

Asset Plan (Draft) 2022 - 2032



Document control

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Executive Summary

Introduction

This Asset Plan outlines key elements involved to sustainably and effectively manage Council's infrastructure assets. This Plan is a key element of Council's strategic asset management planning.

The purpose of this plan is to:

- Demonstrate Council's responsibility to manage infrastructure assets;
- Define and articulate how infrastructure assets are managed to achieve the organisation's goals and objectives;
- Understand the current condition of infrastructure assets and how they may look in 10 years;
- Facilitate stakeholder consultation to determine appropriate levels of service;
- Manage risk of premature asset failures;
- Manage assets by optimising lifecycle costs and support long term financial planning;
- Meet Council's obligation to comply with the Local Government Act 2020.

The outcome of this plan will identify future funding requirements for service delivery considering the condition of assets, levels of service to be provided, future demand and risk management.

Asset Portfolio

This plan focused on Council's fixed infrastructure assets (excluding land and trees) of \$986 million. Six asset categories included in this plan are:

- Roads, including kerb and channel and carparks
- Footpaths
- Bridges, including road and pedestrian bridges
- Stormwater Drainage
- Buildings
- Parks and Open Space (POS)

Community Expectation

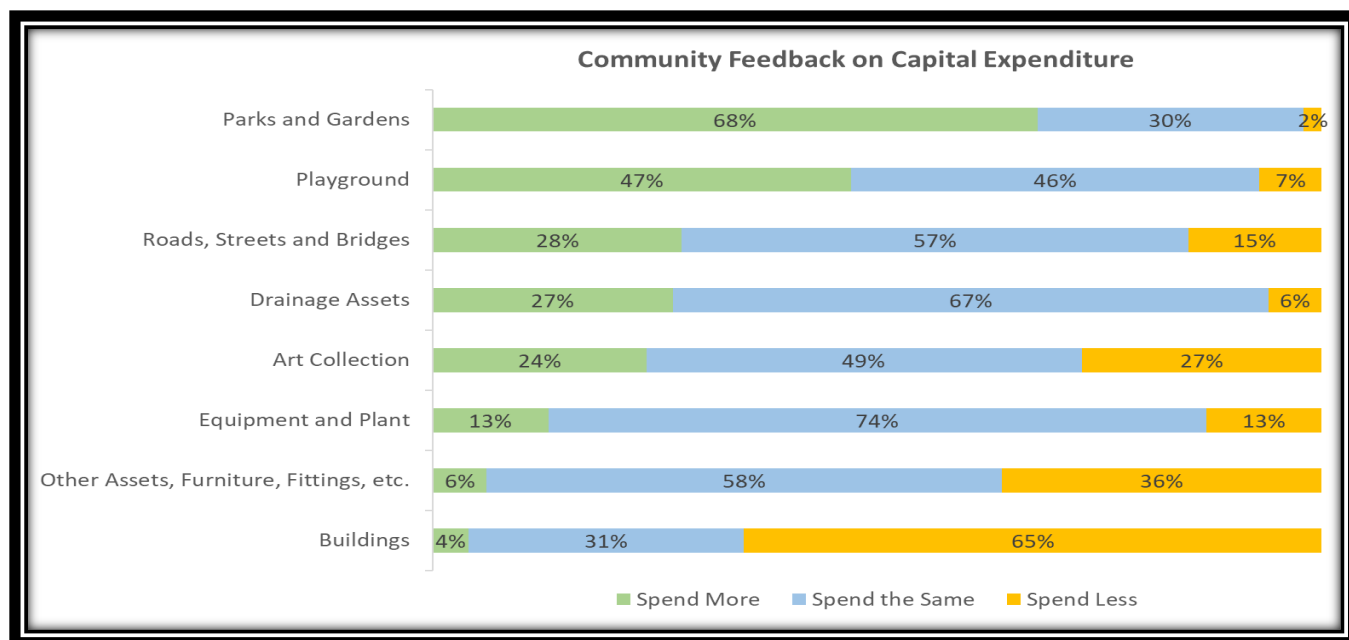
In accordance with the Local Government Act (2020), Banyule City Council engaged with the community in 2020/21, driven by principles of deliberative engagement, to inform the development of the Banyule Community Vision 2041 and Council Plan 2021-2025. The Vision 2041 statement is:

"We in Banyule are a thriving, sustainable, inclusive and connected community. We are engaged, we belong, and we value and protect our environment."

During the engagement process, the community was asked 'When considering how Council spends on Capital works, do you think Council should spend more, the same or less?'. The following figure presents the summary of 320 responses to the question.

