimum feature set required and additional features desirable to enhance the usability of a pathway. Fitness for Purpose is tied to the use of a pathway rather than the asset itself and takes account of changing requirements for different features over time. In terms of Fitness for Purpose, a pathway initially fit for its intended purpose may cease to be so as standards and expectations change. Determination of a pathways fitness for purpose has not been considered, but will be developed in future revisions of this plan.

6.1 Current Condition

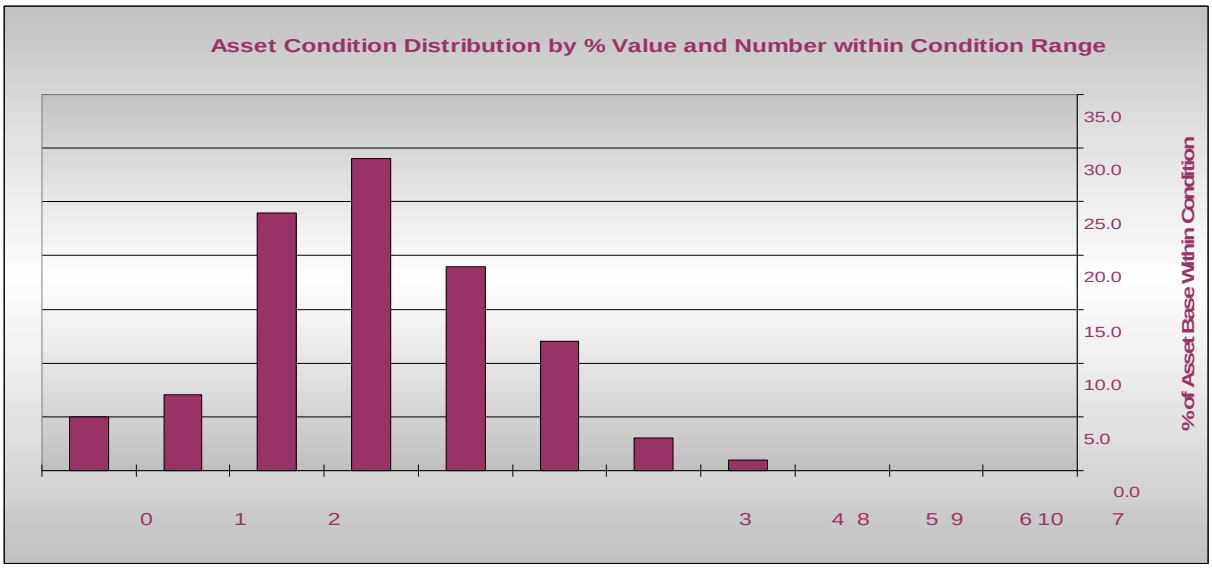
The condition data compiled to date is not considered to be detailed enough to be used for the modelling exercise, therefore default condition profiles from the Moloney Renewal Model have been used. Refer to Graphs 9 & 10.

The default distribution based on the "Very Good" condition distribution contained with the Moloney Renewal Model has been used for In-situ concrete paths and brick paving paths, as follows:



Graph 5: Default "Very Good" Condition profile used for In-situ Concrete & Brick Paved Paths

The default distribution based on the “Good” condition distribution has been used for slab footpaths as follows;



Graph 6: Default “Good” Condition profile used for Slab paths

7 Asset Valuations

The footpath database contains valuation information, however it is considered to be not based on a full renewal basis. The unit rates contained with the database are as follows;

Paths_Costings						
AssetItem	AssetType	TypeCode	Units	Cost	Date of Costing	EffectLife
FOOTPATH	Asphalt	FAS	M2	48	14-Jun-07	40
FOOTPATH	Bituminous Seal	FBI	M2	46	14-Jun-07	20
FOOTPATH	Brick Paving	FBR	M2	59	14-Jun-07	40
FOOTPATH	Cement Slabs	FCE	M2	35	14-Jun-07	20
FOOTPATH	In-Situ Concrete	FCO	M2	39.5	14-Jun-07	40
FOOTPATH	Gravel	FGR	M2	18.08	14-Jun-07	10
FOOTPATH	Interlocking Concrete Block	FIN	M2	53	14-Jun-07	40

Table 4: Unit Rates from the Footpath.mdb database

For this exercise the unit rates and renewal estimates used are shown in Table 16.

Useful life is used to determine the current value of the asset. The following lifecycles are based on the IPWEA's "International Infrastructure Management Manual" (2006) but adjusted to better reflect the local environment of the City of South Perth. Limited information on each pathway's remaining useful life is available. This will be addressed in future versions of the Asset Management plan as resources and data collection methods become available.

The figures quoted provide a basis for future allocation of useful life for all elements of the pathways.

Pathway Material	Type	Years/Life
Slab Pathways		60 years
In-Situ Concrete Pathways		80 years
Brick Paved Pathways		40 years
Asphalt Pathways		15 years
Spray Seal Pathways		15 years

Table 5: Estimated Full Life of Pathways based on construction material

8 Operations & Maintenance

8.1 Operations and Maintenance Strategy

Currently the City has no formalised long term strategy for the ongoing maintenance and renewal of its pathways or a capital evaluation process to assess need and whole of life costs of capital projects. That is not to say that the City of South Perth does not direct significant effort and resources toward providing and maintaining pathways.

In order to address the funding shortfall in maintenance, it is recommended that a long term maintenance strategy be developed and adopted by Council.

A maintenance strategy will:

- describe the systems and procedures to be used to plan and manage maintenance work
- specify the types of maintenance to be carried out.
- establish the order of priority for maintenance activitie.
- nominate the means of resourcing and implementing maintenance.

8.2 Maintenance Activities

Some examples of typical maintenance activities undertaken in relation to pathways are listed in the table below:

Activity	Frequency
Relay uneven slabs	When required
Carry out edge grinding	When required
Remark line marking	When required

Table 6: Typical Maintenance Activities and Frequency

The maintenance activities for pathways, along with factors that govern or influence them, are:

- Reactive (unplanned) maintenance activities. This is governed by the urgency of what is required.
- Planned (scheduled) maintenance activities. These are generally more extensive repairs that are undertaken as part of a program of works to either prevent damage to pathways or bring pathways up to an acceptable condition. The extent of this program largely depends on funding allocations.
- Backlog maintenance activities. This refers to an accumulation of uncorrected or deferred deficiencies in an asset. This is governed by available funding and any future plans for a particular asset.

Reactive work includes the repair or replacement of damaged path sections. By its nature, reactive work must be carried out as the need arises and cannot be scheduled in advance (however a significant proportion can be reduced by regular

inspection and forward planning for replacement ahead of failure).

Work is prioritised as it arises on the basis of defined intervention levels and response times. The intervention level defines the condition, state or risk level associated with an asset component, i.e. the point in time at which the asset is considered to be below an acceptable level of service. Response time defines a reasonable time frame within which it can be expected for Council to remedy the defect. For example, the maintenance strategy may define the maintenance framework and response times as follows:

"As part of its level of service definitions, all identified hazards/defects will be addressed as follows:

- *Extreme risk: immediate*
- *High risk: within 24 hour*
- *Medium risk: within 5 working*
- *Low risk: within routine procedures"*

9 Renewals & Replacements

Rehabilitation and renewal is the outlay in an asset to maintain the current level of service by reinstating its original life. Typical pathway renewal works include replacement of existing sections of path or pathway related facilities such as signed, barriers, bike stands, bike lockers etc.

The City of South Perth carries out a significant amount of renewal and upgrade in relation pathways. This is mainly in relation to slab paths. The City has a program of replacing slab paths with in-situ concrete paths. The replacement of the slab path is considered to be renewal. The new in-situ concrete path is wider (usually a minimum of 1.5m compared to 1.2m for the slab path) than the slap path and is of a higher construction standard, hence there is an element of upgrade to this work.

It is recommended that the City of South Perth document its slab pathway upgrade and renewal program at this section of the Asset Management Plan.

Component	Retreatment Intervention Condition Level (RICL)
In-situ Concrete Pathways	7
Slab Pathways	7
Asphalt & Spray Sealed Pathways	7
Brick Paved Pathways	7

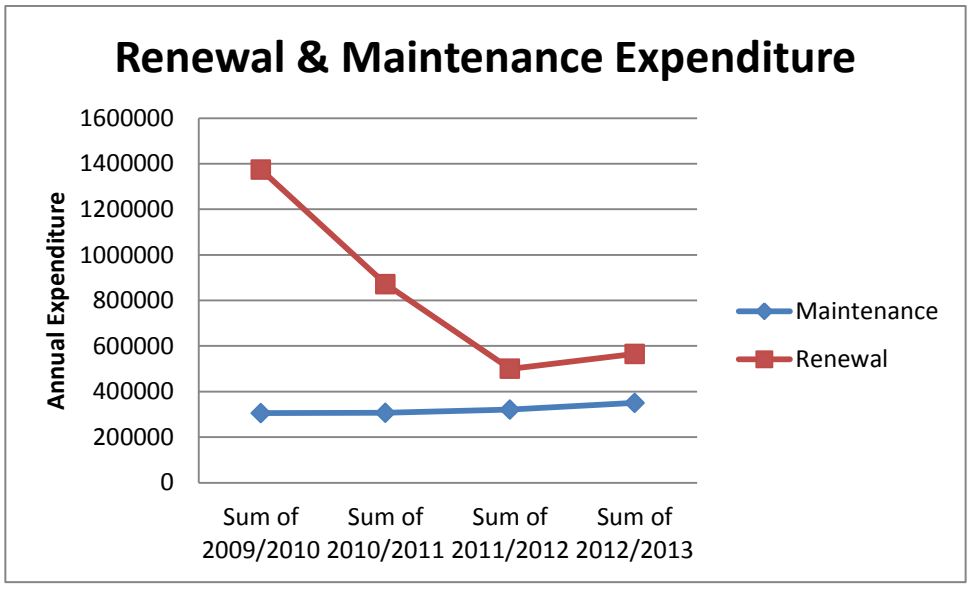
Table 7: RICL's for Pathway Asset Sets

For instance, once a slab pathway deteriorates to condition 7, the model allocates sufficient expenditure to restore the structure to a condition of 0(new). On this basis the Moloney model has calculated a 20 year predicted expenditure model that ensures that no part of the pathway network falls below the nominated RICL over the 20 year period. The 20 year capital expenditure requirement is as follows:

The City of South Perth's renewal and maintenance expenditure over the past four years has been as follows:

Year	Renewal	Maintenance
2009/10	$1,373,696	$305,295
2010/11	$871,311	$306,832
2011/12	$499,761	$320,753
2012/13	$565,000	$350,000
Average	**$827,442**	**$320,720**

Table 8: ***Annual Renewal & Maintenance Budget Allocation for Pathways***



Graph 7: ***Annual Budget allocation for Renewal & Maintenance Expenditure over the past 4 years***

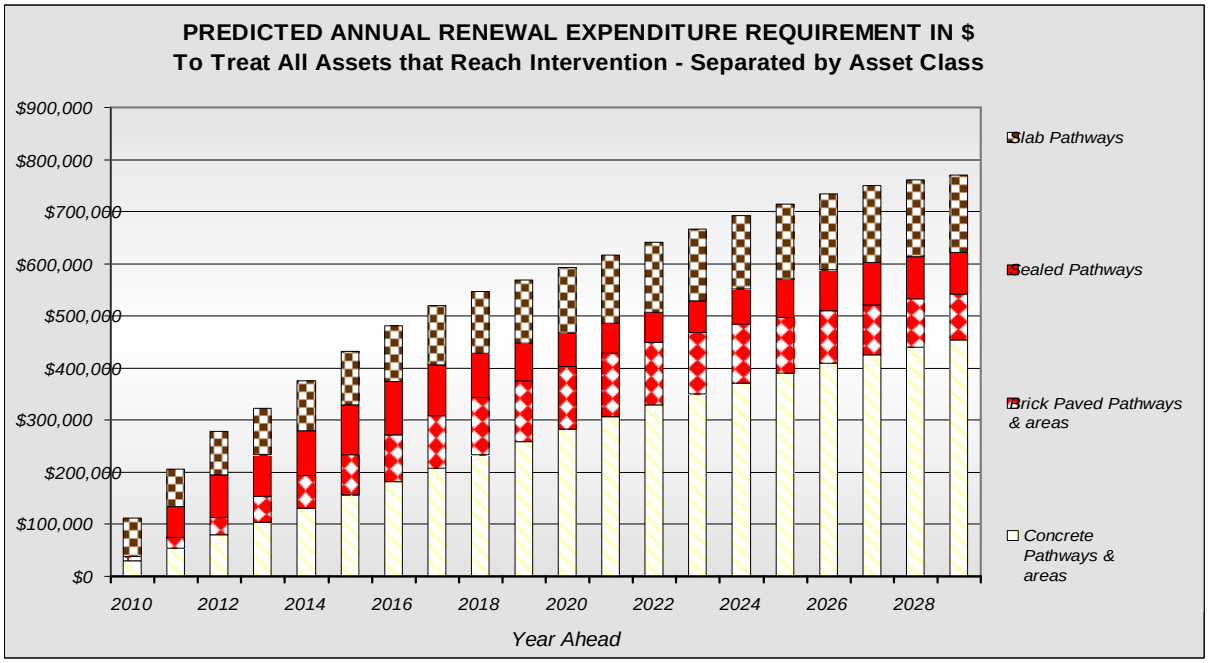
A summary of pathway data is as follows;

Asset Set No.	**18**	**19**	**20**	**21**
% of the Required Exp Being Met	131	30	41	181
Av Unit Renewal Cost $	$80.0	$80.0	$48.5	$50.0
Asset Group	Pathway Group	Pathway Group	Pathway Group	Pathway Group
Asset Set Description	Concrete Pathways & areas	Brick Paved Pathways & areas	Sealed Pathways	Slab Pathways
Asset Quantity	255,508	24,511	18,607	101,771
Units	sqm	sqm	sqm	sqm
Total Asset Group Renewal Cost $	$20,440,676	$1,960,847	$901,665	$5,088,538
Annual Renewal Exp.	$446,134	$23,262	$24,885	$229,796
Annual Maintenance Exp.	$181,011	$9,438	$10,097	$93,236
Retreat. Intervention Condition	**7.0**	**7.0**	**7.0**	**7.0**
Return Cond after Renewal	0	0	0	0
Life to Condition 10 in Years	**60.0**	**25.0**	**15.0**	**40.0**
Life in years to Intervention Level	49.2	20.5	93.0	37.6

Table 9: Summary of data used in the Moloney Renewal Model

The City of South Perth currently budgets an average of $724,077 per annum on footpath renewal. The budget is not specific as to the allocation of these funds against slab, in-situ concrete, brick paved or asphalt seal paths. It is thought that the majority of this funding is directed toward the replacement of slab footpaths with in-situ concrete footpaths in order to reduce the safety & health risk exposure to the Council.

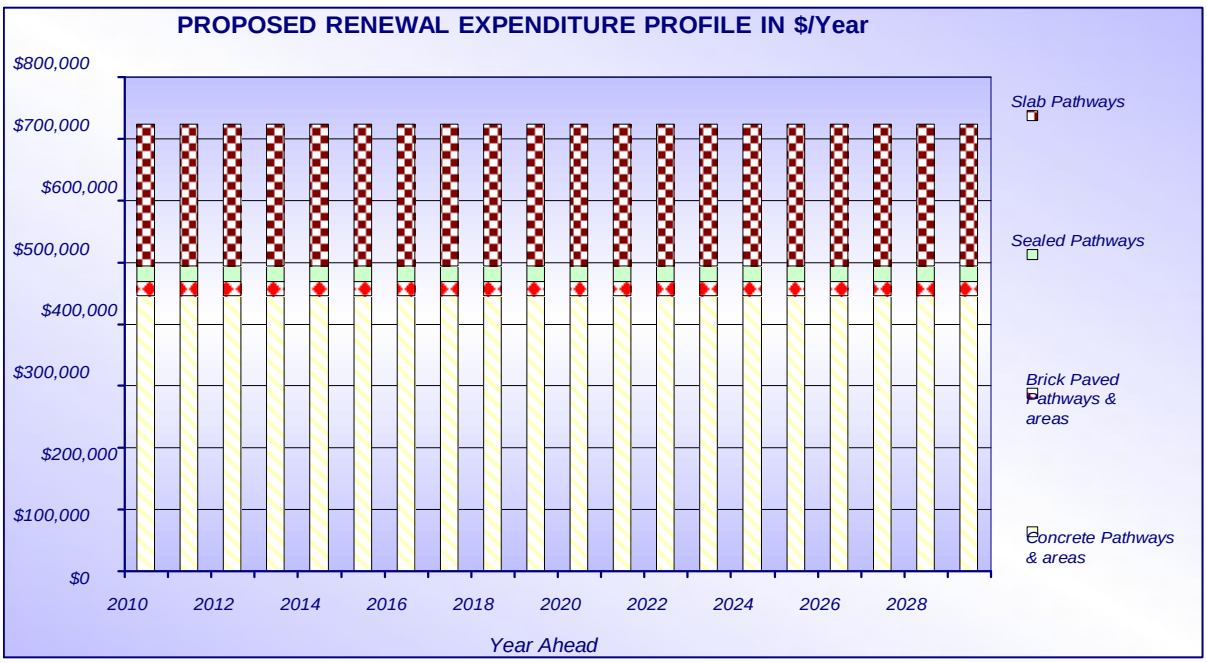
This is something the City of South Perth should refine over the coming years so that accurate renewal modeling can be carried out. For this exercise the $724k has been allocated across the pathway asset set based on percentage of network by length (see Table 16).



Graph 8: Predicted Annual Demand over 20 years

The above graph estimates the capital requirements, for the retention of all identified pathway assets, for the next 20 years. The graph demonstrates the long term demand for funds to renew pathway if they are all to be retained in the long term, based on the nominated rehabilitation intervention values (see table 22). The predicted expenditure demand for Year 1 is $111,861 rising to $769,782 in Year 20.

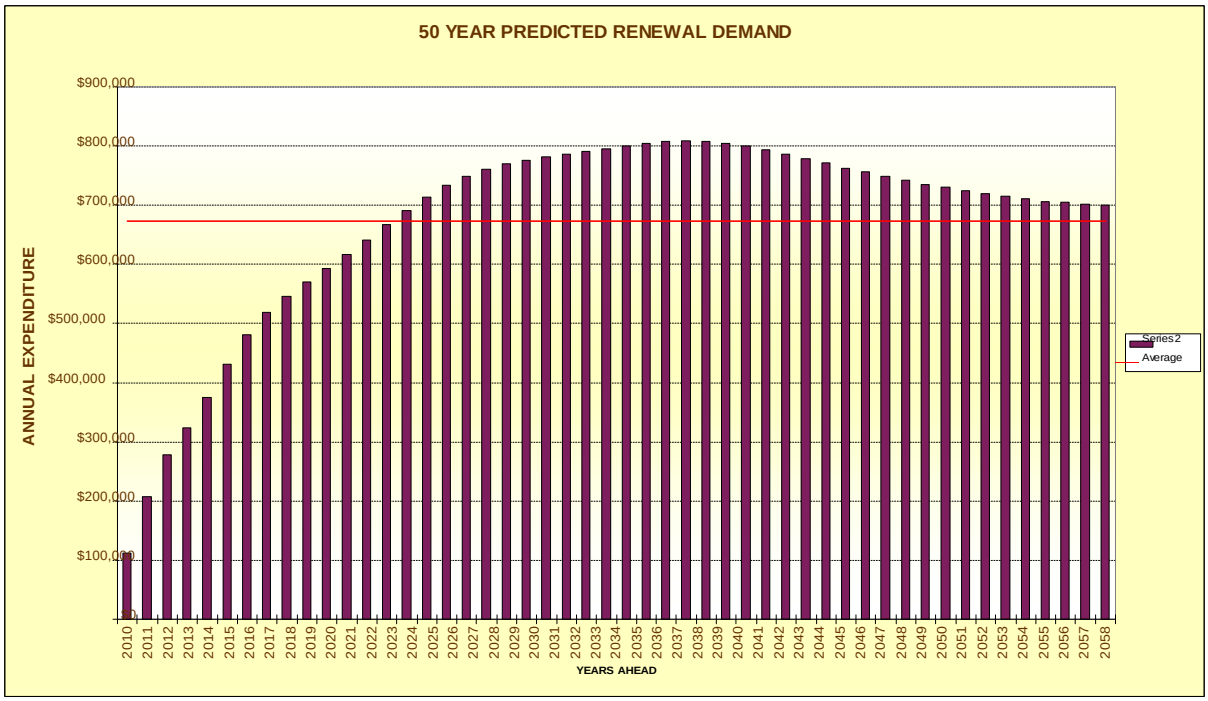
Council is currently spending an average (over the past four years) of $724,077 per annum on renewal. The following graph extrapolates the current average allocation of asset renewal expenditure.



Graph 9: Current Average Renewal Expenditure

Note that the City of South Perth does not track renewal expenditure against pathway construction material type. The percentage breakup used (shown in the table 24) in the modelling is based on network percentage by length of each material type. This breakup should not be relied upon and it is recommended that the City of South Perth commence tracking this information in order to refine the modelling.

In this instance the annual demand does not peak before year 20, therefore a longer timeframe needs to be considered. The following graph shows the renewal demand for pathways over a 50 year period.



Graph 10: Predicted Renewal Demand for Combined Pathways for the next 50 years

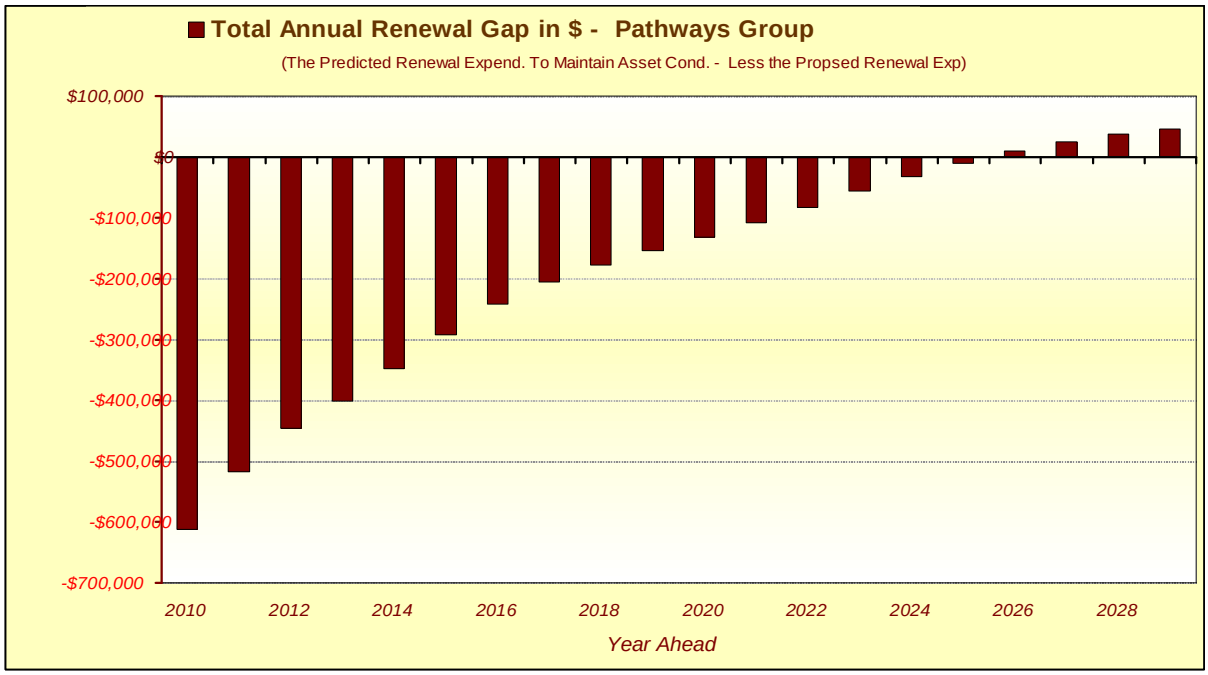
The above graph shows renewal demand for paths peaking in 2038 at $809k per year and then settling to an average of $672,732 per year. Therefore the current average level of expenditure on pathways is $51k greater than the long term average.

