

Infrastructure Strategy 2021-2031



1. Contents

2.	Executive Summary.....	3
3.	Introduction	3
3.1	Management.....	3
3.2	City of Kwinana Assets	4
3.3	Integrated Planning Framework	5
4.	What Assets Do We Have and What Are They Used For	6
4.1	Roads and transport assets.....	6
4.2	Stormwater Drainage.....	7
4.3	Parks and Reserves (Public Open Space)	8
4.4	Buildings	9
5.	Planning for the Future	10
5.1	Assumptions.....	10
5.2	Growth	10
5.3	New Technologies.....	10
	5.3.1 Transportation.....	10
	5.3.2 Community Recreation	11
5.4	Climate Change Effects, Impacts and risks for the City of Kwinana.....	11
6.	Organisation wide challenges relating to Infrastructure	13
6.1	Sustainability of Levels of Service	13
6.2	Accessibility to City services for all	14
7.	Ten Year Strategy	14
7.1	The Organisation’s Priorities for Managing of Its Assets	14
7.2	Asset and Service Management Strategy	14
7.3	Evidence Base	15
8.	Infrastructure Capital Investment.....	16

8.1	Stormwater Drainage - New/Upgrade	16
8.2	Roads and Transport – New/Upgrade	16
8.3	Parks and Reserves – New/Upgrade	16
8.4	Buildings – New/Upgrade	16
9.	Impact of Renewal Investment on Asset Portfolio	18
9.1	Roads and Transport.....	18
9.2	Parks and Reserves	19
9.3	Buildings	19
10.	Initiatives and Improvements	21
11.	References	22

2. Executive Summary

The City of Kwinana is a unique community, set among extensive native bushland and public open space. The City is currently undergoing rapid growth in population, investment and industrial expansion, including Western Australia's premier heavy industry zone - the Kwinana Industrial Area – that generates billions of dollars each year for the state's economy.

Kwinana is amongst the most culturally and linguistically diverse municipalities in the Perth metropolitan region. The population in Kwinana is made up of residents from more than 50 different countries with one in three residents born overseas.

Kwinana is the second fastest growing local government area in Western Australia, with the population predicted to reach 85,158 by 2036.

Local government is asset intensive. The demands of providing and maintaining City assets and delivering appropriate levels of service to the community drive this strategy. Financial and social sustainability is equally important when considering the benefits of assets to the community and the affordability of desired service levels. The City's asset management plans must outline the whole of life costs for each asset and investment of assets must be considered with prudent financial management.

This strategy builds on the strategy adopted in 2019 and is moving toward a more strategic approach to asset planning and work programming.

The previous strategy identified that the ongoing practice of underfunding asset renewals combined with the high number of new and near new assets which would fall due for replacement or renewal within the same timeframe would have a compounding detrimental effect on the City's ability to provide current levels of

service and be financially sustainable. The Asset Sustainability Ratio shows current performance at 22%, that is 68% below the required range of 90% to 100%. This is due to the City's proportion of expenditure on existing capital assets being insufficient when compared to the annual consumption of assets. In order to mitigate this adverse decline, the City has taken a responsible and manageable approach to increasing renewal funding to 80% over the next 11 years and reviewing the current Community Infrastructure Plan, due to the scale and scope of the current plan being beyond the capacity of the community to fund.

While this strategy covers a 10 year period the City's funding strategy encompasses 20 years. Some of the major projects within the 20 year period include:

Construction of Honeywood Sporting Clubrooms - 2022
Wellard Road Dual Carriageway – 2026-2027
Upgrade of the Kwinana Recquatic Centre - 2031-2033

The initial years of this strategy propose an emphasis on improving the organisation's asset management practices to enable a more strategic approach to be taken to forward planning for expenditure on the City's assets. This will ensure that each individual project will provide the City with the best long-term value, and will contribute towards the most efficient overall performance.

3. Introduction

The City's infrastructure assets represent a significant investment, over many generations. Millions of dollars are spent annually managing and maintaining this infrastructure, and it is imperative that we utilise the best management skills and practices to ensure related services are delivered economically and sustainably.

3.1 Management

As asset management is a core business activity this document supports the Strategic Community Plan and Long Term Financial Plan to assist the City develop resilience and future proofing while managing the levels of service expectations of the community.

The City recognises that asset management planning is an organisational responsibility and requires the commitment of senior management within the City for it to succeed.

In the past, the City, like many local authorities, has met community needs through investment in the creation of new infrastructure without suitably recognising the long-term life cycle costs associated with the ongoing operation, maintenance and renewal of the infrastructure.

Improvement in the management of infrastructure can bring major benefits, such as ensuring resources are used in the most cost effective manner, and that assets supporting services are managed in a way that guarantees maximum performance for the lowest, practical 'whole of life' cost. The City is focused on ensuring our infrastructure services meet current and future requirements.