The community told us they would like to see Council spends more on parks and gardens and less on buildings. Key strategies the community provided are:

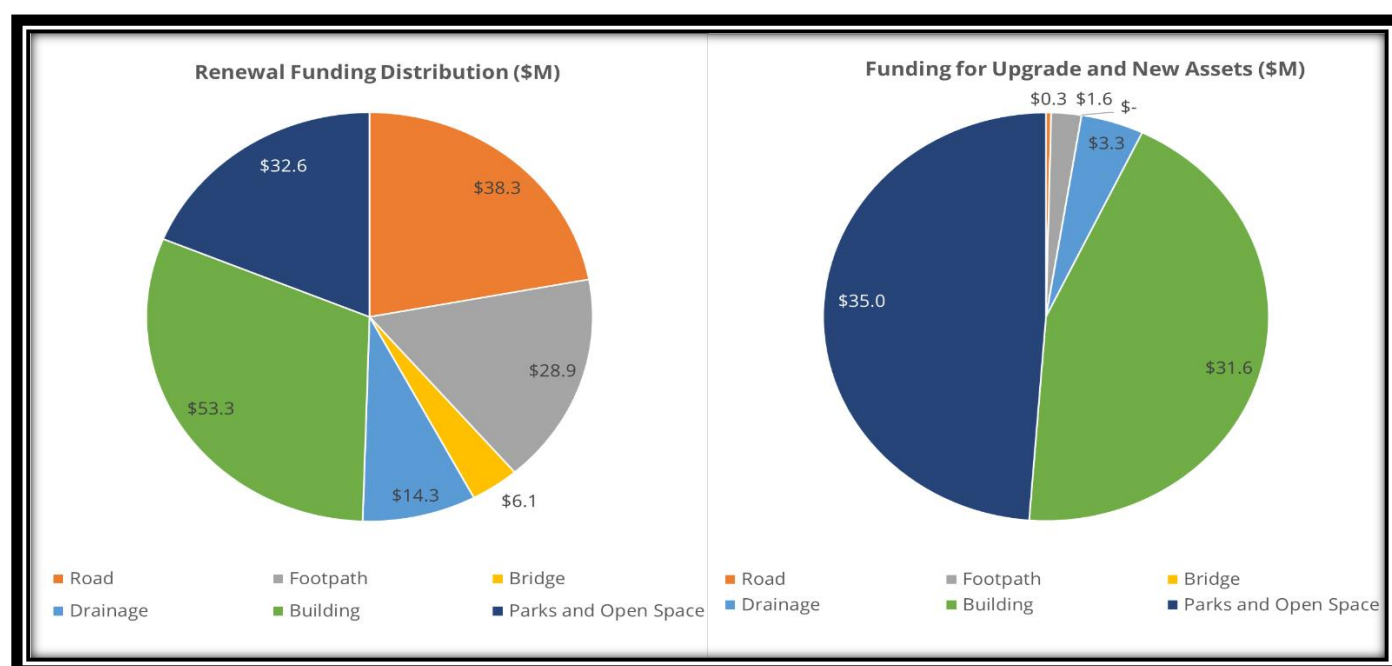
- Most preferred was to spend more on fixing existing infrastructure rather than building anything new.
- Least preferred was to borrow funds to build new infrastructure.
- Council should find efficiencies to reduce costs and fully utilise existing assets.



Financial Forecast and Sustainability:

Council's recurrent expenditure including operation and maintenance is required to continue as it is to keep Council's services operational and safe for the community.

Following figures depict the proposed capital funding distribution among various asset categories.



Findings

- Council's renewal budget over the next 10 years is \$173 million.
- Building and POS consume 50 per cent of this allocation. Road and footpath are 22 and 17 per cent respectively.
- Council's total budget for upgrading and creating new assets is \$72 million over the next 10 years. Almost half (49 per cent) of it is allocated for POS, which supports community preferences.
- A major part (44 per cent) is allocated toward buildings, which may be a concern for managing other assets. Creating new buildings also increases operational and maintenance costs significantly.
- Banyule is preparing a Community Infrastructure Plan (CIP), which will help understand more accurate capital funding required for buildings.

Renewal Funding Allocated Vs Renewal Funding Required

A comparison between renewal funding allocated and required for different asset categories along with Renewal Gap Ratio is summarised below.