Renewal expenditure is currently significantly higher than it needs to be, particularly in the short to medium term. It is understood that this is mainly due to the City's long term program of replacing concrete slab pathways with in-situ concrete pathways. This has the effect of improving the overall condition of the network and pushing back future demand for renewal.

Once this program is complete, significant funds may be able to be utilised elsewhere, for example building renewal, until the renewal demand in relation to pathways once again increases to levels equivalent to what is currently being spend annually.

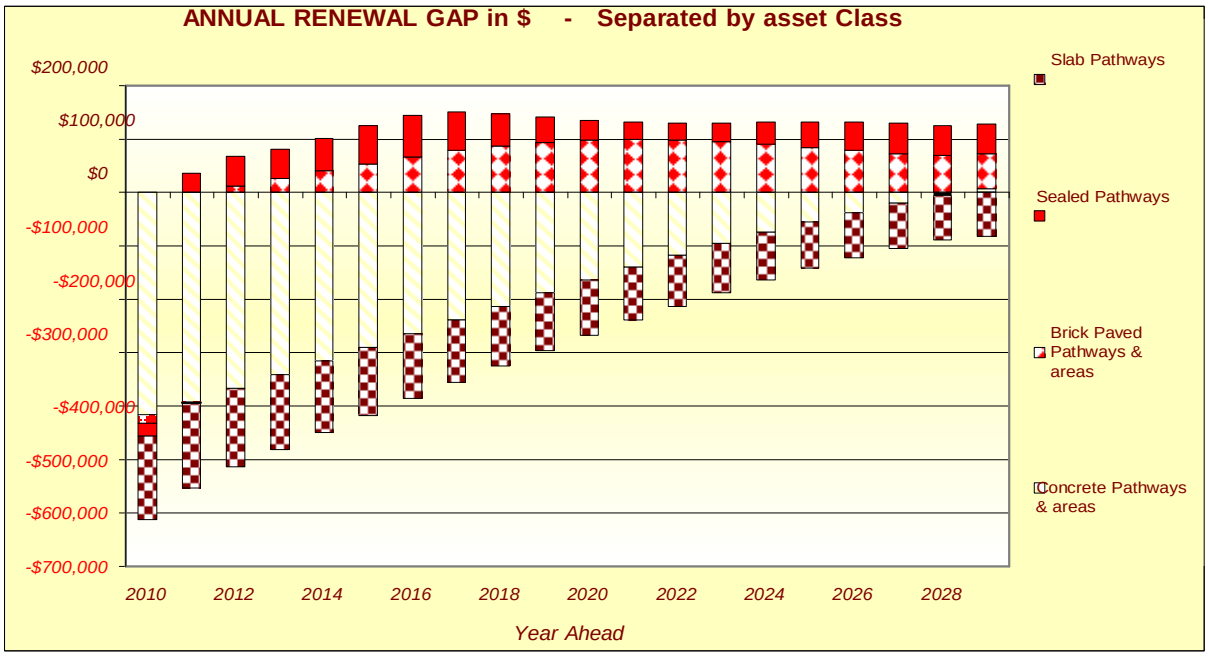
It is recommended that the City continually update this model and monitor renewal demand vs actual expenditure. It may be that following a condition audit of pathways, renewal of the better condition slab pathways can be delayed in order to free up funds to spend in an area of greater demand.

The following graph shows the annual renewal funding gap over the 20 year modelling period.



Graph 11: Predicted Funding Gap over 20 Years (Combined Pathways)

The predicted renewal requirement for year one (1) of the model is an overspend of $612,216. Council is currently spending (on average) $724,077/annum on renewal.

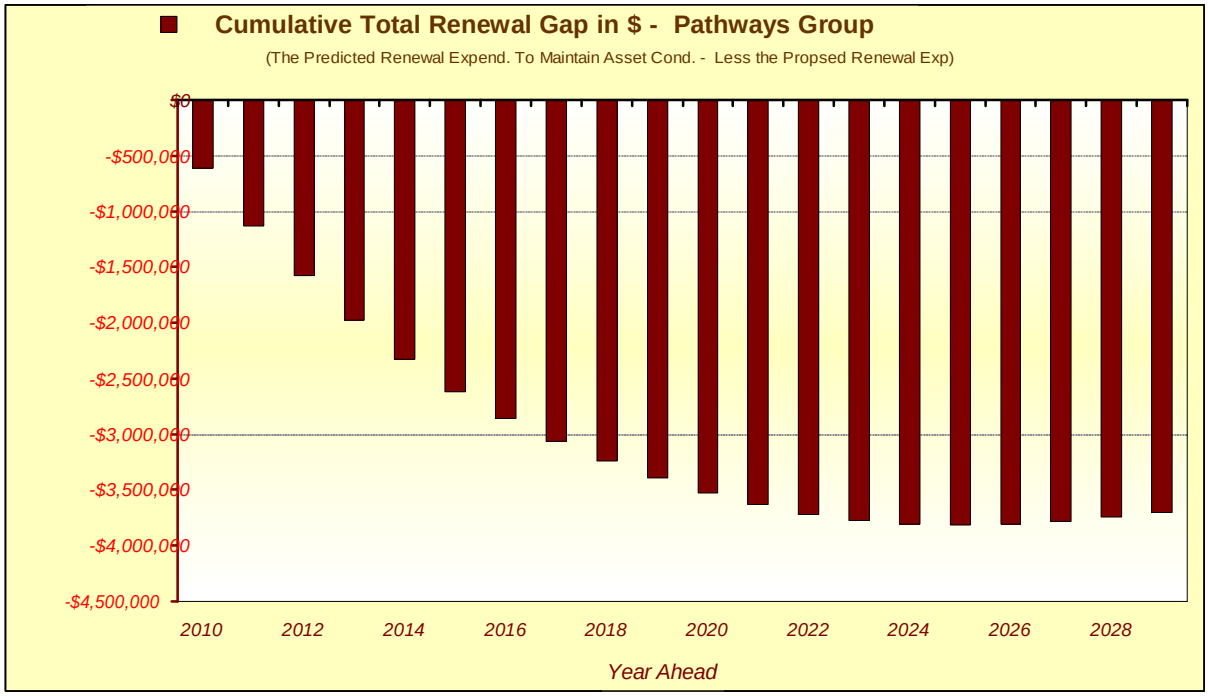


Graph 12: Predicted Funding Gap over 20 Years (Separated by Pathway Type)

When separated into asset classes, it can be seen that there is presently an overspend on insitu-concrete paths and slab paths, however an underspend on sealed paths and brick paved paths. The accuracy of this is based on the accuracy of the allocation of renewal expenditure across asset classes (Table 24).

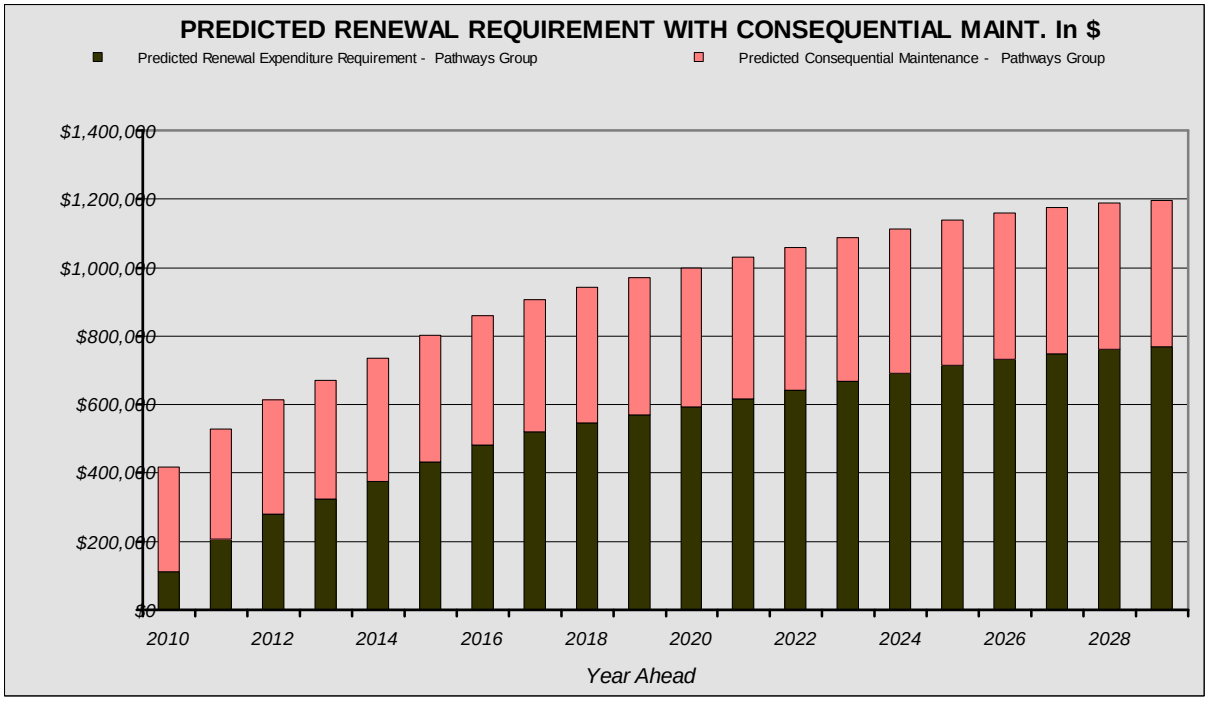
The cumulative renewal gap for combined pathways is $3,700,414 over 20 years. Hence there is an opportunity to reduce (on average) $185k per year on pathway renewal.

The following graph shows the cumulative renewal gap over the 20 year modelling period.



Graph 13: Cumulative Funding Gap Over 20 Years (Combined Pathways)

Cumulative Consequential maintenance over 20 years is predicted to be $6,013,023. This equates to an average maintenance expenditure of $300,653. The current average maintenance expenditure (from Table 23) $293,782, which is near enough equivalent to what is predicted to be needed. Hence annual maintenance expenditure should remain about the same.

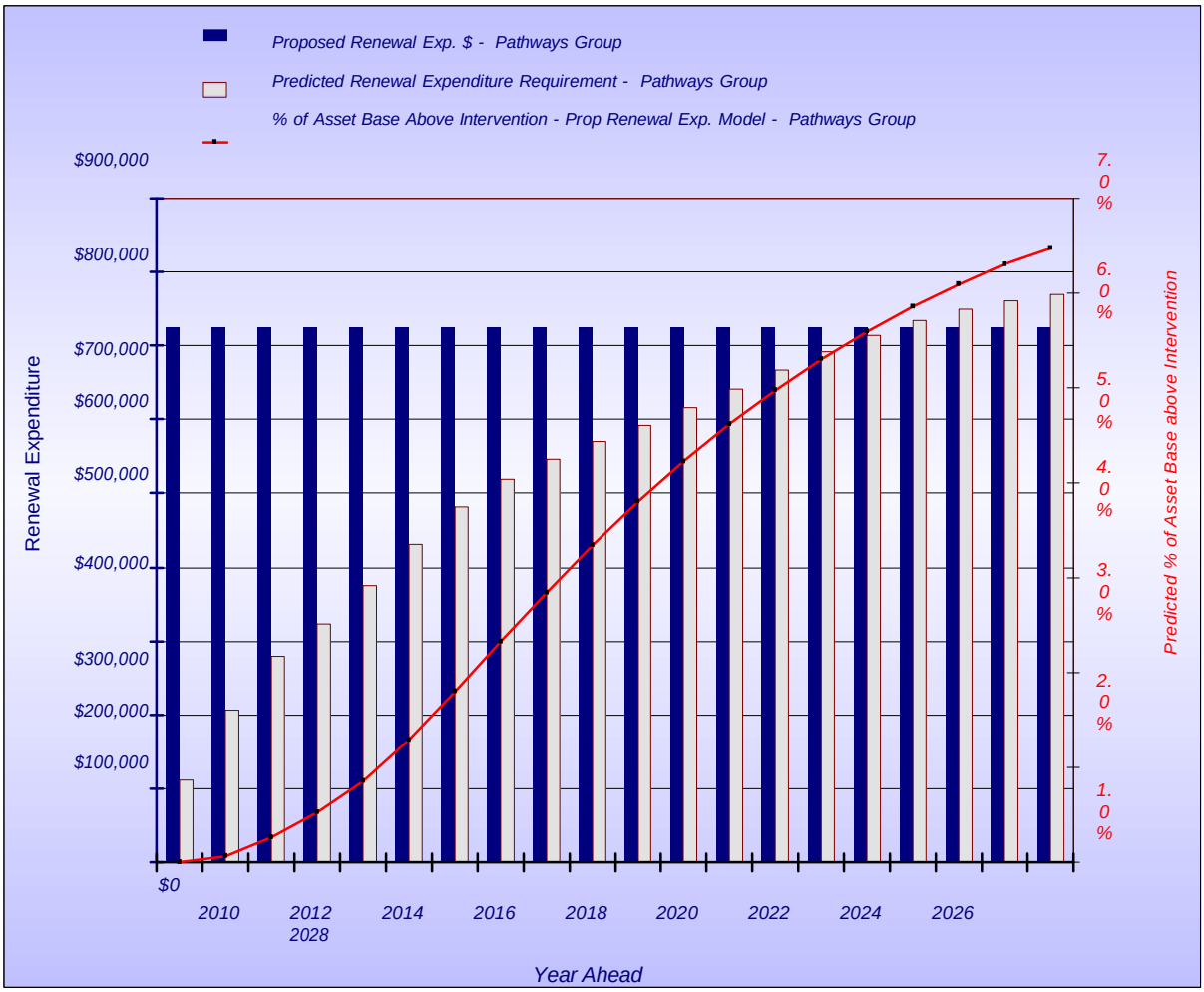


Graph 14: Predicted Renewal Demand and Consequential Maintenance Demand over 20 Years

If current expenditure levels remain the same it can be expected that just under 6.5% of the pathway network will fall to a condition worse than 7 within 20 years (see Graph 16). This may appear odd given that total expenditure on the pathway network in the first 20 years is greater than required. However it is because expenditure on the prick paving and sealed part of the network is less than the predicted demand (see Graph 13). This may be inaccurate because of the arbitrary way the expenditure was allocated in Table 24.

If this figure proves to be accurate, this would mean that on average 6.5% of the network will constantly be in a very poor state of repair requiring significantly more funds (based on an indicative 40%pa increase in maintenance costs) than would have been needed to renew the pathway at the correct time in the first place.

This not only means that the capital expenditure required to renew will ever accumulate, but maintenance activities will become more costly and may possibly out-weigh any benefit of any short term cost saving; the latter being known as "consequential maintenance". The next graph presents proposed vs predicted renewal requirement and consequential maintenance, graphed against the percentage of assets above their intended RICL.



Graph 15: Renewal Demand vs. Current Renewal Allocation and showing % outside Intervention

10 Funding Capacity

This section has not been considered in this "First Cut" AM Plan and will be developed in future plans.

11 Funding Options & Strategy

This section has not been considered in this "First Cut" AM Plan and will be developed in future plans.

12 Improvement Recommendations

A summary of the recommendations made within this Plan, are listed in order of importance. Each recommendation is explained in further detail in its respective section of this Plan:

Recommendation 1:
The pathway network be classified into the functional pathway hierarchy.

Recommendation 2:
The City of South Perth undertake a consultation process with the community to determine the value the community places on its cycling and pedestrian pathway assets and the services they deliver. The results of the community consultation process be assessed and developed to influence levels of service for each FPH classification.

Recommendation 3:
The Asset Management Working Group develops performance criteria for pathway assets.

Recommendation 4:
Categorise pathways according to performance criteria:

- Undertake performance measuring in accordance with key principles.
- Ensure outcomes of performance assessments are reported to Council and used to develop maintenance schedules and set budget requirements.

Recommendation 5:
Develop a Maintenance Strategy outlining the strategies and actions for the ongoing maintenance of pathways.

Recommendation 6:
Develop a Rehabilitation and Renewal Plan outlining the strategies and actions for the rehabilitation and renewal of assets.

Recommendation 7:
Develop a Capital Evaluation Process to assess the viability of upgrades to existing or acquisitions of new assets.

Recommendation 8:
Document the slab pathway upgrade and renewal program.

Recommendation 9:
Develop an Asset Disposal Strategy incorporating key principles.

Recommendation 10:
Track renewal and maintenance expenditure against path construction material type.

Recommendation 11:
Formalise roles and responsibilities in regards to asset lifecycle.

Recommendation 12:
Undertake regular customer satisfaction surveys to ensure the City maintains accurate and up to date information from the community.

Recommendation 13:
Devise strategies to rationalize pathways that may not be aligned to core business activities or are surplus to requirements.

Recommendation 14:
Implement a process by which the cost of new, renewal, upgrade or major maintenance activities are captured and included within the Footpath database.

Recommendation 15:
Annually inspect assets where the current condition is within 1 level of the RCIL.

Public Open Space

Asset Management Plan

City of South Perth

Version 1

June 2013

Date: 18 June 2013

Version: 1.0

Approved for Release By: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
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City of South Perth

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Time Period of the Plan:	The AMP covers a 10 year period.
Asset Management Plan Review Date:	This Asset Management Plan will be reviewed during annual budget preparation but will be amended in line with the Strategic Community Plan.

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EXECUTIVE SUMMARY

Context

This Asset Management Plan (AMP) is concerned with public open space (POS). The POS AMP (Plan) has been compiled to comply with Local Government regulatory requirements including the Integrated Planning and Reporting requirements, and to demonstrate The City of South Perth's (The City) responsible management of assets (and services provided from these assets).

The City provides a Parks and Reserves network in partnership with The Government of Western Australia and the Swan River Trust to sustainably maintain, protect and enhance the City's unique and recognisable character in its parks, streetscapes, buildings, recreational and natural areas with a quality, efficient and cost effective service.

The Plan has 27 POS asset categories which includes; playground equipment, park furniture, hardscape, reticulation, lighting, softscape and structures.

The Plan collates current public open space valuation, income and expenditure data, and compares it with the asset stock's long term funding needs (that are required to provide an agreed and sustainable Level of Service).

The Plan investigates whether Council's current level of asset operational, maintenance and renewal funding are sufficient to sustain the assets at a standard that will be acceptable to both asset owners and users.

This is the first AMP that has been prepared for the City's POS. As such whilst this Plan is comprehensive, it can also be considered as a "first cut plan" which will require ongoing refinement. Much of the data upon which this AMP is based is somewhat low in confidence with a number of improvement actions which have been identified.

What does it Cost?

The City is responsible for a total of 2747 public open space assets within 74 public open space sites and the total POS Current Replacement Cost (CRC) as at 30 June 2012 is valued to be approximately $29,222,944.

Managing the Risks

Analysis of the future demand influences show that the City's POS assets will increase over the 10 year period of this AMP. As time goes by many public open spaces will require remediation or refurbishment to meet contemporary needs and expectations, and to preserve their asset value.

This will require further investigation and better long term planning in order to understand what can be provided going forward. However, there are gaps in the City's current knowledge of its public open spaces' and some of the key risks currently are:

- No individual CRC values for assets;
- No formalised maintenance management regime for public open spaces; and
- Limited long term renewal programme.

The Next Steps

There is a number of improvement actions listed at the end of this AMP, some of the key actions over the short term resulting from this AMP are to:

- Develop a spatial inventory database;
- Improve the accuracy of future financial forecasts through tracking operation, maintenance, renewal, new and upgrade costs.
- Develop individual CRC values for each POS asset;
- Prepare a long term public open space renewal programme; and
- Adopt this Public Open Space AMP.

Questions you may have

What is an AMP?

Asset management planning is a process to ensure delivery of infrastructure services is provided in a sustainable manner, both from a financial and environmental perspective.

An AMP details information about infrastructure assets including actions required to provide an agreed level of service in the most cost effective manner. The AMP defines the services to be provided, how the services are provided and what funds are required to provide the services.

1. FUTURE DEMAND

1.1 Demand Forecast

Factors affecting demand include population change, changes in demographics, seasonal factors, ownership, consumer preferences and expectations, economic factors, environmental awareness, etc. A range of influences that may affect demand for public open spaces' over the 10 year horizon of this AMP have been considered. The key issues for consideration will then allow the City to produce quantitative forecasts on how it expects public open spaces' to change over the life of the AMP.

Table 1-1 summarises the likely demand change each driver will have on public open spaces, this has also been discussed in detail in Appendix C.

Driver	Demand Change	Comment
Political		No intended changes to policy that may affect demand.
Economic		Possible increase in demand from economic sources and due to increased financial capacity. The City needs to ensure it can resource the long term management of its assets and services.
Social		Increased demand due to increasing population, increase due to changing demographics and increase because of tourism.
Legal		Increase in management resource demand because of legislative change.
Environmental		Potentially higher whole of life costs due to climate change, increase from sustainability pressures.
Health & Safety		Increased demand through health and safety requirements for better service levels.

Table 1-1: Demand Drivers

In 2012, the City prepared a Public Open Space Strategy, which was ultimately adopted by the Council at its meeting held on 27 November 2012 (Agenda Item 10.0.5). In particular, the Public Open Space Issues and Challenges Report 2012 outlines the following key issues for consideration for each demand driver:

1.1.1 Political

- There are many over lapping state and local government responsibilities in open space development and management;
- Relationships between state and local government (professional and political) need to be carefully managed;
- Effective community consultation and involvement is vital in open space planning; and
- Conflict between different open space users should be expected and planned for.

1.1.2 Economic

- Significant future investment will be required to maintain the quality of open spaces;
- The cycle of rising expectations has to be considered in investment decisions;

- The level of satisfaction with the current open space system is high;
- Many users of Council's open space are not residents of the City;
- There are opportunities for revenue raising from the existing open space asset base through the leasing and sale of land and the imposition of user pay fees and charges;
- Currently the revenue raised from bookings of reserve space is limited;
- Public liability is a key consideration in considering development and management regimes; and
- Open spaces need to be managed in the public interest and never sacrificed for private influence or gain.

1.1.3 Social

- South Perth has a growing population and this is likely to continue into the foreseeable future;
- South Perth has a very diverse population make up and this is likely to remain;
- Contemporary lifestyles and preferences are reducing the time available and the time allocated to outside recreation pursuits;
- The amount of time people are spending on recreation reserves is reducing;
- Multi-purpose trips to recreation reserves are becoming more popular;
- Diverse recreation facilities are required to meet the needs of the population;
- There will be future increases in housing density in South Perth with particular increases in medium density and high density housing forms; town houses and units;
- Increases in higher density housing forms (with less private open space provision) will increase the demand on publically provided open space;
- Increases in residential density will reduce green space/tree cover on residential lots;
- Increases in population will increase the demand for recreational activity;
- Recreation provision is a key to local community formation;
- Recreation activity improves public health outcomes in the community;
- With increasing use of open space for a wider range of activities there may be conflict between uses and users which will be required to be managed; and
- Persons need to feel safe when they are using public spaces.