To assist in this area and due to the ongoing rapid growth and development within the City, officers have developed guidelines to assist developers when planning public assets such as open space and playgrounds. These applications are scrutinised to ensure that the developments are in the best interest of the community and the City, while not adversely impacting the City's service or financial capacity.

3.2 City of Kwinana Assets

The City of Kwinana is responsible for the management of assets valued at more than \$685 million. These assets play an integral part in delivering the services provided by the City for the community.

The range of infrastructure assets, and the services provided from these assets, are shown below:

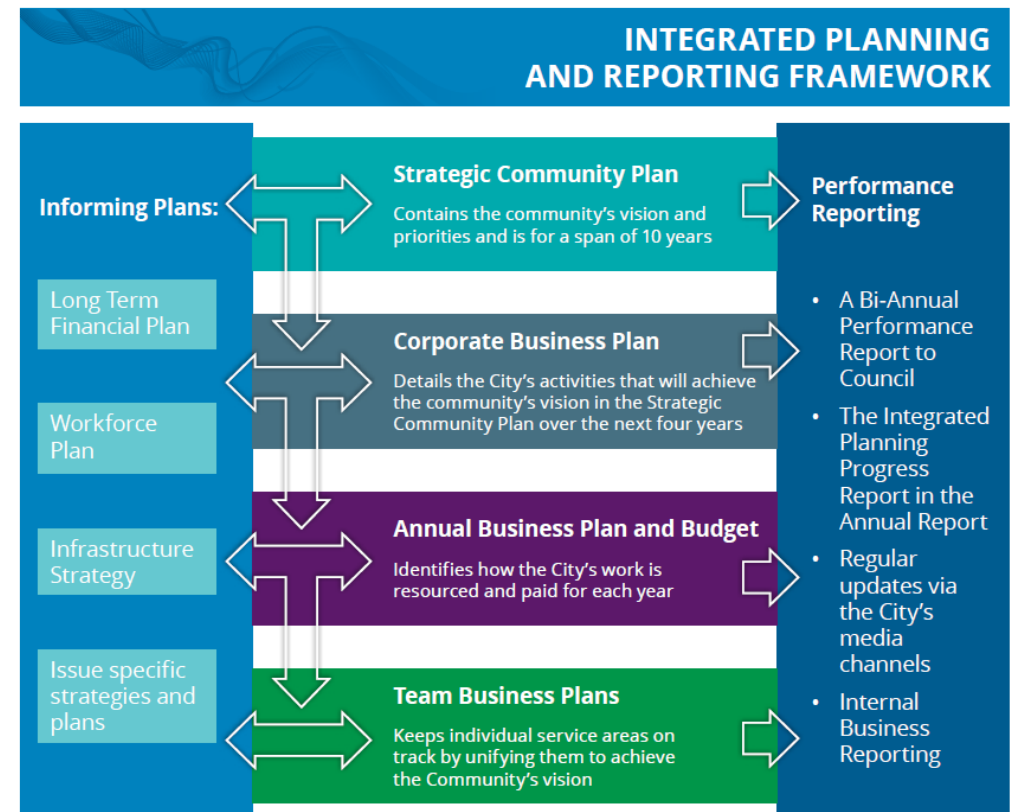
Table 2.1 City of Kwinana Assets

Asset	Replacement Value	Percentage of Total
Roads & Transport	\$380,159,608	56%
Parks and Reserves	\$82,743,400	12%
Drainage	\$57,134,035	8%
Lighting	\$5,224,850	1%
Buildings	\$160,060,497	23%
Total	\$685,322,390	

3.3 Integrated Planning Framework

The objective of the Department of Local Government, Sport and Cultural Industries' approach to Integrated Planning and Reporting was to create a process of continuous improvement.

To aid the process of continuous improvement and alignment with community aspirations, the Strategic Community Plan and Corporate Business Plan must be periodically reviewed and the City's performance regularly monitored and reported, this strategy forms part of the informing documents for this process.



4. What Assets Do We Have and What Are They Used For

4.1 Roads and transport assets

The City owns, maintains and develops the local transportation network. The City's road network provides accessibility to residents, visitors and Kwinana industrial area businesses. The activities within this group include the installation and maintenance of the physical components; roads, footpaths, traffic and pedestrian access and structures, street lighting, drainage, traffic services and safety (e.g. street furniture, signage), as well as the planning, management, and amenity and safety maintenance, to ensure the system is clean, safe and able to cope with future needs.

The contribution that the Roads and Transport assets makes towards Community Outcomes is summarised in the following table.