Asset Category	VAGO Financial sustainability indicators		Renewal Modelling Financial Indicator			
	Renewal Gap Ratio	Risk Level	Renewal Funding Allocation, (\$M)	Required Renewal Funding (\$M)	Renewal Intervention, Condition	Financial Sustainability (%)
Road	0.7	Medium	38.3	38.3	5	100%
Footpath	1.16	Low	28.9	20.7	4	140%
Bridge	6.11	Low	6.1	1.5	4	402%
Drainage	0.67	Medium	14.3	9.4	4	152%
Building	3.92	Low	53.3	38.1	4 & 5	140%
Parks and Open Space	1.34	Low	32.6	31.2	5	104%
Total			173.4	139.2		125%

Comments

- Council's overall renewal funding is 25 per cent higher than that required to keep up with asset consumption (depreciation).
- This additional renewal funding is required to renew any premature failures of assets, legislative and safety compliance, and also to implement best practice energy standard to address Banyule's carbon neutrality target 2028.
- Council spending on renewing buildings, footpaths and bridges is appropriate. These assets are financially sustainable for the next 10 years.
- Council's renewal funding for drainage asset is also appropriate considering the renewal requirement. However, the Renewal Gap Ratio, which considers depreciation, indicates that renewal funding is insufficient.
- Drainage assets are long life (100+ years) assets and the average age of Banyule's drainage network is at the middle of its useful life. Therefore, current renewal requirement is less than depreciation. When this asset class approaches the end of its useful life, renewal needs will increase significantly. It is recommended to continue with the current drainage funding.
- Road assets including carpark and kerb and channel are financially at medium risk. Council has been underspending on roads, carparks and kerb and channel in recent years.
- Parks and Open Space is also at the medium to low risk financially. Current renewal funding looks appropriate to maintain overall asset condition, however the community has shown a preference to improve the level of service of POS.

Recommendations

- It is recommended to implement the renewal funding proposed by this plan, as summarised in Table 3.
- This includes increasing renewal funding by \$6.3 million over the next 10 years for roads (including carparks and kerb and channel) compared to previous planning, through the redistribution of renewal funding across asset classes.
- Maintain renewal spending on drainage, bridges and buildings, and continue with the development of the Community Infrastructure Plan to better inform future capital spending needs for buildings.
- Provide an additional \$10 million towards the renewal and upgrade of Parks and Open Space assets, as the community has shown a preference to improve the level of service of POS. This funding is included in the 10 year Financial Plan.

1. Introduction

This Asset Plan outlines key elements involved to sustainably and effectively manage Council's infrastructure assets. It combines engineering, technical practices and financial management to ensure that services are provided to the community by minimising the lifecycle cost.

This Plan is a key element of Council's strategic asset management planning. The purpose of this plan is to:

- Demonstrate Council's responsibility to manage infrastructure assets;
- Define and articulate how infrastructure assets are managed to achieve the organisation's goals and objectives;
- Understand the current condition of infrastructure assets and how they may look in 10 years;
- Facilitate stakeholder consultation to determine appropriate levels of service;
- Manage risk of asset failure;
- Manage assets by optimising life cycle costs and support long term financial planning;
- Meet Council's obligation to comply with the Local Government Act 2020.

The outcome of this plan will check financial sustainability of Council's infrastructure assets and identify future funding requirements for service delivery considering the following factors:

- Current levels of service and status of assets;
- Predicted level of service and status of the assets in 10 years;
- Future demand for infrastructure;
- Asset failure and risks involved;
- Financial forecasts and funding gaps.

2. Strategic Linkage

Banyule City Council has developed an integrated strategic approach to planning, delivering and reporting to deliver service outcomes for the community and to meet requirements of the new Local Government Act 2020 (the Act).

Integrated planning and reporting aim to ensure we remain an adaptive, responsive and viable local government authority. This is facilitated by understanding community needs and aspirations, setting direction within our resource capability and supporting Council to make informed decisions on behalf of our community. Figure 1 depicts our integrated planning and reporting approach from long term vision to annual actions and reporting.