1.1.4 Legal

- The majority of open space is vested crown land effectively owned by the State but ceded to local government who are then responsible within certain legally defined constraints (vesting orders) for its ongoing development and management. This division between ownership and management, potentially sets up overlapping responsibilities that at times can lead to conflict between local government and state agencies; and
- There is a range of legislative obligations that the City must meet, which if altered, could affect management obligations.

1.1.5 Environmental

- Need to respond to the impact of climate change on the river and river foreshores;
- The need for water conservation;
- Increasing tree canopy cover to improve human comfort levels and reduce watering demand;
- Planting regimes to respond to longer, dryer summers and restrictions to water budget;
- Application of technology to improve water use efficiency;
- Use of native plantings to reduce management costs and watering demand;
- Investment in development and management to reduce resource degradation; and
- Protection and/or enhancement of biodiversity.

1.1.6 Health and Safety

- Health and Safety is particularly relevant when considering the maintenance of public open spaces, and use in support of sports and recreational activities such as walking, running and cycling; and
- A key consideration for health and safety is the development of a more robust inspection and maintenance regime for public open spaces', in order to proactively identify defects that may pose a safety hazard. An improved regime will not only provide a higher service level to users, but potentially also reduce the whole of life costs of the network through preventative maintenance. The cost of such a regime may also be potentially recovered through reduced insurance premiums.

1.2 Demand Management Strategy

A sound demand change strategy identifies how services delivered by the City are expected to change to meet emerging needs, or changing use. Based upon local knowledge and ABS data, the City has determined that future demand of its public open spaces' will likely increase over the 10 year period of this AMP. Five of the six key driver areas show that a combination of different pressures will require the City to not only consider the physical aspects of public open spaces', in terms of provision, materials and design, but also how public open spaces' are operated and maintained.

However, for the City to fully understand the implications of demand change on public open spaces', further information is required across a number of key areas, including:

- Developing a complete public open space inventory;
- Understanding the extent of any future public open spaces';
- Understanding the desired community service levels;
- Understanding the City's future resource capacity;
- Developing an understanding of how public open spaces' fit in with any applicable City plans and policies; and
- Developing more regular public open space inspection and maintenance programme.

Through undertaking the actions listed in this AMP, the City will be able to work towards a clearer long term understanding of its public open space.

1.3 Demand Management

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets, and providing new assets to meet demand and demand management. Demand management practices include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to date for demand management are shown in Table 1-2.

Table 1-2: Demand Management Plan

Service Activity	Demand Management Plan
Community Engagement	• Engage with the community to identify justifiable community needs from other expectations and consider only community needs consistent with Council's charter. • Develop an understanding the community's desired levels of service.
Customer Requests	• Analyse customer requests to optimise the use and performance of existing parks and reserves services and look for non-asset based solutions to meet demand for services.
Public Open Space	• Developing an understanding of how the network fits in with any applicable future policies and LTFP; • Developing a robust inspection and maintenance programme. • Developing a robust inventory;
City capacity	• Understanding the City's future resource capacity;

1.4 New Assets for Growth

The new assets required to meet growth will be acquired free of cost from land developments, or constructed / acquired by the City. Acquiring new assets will commit the City to fund ongoing operations and maintenance costs for the period that the service provided from the assets is required. Given the long life-cycle of public open spaces', the impact of this growth (future renewal costs) is only likely to be material after ten years. These future costs are identified and considered in developing forecasts of future operations and maintenance costs.

2. LEVELS OF SERVICE

2.1 Background

This section details the methodology used to provide an example of Levels of Service that the City could set out to achieve and provide.

The Levels of Service measures also allow the City to ensure that its public open spaces' are fit for purpose and provided at an efficient cost. As such, it is important to ensure that the Service Levels reflect the City's Strategic Community Plan 2013 - 2023 outcomes and funding allocated in the respective Annual Budget.

By considering the City's objectives and values, particularly focussing on those which conflict or appear frequently, two sets of high level service levels were created;

- Community Levels of Service; and
- Technical Levels of Service.

2.1.1 **Community Levels of Service** - relate to the service outcomes that the community wants in terms of safety, quality, quantity, reliability, responsiveness, cost effectiveness and legislative compliance.

Community levels of service measures used in the AMP are:

- Function — Does it meet users' needs?
- Safety — Is the service safe?
- Quality — How good is the service?

2.1.2 **Technical Levels of Service** - Supporting the community levels of service are operational or technical measures of performance. These technical measures relate to the allocation of resources to service activities that the council undertakes to best achieve the desired community outcomes.

Technical service measures are linked to annual budgets covering:

- Operations – the regular activities to provide services (eg condition inspections);
- Maintenance – the activities necessary to retain an assets as near as practicable to its original condition (eg repair of an asset);
- Renewal – the activities that return the service capability of an asset up to that which it had originally (eg asset replacement); and
- Upgrade – the activities to provide a higher level of service (eg additional assets within a public open space) or a new service that did not exist previously (eg a new park bench).

2.2 Desired Levels of Service

Table 2-1 details an example of the Levels of Service that could be implemented which would enable the City to benchmark its public open spaces' performance. At present no target or current performance levels are recorded due to a lack of supporting information. These sections will be progressively developed, and suitable targets set at a level similar to that currently delivered by the City.

Public Open Space

Key Performance Indicator	Level of Service	Performance Measure	Explanation	Measurement Procedure	Target	Current	Data Confidence
Accessible	Public open space is easy to access from the majority of the City's properties.	Connectivity	Properties within the City can readily access the public open space.	Percentage of properties with a safe route to the public open space.	TBC	TBC	TBC
Available	Public open space is available (i.e. operational) when required.	Public Open Space Closures	Time that public open space is closed is minimised.	Percentage of days per annum that one or more public open spaces are closed due to works, condition and/or safety.	TBC	TBC	TBC
Health & Safety	Public open space is provided and maintained in order to help achieve 'zero harm' to users, and minimise the City's exposure to risk.	Risk Management	The City operates a risk register for its public open space.	Number of risks identified high or above shall be mitigated.	TBC	TBC	TBC
		Safety & Maintenance Defects	Public open space is inspected at suitable intervals.	Percentage of public open spaces' inspected within the specified period.	TBC	TBC	TBC
		Safety & Maintenance Defects	Public open space safety and maintenance defects are corrected within the City's target timeframes.	Percentage of public open space defects corrected within the intervention time.	TBC	TBC	TBC
		Accidents	The number of harm/damage claims	Percentage of claims successfully defended, per	TBC	TBC	TBC

			against the City is minimised.	annum, by number.			
Maintenance	Public open space is clean and well maintained.	Cleaning Requests	Public open space is maintained appropriately so as to limit the number of requests for maintenance received from external sources.	Number of requests for maintenance received per public open space.	TBC	TBC	TBC
		Maintenance	Public open space is routinely cleaned so as to proactively remove rubbish and obstructions.	Percentage of public open space within the City's agreed cleaning programme timeframes.	TBC	TBC	TBC
Quality	The City's public open space is provided at a level of quality, agreed by stakeholders.	Condition	Public open space is maintained in a good condition.	Percentage of public open space rated as between a condition 1 and 3, on a 1 to 5 scale, where 1 is very good (new) and 5 very poor.	TBC	TBC	TBC
		Condition	The City's public open space is free from hazards.	Average number of hazards detected, per public open space.	TBC	TBC	TBC
		Aesthetics	The public open space is aesthetically pleasing and adds to the City's appeal.	The annual number of public open space aesthetic complaints received, per public open space.	TBC	TBC	TBC

Satisfaction	Users are happy with the public open spaces'.	Customer Satisfaction	Users are happy with the public open space.	Through the use of an annual questionnaire percentage of users who are at least satisfied with the City's public open space.	TBC	TBC	TBC
Sustainability	The City's public open space is sustainable.	Financial Sustainability	The City is able to afford the whole of life costs of the public open space.	The percentage of 10 year whole of life cost in the public open space AMP that is allowed for in the LTFP.	TBC	TBC	TBC
Utilisation	The City's public open space is well used.	Utilisation	Users readily use the public open space.	The amount of visitors to the City's public open space.	TBC	TBC	TBC

Table 2-1: Service Level Targets & Performance for Public Open Spaces'

2.3 Current Levels of Service

The City has condition data for POS, which was collected in 2012. The results are detailed in Table 2-2 below. In addition, when information is available Safety and Maintenance information will be located future Appendixes.

Condition	Number of Assets	Percentage of Assets
1	132	5%
2	886	32%
3	1464	53%
4	216	8%
5	22	1%
Unknown (0)	27	1%

Table 2-2: 2011 Condition Data

2.4 Level of Service Performance Monitoring

Levels of Service will be monitored and reported in future versions of the AMP and reported in the Annual Report.

3. FINANCIAL MANAGEMENT

This section contains the financial information and will be improved as more information becomes available regarding desired levels of service, current and projected future asset performance, and the improved level of data confidence.

3.1 Asset valuations

The City is responsible for a total of 2747 public open space assets and the total public open space CRC as at 2011/12 is valued to be approximately $29,222,944. The public open space valuation and financial data has been provided from the City's financial records and the City's current asset register.

There are no individual CRC for the City's public open spaces'. This will need to be included in future revisions of this AMP.

Table 3-1 shows a breakdown of the current asset categories and the number of each asset held by the City, Figure 3-1 shows a visual representation of this information.

Asset Category	Number
Art	48
BBQ	20
Boat Ramp	4
Bridge	10
Drainage	9
Electrical	149
Environmental	2
Exercise Equipment	3
Fencing	443
Flag Pole	4
Fountain	46
Jetty	3
Light	502
Pathway	100

Asset Category	Number
Playground	183
Postal Cabinet	1
Reticulation	68
Rubbish Disposal	181
Seat	309
Shelter	43
Sign	477
Sporting	56
Structure	1
Table Setting	29
Utility	2
Wall	52
Weather Station	2
Total	**2747**

Table 3-1: Public Open Space Assets

Types and Numbers of Public Open Space Assets

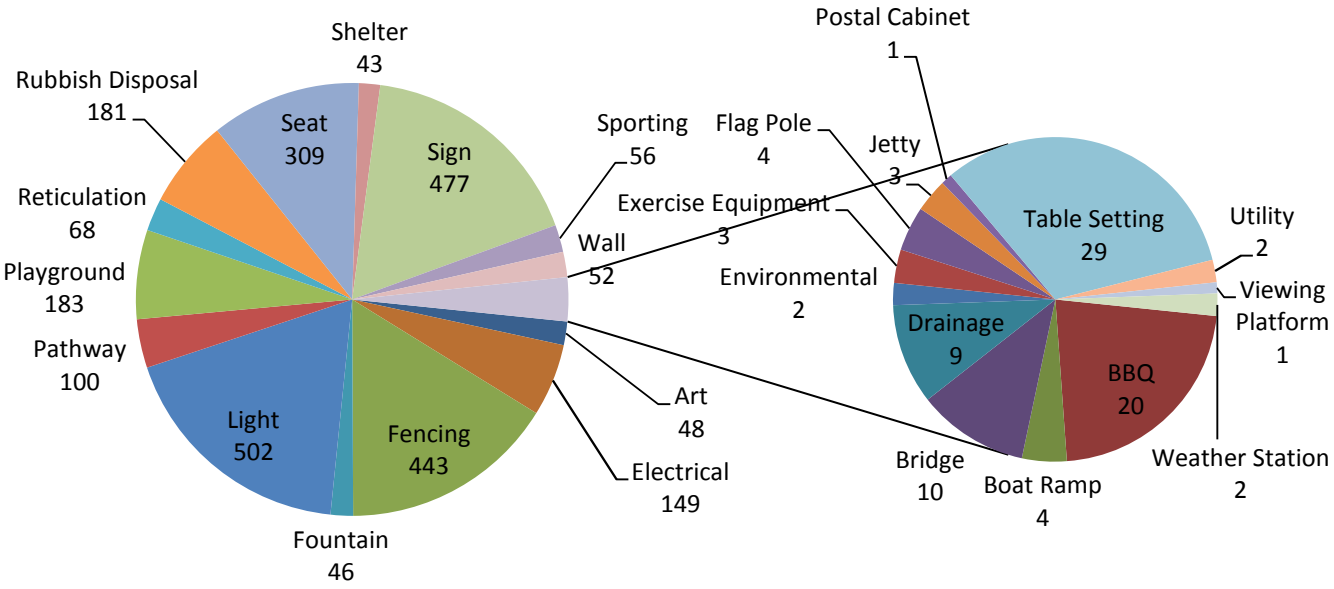

Figure 3-1: Breakdown of the Type and Number of POS Assets

3.2 Funding and Expenditure Details

3.2.1 Summary Historical Income

No information is available for this AMP on historical revenue on public open spaces'. Table 3-2 outlines the 2012/13 budgeted income. This table will need to be expanded in future revisions of this AMP.

Income Source	2012/13 (Budget)
Municipal	$278,000
Total Expenditure	**$278,000**

Table 3-2: POS Income

3.2.2 Summary Historical Expenditure

The City only holds basic details of previous year's financial expenditure levels on its public open spaces'. Table 3-3 details the level of public open spaces' expenditure over the past 5 financial years, which is available for this AMP.

Whilst the four different activity types of public open spaces' lifecycle have been listed, the City has not historically recorded expenditure in this way. An improvement project has been identified to begin recording future expenditure more accurately against activity type, especially between operation, maintenance, renewals, upgrades and acquisitions.

Activity	2007/08	2008/09	2009/10	2010/11	2011/12
Operation	$0	$0	$0	$0	$0
Maintenance	$2,910,993	$3,418,704	$3,444,993	$3,484,338	$3,454,339
Renewal	$0	$0	$0	$0	$0
Upgrade / New	$1,090,128	$2,159,881	$870,733	$144,247	$730,259
Total	**$4,001,121**	**$5,578,585**	**$4,315,726**	**$3,628,585**	**$4,184,598**

Table 3-3: 2007/08 – 2011/12 Public Open Space Historical Expenditure

3.2.3 Summary Future Planned Expenditure

No information is available for this AMP on future expenditure on public open spaces'. Tables 3-4 shows outlines the 2012/13 budgeted income. This table will need to be expanded in future revisions of this AMP.

Activity	2012/13(Budget)
Operation	$0
Maintenance	$3,550,990
Renewal	$0
Upgrade/New	$640,000
Total	**$4,190,990**

Table 3-4: Planned Future Expenditure for Public Open Spaces'

As there is insufficient future expenditure information, planned renewals cannot be calculated. As a future improvement the City should develop useful lives for each asset so this data can be used with condition data to determine predicted renewals i.e when each asset will need to be replaced. The condition data can be used to determine how far through an asset is through its life using the generic remaining life categorisation. An example of useful lives is contained in Appendix E.

3.3 Required Operation & Maintenance Expenditure

The City undertakes maintenance on a reactive basis, such as a complaint from a resident or Public Open Space user. The Public Open Space section or asset that has been reported is inspected and then if necessary a suitable repair will be conducted.

The City undertakes full Public Open Space inspections every 4-5 years. A new role has been created for an Asset Technical Officer which will ensure more regular inspections based on suburb/ward areas are carried out throughout the year. This will allow the City to identify areas of damage to be more pro-active and plan and undertake the required maintenance.

For this AMP, It has been assumed that operation costs have been included in the Maintenance costs. Aside from the 2012/13 budgeted maintenance expenditure, no additional future maintenance expenditure his currently available.

3.4 Disposal Plan

It is not planned or expected that any public open space assets will be disposed of over the life of this AMP. For the benefit of this AMP, asset disposal is treated as the removal of an asset, without replacement.

3.5 Future Lifecycle Costs

Lifecycle costing (LCC) is a process, which aims to determine the sum of all expenses associated with assets, including acquisition, operation, maintenance, renewal, upgrading and disposal. The principal concern for public open space assets is that whilst the upfront acquisition costs are usually significant, the recurrent ongoing expenditure is usually far higher.

It is the City's intention, through improved management practices and knowledge, to develop an improved lifecycle cost model of its public open space assets, in order to better understand the true costs of service delivery. Furthermore, this will then allow the City to ensure that it can close any funding shortfall that exists.

Financial data for maintenance and 2011/12 renewals have been provided from the City's financial budgets. For this AMP, it has been assumed that future expenditure levels will be similar to historical expenditure.

Further refinement of the City's recording of activity cost expenditure practices are required to improve the following lifecycle projections. In addition, the financial projections will be improved as the level of data confidence improves.

3.6 Age data

The life of an asset depends on its construction, usage, maintenance levels among other factors. If renewal funding does not keep pace with the natural rate of deterioration, it is reasonable to expect that most assets will deteriorate to a point where they require major renewal works or demolition.

Older assets may be less flexible in use, or no longer meet the users' needs, and be less efficient to operate.

There is limited information on public open spaces' in the City's Public Open Space asset register. The construction dates are unknown and there is very limited information on the installation date for all public open space assets, therefore this has been listed as an improvement action.

3.7 Asset Priority

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

The City's parks have been categorised into a classification framework based on a classification system developed by the State Government.

A future aim of the City's is to use the classification system as a priority rating system to prioritise long term financial planning.

The following outlines the classifications which have been extracted from the City's Public Open Space Strategy Part 2 (2012):

3.7.1 Regional Reserves

Regional reserves are those areas of publicly owned and managed land whose primary purposes are to protect and enhance their valued natural environment and encourage passive recreation and enjoyment. The reserves are considered of regional significance because of their important contribution to the metropolitan region's sense of place and their attraction of users from throughout the region.

3.7.2 District Reserves

District reserves are those areas of publicly owned and managed land whose primary purpose is to accommodate formal sport, other forms of recreation and to protect/enhance their valued natural environment. The reserves are considered of district significance because of their attraction to a wide range of users from a range of surrounding suburbs.

3.7.3 Neighbourhood Reserves

Neighbourhood reserves are those areas of publically owned and managed land whose primary purpose is to meet the recreational needs of the immediate local suburb and to develop/enhance the local 'sense of place'.

3.7.4 Local Reserves

Local reserves are those areas of publically owned and managed land whose primary purpose is to meet the recreational needs of the surrounding residential population and to develop/enhance the local sense of place.

Under this classification system a series of characteristics are attached to each category of reserve, these are detailed in Tables 3-5 and 3-6.

Classification	Size	Catchment	Location	Timing of Use	Facilities
Local	0.2 – 1ha	• 400m • 5 minute walk	• 5 minute walk to local residents • Good, safe walk/cycle access	• Predominantly day time, to early evening (daytime hours & light) • Does not require lighting	• Limited on-street parking, with service level access provided • Possible playground equipment (based on catchment demographics) • Informal play and recreation areas • Areas for dog walking under control • Natural shade and tree cover • Possible reticulated turf (with hydro-zoning) • Possible bin and seats • Footpaths • Signage
Neighbourhood	1-5ha	• 800m • 10 minute walk	• Central to surrounding neighbourhood. • Access to good, safe walk/cycle paths. • Good passive surveillance. • Build on natural elements. • Sense of place. • Simultaneous use.	• Day to late evening	• As above as well as: formalised verge parking where necessary • Community play equipment (based on catchment demographics) • Shelter structures • Irrigated lawn (incorporating hydro zoning) • Seating facilities • Drinking fountains • Picnic areas with barbecues and washing facilities • Small public toilet facilities • Small-scale hardstand multi-use court such as basketball/tennis • Lighting for limited evening use — safety and security only (e.g. barbecues)

					• Bus stop location desirable • Bicycle racks • Power supply access
District	5-20ha	• 2km • 5 minute drive	• Central to catchment • District distributor roads • Good passive surveillance • Public transport networks • Co-location of community facilities to create 'hub' feel	• Day to late evening	• On and off-street parking including associated public vehicle entry/s, with provision for service vehicles • Play equipment, appropriate to the size and location of the Reserve. The number • and type of playgrounds will depend on the layout of the public open space and location of other play facilities in close proximity • Formal sport and recreation activities • Multi-purpose clubroom facility/s with outdoor open social areas, community areas, storage areas, informal spectator viewing facilities (where appropriate) • Sports field lighting • Informal active recreation facilities (multi-use courts etc.) • Informal play and recreation areas • Areas for dog walking under control and possible canine facilities • Natural shade and tree cover • Formal shelter structures • Reticulated turf accommodating hydro-zoning • Waste facilities • Benches and seats etc. • Drinking fountains • Picnic areas with barbecues, shade structures, tables and washing facility/s. • Public toilet facilities • Safety and security lighting and possible ancillary features where required. • Path networks (informal trails, dual use paths, etc.) • Signage — directional and interpretive • Bicycle facilities (i.e. Racks) • Drainage, electrical, sewer and communication infrastructure
Regional	20ha +	• Most people drive, cycle or walk; • More than	• Major road and public transport networks	• Day to late evening	• On-site and formal verge parking or on-street parking with restrictions • Internal roadways for service, building and car park access

		1 geographic area			• Service access and compounds with lockable storage facilities • Regional play equipment - The number and type of playgrounds will depend on the layout of the POS and location of other play facilities within close proximity • Formal sport and recreation activities • Multi-purpose clubroom facilities with outdoor open social areas, community areas, storage areas, informal spectator viewing facilities etc • Sports field lighting • Informal active facilities (full court, multi-use court facilities etc.) • Informal play and relaxation areas • Areas for dog walking under control and possible canine facilities • Natural shade and tree cover • Formal shelter structures and or pavilions or varying sizes to cater for group functions and social activities • Reticulated turf, accommodating hydro-zoning • Waste facilities and possible compound for clubs/groups • Benches, seats, and other park furniture etc. • Drinking fountains • Several picnic areas with barbecues, picnic tables and washing facilities • Public toilet facilities distributed throughout the reserve servicing relevant nodes • Safety and security lighting and possible ancillary features where required. • Pedestrian and cycle path networks • Signage — directional, interpretive and informational (e.g. conservation points) • Bicycle facilities (i.e. racks) • Possible event infrastructure • Drainage, electrical, sewer and communication infrastructure

Table 3-5: Reserve Category and Related Factors

(Source: City of South Perth's Public Open Space Strategy Part 2, 2012)

Regional Reserve	District Reserve	Neighbourhood Reserve	Local Reserve	Small Local Reserve
• Milyu Nature Reserve (DEC Managed) • Mt Henry Reserve • Canning River Foreshore Reserve • Andrew Thompson Reserve • Sandon Park • Sir James Mitchell Park (incorporating South Perth Esplanade & Clydesdale Park) • Collier Park Golf Course • Royal Perth Golf Course (leased)	• Windsor Park • James Miller Oval • Richardson Park • Morris Mundy Reserve • Ernest Johnson Oval (incorporating Hensman Reserve and Sandgate Reserve • Collier Reserve, Collins Oval (leased) and Bill Grayden Reserve • Challenger Reserve • Neil McDougall Park • George Burnett Park • South Perth Lawn Tennis Club (leased)	• Comer Reserve • Karawara Greenways • Como Beach Reserve • Bodkin Park	• David Vincent Reserve • Bill McGrath Reserve • Mackie Street Reserve • Ryrie Avenue Reserve • Bradshaw / Conochie Reserve • Mt Henry Road Reserve • Davilak Reserve • Coolidge Street Reserve • Olives Reserve	• Roebuck Reserve • Gwenyfred Reserve • Shaftesbury Street Reserve • Swanview Terrace Reserve • Hensman Square • Doneraille Reserve • Carlow / Kilbride Reserve • Garvey Street Park • Hope Avenue Reserve • Isabella / Craigie Reserve • Marsh Avenue Reserve • Jan-Doo Park • Axford / Barker Reserve • Canavan Crescent Reserve • Moresby Street Reserve • Warrego Street Reserve • Meadowvale Avenue Reserve • Brandon / Darling Reserve • George Street Reserve (near Berwick) • Blamey Place • Hobbs Avenue Reserve

Table 3-6: Categorisation of City Reserves

(Source: City of South Perth's Public Open Space Strategy Part 2, 2012)

3.8 Condition data

Full inspections of the City's public open space assets are undertaken every 4-5 years, with the last survey being completed in 2012. However, this may change with the implementation of a new asset management system, as well having the new Asset Technical Officer position, which will carry out regular inspections based on suburb/ward areas on a scheduled basis throughout the year. City maintenance staff also carry out quarterly quality inspections of areas of public open space.