Strategic Community Plan Outcomes	Strategic Objectives	Assets
Infrastructure and services that are sustainable and contribute to health and wellbeing	Provide for an accessible and well-connected City by integrating public transport and improving safe streets for driving, walking and cycling	447km of roads 300km of shared paths 56,438m ² of carpark 40,009m ² of embayment parking 6,714 street lights 171 carpark lights

4.2 Stormwater Drainage

The City has a responsibility to ensure stormwater is managed through its stormwater drainage network with the aim to minimise the effects of flooding. The City's stormwater drainage network is broken in to three main asset classes: pipes, pits and structures, with all others falling under Bio-retention devices.

The contribution that the Stormwater assets makes towards Community Outcomes is summarised in the following table:

Strategic Community Plan Outcomes	Strategic Objectives	Assets
Infrastructure and services that are sustainable and contribute to health and wellbeing	Provide for an accessible and well-connected City by integrating public transport and improving safe streets for driving, walking and cycling	192 km of pipes 8,341 pit units 194 culvert units 137 storage chamber units 44 Gross Pollutant Trap (GPT) units 29 drainage sumps fenced

An effective stormwater drainage network ensures that water run-off is captured and diverted into storage areas, such as sumps, eliminating the pooling of water on roads, or flooding.



4.3 Parks and Reserves (Public Open Space)

The parks and reserves portfolio exists to enhance the quality of life of Kwinana residents, by providing high quality passive and recreational facilities throughout the City. The City has a wide range of parks, reserves and public open spaces located throughout the municipality, increasing with each new development area.

The contribution made by the Parks and Reserves assets towards Community Outcomes is summarised in the following table.

Strategic Community Plan Outcomes	Strategic Objectives	Assets
Infrastructure and services that are sustainable and contribute to health and wellbeing	Maintain infrastructure, playgrounds, parks and reserves to a high standard through sustainable asset maintenance and renewal	25.54ha of sportsgrounds 43.26ha of parks and streetscapes
A unique, vibrant and healthy City that is safe, connected and socially diverse	Create, activate and manage places and local centres that are inviting, unique and accessible	77.9735ha of dryland areas
	Develop wellbeing programs and implement physical recreation that is culturally appropriate for Kwinana's community	



4.4 Buildings

The building asset portfolio consists of a variety of building types and sizes, with various plant and equipment. Kwinana has an extensive portfolio of properties and buildings used to accommodate staff, and to provide services to residents and visitors. The City owns and manages the property and building assets on behalf of the City of Kwinana community. The objective is to ensure that the buildings are maintained for their specific purposes throughout their life cycle.

The contribution made by the Parks and Reserves assets towards Community Outcomes is summarised in the following table.

Strategic Community Plan Outcomes	Strategic Objectives	Assets
Infrastructure and services that are sustainable and contribute to health and wellbeing	Develop quality, financially-sustainable infrastructure and services designed to improve the health and wellbeing of the community	3 x Civic Facilities 19 x Community Facilities 9 x Commercial Facilities 4 x Heritage Facilities 234 x Independent Living Units 12 x Recreation Facilities
A unique, vibrant and healthy City that is safe, connected and socially diverse	Create, activate and manage places and local centres that are inviting, unique and accessible	
	Enhance opportunities for community to meet, socialise, recreate and build local connections	

5. Planning for the Future

5.1 Assumptions

In order to plan for the long term, it is necessary to make assumptions about various aspects in the future. The significant assumptions made about the future form an important part of the planning framework.

Council identifies the significant forecasting assumptions and risks underlying the financial information set out in the LTFP. Where there is a high level of uncertainty, the Council is required to state the reason for that level of uncertainty and provide an estimate of the potential effects on the financial assumptions. The level of uncertainty is determined by reference to both the likelihood of occurrence and the financial materiality.

5.2 Growth

As the City is experiencing rapid growth and development measures have been put into place to ensure the burden on the City's finances and resources will be manageable into the future, to assist with this officers have developed guidelines for the planning, design and construction of assets that will be gifted to the City. Applications for new assets are scrutinised to ensure that the proposals are in the best interest of the community and the City and meet all standards, while not adversely impacting the City's level of service or financial capacity.

5.3 New Technologies

Popular and main stream discussion around new technologies suggest that there will be a considerable social shift over the coming years as emerging and future technologies affect what work is done, how it is done, and then how this flows on to affect economic and social paradigms. The City undertakes to explore avenues that enhances service provision to the community in a responsible and justified manner.

Consideration of the following issues should be considered as part of the City's growth and development.

5.3.1 Transportation

Technologies, such as electric driverless vehicles, have potential to alter transport patterns, particularly if coupled with an 'on demand' service models, such as Uber, and an increase in social tolerance to ride-sharing and automated route optimisation.

The increasing uptake of 'smart', connected technology in vehicles will enable a far greater understanding of travel behaviours, including route choice, trip purposes, journey times and responses to congestion and weather. Such data, if made available, may facilitate much more informed decision making for maintenance and capital investments in the network.