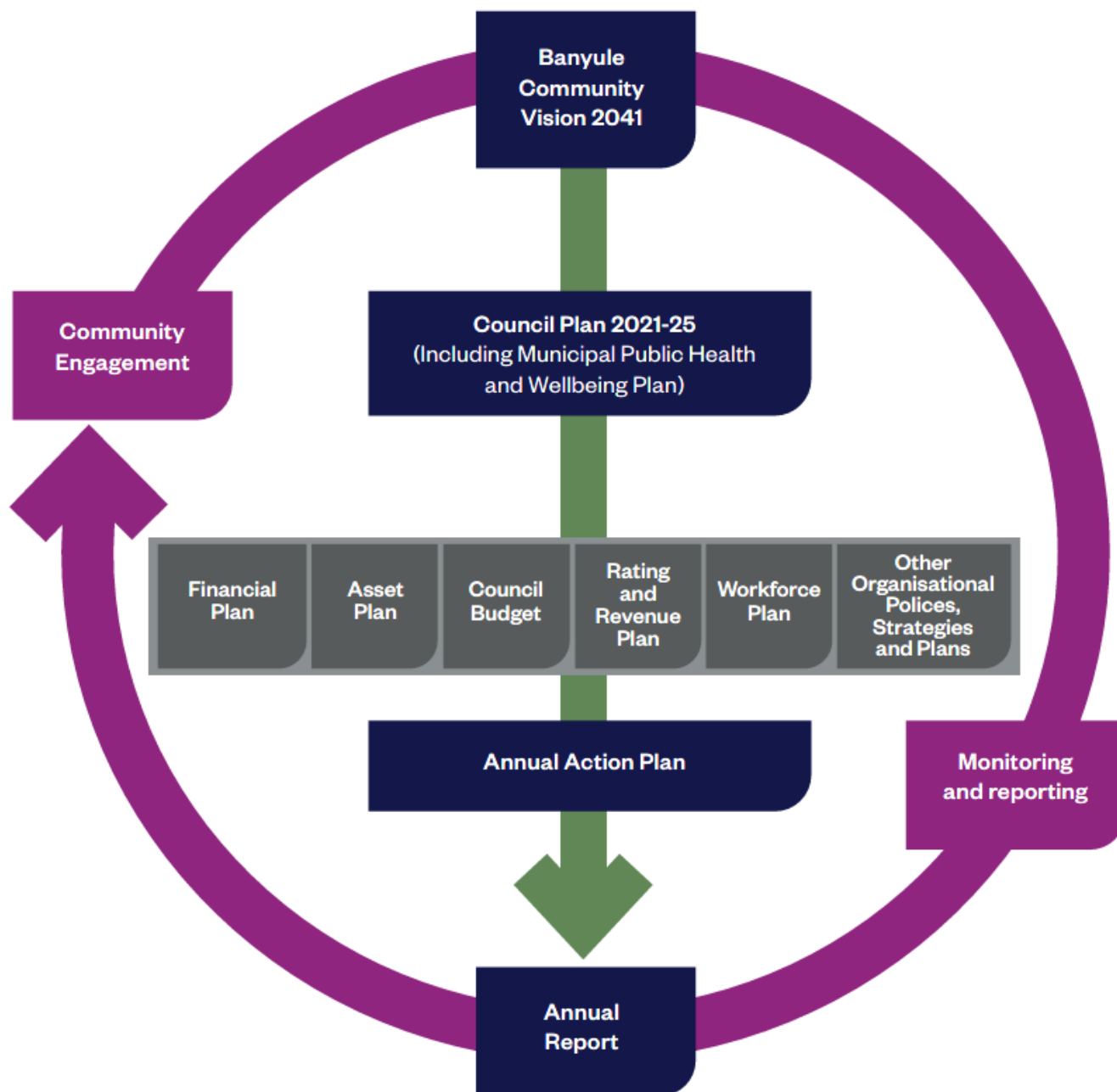


Figure 1: Integrated Planning and Reporting Approach (Source: Banyule Council Plan 2021 – 2025)

Striving to achieve long-term social inclusion, economic prosperity and environmental sustainability, Council adopted the Banyule Community Vision 2041. The Vision 2041 statement is:

“We in Banyule are a thriving, sustainable, inclusive and connected community. We are engaged, we belong, and we value and protect our environment.”

The Vision includes six priority themes which outline the aspirations and focus of our community for the next 20 years.



This plan intends to demonstrate how Council funds are allocated to manage infrastructure assets to support the Council Vision as guided by the Council Plan. The plan is also part of Council's Asset Planning documents, as shown in Figure 2, to support Council's Asset Management Strategy and Policy, and guide operation plans.