Inspections are undertaken in-line with the National Parks & Recreation Assets Condition Grading Standards 2005 (PRAMS). The manual provides standard condition grading schedules for all major asset types and are grouped under five categories; Horticultural, Structural, Services, Furniture & Fittings, and Plant. Parks and recreational assets predominately come under Furniture and Fittings.

Table 3-7 outlines the generic format which each schedule is based on.

Grade	Condition	General Meaning
0	Non-existent	Asset absent or no longer exists
1	Excellent	Sound physical condition *No work required*
2	Good	Acceptable physical condition; minimal short term failure risk but potential for deterioration *Only minor work required (if any)*
3	Average	Significant deterioration evident; failure unlikely in near future but further deterioration likely *Work required but asset is still serviceable*
4	Poor	Failure likely in short term *Substantial work required in short term, asset barely serviceable*
5	Very Poor	Failed or failure imminent/ safety risk *Major work or replacement required urgently*

Table 3-7: Generic Condition Grading Standards under PRAMS

3.9 Gap Analysis

This section analyses the variance between the predicted full life cycle cost (including operations, maintenance, renewal, upgrade, but excluding new growth), and planned expenditure. This variance indicates the life cycle gap, showing insufficient asset expenditure, or a surplus, showing excessive expenditure. This gap indicates whether further work is required to manage required Levels of Service and funding to eliminate any funding gap.

Providing services in a sustainable manner will require matching of predicted asset expenditure to meet agreed Levels of Service with planned capital works programs and available revenue.

These predicted expenditures may be compared to budgeted expenditures in the 10 year period to identify any funding shortfall.

Based on the available data, it is not possible to calculate if there is a short fall or gap in funding levels due to incomplete individual asset CRC values. This has been listed as an improvement action to be updated when the financial data is available.

3.10 Asset Sustainability Ratios

As part of the DLG Asset Management Framework and Guidelines the City will need to report three ratios. The City's current ratios for the assets covered in this plan are shown below in Tables 3-8 and 3-9 and will be monitored and reported annually. The current figures have been extracted from the 2011/12 financials which have been provided by the City. The planned capital renewal expenditure has been calculated using the 5 Year historical average, which has been calculated as $935,581.

Current Replacement Cost	$29,222,944
Depreciated Replacement Cost (DRC)	$16,971,832
Annual Depreciation Expense	$879,177
Planned Capital Renewal Expenditure (10yrs)	$9,355,810
Predicted Renewal and Replacement Expenses (10yrs)	$9,355,810

Table 3-8: Asset Sustainability Rates

For the purpose of this AMP and because limited renewal information was available for the AMP, it has been assumed that predicted renewal expenditure is the same as planned expenditure.

Ratio	Value	DLG's target ranges
Asset Sustainability Ratio (Annual Planned Capital Renewal expenditure / Annual Depreciation Expense)	106.42%	90% - 110%
Asset Renewal Funding Ratio (Planned Capital Renewal Expenditure / Required Capital Renewal Expenditure)	100%	95% -100%
Asset Consumption Ratio (Depreciated Cost / Current Replacement Cost)	58.08%	50% - 75%

Table 3-9: Asset Ratios

The Asset Sustainability Ratio is nicely within the DLG's target range. However, given the low confidence of the value of the annual planned capital renewal expenditure, only one historical renewal cost for 2010/11 was available for this AMP. It is considered this value is not accurate.

The Asset Renewal Funding Ratio is based on the assumption that the planned capital renewal is the same as the predicted capital renewal. This value would normally indicate that the City is renewing assets at the rate they are being consumed and adequately funding all new assets and services. (However, we have assumed planned = predicted).

As stated above the value of the annual planned capital renewal expenditure is low in confidence and has been multiplied by 10 years to get the planned capital renewal expenditure value. In addition, the predicted capital renewal expenditure has been calculated using the 5 Year historical average and multiplied by 10. This value is also considered low in confidence as there is only one historical renewal cost for 2010/11.

The Asset Consumption Ratio is nicely within the DLG's target range.

3.11 Key Assumptions made in Financial Forecasts

This section details the key assumptions made in presenting the information contained in this AMP and in preparing forecasts of required operating and capital expenditure and asset values, depreciation expense and carrying amount estimates. It is presented to enable readers to gain an understanding of the levels of confidence in the data behind the financial forecasts.

Key assumptions made in this AMP are:

- The asset registers are accurate;
- The current Levels of Service will remain constant over the life of this AMP;
- Income and Expenditure details have been extracted from previous budgets are correct and complete;
- All predicted financial figures are based on 2012 rates and are not adjusted by the inflation rate for the particular year of works.

3.12 Data confidence

The City does not currently have robust historical financial readily available. There is limited information available, resulting in poor data confidence levels. The data confidence levels will improve in future revisions of the AMP as the data quality improves.

Table 3-10 below summarises the confidence levels of financial data obtained for this AMP.

Asset Category	Confidence Rating				
	Operations	Maintenance	Renewals	Upgrades	New/ Acquisitions
Expenditure (Historical)	D	C	C	D	D
Forecast Expenditure	D	C	D	D	D
Lifecycle Expenditure	D	C	D	D	D

Table 3-10: Financial Data levels of confidence

Table 3-11 below outlines the data confidence limits used in this AMP.

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

Table 3-11: Levels of Confidence Definitions

4. PLAN IMPROVEMENT AND MONITORING

4.1 Performance Measures

The effectiveness of the AMP can be measured in the following ways:

- The degree to which the required cash flows identified in this AMP are incorporated into the organisation's long term financial plan and Community/Strategic Planning processes and documents; and
- The degree to which the 5 year detailed works programs, budgets, corporate business plans and organisational structures take into account the 'global' works program trends provided by the AMP.

4.2 Improvement Plan

The asset management improvement plan generated from this AMP is shown in Table 4-1.

Focus	Identified Gap	Solution	Priority	Completion Date
Asset Management System	Incomplete public open space asset register (limited individual CRC, installation dates etc.).	Continue to keep the public open space asset register up to date.	TBC	TBC
Maintenance Programme	Limited preventative maintenance programme exists.	Develop more specific public open space based operation and maintenance programme.	TBC	TBC
Maintenance Programme	Maintenance activities have target correction timeframes.	Existing framework for the identification of maintenance and safety defects, correction times and correction performance to be improved.	TBC	TBC
Renewal (works) programme	A data informed works programme exists.	Develop a more specific long term capital works programme.	TBC	TBC
Financial Management	Expenditure is recorded against the appropriate activity but does not include whether the expenditure is renewal, etc.	Create definitions around which activities constitute operational, maintenance, renewal, upgrade, new and disposal works.	TBC	TBC
Financial Management	The AMP does not link to a corporate LTFP (under review).	Link AMP to LTFP and review AMP against LTFP outputs.	TBC	TBC
Financial Management	A five year asset renewal program exists, however could be supported with better data.	Provide construction dates and useful lives for each asset to determine replacement date.	TBC	TBC
Financial Management	Limited CRC for each POS asset.	Develop and improve on the corporate set of unit rates for each POS asset.	TBC	TBC

Service Levels	Service levels are used by Parks Management but are not adopted by City.	Workshop service levels with senior staff and City, amend (if required) and then adopt.	TBC	TBC
Service Levels	Current service level performance and targets are developed but not formalised.	Complete collection of information to monitor service level performance, and then adopt suitable service level targets.	TBC	TBC

Table 4-1: Improvement Plan for Public Open Spaces'

4.3 Monitoring and Review Procedures

This AMP will be reviewed during annual budget preparation and amended to recognise any material changes in levels of service and/or resources available to provide those services as a result of the budget decision process.

The AMP has a life of 10 years and is due for revision and updating within 2 years of each Council election.

Appendix A. Asset Register And Valuation

Asset Category	Number
Art	48
BBQ	20
Boat Ramp	4
Bridge	10
Drainage	9
Electrical	149
Environmental	2
Exercise Equipment	3
Fencing	443
Flag Pole	4
Fountain	46
Jetty	3
Light	502
Pathway	100

Asset Category	Number
Playground	183
Postal Cabinet	1
Reticulation	68
Rubbish Disposal	181
Seat	309
Shelter	43
Sign	477
Sporting	56
Structure	1
Table Setting	29
Utility	2
Wall	52
Weather Station	2
Total	**2747**

Table 4-2: POS Asset Register Summary

Condition	Number of Assets	Percentage of Assets
1 (Very Good)	132	5%
2 (Good)	886	32%
3 (Average)	1464	53%
4 (Poor)	216	8%
5 (Very Poor)	22	1%
Unknown (0)	27	1%

Table 4-3: POS Condition Data

2011/12 Valuation	
Current Replacement Cost	$29,222,944
Total Depreciation	$12,251,112
DRC	$16,971,832
Annual Depreciation	$879,177

Table 4-4: Public Open Spaces' 2011/12 Valuation

The above information has been provided by the City's Asset Register and the City's Financial System. This section will be improved as more information becomes available and the level of data confidence improves. The Current Replacement Cost is based the Accumulative Historical Cost (Historical Cost plus purchases and additions).

Appendix B. Legislative Environment: Acts And Regulations

The City has to meet many legislative requirements including Australian and State Legislation and State Regulations. Many of these requirements are drivers for minimum service levels in that they are levels which the City must meet. The current legislation which influences the City's public open space management are:

Public Open Space	
Legislation	**Requirement**
Local Government Act, 1995 (WA)	The Act provides the principal legislative framework around which the roles, purpose, responsibilities and powers of local governments as set out. Under the Act, regulations set out a minimum requirement for all WA local governments to develop and maintain a Strategic Community Plan and Corporate Business Plan. This compels the local governments to establish long term service and asset strategies through robust asset management practices.
Environmental Protection Act, 1986 (WA)	The Environmental Protection Act 1986 provides for the formation of the Environmental Protection Authority (EPA). It also provides for the prevention, control and abatement of pollution and environmental harm and for the conservation, preservation, protection, enhancement and management of the environment.
Disability Discrimination Act 1992	The Federal Disability Discrimination Act 1992 (D.D.A.) provides protection for everyone in Australia against discrimination based on disability. It encourages everyone to be involved in implementing the Act and to share in the overall benefits to the community and the economy that flow from participation by the widest range of people.
Occupational Health & Safety Act 1984	The Occupational Health and Safety Act is concerned with protecting the safety, health and welfare of people engaged in work or employment. The Act's primary goal is to instil health and safety programs to foster a safe work environment, but as a secondary effect, may also protect co-workers, family members, employers, customers, suppliers etc. In considering any property as a work site, and in planning, initiating and undertaking work on sites, full consideration and application of the Act should be given in order to identify, manage and reduce or mitigate the risk of harm to the City's employees and contractors.
Aboriginal Heritage Act 1972	Regulations and requirements that the City must comply with relating to aboriginal heritage.
Native Title Act 1999	Regulations and requirements that the City must comply with in relation to the use of land.
Town Planning & Development Act 1928	Regulations and requirements that the City must comply with in relation to the use of land.
Conservation and Land Management Act 1984	Regulations and requirements that the City must comply with relating to the use of land and vegetation.
Heritage Act, 1990 (WA)	The Heritage Act provides for, and encourages, the conservation of places which have significance to the cultural heritage in the State, as well as to establish the Heritage Council of WA. Amongst other activities, the Council maintains a state register of heritage places, which are given legal protection under the Act. Generally, buildings on the register must be maintained and cannot be diminished, destroyed or concealed.
Emergency	The Act establishes the basis for a broader framework of regulations (Emergency

Management Act, 2005 (WA)	Management Regulations 2006), a committee structure, the prescription of agencies to fulfil the roles as hazard management agencies, combat agencies and support organisations and a suite of State level plans and policies that link the operations of emergency management. Generally, local governments often manage fire stations, as well as use buildings for emergency management centres.
Environment Protection Act (unauthorised discharges) Regulations 2004	States that pesticides cannot be discharged into the environment.
OSH Regulations 1996	The guidelines for employees and employers to undertake within the work environment.
Rights in Water and Irrigation Act 1914	Licence to take water from the groundwater aquifer for the purposes of irrigation of public open space.
Dividing Fences Act	Local government exempt from 50/50 contribution for dividing fences abutting public open space.
Bush Fires Act 1954	Regulates the specifications of firebreaks.
Health (Pesticides) Regulations 1956	Regulates the possession and use of pesticides.
Health Act 1911	Discharging causing pollution to waterways.
Wildlife Conservation Act 1950	Provides for the conservation and protection of native flora and fauna.
Department of Employment & Workplace Relations - Code of Practice - Management of Hazardous Substances (NOH:1994)	Regulates the possession and use of poisons.
Other Standards and Regulations	Other relevant documents include, but are not limited to: • Contaminated Sites Act 2003 • Contaminated Sites Regulations 2006 • Aboriginal Heritage Regulations 1974 • Agricultural and Veterinary Chemicals Act 1994 • Agricultural and Related Resources Protection Act 1976 • Biological Control Act 1986 • Dangerous Goods Safety Act 2004 • Poisons Act 1964 • All other relevant State and Federal Acts & Regulations • All Local Laws and relevant policies of the organisation

Table 4-5: Legislation, Acts and Regulations for Public Open Space

Appendix C. Demand Forecast

This AMP considers a 10 year planning horizon and therefore the factors that may influence the potential demand of public open spaces' must be recognised over this time. The following section provides commentary on different factors that may be subject to change and that in turn, may affect the demand for public open spaces'.

In undertaking this analysis of possible demand, selected Australian Bureau of Statistics (ABS) and Western Australia Tomorrow information has been used to develop first cut demand projections, as well as City documentation and knowledge. The projections will require future revision as the City's public open spaces' knowledge improves.

Political

Policy Change

Local government policy change, as well as state government service reallocation, can often affect the demand for public open spaces'. At present, no specific changes to policy have been identified which will affect demand on the City's public open space portfolio.

The State Government has been considering the issue of metropolitan local government reform. The Metropolitan Local Government Review Panel was set up to examine and review the present structures and arrangements for metropolitan local government.

Of particular note, the Panel has recommended that the 30 existing local governments be reduced to a maximum of 12, based on the strategic Regional Planning Centres (Department of Planning, Directions 2031 and Beyond) of Perth, Armadale, Cannington, Fremantle, Joondalup, Morley, Midland, Stirling, Rockingham and Yanchep. This approach has significant implications for the City as it will cease to exist under this proposal.

However, it is unknown at this stage what the future of the City is. It is assumed that policy driven demand will remain unchanged, until the State Government makes a decision on the local government structure.

Demand Change: No change at the time this AMP was developed

Economic

Local Economic Change

It is suggested that with an increasing population and increasing tourist numbers it is likely that public open space asset lives will be reduced. The end result is ultimately higher costs to the City. In addition, those living within the local community and tourists visiting will increase economic activity in the local community.

It is believed that this position would be exacerbated if a significant event occurred, such as the development of a major resource project, significant state government infrastructure investment etc.

As things currently stand, it is thought that there will be an increase in public open space demand from economic sources, and principally from tourism.

Demand Change: Likely increase in demand

City of South Perth Financial Capacity

The cost of providing public open spaces' to the community is primarily funded from the municipal budget, and community services must compete for funds along with other services and assets that the City provides. However, recent studies on WA Local Government suggest that many are not financially sustainable. Subsequent recent changes to the WA Local Government Act are now driving Councils towards measuring and achieving long term financial sustainability. It should be noted that at present it is unclear as to how financially sustainable the City is. However, it

can be expected that through its integrated planning framework, that future consideration of sustainable asset service levels will be considered.

Therefore, a possible increase in demand could reasonably be expected due to increased financial capacity.

Demand Change: Likely increase in demand

City of South Perth Resource Capacity

In recent years many sectors of the WA economy have felt the "squeeze" from a highly competitive labour market. This has been exasperated by a strong resource sector, as well as an ageing population. The local government market is certainly not immune to this and over recent years, has certainly had to seriously consider its recruitment and retention practices in order to maintain sufficient staffing levels.

For local government, an ageing professional work force, combined with a labour shortage and an increase in statutory obligations has meant that resource capacity is stretched. A key concern is whether the City will be able to maintain the provision of its assets and services to the same service level in to the future if its resourcing level continues to be further restrained. Consideration will be needed by the City to ensure that it can resource the long term management of its assets and services.

Demand Change: No Change, although further research required

Social

Total population figures were sourced from the ABS' Regional Population Growth dataset for the City's local government area. Table 6-7 contains estimated resident populations from between 2001 and 2011.

Population	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Number	37521	38347	39043	39643	40278	40853	41408	42417	43280	43387	43963

Table 4-6: ABS Estimated City Population 2001-2011

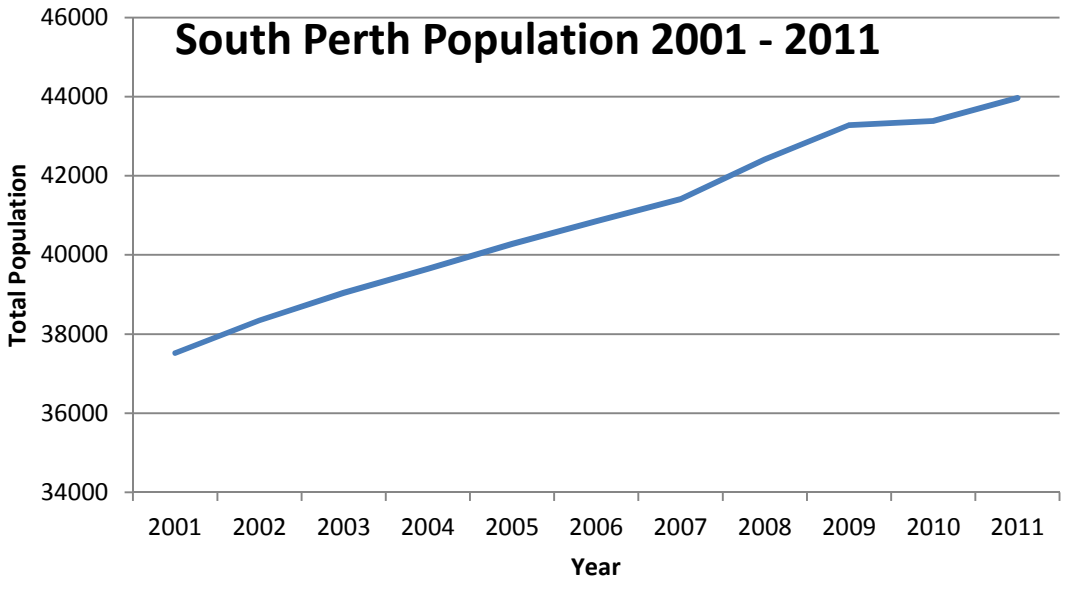

Figure 4-1: ABS Estimated City Population 2001-2011

The figures from the ABS show that between 2001 and 2011 the City has experienced an increase in population by approximately 6442 people (17.2%). This represents an average annual population change of 1.6% per year over the period. This means that the City has an increasing population.

The City is preparing for significant and sustained growth over the next 20 years with a target of 6000 additional dwellings, representing a 30% increase in the existing number of dwellings within the City. Our expected population growth will have an impact on increasing community expectations regarding resourcing, lifestyle, wellbeing and prosperity. (Source: Strategic Community Plan 2013 – 2032)

Demand Change: Increased demand for POS

Demographic Change

Figure 4-2 details the City's population age range from the 2011 census. It shows that over 87% of the City's population are under the age of 65, and that 13% are over the age of 65.

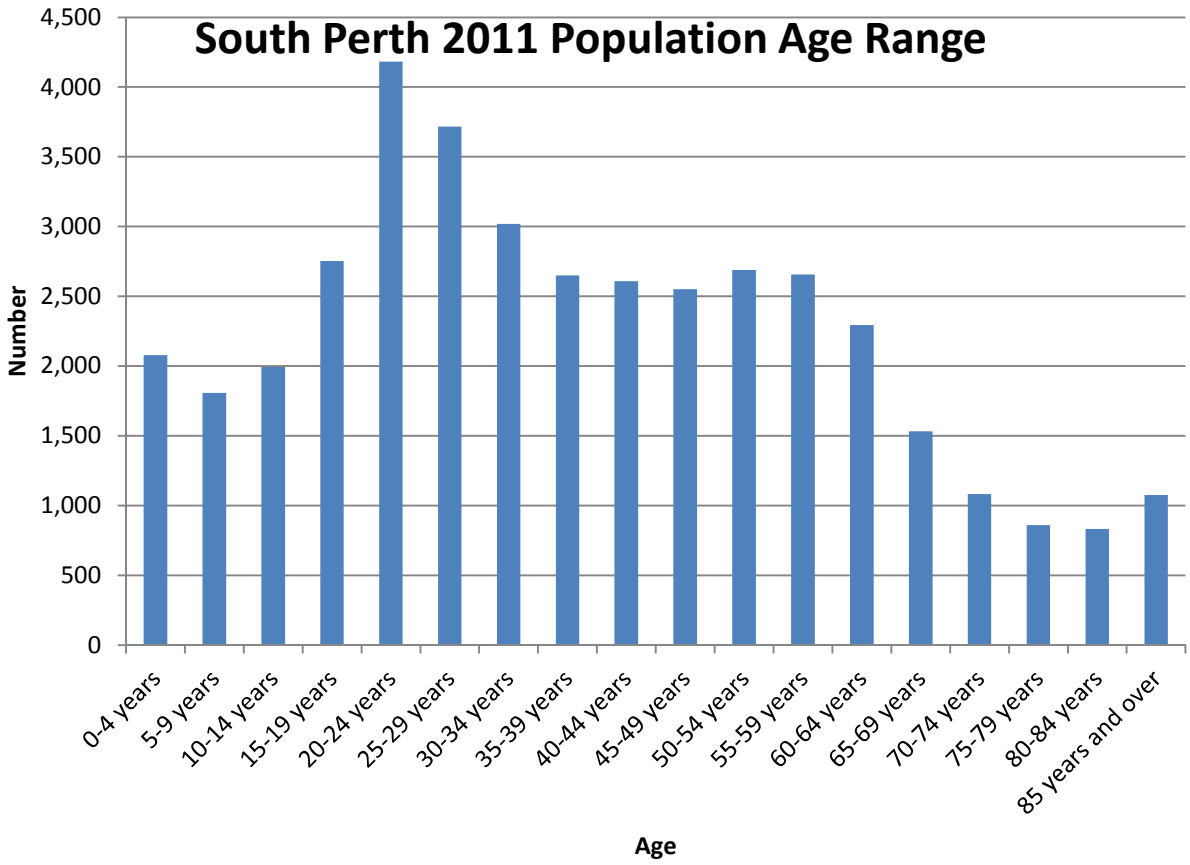

Figure 4-2: City Population Age Range

From 2006 to 2011, City of South Perth's population has increased. The largest changes in age structure in this area between 2006 and 2011 were in the age groups:

- Empty nesters and retirees (60 to 69) (+966 persons);
- Young workforce (25 to 34) (+937 persons);

- Babies and pre-schoolers (0 to 4) (+297 persons); and
- Parents and homebuilders (35 to 49) (+193 persons).