5.3.2 Community Recreation

As population growth continues, it is possible that increasing pressure will be placed on the use of existing open spaces to accommodate this growth. Synthetic and hybrid turf technology has made significant advances in recent years in response to a shift in the ways sports are being played. This technology will enable more games to be played on the same ground without compromising the quality of the playing surface. This may, in time, enable more efficient use of existing greenspace but may exacerbate pressure being placed on green space for alternative land use.

5.4 Climate Change Effects, Impacts and risks for the City of Kwinana

The City of Kwinana is experiencing the following escalating climate change effects and their localised impacts:

Climate change effect	Localised impacts
Temperature change	Increased number and severity of hot days and heat waves
	Increased evaporation from public open space areas, sports fields and parks
	Increased number of high fire risk days and potential for severe bushfires
Reduced rainfall	Drier vegetation and landscapes
	Reductions in groundwater recharge rates
	Reduction in water availability for properties reliant on rainwater tanks as their domestic water source
Rising sea level	Increased erosion and inundation of coastal areas
Extreme weather events	Localised flooding
	Severe wind events

The above localised climate change impacts have the potential to affect the City's operations and community in a variety of ways.

Major potential risk categories to the City of Kwinana's operations associated with these localised impacts of climate change include the following:

Damage or accelerated ageing of City and community infrastructure

- An increase in the number of hot days and heat waves will potentially accelerate the rate of ageing of City owned or managed assets.
- An increase in the frequency of extreme weather events, with associated damaging wind speeds and localised flooding, may cause unanticipated damage to both City and community infrastructure.
- Reduced rainfall and water availability will lead to drier vegetation, with potential damage, increased prevalence of disease and fatalities of vegetation across public open space areas and streetscapes. Combined with increased average temperatures throughout the year and an increase in the number of hot days and heatwaves further exacerbating these effects, we will likely experience a decrease in the quality and amenity of vegetation over time.
- An increase in the number of fire risk days may lead to more frequent and/or severe bushfires. Properties, buildings and other infrastructure may be damaged by fire.

Resource usage and cost

- An increase in the number of hot days and heat waves will increase the need for mechanical cooling. This will generate an additional cost associated with energy use to cool City owned facilities and City vehicles. There is also the potential that some City residents who are financially or otherwise unable to use mechanical cooling at home may access City facilities (such as the library, aquatic centre or community centres) more often to escape the heat.

6. Organisation wide challenges relating to Infrastructure

In response to changing needs, standards and/or regulatory requirements, ongoing reviews of the performance of infrastructure, in line with changing expectations, should be undertaken. This includes ensuring data, systems and processes, and organisational knowledge is well documented so that we are able to be more agile and responsive to changing requirements.

The following initiatives are common themes in all asset plans:

- Data capture and validation;
- Asset condition and performance assessment strategy;
- Develop business rules on data management and financial controls;
- Development of Risk Schedules;
- Perform asset criticality assessment and apply to operation and maintenance schedules;
- Investigate and implement Sustainability initiatives.

6.1 Sustainability of Levels of Service

The City will continue to focus on ensuring levels of service are appropriate and meet the current and future needs of the community, within the community's capacity to pay. Service delivery will be benchmarked against other Councils to identify what, if any, actions are required to ensure that services are delivered in the most cost effective and efficient manner.

The City must balance level of service sustainability and affordability - a challenge in a world with increasing expectation and service demands and a widening gap between perceived and actual Levels of Service. In general, with any level of service change, there is an increase in associated costs to meet the new the requirements. The City will also look for more efficient ways to provide services and infrastructure to look for opportunities to increase, or at least maintain, levels of service, without increasing the financial burden.

A schedule of services to be benchmarked will be developed by assessing the priority of each service against a set criteria, as well as other factors, including opportunities for shared services with other councils, resourcing and capability considerations.

A key commitment of Council is to review the current Community Infrastructure Plan, due to the scale and scope of the current plan being beyond the capacity of the community to fund. Key considerations in the review will be the scale of new facilities (generally facilities will be reduced in size, and may be in the form of temporary use of a room in a public building), removing staff from new community facilities (the City has an unusual and high-cost approach of staffing community buildings, while operating separate customer service, facility booking and community development services), and considering a larger multi-purpose regional facility, with limited staff to manage the booking of internal hard courts.

6.2 Accessibility to City services for all

The City recognises the social model of disability. We are committed to looking at ways to remove barriers to access and inclusion that may restrict a person's abilities. The City is committed to actively promoting environments and services in which all people are valued and have the choices to live their best lives.

The development of the *Disability Access and Inclusion Plan* is guided by *The Western Australian Disability Services Act 1993 (Amended 2004)*. The Act requires all Local Governments to develop and implement a *Disability Access and Inclusion Plan* (DAIP). This helps ensure that people with disability have equal access to facilities, services, and employment opportunities.