Analysis of the service age groups of the City in 2011 compared to Greater Perth shows that there was a lower proportion of people in the younger age groups (0 to 17 years) and a higher proportion of people in the older age groups (60+ years).

Overall, 17.9% of the population was aged between 0 and 17, and 19.2% were aged 60 years and over, compared with 23.3% and 17.8% respectively for Greater Perth.

The major differences between the age structure of the City and Greater Perth were:

- A larger percentage of 'Tertiary education & independence' (13.5% compared to 10.2%);
- A larger percentage of 'Young workforce' (16.8% compared to 14.7%);
- A larger percentage of 'Frail aged' (2.7% compared to 1.6%); and
- A larger percentage of 'Older workers & pre-retirees' (13.2% compared to 12.4%).

With the above population structure, there is reasonably expectation for an increase in participation rates at public open spaces' and also an increase in more passive pastimes, such as walking.

In addition, with predictions of an increasing population, this will likely result in higher utilisation of public open spaces'. This in turn would require higher costs for asset replacement.

Going forward, the City will clearly need to plan for comprehensive public open spaces' that allows all community members suitable access. In addition, there is a need to develop robust maintenance regimes that ensure the public open space remains safe and that defects are identified and corrected within appropriate timeframes.

Demand Change: Likely higher demand for the provision of public open spaces and enhanced maintenance practices

Tourism Growth

The Tourism Forecasting Committee is an independent body charged with providing present and future activity forecasts. Tourism Research Australia also publishes the Forecast publication twice a year with contains forecasts for the next 10 years. The Tourism Forecasting Committee says the number of visitor nights in Western Australia is forecast to be 55.3 million by 2020, up from 45.6 million in 2010. That's an average annual rise of 2.0 per cent. The forecasts suggest the number of visitor nights will rise faster in Perth than in the rest of Western Australia.

It is reasonable to expect tourism demand to grow in the City as there are many current tourist attractions, including Old Mill, Swan River, Canning River, Perth Zoo, Collier Park Golf Course, Heritage House & precinct, Sir James Mitchell Park, water sports.

The City is aware it needs to identify existing and potential hubs of activity to develop and enhance such industries as tourism. With sensible strategic investment into key tourist assets, as well as in assets that contribute to overall town site aesthetics (e.g. public open spaces') the City could see high tourism growth figures.

Overall, with predictions of increased tourism, this will result in higher utilisation of public open spaces'. This in turn would mean the City will incur higher costs for asset replacement.

Demand Change: Likely higher demand for public open spaces' and enhanced maintenance practices

Recreation Change

One of the City's strategic priorities is to enhance and develop public open spaces and manage impacts on the City's built and natural environment. Therefore, for the City to meet and maintain this strategic priority there will be a requirement to continually improve and upgrade the existing public open spaces'.

Also, with changing age structures it is reasonable to expect a change in demand for the types of public open space assets available.

Demand growth driven by change in the largest age group may force the City to consider the types of public open spaces' it provides. In summary, it is expected that there will be a change in demand which will likely lead to higher costs for new public open space assets.

Demand Change: Likely increase in demand

Legal

Legislation

The City is bound to meet a range of legislative obligations, the majority of which are discussed elsewhere in this AMP, which if altered, could affect the City's management obligations.

A current legislative driver of change is the amendment of the Local Government Act. The Act is being amended to promote integrated planning and ensure that long term financial planning, asset management planning and workforce planning become standard business practices for all local governments. This outcome means that the majority of WA local government organisations will have to notably improve their current practices and processes.

The production of this AMP is a step forward in improving the City's capacity, however further significant improvement will be required. Aside from an increase in resources being needed to improve the current asset management practices, a change in demand may result if it is established that there are significant POS issues, and/or that there is a large renewal funding gap.

In summary, the changes to the Local Government Act suggest that there will be an increased demand in resources needed to undertake robust asset management practices, but that the outcomes and effects of this are not yet known.

Demand Change: Increase in management resources

Environmental

Climate

The Federal Department of Sustainability, Environment, Water, Population and Communities suggests that future temperature changes due to increasing greenhouse gas concentrations, could rise by 0.4 to 2.0^{o}C by 2030 across much of Australia (CSIRO 2001, Lindesay 2003). By 2070, temperatures are expected to be between 1.0 to 6.0^{o}C higher than in 1990, with the largest increases projected to occur in summer. Further, when severe weather events do occur, these are also expected to become more frequent and more severe.

Whilst climatic change may not directly affect demand of the services provided by the City, an increase in climatic variation may potentially reduce the attainable life of Public Open Space assets. Further, if as expected, resource costs continue to increase proportionally above normal CPI levels, the financial cost of maintaining and operating public open spaces' will rise.

Demand Change: Potentially higher whole-of-life costs and reduced public open space asset useful lives

Sustainability

At present, there is no particular legislative driver for public open space assets to be environmentally sustainable. Purchases of new assets could be more environmentally sustainable and options exist for the City to increase the sustainability of its existing assets, but this will involve a change of construction and reuse practices, rather than specifically affecting demand.

Demand Change: No Change

Health & Safety

Health and safety is particularly relevant when considering the maintenance of public open spaces', and use in support of sports and recreational facilities.

A key consideration for health and safety is the development of a more robust inspection and maintenance regime for public open spaces', in order to proactively identify defects that may pose a safety hazard. An improved regime will not only provide a higher service level to users, but potentially also reduce the whole of life costs through preventative maintenance. The cost of such a regime may also be potentially recovered through reduced insurance premiums.

Demand Change: Increase in maintenance practices, but costs could be offset, while providing higher service level

Appendix D. Example of Typical Useful Lives

Asset	Description	Useful Life (Yrs)
BBQ	Brick	20
BBQ	Electric	10
BBQ	Gas	10
BBQ	Stone	20
BBQ	Wood	10
Bike Stand	Metal	20
Bin Stand	3 pads and 3 posts	10
Bin Stand	Double bin stand-Concrete footing	10
Bin Stand	Metal post	10
Bin Stand	Single bin stand-Concrete footing	10
Bins	Decorative	20
Bins	Metal	20
Bins	Otto Plastic Bin	5
Bins	Plastic	5
Bins	Timber	15
Bollards	Decorative	30
Bollards	Metal	25
Bollards	Plastic	10
Bollards	Stone	30
Bollards	Timber	20
Brick Structures	Brick wall	25
Brick Structures	Concrete	30
Brick Structures	Steel	50
Brick Structures	Timber	20
Bridge	Concrete pedestrian bridge	60
Bridge	Concrete Concrete	50
Bridge	Stone	80
Bridge	Timber	50
Bridge	Timber	50
Bridge	Timber handrail	50
Concrete Structure	Metal	20
Concrete Structure	Wood	15
Exercise facility	Border	20
Exercise facility	Exercise area	25
Exercise facility	Exercise	25

Asset	Description	Useful Life (Yrs)
Playgrounds	F/S Slides	15
Playgrounds	Fence	20
Playgrounds	Playground mulch	5
Playgrounds	Runway	20
Playgrounds	Sandpit	5
Playgrounds	See-Saw	15
Playgrounds	Skate swing	20
Playgrounds	Spring Equipment	15
Playgrounds	Swings	20
Playgrounds	Under surfacing	5
Playgrounds	Unit	20
Playgrounds	Unit	20
Seat	Concrete Seat	20
Seat	Concrete top/Metal frame	20
Seat	Fibre-glass Seat/Metal Frame	20
Seat	Metal Seat	20
Seat	Plastic Seat	20
Seat	Wood Seat	20
Seat	Wood Seat / Stone Frame	20
Seat	Wood seat/Concrete frame	20
Seat	Wood Seat/Metal Frame	20
Shelters	Concrete Roof	40
Shelters	Metal	30
Shelters	Metal Roof	30
Shelters	Shade Structure	10
Shelters	Tile Roof	30
Shelters	Wood	30
Shelters	Wood Roof	30
Signs	Information	7
Signs	Metal Name Sign	7
Signs	Ordinance	7
Signs	Other	7
Signs	Street Sign	7
Signs	Timber Name Sign	7
Skate Bowls	Concrete	40

	equipment	
Exercise facility	Sign	7
Exercise facility	Under surfacing	5
Fences	Block/Brick	30
Fences	Chainwire fence	10
Fences	Chainwire gate	10
Fences	Concrete	30
Fences	Galv Chainwire fence	10
Fences	Handrail	15
Fences	Metal guard	15
Fences	Metal Post Metal Rail	15
Fences	Metal rail	15
Fences	Metal slip rail gate	15
Fences	Metal Swing Gate	15
Fences	Netting	10
Fences	PVC Coat Chainwire fence	10
Fences	Safety	15
Fences	Security Wire	15
Fences	Silt trap fence	5
Fences	Steel gate	15
Fences	Steel post/Chain rails	10
Fences	Stone	30
Fences	Timber	15
Fences	Timber gate	15
Fences	Timber Lattice	15
Fences	Timber Post Metal Rail	15
Fences	Timber posts/Chain lock	5
Fences	Timber rail/concrete post	15
Fences	Welded Wire Mesh	20
Fences	Wire Strands	10
Fences	Wood post/Wood Rail	15

Skate Bowls	Wood	20
Sports Field	Artificial cricket wicket	10
Sports Field	Athletics Discus	10
Sports Field	Athletics Field	10
Sports Field	Athletics Long Jump Athletics long jump	10
Sports Field	Athletics shot put	10
Sports Field	Baseball diamond	10
Sports Field	Baseball practice nets	10
Sports Field	Baseball Practice nets fence	10
Sports Field	Basketball post	10
Sports Field	Basketball court	20
Sports Field	basketball court basketball court	20
Sports Field	Basketball goal post	10
Sports Field	Cricket net fence	10
Sports Field	Cricket practice nets Cricket practice nets	10
Sports Field	Cricket sight boards	10
Sports Field	Cricket stump	5
Sports Field	Croquet Lawn	10
Sports Field	Dog Of Leash Area	10
Sports Field	Fence	10
Sports Field	Hockey Goal Posts	10
Sports Field	Hockey goal posts	10
Sports Field	Line marking	5
Sports Field	Netball court fence	10
Sports Field	Netball Courts	20
Sports Field	Netball goal posts	10
Sports Field	Oval	10
Sports Field	Rugby Goal Posts	20
Sports Field	Soccer Goal Posts	20
Sports Field	Tennis court fence	10

Fences	Wooden Picket	15
Fences	Wrought Iron Gates.	20
Fire Trail	Vehicle Access Trail	10
Flagpole	Aluminium	20
Flagpole	Timber	20
Lighting	Flood	30
Lighting	Park	20
Lighting	Security	20
Lighting	Solar	20
Lighting	Special	20
Lighting	Street	20
Metal Structures	Bike Racks	15
Metal Structures	Metal arch	20
Metal Structures	Other	15
Metal Structures	Steel Flag Pole	15
Metal Structures	Tree Guard	15
Playgrounds	Artificial surfacing	5
Playgrounds	Border	15
Playgrounds	F/S Equipment	15
Sports Field	Tennis court nets	10
Sports Field	Tennis courts Tennis courts	20
Sports Field	Tennis gates	15
Sports Field	Tennis nets	10
Sports Field	Tennis Practice Wall	20
Sports Field	Tennis Umpire Chair	10
Sports Field	Turf wicket	10
Stone Structures	Site View	5
Tables	Concrete	20
Tables	Concrete / Wooden	15
Tables	Fibre-glass / Metal Frame	15
Tables	Metal	15
Tables	Plastic / Metal Frame	15
Tables	Wooden	15
Tables	Wooden / Metal	20
Timber Structures	Bridge	20
Timber Structures	Entry Structure	15
Timber Structures	Other	15
Timber Structures	Pergola	15

Table 4-7: Generic Useful Lives for POS

(Source: IPEWA.org.au)

Appendix E. References

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Road

Asset Management Plan

Version 1
June 2013

Date: 18 June 2013

Version 1.0

Approved for Release By: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
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Time Period of the Plan:	The AMP covers a 10 year period.
Asset Management Plan Review Date:	This asset management plan will be reviewed during annual budget preparation but will be amended in line with the Strategic Community Plan.

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EXECUTIVE SUMMARY

Context

The City of South Perth (The City), occupies an area of land bordered on three sides by river water. To the north is the Swan River with the wide 'Perth Water'. District of the City of Perth lies across the River: with the Narrows Bridge as the link between the two sides, carrying the Kwinana Freeway south.

This plan is concerned with the City's road network and its components as follows:

- Roads: Sealed & unsealed surface
- Road Pavement

The road network comprises:

- 12.98km of District Distributor A roads;
- 11.64km of District Distributor B roads;
- 17.36km of Local Distributor roads;
- 158.26km of Access Roads; and
- 0.46km of Unclassified Roads.

These infrastructure assets have an estimated Current Replacement Cost (CRC) of $165,386,198 *(based on the latest revaluation of road assets in 2011/12).*

This is the first Asset Management Plan (AMP) that has been prepared by the City for its road network. As such whilst this AMP is comprehensive, it can also be considered as a "first cut plan" which will require ongoing refinement. Much of the data upon which this AMP is based is somewhat low in confidence and many improvement actions have been identified. The improvement actions listed within this plan have been prioritised based on risk analysis and professional judgement.

Sustainability of service delivery (Long term – Life Cycle Cost)

The projected cost to deal with the resurfacing elements covered by this AMP including operations, maintenance, and renewal and upgrade of existing assets over the 10 year planning period is $14.7 million.

The City's estimated available funding for this work over this period is $19 million for the 10 year planning period per year which is 141% of the amount required to provide the service.

The Citys' present funding levels appear to be sufficient to continue to provide existing services at current levels in the medium term.

Although this paints a very positive picture, these figures are distorted by the fact that this only deals with the road surface. It is also dependant on the accuracy of the data available. Accuracy and thus confidence levels will improve in future revisions of the AMP as the data quality improves.

What we will do

The City plans to provide transport services for the following within the 10 year planning period:

- Operation, maintenance, renewal and upgrade of roads to meet levels of service set by council in annual budgets.
- Major renewals and upgrades to a number of streets, roads, road side kerbs, drainage structures and footpaths.

What we cannot do

The City does not have enough funding to provide all services at the desired levels of service or provide new services. A list of works which cannot be done will be included in future revisions of the AMP.

Managing the Risks

There are risks associated with providing the service and not being able to complete all identified activities and projects. We have identified major risks as:

- Lack of confidence in asset register data leading to poor forward works forecasting i.e. identification of wrong sections for renewal / upgrades; and
- Financial gap between required level of service and funding levels

The City will endeavour to manage these risks within available funding by:

- Reviewing road asset inventory, include newly acquired assets, and revaluate network; and
- Defining appropriate levels of service and pursuing alternate funding avenues.

The Next Steps

The actions resulting from this AMP are:

- Define the AM roles and responsibilities of City staff;
- Develop and implement a formal staff AM training programme, including induction awareness;
- Incorporate other transport related assets (e.g. signs, traffic calming measures) into this AMP, and split out drainage;
- Develop Level of Service based on community requirements; and
- Review transport asset inventory, include newly acquired assets, and revaluate network.

1. FUTURE DEMAND

1.1 Demand Forecast

Factors affecting demand include population change, changes in demographics, seasonal factors, vehicle ownership, consumer preferences and expectations, economic factors, agricultural practices, environmental awareness, etc.

The City has identified a range of influences that may affect demand for services that rely on property assets for delivery, over the 10 year horizon of this AMP. The seven identified influences are discussed in detail in Appendix F and are summarised in Table 1-1 below:

Table 1-1: Demand Factors, Projections and Impact on Services

Driver	Demand Change	Comment
Political	→	No intended changes to policy that may affect demand.
Economic	↑	Possible increase in demand from economic sources and due to increased financial capacity. The City needs to ensure it can resource the long term management of its assets and services.
Social	↑	Increased demand due to increasing population, increase due to changing demographics and increase because of tourism.
Legal	↑	Increase in management resource demand because of legislative change.
Environmental	↑	Potentially higher whole of life costs due to climate change, increase from sustainability pressures.
Health & Safety	↑	Increased demand through health and safety requirements for better service levels.

1.2 Demand Management Strategy

A sound demand change strategy identifies how services delivered by the City are expected to change to meet emerging needs, or changing use. Based upon local knowledge and ABS data, the City has determined that future demand of its road network will likely increase over the 10 year period of this AMP. Five of the six key driver areas show that a combination of different pressures will require the City to not only consider the physical aspects of its road network', in terms of provision, materials and design, but also how its road network is operated and maintained.

1.3 Demand Management Plan

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets, and providing new assets to meet demand and demand management. Demand management practices include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to date for demand management are shown in Table 1-2.

Table 1-2: Demand Management Plan

Service Activity	Demand Management Plan
Community Engagement	• Engage with the community to identify justifiable community needs from other expectations and consider only community needs consistent with Council's charter. • Develop an understanding the community's desired levels of service.
Customer Requests	• Analyse customer requests to optimise the use and performance of existing road services and look for non-asset based solutions to meet demand for services.
Roads	• Identify and promote major transport routes with road hierarchy matched to levels of service. • Developing an understanding of how the network fits in with any applicable future policies and LTFP; • Developing a robust road inspection and maintenance programme. • Developing a robust road inventory;
Traffic load and volume control	• Improve road and pavement performance through road mass restrictions and reducing traffic volumes. • Understanding the extent of any future road network
City capacity	• Understanding the City's future resource capacity;

1.4 New Assets for Growth

The new assets required to meet growth will be acquired free of cost from land developments and constructed/acquired by Council.

It is expected that the present population growth rates will persist for the majority of AMP at similar rates to the historical average. It is also assumed that over the life of this AMP no new assets will be acquired.

Should the City acquire any new assets the City will have to commit council to fund ongoing operations and maintenance costs for the period that the service provided from the assets is required. Given the long life-cycle of road assets, the impact of this growth (future renewal costs) is only likely to be material after ten years.

2. LEVELS OF SERVICE

2.1 Background

This section details the methodology used to determine Levels of Service that the City has set out to achieve and provide.

Appendix B tables the Levels of Service to be monitored for performance and identify areas of deficiency or over-provision. The Levels of Service measures also allow the City to ensure that its road network is fit for purpose and provided at an efficient cost.

Road networks are crucial pieces of transport infrastructure that underpin the majority of our community's day to day activities. It is therefore critical that a well-connected, designed and maintained network is provided to the achieve all of the City's Strategic Objectives as mentioned in Table 1-2 previously. As such, it is important to ensure that the Service Levels reflect the City's Strategic Community Plan outcomes and funding allocated in the respective Annual Budget. By considering the City's objectives and values, particularly focussing on those which conflict or appear frequently, two sets of high level service levels were created:

2.1.1 **Community Levels of Service** - relate to the service outcomes that the community wants in terms of safety, quality, quantity, reliability, responsiveness, cost effectiveness and legislative compliance.

Community levels of service measures used in the AMP are:

- Quality — How good is the service?
- Function — Does it meet users' needs?
- Safety — Is the service safe?

2.1.2 **Technical Levels of Service** - Supporting the community levels of service are operational or technical measures of performance. These technical measures relate to the allocation of resources to service activities that the council undertakes to best achieve the desired community outcomes.

Technical service measures are linked to annual budgets covering:

- Operations – the regular activities to provide services such as condition inspections, sweeping frequency etc.
- Maintenance – the activities necessary to retain an assets as near as practicable to its original condition (e.g. road patching),
- Renewal – the activities that return the service capability of an asset up to that which it had originally (e.g. frequency and cost of road resurfacing and pavement reconstruction),
- Upgrade – the activities to provide an higher level of service (e.g. widening a road) or a new service that did not exist previously (e.g. a new road section).

2.2 Desired Levels of Service

At present, indications of desired Levels of Service are obtained from various sources including residents' feedback to Councillors and staff, service requests and correspondence. Council has yet to quantify desired levels of service.

Table 2-1 overleaf indicates the draft desired Level of Service based on the present visual condition of the sealed road network.

Table 2-1 Desired levels of service for condition

Road Asset Class \ Condition % length	Condition 1 "Good" % Preferred	Condition 2 "Minor" % Preferred	Condition 3 "Medium" % Preferred	Condition 4 "Major" % Preferred	Condition 5 "No Good" % Preferred
Roads					
Sealed Regional Distributor Roads	<50%	40-70%	<10%	<3%	<2%
Sealed Local Distributor Roads	<50%	40-60%	<15%	<3%	<2%
Sealed Local Access Roads	<50%	40-60%	<20%	<5%	<3%
Kerbs	<70%	40-70%	<20%	<5%	<3%

2.3 Current Levels of Service

The City has undertaken a condition survey for its road network. This condition data has been used and compared against the desired level of service shown in Table 2-1 above.

Current visual road condition Level of Service details are contained in Table 3-2 later in this document.

3. LIFECYCLE MANAGEMENT PLAN

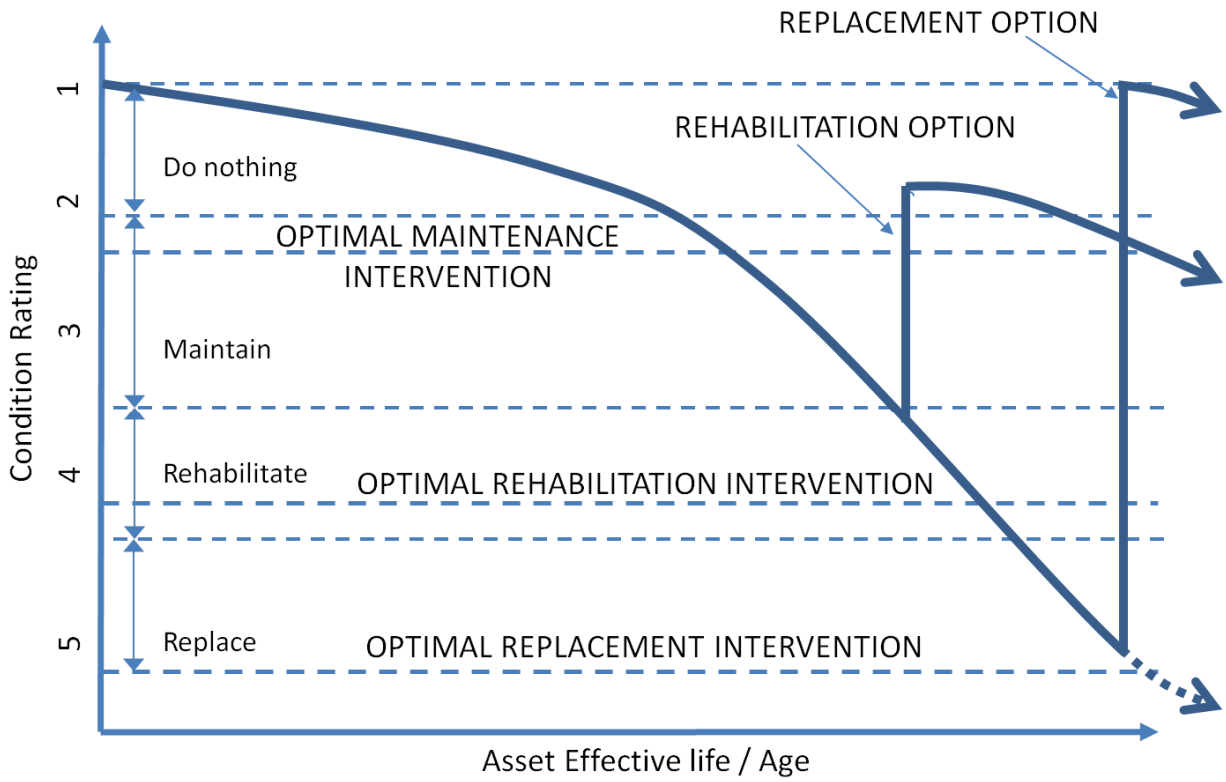
The lifecycle management plan details how the City plans to manage and operate the assets at the agreed levels of service (defined in Section 2) while optimising life cycle costs.

This model relates particularly to the maintenance and renewal stages of asset life.

In the "Do Nothing" phase, the asset deteriorates slowly and maintenance is generally not required. In the "Maintain" phase, activities will need to be performed to minimise continued deterioration. In the "Rehabilitate" or "Renewal" phase, activities are undertaken that restore the asset to a condition close to that of the original.

The importance of the time for intervention for renewal is paramount. If renewal activities are not undertaken in a timely manner, the condition of the asset will deteriorate rapidly to failure, and the cost of reconstruction, may be many times that of renewal activities.

Figure 3-1: The Sealed Road Pavement Lifecycle (IPWEA, 2006))



Source: The Sealed Road Pavement Lifecycle (IPWEA, 2006)

3.1 Asset hierarchy

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

A suggested asset service hierarchy is shown in Table 3-1 overleaf.

Table 3-1: Asset Service Hierarchy

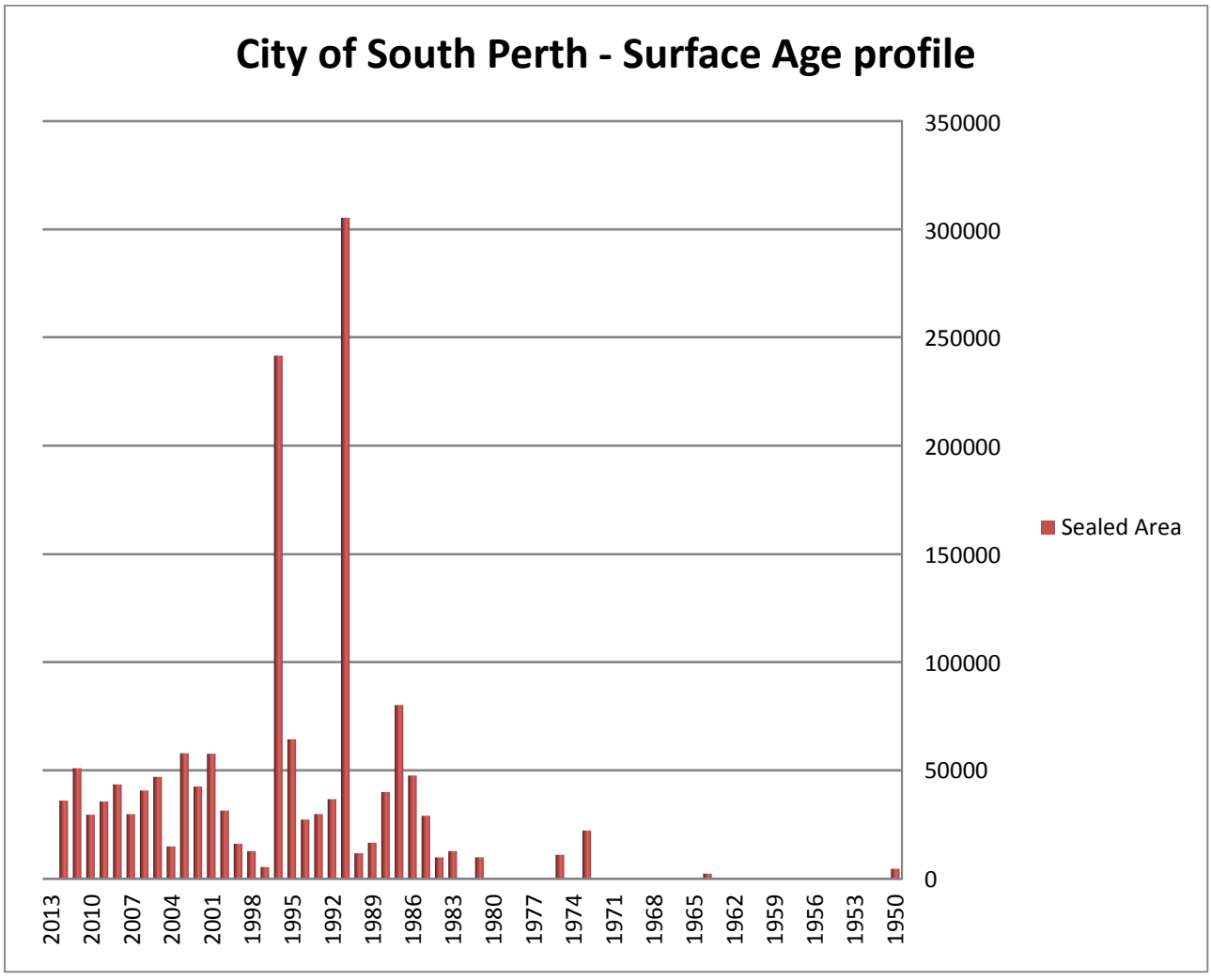
Service Hierarchy	Service Level Objective
Regional Sealed Distributor Roads	Provide safe, smooth and all weather access [2 lane width, 80km/h design speed, legal load limits]
Sealed Local Distributor Roads	Provide safe, smooth and all weather access [2 lane width (for more than 200vpd), 60km/h design speed, no load limits]
Sealed Local Access Roads	Provide safe, smooth and all weather access [2 lane width, 60km/h design speed, no load limits]

3.2 Age profile

The age profile of the assets included in this AMP is shown in Figure 3-2 below.

For accurate full life cycle costing to be carried out, it is a requirement that the data confidence is improved in the future. The age profile should be revised iteratively prior to future revisions of the AMP in order to improve the reliability of the data and projections.

Figure 3-2: Asset Age Profile



3.3 Present Asset condition

The City has recently undertaken a condition inspection of its entire sealed road network. The results are represented in Table 3-2 below.

Based on the indicative Condition Levels of Service contained in Table 3-2 below, the Council is providing:

- A high Level of Service for its sealed District Distributor A road network; and
- A medium Level of Service for the rest of its road network.

Considering that these Levels of Service are based on the networks' present condition, further work will be carried out to once the Levels of Service have been finalised and adopted by Council. This further work will entail compiling a forward works program to redress these imbalances, and increase funding to the areas where the Level of Service is balanced.

Table 3-2: Overall Surface Condition assessment

Condition % length	Condition 1 "Good" %		Condition 2 "Minor" %		Condition 3 "Medium" %		Condition 4 "Major" %		Condition 5 "No Good" %	
Road Asset Class	Current	Desired	Current	Desired	Current	Desired	Current	Desired	Current	Desired
Sealed District Distributor A Roads	29%	<50%	31%	40-70%	40%	<10%		<3%		<2%
Sealed District Distributor B Roads	6%	<50%	24%	40-60%	59%	<15%	11%	<3%		<2%
Sealed Local Distributor Roads	12%	<50%	34%	40-60%	46%	<20%	5%	<5%	3%	<3%
Sealed Local Access Roads	9%	<70%	19%	40-70%	43%	<20%	26%	<5%	1%	<3%

Please note that:

- 2% of the Access Roads were not rated during the last condition survey;
- A breakdown of pavement condition is not currently available
- A breakdown of kerb condition is not currently available

3.4 Routine Maintenance Plan

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

3.4.1 Maintenance plan

Maintenance refers to works undertaken to address minor defects such as pothole patching, edge-break or patching. These treatment works are undertaken to keep Council's road network in a safe and operational condition, but not necessarily to improve the overall condition of these assets. Maintenance includes reactive, planned and specific maintenance work activities.

Reactive maintenance is unplanned repair work carried out in response to service requests and management/supervisory directions. Assessment and prioritisation of reactive maintenance is undertaken by Council staff using experience and judgement. Although not developed as yet, it is the aim of the City to carry out reactive maintenance in accordance with predetermined response levels of service agreed with the community.

Planned maintenance is repair work that is identified and managed through a maintenance management system (MMS). MMS activities include inspection, assessing the condition against failure/breakdown experience, prioritising, scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.

Cyclic maintenance is replacement of higher value components/ sub-components of assets that are undertaken on a regular cycle including repainting of road markings etc. This work generally falls below the capital/ maintenance threshold.

Operational costs are not currently recorded as a separate amount by the City. It is assumed that all costs are captured under a maintenance amount. These costs are shown in Table 3-3 below. This has been listed as an improvement action.

Table 3-3: Historical Maintenance Expenditure

	Operational costs	Maintenance costs	Total
2007/08	Non recorded	$1,417,000	$1,417,000
2008/09	Non recorded	$2,106,000	$2,106,000
2009/10	Non recorded	$2,159,000	$2,159,000
2010/11	Non recorded	$2,653,000	$2,653,000
2011/12	Non recorded	$2,971,000	$2,971,000
2012/13	Non recorded	$2,583,000	$2,583,000

Although details are not clear for the actual split between the maintenance categories above, the costs have been split anecdotally as follows:

- Reactive maintenance work is typically 30 % of total maintenance expenditure;
- Planned maintenance work is typically 25 % of total maintenance expenditure;
- Cyclic maintenance work is typically 30 % of total maintenance expenditure; with
- Operational costs making up the balance.

Future revisions of this AMP should include linking required maintenance expenditures with required levels of service.

3.4.2 Standards and specifications

Maintenance work is carried out in accordance with the following Standards and Specifications.

- Austroads standards and specifications;
- Australian Standards; and
- Australian Roads and Research Board (ARRB) Sealed Local Roads Manual.

3.4.3 Future operations and maintenance expenditures

It should be noted that when undertaking the lifecycle modelling, these types of costs are taken into consideration by assuming that, each year, a percentage of these distresses (such as potholes) will be repaired as part of Council's routine maintenance. If these assets are left to deteriorate (i.e. sufficient capital expenditure is not allocated), then the amount of distresses being fixed under routine maintenance will increase and the routine maintenance expenditure required will also increase. Equally, if the condition of these assets improves then the routine maintenance expenditure required will decrease.

Maintenance is funded from the operating budget and grants where available.

The future operations and maintenance expenditure is forecast to trend in line with historical maintenance expenditure, plus additional expenditure for new assets. The historical average funding levels have therefore been used to determine future funding levels as shown in Table 3-5 below. Note that all costs are shown in 2012 dollar values.

Table 3-4: Planned Operations and Maintenance Expenditure

Year	Projected Operation & Maintenance -
2013/14	$2,314,833
2014/15	$2,261,200
2015/16	$2,261,200
2016/17	$2,261,200
2017/18	$2,261,200
2018/19	$2,261,200
2019/20	$2,261,200
2020/21	$2,261,200
2021/22	$2,261,200
2022/23	$2,261,200

Deferred maintenance, i.e. works that are identified for maintenance and unable to be funded are to be included in the risk assessment process in the Infrastructure Risk Management Plan.

3.5 Renewal/Replacement Plan

Renewal expenditure is major work which does not increase the asset's design capacity but restores, rehabilitates, replaces or renews an existing asset to its original service potential. Work over and above restoring an asset to original service potential is upgrade/expansion or new works expenditure.

3.5.1 Renewal plan

Road assets requiring renewal have been identified using the ROMAN II inventory data to project the renewal costs for renewal years using asset condition and acquisition year, and the useful lives listed in Appendix A.

Renewal will be undertaken using 'low-cost' renewal methods where practical. The aim of 'low-cost' renewals is to restore the service potential or future economic benefits of the asset by renewing the assets at a cost less than replacement cost. As a result, a matrix of low-cost renewal option should be developed as an appendix in future revisions of the AMP. This has been listed as an improvement action.

Actual past renewal expenditure is shown in Table 3-5 below.

Table 3-5: Historical Renewal Expenditure

Year	Road network renewal
2007/08	$2,655,000
2008/09	$2,574,000
2009/10	$2,255,000
2010/11	$1,566,000
2011/12	$3,174,000
2012/13	$0

3.5.2 Projected renewal expenditure

Projected future renewal expenditures are forecast to increase over time as the asset stock ages.

The City has determined its planned renewal expenditure for its road network as shown below.

The expenditure projections are summarised in Table 3-6 below.

Renewals are to be funded from capital works programs and grants where available. This is further discussed in Section 4.1.5.

Table 3-6: Planned Renewal Expenditure

Year	Resurfacing renewal	Ancillary renewal	Total Renewal
2013/14	$1,206,533	$830,800	$2,037,333
2014/15	$1,800,000	$830,800	$2,630,800
2015/16	$1,850,000	$830,800	$2,680,800
2016/17	$1,900,000	$830,800	$2,730,800
2017/18	$1,975,000	$830,800	$2,805,800
2018/19	$2,150,000	$830,800	$2,980,800
2019/20	$2,225,000	$830,800	$3,055,800
2020/21	$2,300,000	$830,800	$3,130,800
2021/22	$2,375,000	$830,800	$3,205,800
2022/23	$2,450,000	$830,800	$3,280,800

Upgrade projects have a renewal component which has not been identified or estimated in the above figures. If this was carried out, the expenditure on renewals would increase while the upgrade expenditure would decrease. This will have a significant effect on the sustainability ratios. An improvement action to split the upgrade expenditure into a renewal and upgrade component has therefore been listed.

The planned expenditure represents an average renewal expenditure of just over $2.8 million per annum. This is substantially higher than the historical expenditure trends have been.

However, after undertaking a renewal modelling exercise based on the age and condition of the network, using the current identified useful life's it is evident that the City only requires a total of $14,682,370 over the next 10 years to deal with the sites requiring a surface treatment based on current surface condition compared to the planned amount of $20,231,533.

An improvement action to carry out regular condition assessments of the road network covered in this AMP has been identified and listed.

3.5.3 Renewal standards

Renewal work is carried out in accordance with the following Standards and Specifications.

- Austroads standards and specifications;
- Australian Standards; and
- Australian Roads and Research Board (ARRB) Sealed Local Roads Manual.

3.6 Creation/Acquisition/Upgrade Plan

New works are those works that create a new asset that did not previously exist, or works which upgrade or improve an existing asset beyond its existing capacity. They may result from growth, social or environmental needs. Assets may also be acquired at no cost to the Council from land development.

New assets and services are to be funded from capital works program and grants where available. The City has historically recorded upgrade and new works as one figure. An improvement action has been listed to show this as two separate amounts.

Historical upgrade/new asset expenditure is shown in Table's 3-7 and 3-8 overleaf.

Table 3-7: Historical Upgrade / New Expenditure

Year	Road Upgrade/New expenditure
2007/08	$688,000
2008/09	$699,000
2009/10	$1,601,000
2010/11	$1,706,000
2011/12	$29,000
2012/13	$3,035,000

The City has determined its planned renewal expenditure for its road network as shown below in Table 5-10.

Table 3-8: Planned Upgrade / New Expenditure

Year	Planned Road Upgrade/New expenditure
2013/14	$944,600
2014/15	$944,600
2015/16	$944,600
2016/17	$944,600
2017/18	$944,600
2018/19	$944,600
2019/20	$944,600
2020/21	$944,600
2021/22	$944,600
2022/23	$944,600

An improvement action has been listed to improve the manner with which the City carries out the forward works planning to increase the reliability of the planned upgrade and new forward works expenditure levels.

3.6.1 Standards and specifications

Standards and specifications for new assets and for upgrade/expansion of existing assets are the same as those shown in Section 3.4.2.

3.7 Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation.

It is unlikely that any the City's road network would be disposed of while it is still in service. There are no plans to dispose of any significant lengths of road at this time.

In the carrying out of road realignment works, existing road pavement materials may be ripped up and left in-situ or removed and reused elsewhere. For all practical purposes, the value of salvaged road materials is of little consequence.

4. FINANCIAL SUMMARY

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

The financial projections will be improved as more information becomes available on desired levels of service and current and projected future asset performance, and the level of data confidence improves.

Figure 4-1 below summarises the City's total expenditure on its road network for the past five years, and its planned expenditure for the duration of this AMP.

Figure 4-2 overleaf outlines the predicted lifecycle costs to maintain the assets are a similar Level of Service.

Figure 4-1: Five Year Historical Expenditure and Ten Year Planned Expenditure

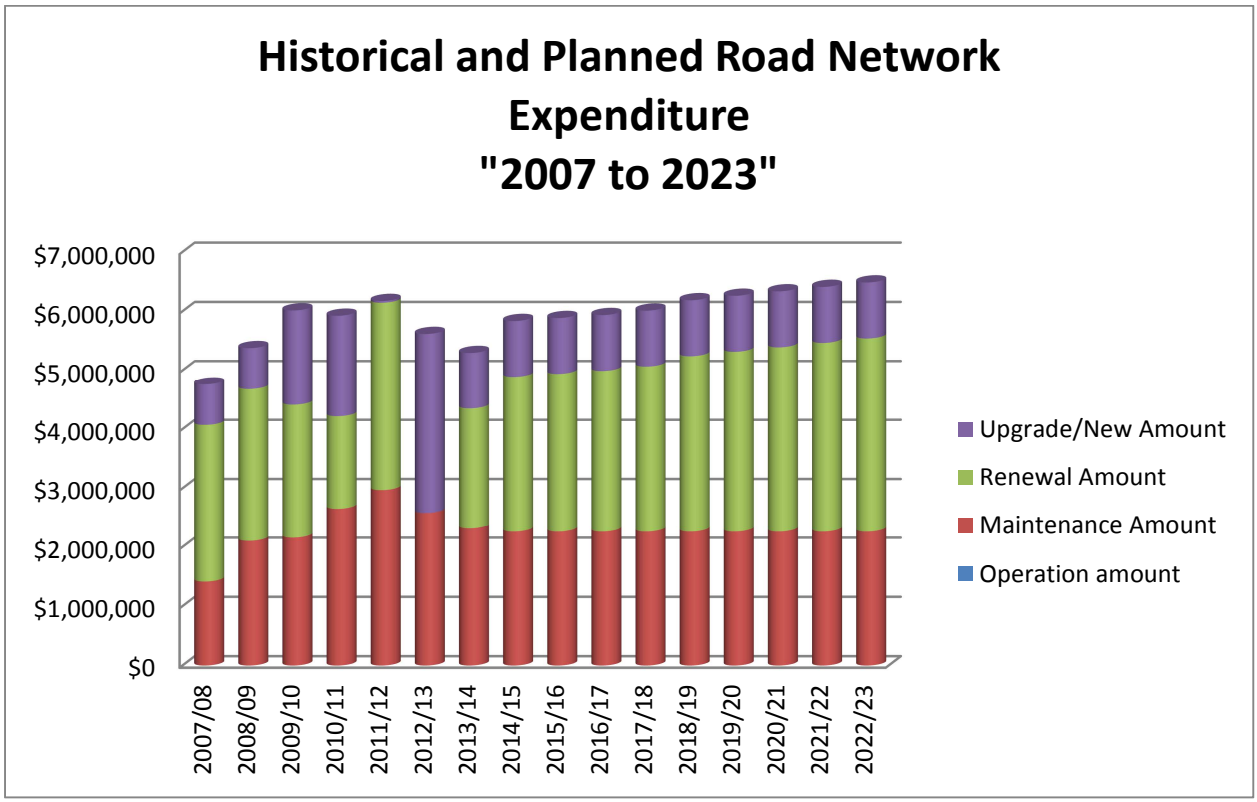
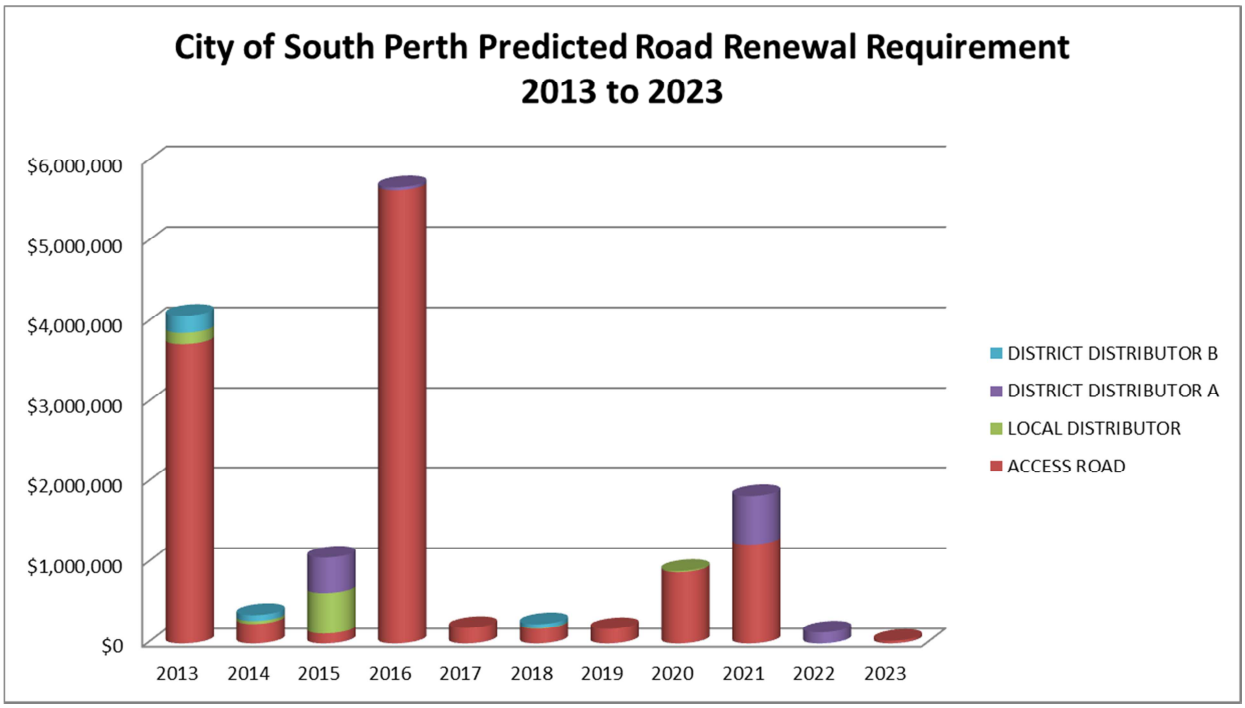


Figure 4-2: Ten Year Total Predicted Renewal Expenditure



4.1.1 Asset Valuations

The value of assets recorded in the asset register as at 30 June 2012 covered by this AMP is shown below. Assets were last revalued in 2011/12.