The requirements of the DAIP are taken into consideration in all new and upgrade projects.

7. Ten Year Strategy

7.1 The Organisation's Priorities for Managing of Its Assets

This Infrastructure Strategy identifies how the City plans to transition from a traditional approach to providing infrastructure, where a small group of experts applied their knowledge within their own area of expertise to determine what needed to be done, to a collaborative and strategic approach across the whole organisation. This will ensure a well-informed understanding of stakeholder requirements obtained through appropriate engagement and will be supported by data-based analysis of asset condition and performance, and will result in the provision of appropriate and effective assets to the community in the most efficient means practicable.

An organisation-wide focus will enable a better understanding and definition of stakeholders' expectations and the provision of assets through a programme of development and alignment of key overarching strategies

7.2 Asset and Service Management Strategy

The drive to improve the City's strategic management encompasses infrastructure and activities across the whole of the organisation. Specific initiatives associated with Infrastructure include (but is not limited too):

- Continue the development and implementation of best practise Asset Management Strategy and Framework aligned with ISO 55000.
- Develop and implement of a fit for purpose Project Management Framework and associated documentation.

- Improved Health and Safety policy with respect to contractor engagement and management with respect to all works.
- Development and implementation of a Corporate Business Systems with regard to Asset Management and Project and Operational Management.
- Development of a Sporting and Recreation Plan
- Process development and documentation.

These strategies will further inform our needs in both the short and longer term, and how we set our priorities in conjunction with affordability.

The City will seek to further clarify and define the requirements for service delivery as a separate function from asset management and project delivery, and allocate accountability and responsibility for those functions to specific roles within the organisation. It is envisaged this will give a sharper focus on ensuring appropriate service delivery supported by appropriate assets.

In the short term (0-5 years) the infrastructure strategy will strive to maintain the existing assets at the current levels of service (LoS) and address the known or identified major issues (e.g. high risk or regulatory compliance). However due to the chronic underfunding of asset renewals, the LoS will drop. During this time, non-urgent capital projects that are not likely to directly impact on the LoS in the short to medium term, should be prioritised or deferred.

In the medium term, (5-10 years) LoS will continue to drop, until we start investing enough to maintain the condition of assets.

In the longer term (10-15 years) with the forecast new investments, the decline in LoS will slow, until it stabilises in year 11, and slowly increases, on average, through the provision of new assets.

7.3 Evidence Base

Improving Council's evidence base to support optimised decision-making is an ongoing activity. Asset knowledge is variable across asset groups, and currently there is a significant focus on a consistent approach to registering and maintaining asset information to ensure it is fit for purpose and trusted.

8. Infrastructure Capital Investment

8.1 Stormwater Drainage - New/Upgrade

Project	Cost \$,000	Year
DCA 3 Peel Sub P Drain – Anketell South & Casuarina	\$ 1,175	2024
DCA 3 Peel Sub O Drain – Casuarina	\$ 877	2026
DCA 3 Peel Sub P1 Drain – Casuarina	\$ 985	2026

8.2 Roads and Transport – New/Upgrade

Project	Cost \$,000	Year
Black Spot Wellard Road & Henley Boulevard Pre-deflection	\$ 470	2022
DCA 1 Bertram Road Upgrade – Challenger to Wellard Road	\$ 4,765	2028
DCA 1 Culvert and road crossing over the Pell Main Drain linking Lots 661 and 670	\$ 739	2028
DCA 1 Wellard Road Upgrade – Bertram Road to Cavendish	\$13,908	2026
DCA 3,4 Thomas Road	\$ 9,010	2022
DCA 1 Wellard Road Upgrade – Cavendish to Millar Road	\$ 7,934	2027
DCA 2,3 Mortimer Road	\$ 5,706	2027

8.3 Parks and Reserves – New/Upgrade

Project	Cost \$,000	Year
DCA 2,3,4,5,6,7 - District Sporting Ground	\$ 1,858	2025
DCA 4 - Anketell North Public Open Space	\$10,893	2027
DCA 6 - Mandogalup Public Open Space	\$11,014	2023
Kwinana Loop Trail Upgrade	\$ 704	2022-2023