Item	Value
Current Replacement Cost (2012)	$165,386,198
Depreciable Amount	$90,135,478
Depreciated Replacement Cost	$75,250,720
Annual Depreciation Expense	$8,314,213

4.1.2 Asset Sustainability Ratios

As part of the Department of Local Government (DLG) Asset Management Framework and Guidelines the City will need to report three ratios. The City's current (2011/12) ratios for the assets covered in this plan are shown below and will be monitored and reported annually.

	Value	DLG's target ranges
Asset Sustainability Ratio **(Planned Annual Renewal & replacement expense/Annual Depreciation expense)**	25%	90% - 110%
Asset Renewal Funding Ratio (surfacing only) **(Planned Capital renewal expenditure/Required Capital renewal expenditure)**	141%	95% -100%
Asset Consumption Ratio **(Depreciated Replacement Cost/Current Replacement Cost)**	46%	50% - 75%

The table below shows the figures used to calculate the ratios shown above.

Description	Value
Planned Annual Renewal & replacement expense	$2,076,703
Annual Depreciation expense	$8,314,213
Planned Capital renewal expenditure	$20,767,030
Required Capital renewal expenditure	$14,682,370
Depreciated Replacement Cost	$75,250,720
Current Replacement Cost	$165,386,198

All of the ratios shown above are outside of the DLG's target ranges. These ratios will be monitored and reported on an annual basis. It should be remembered that the Asset Renewal Funding Ratio is based purely on the surfacing and kerb data. This is due to the format of the information currently available, and will be improved in future revisions of this AMP as further information becomes available.

To provide services in a financially sustainable manner, as a minimum, Council will need to ensure that it is renewing assets at the rate they are being consumed over the medium-long term, and funding the life cycle costs for all new assets and services in its LTFP.

The City is committed to monitoring these ratios on annual basis and intends to review the data used to create these current values, along with continually reviewing the data to ensure that continual improvement is made.

4.1.3 Gap Analysis

This section analyses the variance between the predicted full life cycle cost (including operations, maintenance, renewal, upgrade, but excluding new growth), and planned expenditure. This variance indicates the life cycle gap, showing insufficient asset expenditure, or a surplus, showing excessive expenditure. This gap indicates whether further work is required to manage required Levels of Service and funding to eliminate any funding gap.

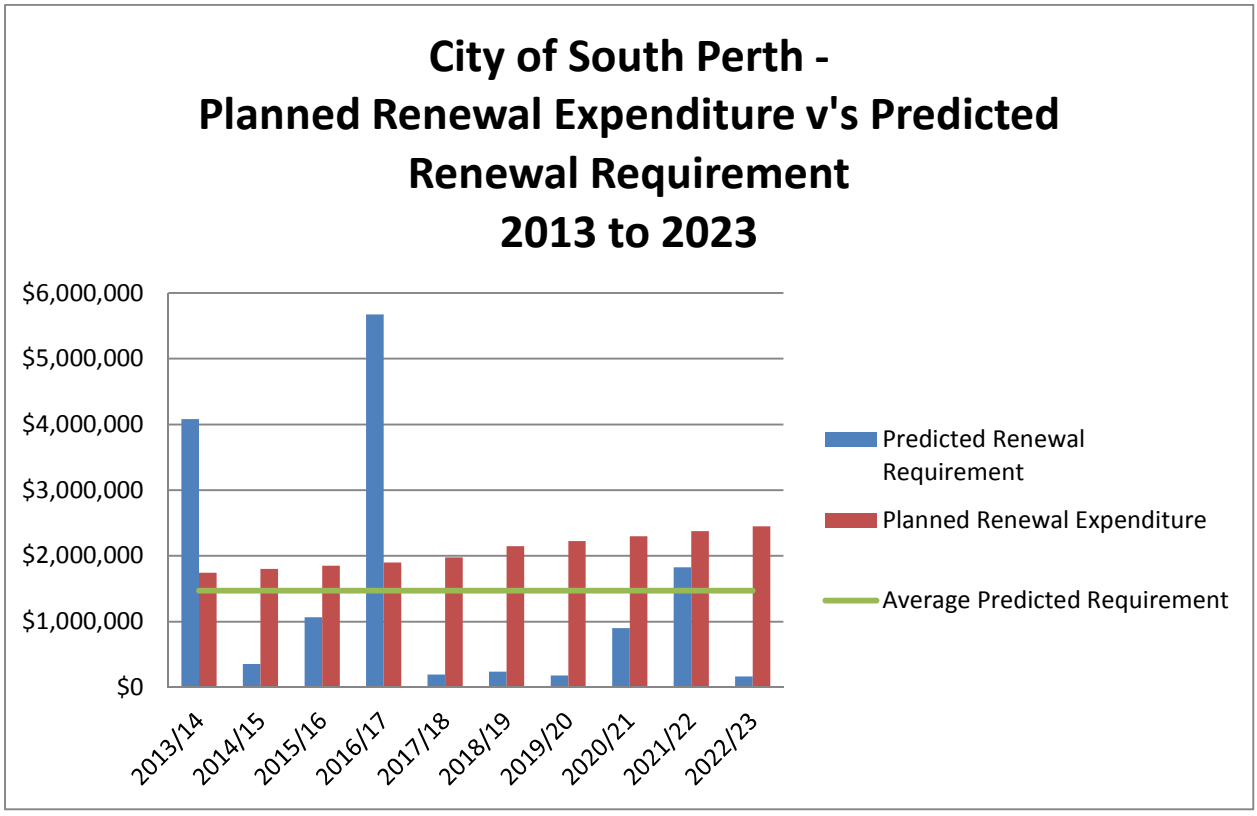
Providing services in a sustainable manner will require matching of predicted asset expenditure to meet agreed Levels of Service with planned capital works programs and available revenue.

This AMP identifies the projected operations, maintenance and capital renewal expenditures required to provide an agreed Level of Service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

These predicted expenditures may be compared to budgeted expenditures in the 10 year period to identify any funding shortfall. In a core AMP, as in this AMP, the gap is generally due to increasing asset renewals for ageing assets due to insufficient past renewal expenditure.

The average projected renewal expenditure (surface only), required over the 10 year planning period is $937,483 per year as illustrated in Figure 4-3 below.

Figure 4-3: Predicted Renewal Requirement Vs Planned Renewal Expenditure

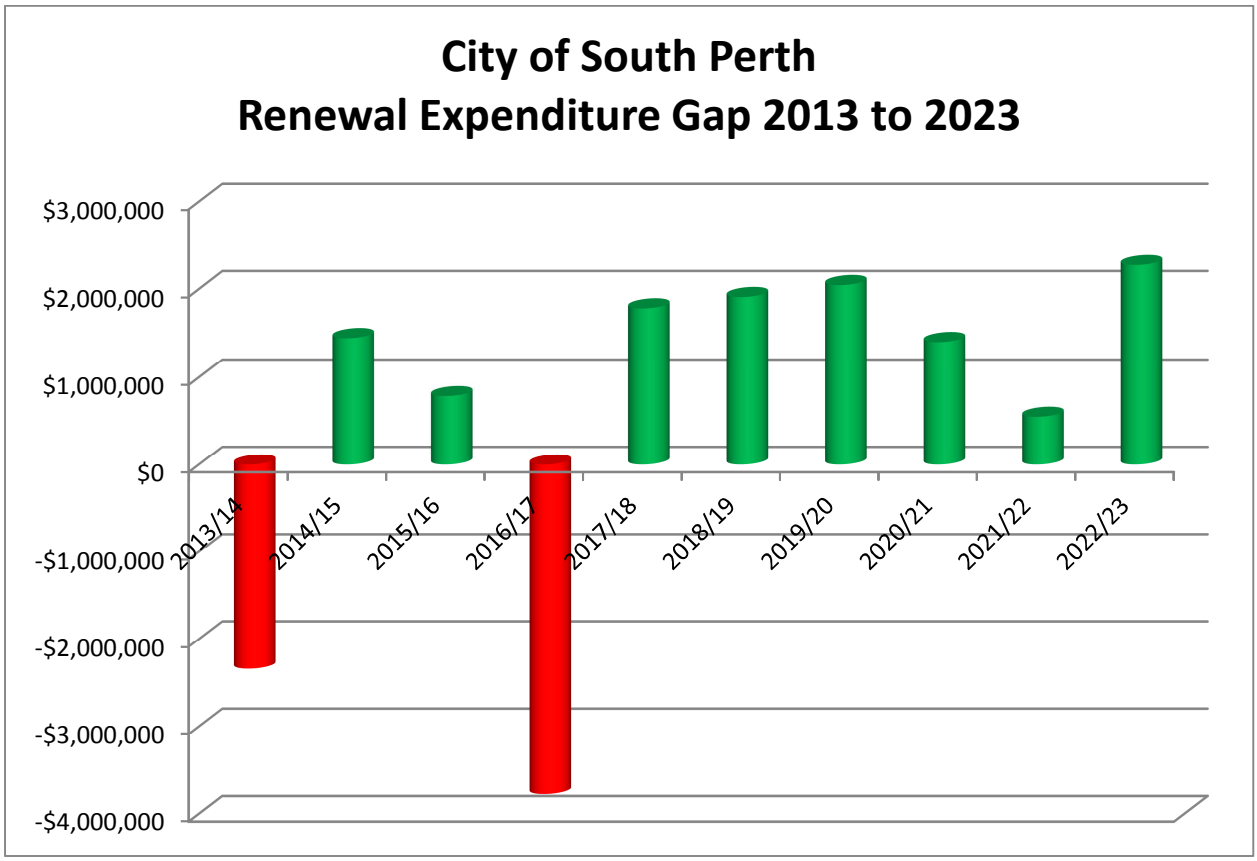


The City is planning and has budgeted through it LTFP to spend an average of $2,076,703 per annum on renewals over the life of this AMP.

The predicted average amount required per annum for renewals based upon asset condition and age is $1,468,237. This indicates that the City is planning to spend an average of $608,466 above what is required on road renewals per annum

This is illustrated in Figure 4-4 overleaf which shows the annual funding gap on an annual basis.

Figure 4-4: Predicted Life cycle gap (10 year)



Gap analysis summary

The figures reported in the preceding sections paint an encouraging picture. It is important however, to realise that this only covers the resurfacing and kerbing of the network over the life of this plan, it not take into account any requirements for the pavement structure.

Expenditure projections are in current (non-inflated) 2012 values.

4.1.4 Funding Strategy

The funding strategy is detailed in the organisation's 10 year long term financial plan. Projected expenditure identified in Section 3.5.2 is to be funded from future operating and capital budgets, with grant funding. There are several funding sources that are available to the City in order to operate, maintain, renew, upgrade and build the road network. These sources are, but are not limited to, the following:

- City revenue from rates.

  The City seeks to maximise funding from non-council sources in order to help minimise the cost of transport assets on City rates. Non-council funding sources have not historically been able to fully fund the City's transport activities and therefore there is always likely going to be a reliance on rate revenue.

- Roads to Recovery.

  The Roads to Recovery Program operates uniformly across Australia. Under current arrangements, each council is guaranteed a share of the total available funding. Under simple administrative procedures whereby spending decisions are made locally and reported to the government, money is paid directly from the Australian Government to each council.

- Financial Assistance Grants.

  The Financial Assistance Grants are currently provided under the Local Government (Financial Assistance) Act 1995 and have the following components:

  - *a general purpose component which is distributed between the States and Territories according to population (i.e., on a per capita basis), and*
  - *an identified local road component which is distributed between the States and Territories according to fixed historical shares.*

  Both components of the grants are untied in the hands of local government, allowing councils to spend the grants according to local priorities.

- Metropolitan Regional Road Group (MRRG) Grants.

  The MRRG operates two grant funding programmes, one for improvement projects and one for rehabilitation. Improvement grants are available, on a two-thirds (grant)/one-third (Council) basis, for either upgrade projects (i.e. road widening) or new projects (new roads). Rehabilitation grants operate on the same basis for road renewal projects (resurfacing or reconstruction).

- Blackspot Funding.

  The Black Spot Program is part of the commitment to reduce crashes on Australian roads. Road crashes are a major cost to Australians every year. Black Spot projects target those road locations where crashes are occurring. By funding measures such as traffic signals and roundabouts at dangerous locations, the program reduces the risk of crashes. Black spot programs are typically small scale localised upgrade projects.

Developer contributions.

The City negotiates with property developers in order to receive contributions for the future provision of significant public infrastructure that is necessitated because of development. This includes funding for the provision of new and upgraded roads.

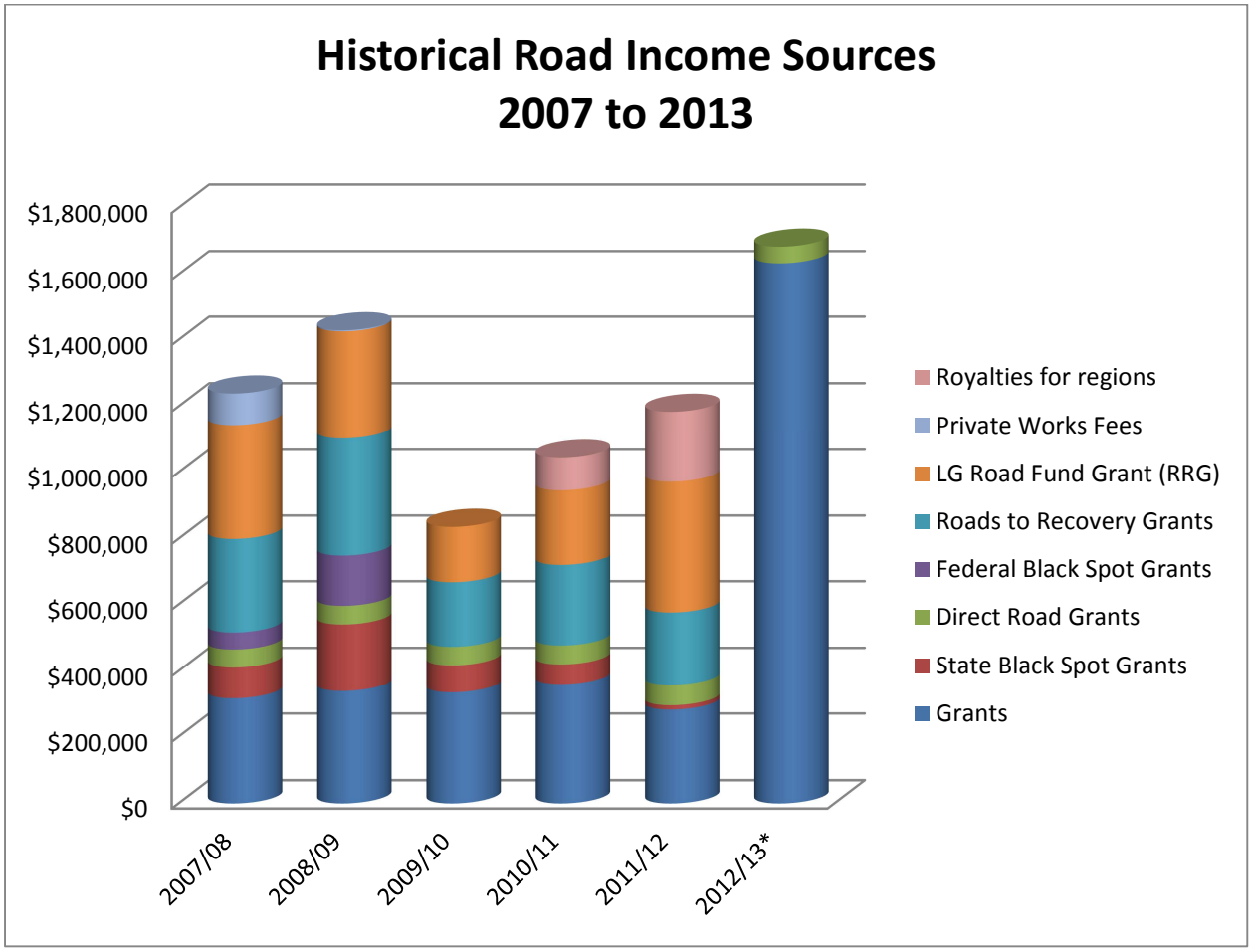
- Developer funded infrastructure.

  In some instances where new or upgraded public infrastructure in existing road reserves is necessitated because of development, it is fully funded and constructed by developers.

4.1.5 Historical funding

Figure 6-5 shows the historical grants received by the City over the past four years.

Figure 4-5: Historical Road Funding Sources



This equates to 22% of the City's expenditure on road assets during these years. It is in the interest of the City to maximise the external funding opportunities, and the City will be actively pursuing these grants.

4.1.6 Key Assumptions made in Financial Forecasts

This section details the key assumptions made in presenting the information contained in this AMP and in preparing forecasts of required operating and capital expenditure and asset values, depreciation expense and carrying amount estimates. It is presented to enable readers to gain an understanding of the levels of confidence in the data behind the financial forecasts.

Key assumptions made in this AMP are:

- The inventory, income and expenditure details of the City's road network have been included in this AMP;
- Condition data for the road network has been incorporated into the model for predicting future expenditure needs;
- The asset register used is correct and accurate;
- The current Levels of Service will remain constant over the life of this AMP;
- The budget and expenditure details are accurate as given, and expenditure will continue in line with historical trends;
- The current network deficiency is accurately reported as given;
- The Road Maintenance budget consists of both operational and maintenance functions;
- The road network valuation is the latest valuation undertaken by the City;
- Unit rates and asset lives are reflective of real cost and asset lives;
- The treatment and maintenance costs are based on Council's current schedule of rates and may not directly compare to Councils internal service provision actual costs; and
- All predicted financial figures are based on 2012 rates and are not adjusted by the inflation rate for the particular year of works.

4.1.7 Data confidence

Table 4-1 below summarises the confidence levels of financial data obtained for this AMP.

Table 4-1: Financial Data levels of confidence

Asset Category	Confidence Rating				
	Operations	**Maintenance**	**Renewals**	**Upgrades**	**New/ Acquisitions**
Roads	E	C	C	C	D

Table 4-2 below summarises the data confidence levels of information obtained for this AMP.

Table 4-2: Data Levels of confidence

Asset Category	Confidence Rating			
	Quality overall / completeness	**Year acquired / constructed / last surface**	**Useful life**	**Condition**
Roads	C	C	C	C

Table 4-3 below summarises the confidence levels of the financial data.

Table 4-3: Data Levels of confidence

Asset Category	Confidence Rating		
	Predicted Expenditure	**Sustainability Ratios**	**Gap analysis**
Roads	C	D	C

Table 4-4 below outlines the data confidence limits used in this AMP.

Table 4-4: Levels of Confidence Definitions

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

5. PLAN IMPROVEMENT AND MONITORING

5.1 Performance Measures

The effectiveness of the AMP can be measured in the following ways:

- The degree to which the required cashflows identified in this AMP are incorporated into the organisation's LTFP and Community/Strategic Planning processes and documents; and
- The degree to which 1-5 year detailed works programs, budgets, business plans and organisational structures take into account the 'global' works program trends provided by the AMP.

5.2 Improvement Plan

The asset management improvement plan generated from this AMP is shown in Table 5-1

Table 5-1: Improvement Plan

Action Number	Action	Priority (High = 1 - 2 year, Medium = 2 – 4 years, Low =3 - 6 years
1	Ensure that the City's asset management strategy is adopted by Council	High
2	Develop a hierarchy for all assets, identifying parent/child relationships, and link to Levels of Service.	High
3	Develop a simple business case proforma and associated process, for new capital projects. The proforma should provide a project brief, project description, operational, maintenance and renewal impacts (whole-of-life) and potential income sources.	High
4	Revise current development conditions to include the provision of electronic as-constructed asset information and whole-of-life cost analysis.	Medium
5	Develop Level of Service based on performance criteria / needs & affordability, rather than anniversary treatments.	Medium
6	Develop a formal staff AM training programme, including induction awareness.	High
7	Develop a formal Councillor AM training programme.	High
8	Develop a business continuity plan for AM activities.	High
9	Develop a diagram that defines the organisation's asset management documentation structure and include in the AM Strategy.	High
10	Configure the City's corporate financial system and works management system to record asset expenditure at the individual asset level according to maintenance type and activity.	High
11	Carry out 5% audit on assets with regard to date acquired, dimensions, structure, and condition. Increase audit if results are poor and update inventory data prior to each AMP version.	Medium
12	Develop Councils Data Collection Manuals to ensure repeatability and on-going improvement of condition data collection and modelling processes.	Medium
13	Develop a matrix of low-cost renewal options for future AMPs.	High
14	Improve the manner with which the City carries out the forward works planning to increase the reliability of the planned upgrade and new forward works expenditure levels.	High
15	Review the City's year acquired, estimated asset lives and adopt consistent unit rates across the organisation.	Medium
16	Develop staff AM performance measures and link KPIs to individual job descriptions.	High
17	Link Workforce Management Plan to AM Strategy.	High
18	Define the AM roles and responsibilities of City staff.	High

19	Define the asset financial responsibilities of City staff.	High
20	Determine split in costs between operational, maintenance, renewal, upgrades and new.	High
21	Develop a framework for reporting AM outcomes to Council and customers.	Medium
22	Revaluate the assets within the roads AMP.	Medium

5.3 Monitoring and Review Procedures

This AMP will be reviewed during annual budget preparation but will be amended in line with the Strategic Community Plan.

Appendix A. **ROAD UNIT RATES AND LIVES**

Asset Unit Rates

The City currently operates a set of road unit rates which are shown in Table 5-2 below.

Table 5-2: Construction Unit Rates

Asset Type	Unit Cost ($/m2)
Roads-Chip seal (single)	$8.00
Roads-Chip seal (double)	$12.00
Roads-Asphalt seal	$26.00
Concrete	$110.00
Brick	$65.00
Concrete pavers	$65.00
Roads-Other seal	$10.00

Asset Lives

Tables 5-3 and 5-4 detail the road construction lives which have been applied in this AMP. In particular, they have been used in conjunction with the lifecycle costing.

Table 5-3: Asset Lives/Service Level

Asset Type	Basic Pavement Service Level (Years)
Distributor A	40
Distributor B	45
Local Distributor	50
Access Road	60
Unclassified	60

Table 5-4: Asset Lives/Service Level

Asset Type	Basic Surface Service Level (Years)
Roads-Chip seal (single)	15
Roads-Chip seal (double)	20
Roads-Asphalt seal	25
Concrete	60
Brick	15
Concrete pavers	15
Roads-Other seal	20

Appendix B. **LEVELS OF SERVICE**

Key Performance Measure	Level of Service Objective	Performance Measure	Desired Level of Service	Current Level of Service
COMMUNITY LEVELS OF SERVICE				
Quality	Responsiveness	Customer service requests (CSR) response	95% of all CSRs completed on time	**TBC**
Function	Access is available at all times	% Road closures to due unplanned works	Less than 2% each month	**TBC**
	Sealed road network condition is maintained at a technically optimal threshold	% of road network in poor condition, based on annual condition report	No more than 10% of the asset stock to be in condition 4 or 5 in any given year	**TBC**
Safety	Provide safe suitable roads, free from hazards	Number of injury accidents.	Less than 20 per annum	**TBC**
	Provide safe suitable roads, free from hazards	Crash reports	Crash reports reducing by 5 % every year	**TBC**
Environmental	Environmental	CSR's relating to environment	less than 2/ month	**TBC**

TECHNICAL LEVELS OF SERVICE					
Operations	Servicing and management	Annual condition and defects inspection	Defects are reducing		**TBC**
	Accessibility: Provide all weather access to trunk collector and dwelling access road	Duration and frequency of road being impassable	Less than 4 hours when road is impassable per year at no more than 2 locations		**TBC**
	Forward Works Budget spend	Road Operations Budget	Within 2% of budget (savings excluded)		**TBC**
Safety	Safety: construction services	Total Recordable Injury Frequency Rate (TIFR)	Not >14hrs/million		**TBC**
Maintenance	Forward Works Budget spend	Road Maintenance Budget	Within 2% of budget (savings excluded)		**TBC**
	Repair sealed road hazards and defects	Reactive vs maintenance %age	Reactive Planned	20% 80%	**TBC**
	Safety: Provide clear road signage	Annual defect & condition survey	Less than 5% of signs with defects.		**TBC**
	Cost effectiveness: Provide services in cost-effective manner	Maintenance cost $/km	Trunk roads $4,000/km Collectors $2,000/km Dwelling access $1,000/km Property access $500/km		**TBC**

Maintenance Renewals	Resurfacing of road network	%age of identified length resealed per year	> 95%	**TBC**
	Forward Works Budget spend	Road Renewal Budget	Within 2% of budget (savings excluded)	**TBC**
Upgrade/New	Major works rehabs & upgrades	%age of road category length upgraded per year	>2%	**TBC**
	Major works rehabs & upgrades	%age of works (Time, quality & budget)	> 95%	**TBC**
	Forward Works Budget spend	Budget	Within 2% of budget (savings excluded)	**TBC**

Appendix C. **CONDITION INSPECTION METHODOLOGY**

Roads

The City currently uses external consultants to undertake its road condition surveys.

The City undertakes its condition survey evry 3-5 years, with the survey methodology following the ROMAN / ROMAN II methodology

Appendix D. SAFETY AND MAINTENANCE INSPECTION METHODOLOGY

The City currently undertakes safety inspections in a number of ways.

- Annual inspections; and
- Regular patrol teams with assigned areas to find defects.

The City is split into areas with each patrol team having a particular area to inspect. The defects pre-determined response times based on their risk value.

Appendix F. **DEMAND FORECAST**

This AMP considers a 10 year planning horizon and therefore the factors that may influence the potential demand the City's road network over this period must be recognised. The following section provides commentary on different factors that may be subject to change and that in turn, may affect the demand on the road network.

In undertaking this analysis of possible demand, selected Australian Bureau of Statistics (ABS) and Western Australia Tomorrow information has been used to develop first cut demand projections, as well as City documentation and knowledge. The projections will require future revision as the City's road network knowledge improves.

Political

Policy Change

Local government policy change, as well as state government service reallocation, can often affect the demand for community services. At present however, no specific changes to policy have been identified which will affect demand on the City's road network.

The State Government has been considering the issue of metropolitan local government reform. The Metropolitan Local Government Review Panel was set up to examine and review the present structures and arrangements for metropolitan local government.

Of particular note, the Panel has recommended that the 30 existing local governments be reduced to a maximum of 12, based on the strategic Regional Planning Centres (Department of Planning, Directions 2031 and Beyond) of Perth, Armadale, Cannington, Fremantle, Joondalup, Morley, Midland, Stirling, Rockingham and Yanchep. This approach has significant implications for the City as it will cease to exist under this proposal.

However, it is unknown at this stage what the future of the City is. It is assumed that policy driven demand will remain unchanged, until the State Government makes a decision on the local government structure.

Demand Change: No change at the time this AMP was developed

Economic

Local Economic Change

It is suggested that with an increasing population and increasing tourist numbers it is likely that the road network asset lives will be reduced. The end result is ultimately higher costs to the City. In addition, those living within the local community and tourists visiting will increase economic activity in the local community.

It is believed that this position would be exacerbated if a significant event occurred, such as the development of a major project or significant state government infrastructure investment etc.

As things currently stand, it is thought that there will be an increased demand from economic sources, and principally from tourism on the City's road network.

Demand Change: Likely increase in demand

City of South Perth Financial Capacity

The cost of providing road network for the community is primarily funded from the municipal budget, and community services must compete for funds along with other services and assets that the City provides. However, recent studies on WA Local Government suggest that many are not financially sustainable. Subsequent recent changes to the WA Local Government Act are now driving Councils towards measuring and achieving long term financial sustainability. It should be noted that at present it is unclear as to how financially sustainable the City is. However, it can be expected

that through its integrated planning framework, that future consideration of sustainable asset service levels will be considered.

Therefore, a possible increase in demand could reasonably be expected due to increased financial capacity.

Demand Change: Likely increase in demand

City of South Perth Resource Capacity

In recent years many sectors of the WA economy have felt the "squeeze" from a highly competitive labour market. This has been exasperated by a strong resource sector, as well as an ageing population. The local government market is certainly not immune to this and over recent years, has certainly had to seriously consider its recruitment and retention practices in order to maintain sufficient staffing levels.

For local government, an ageing professional work force, combined with a labour shortage and an increase in statutory obligations has meant that resource capacity is stretched. A key concern is whether the City will be able to maintain the provision of its assets and services to the same service level in to the future if its resourcing level continues to be restrained. Consideration will be needed by the City to ensure that it is able to resource the long term management of its assets and services.

Demand Change: No Change, although further research required

Social

Total population figures were sourced from the ABS' Regional Population Growth dataset for the City's local government area. Table 6-8 contains estimated resident populations from between 2001 and 2011.

Population	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Number	37521	38347	39043	39643	40278	40853	41408	42417	43280	43387	43963

Table 5-4: ABS Estimated City Population 2001-2011

The figures from the ABS show that between 2001 and 2011 the City has experienced an increase in population by approximately 6442 people (17.2%). This represents an average annual population change of 1.6% per year over the period. This means that the City has an increasing population.

The City is preparing for significant and sustained growth over the next 20 years with a target of 6000 additional dwellings, representing a 30% increase in the existing number of dwellings within the City. Our expected population growth will have an impact on increasing community expectations regarding resourcing, lifestyle, wellbeing and prosperity. (Source: Strategic Community Plan 2013 – 2032)

Demand Change: Increased demand on the road network

Demographic Change

Figure 5-1 details the City's population age range from the 2011 census. It shows that over 87% of the City's population are under the age of 65, and that 13% are over the age of 65.

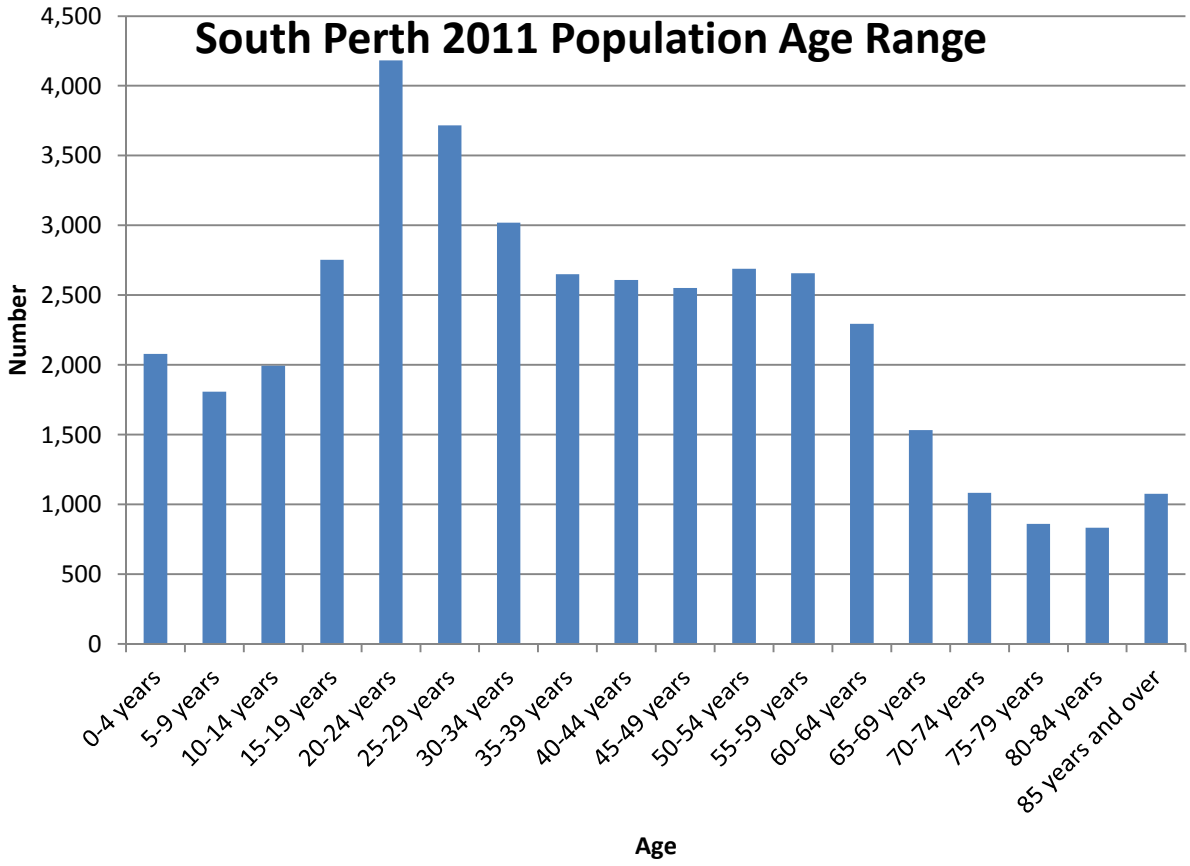


Figure 5-1: City Population Age Range

From 2006 to 2011, City of South Perth's population has increased. The largest changes in age structure in this area between 2006 and 2011 were in the age groups:

- Empty nesters and retirees (60 to 69) (+966 persons);
- Young workforce (25 to 34) (+937 persons);
- Babies and pre-schoolers (0 to 4) (+297 persons); and
- Parents and homebuilders (35 to 49) (+193 persons).

Analysis of the service age groups of the City in 2011 compared to Greater Perth shows that there was a lower proportion of people in the younger age groups (0 to 17 years) and a higher proportion of people in the older age groups (60+ years).

Overall, 17.9% of the population was aged between 0 and 17, and 19.2% were aged 60 years and over, compared with 23.3% and 17.8% respectively for Greater Perth.

With the population structure as it is, it is a reasonable expectation that there will be an increase in the demand placed upon the City's road network, as people travel to and from work and have an outdoor lifestyle. This would inevitably require higher costs for asset replacement.

Demand Change: Likely higher demand on the road network and enhanced maintenance practices

Tourism Growth

The Tourism Forecasting Committee is an independent body charged with providing present and future activity forecasts. Tourism Research Australia also publishes the Forecast publication twice a year with contains forecasts for the next 10 years. The Tourism Forecasting Committee says the number of visitor nights in Western Australia is forecast to be 55.3 million by 2020, up from 45.6 million in 2010. That's an average annual rise of 2.0 per cent. The forecasts suggest the number of visitor nights will rise faster in Perth than in the rest of Western Australia.

It is reasonable to expect tourism demand to grow in the City as there are many current tourist attractions, including Old Mill, Swan River, Canning River, Perth Zoo, Collier Park Golf Course, Heritage House & precinct, Sir James Mitchell Park, water sports.

The City is aware it needs to identify existing and potential hubs of activity to develop and enhance such industries as tourism. With sensible strategic investment into key tourist assets, as well as in assets that contribute to overall town site aesthetics the City could see high tourism growth figures.

This would also cause an increased use of the City's road network, meaning that an increase demand would be placed upon the road network. This in turn would mean the City will incur higher costs for asset replacement.

Demand Change: Likely higher demand on the road network and enhanced maintenance practices

Technological

Materials, Construction and Maintenance Techniques

Changes in material and construction techniques could lead to improved service levels and infrastructure standards and ultimately reduced maintenance requirements. However, it is difficult to predict whether newer materials, construction and maintenance techniques will affect demand. Therefore, none is currently predicted.

Demand Change: No change

Transport Mode Changes

The push for communities to be environmentally sustainable continues to grow, and at some future point, reliance on fossil fuels for automotive travel must reduce. However, during the timeframe of this AMP, it is not expected that major changes to transport modes will occur. The City will continue to monitor changes in transport technology and suitably plan for network changes if required.

Demand Change: No change

Legal

Legislation

The City is bound to meet a range of legislative obligations, the majority of which are discussed elsewhere in this AMP, which if altered, could affect the City's management obligations.

A current legislative driver of change is the amendment of the Local Government Act. The Act is being amended to promote integrated planning and ensure that long term financial planning, asset management planning and workforce planning become standard business practices for all local governments. This outcome means that the majority of WA local government organisations will have to notably improve their current practices and processes.

The production of this AMP is a step forward in improving the City's capacity, however further significant improvement will be required. Aside from an increase in resources being needed to improve the current asset management practices, a change in demand may result if it is established that there are significant renewal funding gap.

In summary, the changes to the Local Government Act suggest that there will be an increased demand in resources needed to undertake robust asset management practices, but that the outcomes and effects of this are not yet known.

Demand Change: Increase in management resources

Environmental

By their nature roads have considerable impacts on both the natural environments and nearby communities. People and properties may be in the direct path of road works and affected in a significant way. Others may be indirectly affected by the construction, through the disruption to livelihood, loss of familiar travel routes and community linkages, noise and pollution and increased road accidents. Changes to the natural environment may include changes to streams and underground water, soil erosion, and interference with fauna and flora. In previously under-developed areas, new roads may bring development, significantly affecting sensitive environments and the lifestyles of indigenous people.

Maintenance and the Environment

The environment is generally not considered extensively in the design and implementation of road maintenance tasks. Although the impact might be gradual because of the size and extent of maintenance works, in time it is noticeable throughout the road network and the implementation of standard good practices can reduce the effect. These good practices include methodological, technical, economical and institutional/contractual from an environmental perspective.

Demand Change: Minor change in maintenance practices

Sustainability

At present, there is no particular legislative driver for public road infrastructure assets to be environmentally sustainable. Purchases of new assets could be more environmentally sustainable and options exist for the City to increase the sustainability of its existing assets, but this will involve a change of construction and reuse practices, rather than specifically affecting demand.

Demand Change: No Change

Climate

The Federal Department of Sustainability, Environment, Water, Population and Communities suggests that future temperature changes due to increasing greenhouse gas concentrations, could rise by 0.4 to 2.0°C by 2030 across much of Australia (CSIRO 2001, Lindesay 2003). By 2070, temperatures are expected to be between 1.0 to 6.0°C higher than in 1990, with the largest increases projected to occur in summer. Further, when severe weather events do occur, these are also expected to become more frequent and more severe.

Whilst climatic change may not directly affect demand of the services provided by the City, an increase in climatic variation may potentially reduce the attainable life of the materials used to construct and maintain the City's road network. Further, if as expected, resource costs continue to increase proportionally above normal CPI levels, the financial cost of maintaining and operating the road network will rise.

Demand Change: Potentially higher whole-of-life costs and road network asset useful lives

Health & Safety

Health and safety is particularly relevant when considering the maintenance of road infrastructure assets.

A key consideration for health and safety is the development of a more robust inspection and maintenance regime for road infrastructure assets, in order to proactively identify defects that may pose a safety hazard. An improved regime will not only provide a higher service level to users, but potentially also reduce the whole of life costs through preventative maintenance. The cost of such a regime may also be potentially recovered through reduced insurance premiums.

Demand Change: Increase in maintenance practices, but costs could be offset, while providing higher service level

Appendix G. **LEGISLATIVE ENVIRONMENT: ACTS AND REGULATIONS**

The City has to meet many legislative requirements including Australian and State Legislation and State Regulations. Many of these requirements are drivers for minimum service levels in that they are levels which the City must meet. The current legislation which influences the City's road management are:

Table 5-5: Legislation, Acts and Regulations

Legislation	Requirement
Local Government Act, 1995 (WA)	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by AMPs for sustainable service delivery
Civil Liability Amendment Act 2003	In 2001, the High Court of Australia abolished the Common Law Rule exempting Highway Authorities from liability for the non repair of roads (or non-feasance 'failure to perform an act'). A level of protection for road authorities from failure to carry out work was subsequently restored under Civil Liability Amendment Act 2003. Under subsection (2) of section 5Z of Part 1C of the Civil Liability Amendment Act 2003; "…a roads authority is not liable in proceedings to which this Part applies for harm arising from a failure of the authority to carry out work, unless at the time of failure the authority had actual knowledge of the particular risk that caused the harm."
Road Traffic Act 1974	The Road Traffic Act 1974 covers several key areas relevant to Local Authorities. Section 81 gives Local Authorities the power to effect road closures, both temporary and permanent. Sections 84 and 85 empower LA's to recover costs for certain damages to road reserve assets from the owner of the vehicle found to cause the damage. Other sections also set out the regulations for unauthorised parking and vehicles types, requirements and uses on roads.
Main Roads Act 1930	The Main Roads Act 1930 set out the framework by which Main Roads and the Commissioner operate and the regulations and requirements that the City must comply with in relation to use of roads. The Act focuses heavily on the function of Main Roads but also links with several key areas of Local Government. The act sets out Main Roads right of delegation of power to Local Government, ability to proclaim roads highways and main roads and power to make relevant regulations. MRWA must also consult relevant LG bodies prior to the improvement of any roads. Local Government must also comply with information requests from MRWA.
Environmental Protection Act, 1986 (WA)	The Environmental Protection Act 1986 provides for the formation of the Environmental Protection Authority (EPA). It also provides for the prevention, control and abatement of pollution and environmental harm and for the conservation, preservation, protection, enhancement and management of the environment.
Disability Discrimination Act	The Federal Disability Discrimination Act 1992 (D.D.A.) provides protection for everyone in Australia against discrimination based on disability. It encourages everyone to be involved in implementing the Act and to share in the overall benefits to the community and the economy that flow from participation by the widest range of people.
Occupational Safety & Health Act 1984	The Occupational Health and Safety Act is concerned with protecting the safety, health and welfare of people engaged in work or employment. The Act's primary goal is to instil health and safety programs to foster a safe work environment, but as a secondary effect, may also protect co-workers, family members, employers, customers, suppliers etc. In considering any property as a work site, and in planning, initiating and undertaking work

	on sites, full consideration and application of the Act should be given in order to identify, manage and reduce or mitigate the risk of harm to the City's employees and contractors.
Native Title Act 1999	Regulations and requirements that the City must comply with in relation to the use of land.
Town Planning & Development Act 1928	Regulations and requirements that the City must comply with in relation to the use of land.
Conservation and Land Management Act 1984	Regulations and requirements that the City must comply with relating to the use of land and vegetation.
Land Administration Act 1997	Parameters for control and vesting of road reserves.
Aboriginal Heritage Act 1972	Regulations and requirements that the City must comply with relating to aboriginal heritage.
Other Standards and Regulations	Other relevant documents include, but are not limited to: AS/NZS 4360: 1995 Risk Management Main Roads Western Australia Traffic Management for Road works Code of Practice 2004. All other relevant State and Federal Acts & Regulations All Local Laws and relevant policies of the organisation Austroads – Australian Standards and Codes of Practice

Appendix H. **10 YEAR RENEWAL PROGRAMME**

Appendix I. **REFERENCES**

DVC, 2006, *Asset Investment Guidelines*, Glossary, Department for Victorian Communities, Local Government Victoria, Melbourne, http://www.dpcd.vic.gov.au/localgovernment/publications-and-research/asset-management-and-financial.

IPWEA, 2011, *International Infrastructure Management Manual*, Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au.

IPWEA, 2008, *NAMS.PLUS Asset Management* Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au/namsplus.

IPWEA, 2009, *Australian Infrastructure Financial Management Guidelines*, Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au/AIFMG.

Stormwater Drainage Assets

The City of South Perth (The City) has a land area of 19.9km2 and to date has surveyed 63 of 142 stormwater drainage catchment areas, which in turn covers approximately 50% of the known drainage network.

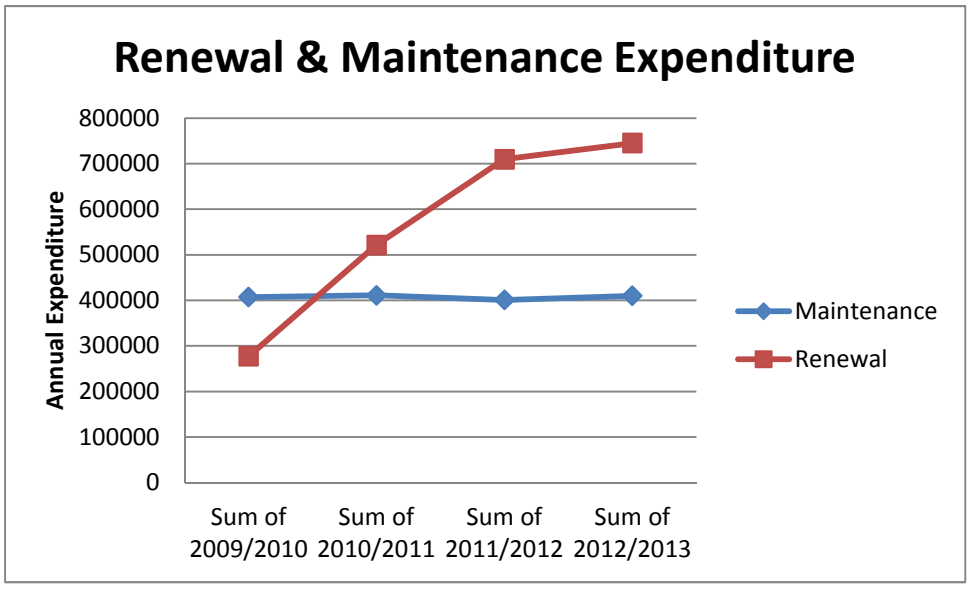
The drainage network comprises:

- Structures: 4,660
- Pipes: 136km

The City's drainage infrastructure assets have an estimated Current Replacement Cost (CRC) of $44,272,484 (based on the latest revaluation of drainage assets in 2011/12).

The City's renewal and maintenance expenditure over the past four years has been as follows:

	Renewal	Maintenance
2009/10	277,452	407,296
2010/11	521,250	410,979
2011/12	709,496	400,907
2012/13	745,000	410,000
Average	**563,000**	**407,296**



The City has developed a Stormwater Drainage Survey Specification, which details all information which must be included in a drainage survey; the specification has been integrated in the Annual Survey Services tender. The survey specification documentation has been developed with the aim of ensuring all drainage data received, from both internal and external sources, is in a consistent

industry based format. Receiving drainage surveys in a consistent format enables improved management of asset information. All drainage information is maintained in the City's Confirm Asset Management System.

To reduce dependency on external drainage inspection services and help improve decision making, the City has purchased a drainage inspection camera, to perform preliminary assessments of identified drainage problems. Additionally, the drainage inspection camera enables the City to produce both still imagery and video surveys, of drainage pipes and structures for use in condition assessment of the network.

Through the use of contracted drainage surveyors, the City plans to undertake surveys of entire catchment areas in coming years, which in turn will provide a holistic view of the drainage network. Using the improved survey information, the City intendeds to produce a 'first cut' Asset Management Plan by 30 June 2015.