8.4 Buildings – New/Upgrade

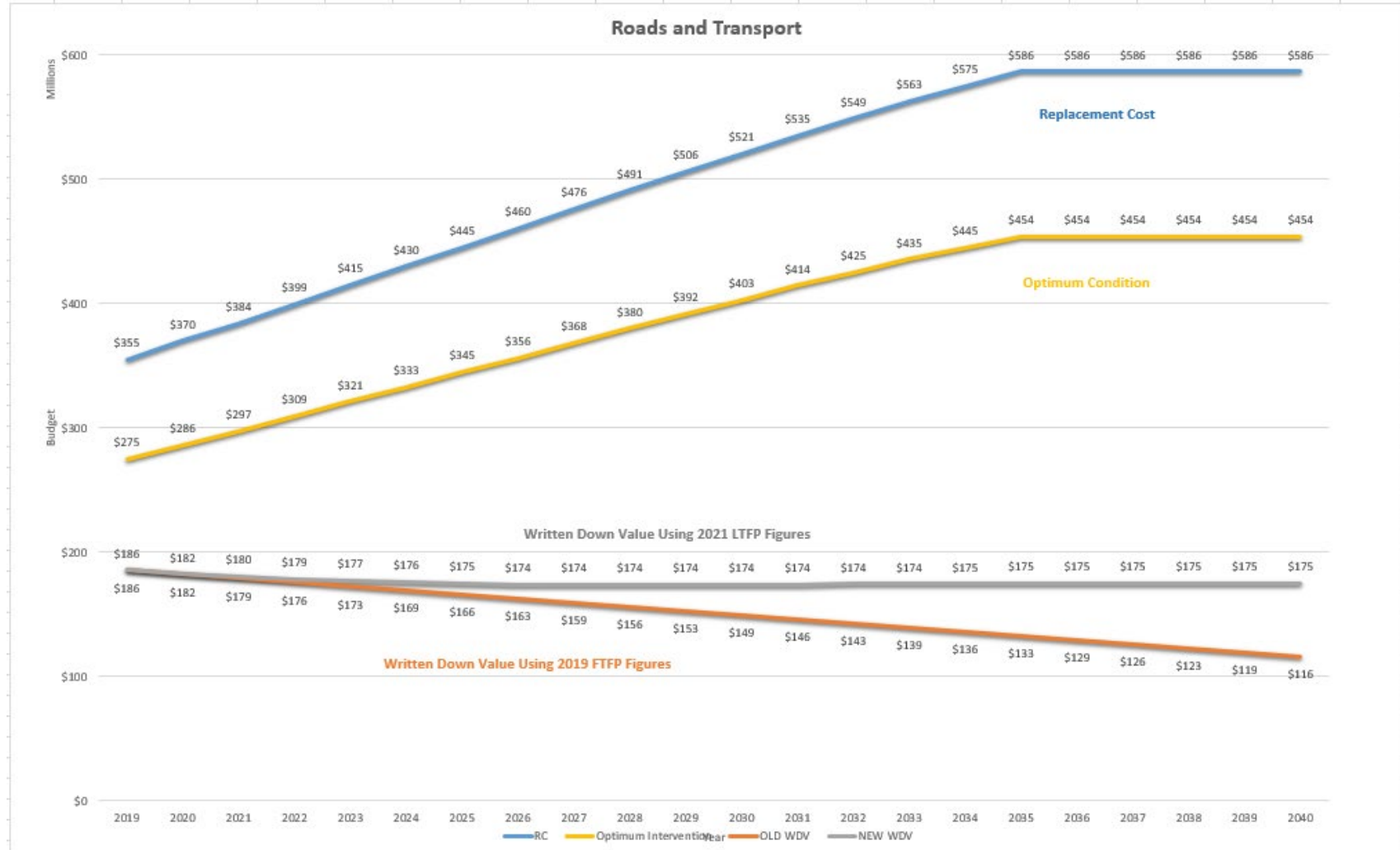
Project	Cost \$,000	Year
DCA 9 - Local Sports Ground Clubroom - Honeywood	\$ 3,718	2022
Operations Centre Extension	\$ 550	2022
DCA 12 - Local Sporting Ground with Community Centre / Clubroom - Wellard West	\$ 5,251	2024-2026
DCA 10 - Local Community Centre Casuarina/Anketell	\$ 3,268	2026-2028

DCA 8 - Local Sporting Ground with Facility Building - Mandogalup	\$ 1,165	2026-2028
DCA 8,9,10,11,12,13 - Branch Library (serves Districts A & B)	\$ 7,320	2026-2028
DCA 9 - Local Community Centre (large Scale) - Wandí	\$ 3,852	2026-2028

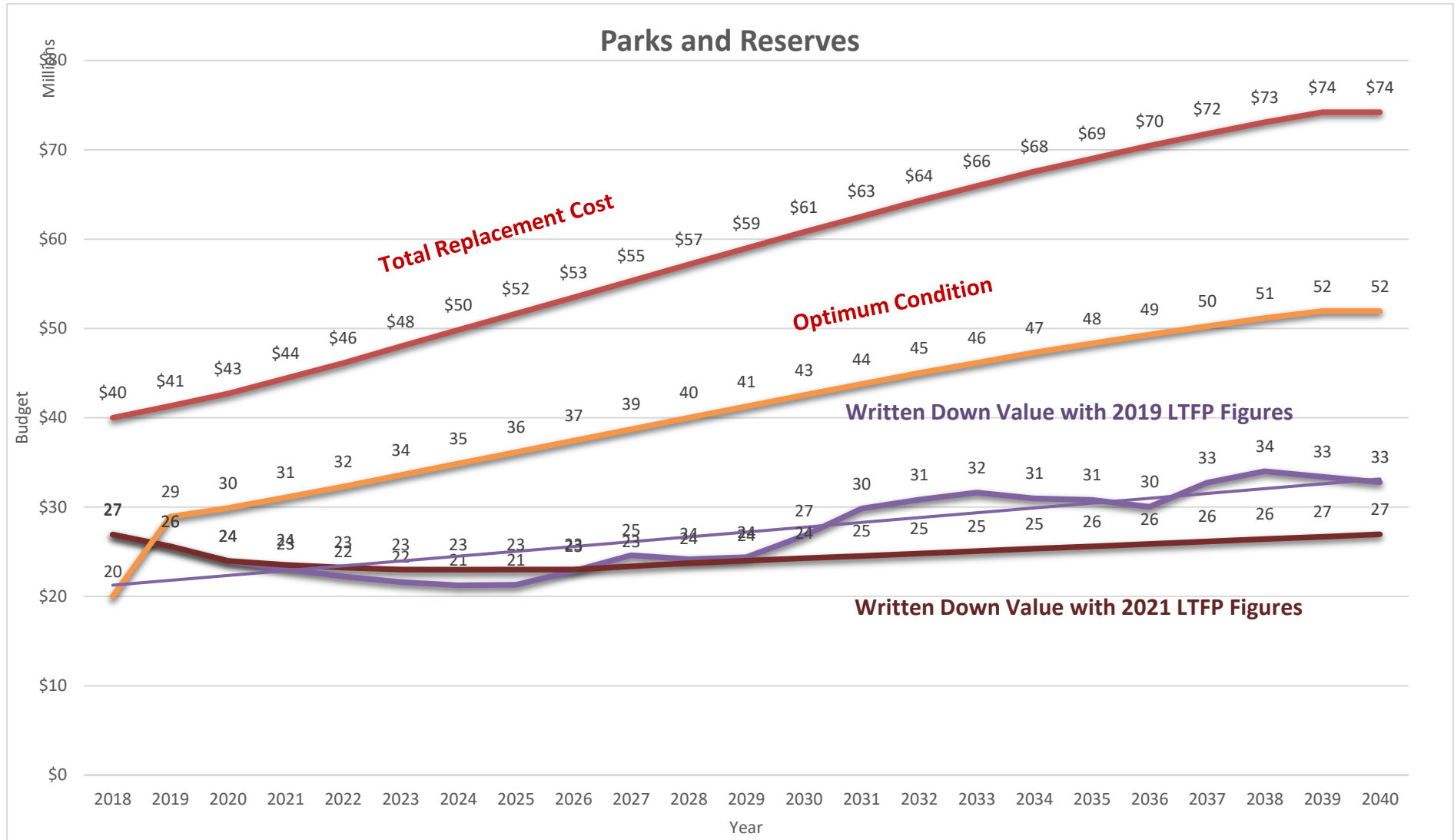
Note: DCA buildings are subject to the results of the Community Infrastructure Review

9. Impact of Renewal Investment on Asset Portfolio

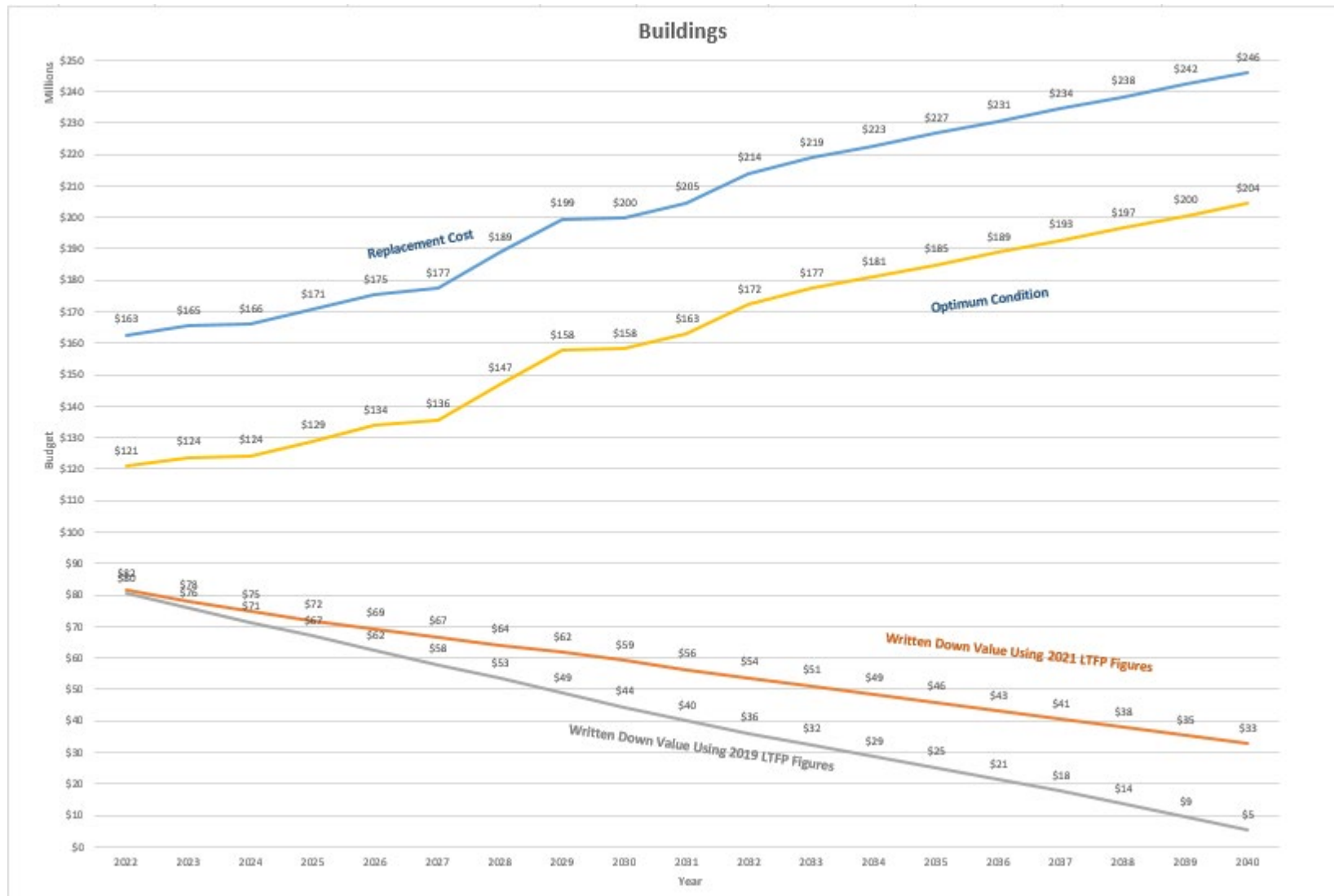
Roads and Transport



9.1 Parks and Reserves



9.2 Buildings



10. Initiatives and Improvements

Infrastructure Strategy proposes the following initiatives and improvements to enable the asset management objectives to be achieved.

Ref:	Theme:	Task:	Responsibility	Timeframe	Resources
1	Long Term Financial Plan	Review and update LTFP for all asset classes	Manager Finance / Manager Asset Management Services	Annually	Staff time
2	Infrastructure Strategy	Adoption of 10 Year Infrastructure Strategy	Elected Members	Jun 2021	
3	Asset Management Plans	Review asset management plans	Asset Management Team	Biennially	Staff time
4	Asset Management Plans	Adoption of asset management plans	Elected Members	Biennially	
5	Long Term Financial Plan/Infrastructure Planning	Review of Community Infrastructure Plan, key considerations - scale of new facilities, staffing, ability to fund	Cross functional team	2021	Staff time
6	Levels of Service	A schedule of services to be benchmarked will be developed by assessing the priority of each service against a set criteria, as well as other factors, including opportunities for shared services with other councils, resourcing and capability considerations.	Asset Management Team	Dec 2022	Staff time
7	Best Practice	Continue the development and implementation of best practise Asset Management Strategy and Framework aligned with ISO 55000.	Asset Management Team	Ongoing	Staff time
8	Best Practice	Develop and implement of a fit for purpose Project Management Framework and associated documentation.	Manager Asset Management Services	Jun 2021	Staff time
9	Best Practice	Improved Health and Safety policy with respect to contractor engagement and management with respect to all works.	Manager Asset Management Services	Jun 2021	Staff time

Ref:	Theme:	Task:	Responsibility	Timeframe	Resources
10	Data Management	Development and implementation Corporate Business Systems with regard to Asset Management and Project and Operational Management	Asset Management Team	Jun 2021	Staff time
11	Asset Management	Development of a Sport and Recreation Plan	Community Development Officer (Recreation and Inclusion)	Dec 2021	Staff time
12	Best Practice	Clarify and define the requirements for service delivery as a separate function from asset management and project delivery. Allocate accountability and responsibility for those functions to specific roles	Cross functional team	Jun 2022	Staff time

11. References

City of Kwinana Climate Change Plan 2021

City of Kwinana Disability Access and Inclusion Plan 2019-2021

City of Kwinana Community Infrastructure Plan 2011-2031