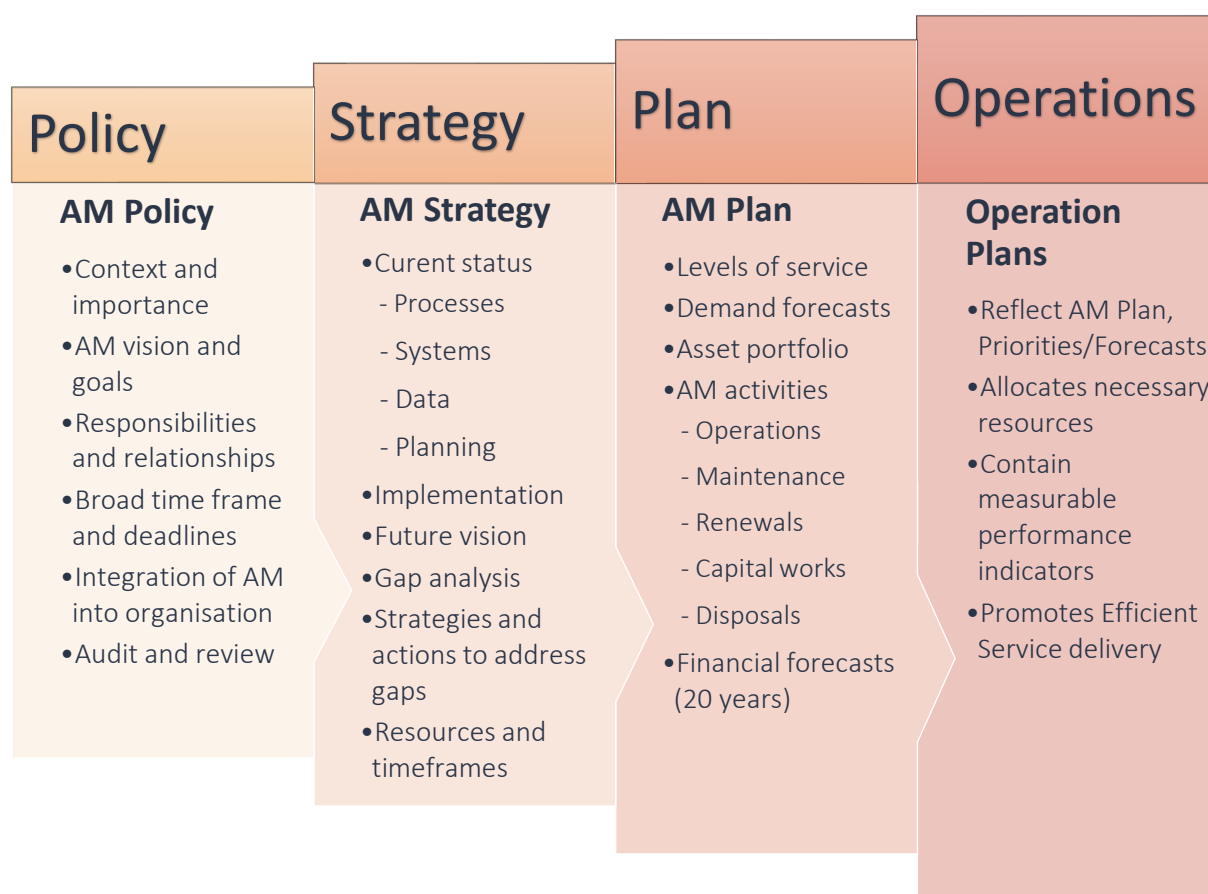


Figure 2: Asset Management Planning Hierarchy

3. Assets and Services Provided

Council manages fixed infrastructure assets (excluding land) of \$986 million on behalf of the community. These assets are required to provide agreed services to our diverse communities. Figures 3 and 4 summarises a list of Council's infrastructure assets and their values respectively.

Service refers to the services, programs and activities that support individuals and communities achieve better health, wellbeing, social and economic outcomes. Council has a long history of providing services for community benefit. As our communities evolve, Council's community services will adapt to keep pace. Figure 5 depicts some examples of Council's services, which are provided or supported by infrastructure assets.



372

BUILDINGS

Neighbourhood house , leisure, recreation, libraries, community services, sports pavilions, civic centres

10



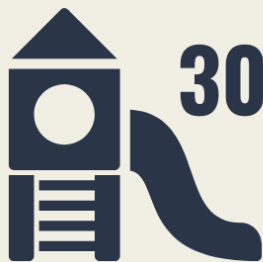
BRIDGES, UNDERPASSES

55

FOOTBRIDGES

2,672

RETAINING WALLS



30,000 +

OPEN SPACE
ASSETS

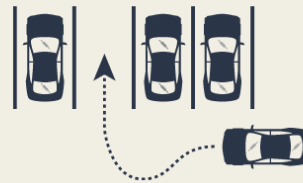
BBQ, bike racks, BMX tracks, bollards, cricket wickets, dog waste bag dispensers, fences, fitness equipment, flagpoles, drinking fountains, gates, goals, guide rails, park lights, monuments, sports courts, shade sails, seats and tables, signs, sports fields, stairs, structures.

667KM

ROADS

1,034KM

KERBS



143

CAR PARKS

802KM

DRAINAGE PIPES



1,884M

OPEN CHANNELS

35,038

STORMWATER
PITS



989KM

FOOTPATHS

78KM

OPEN SPACE
PATHWAYS

Figure 3: Summary of Council's Assets

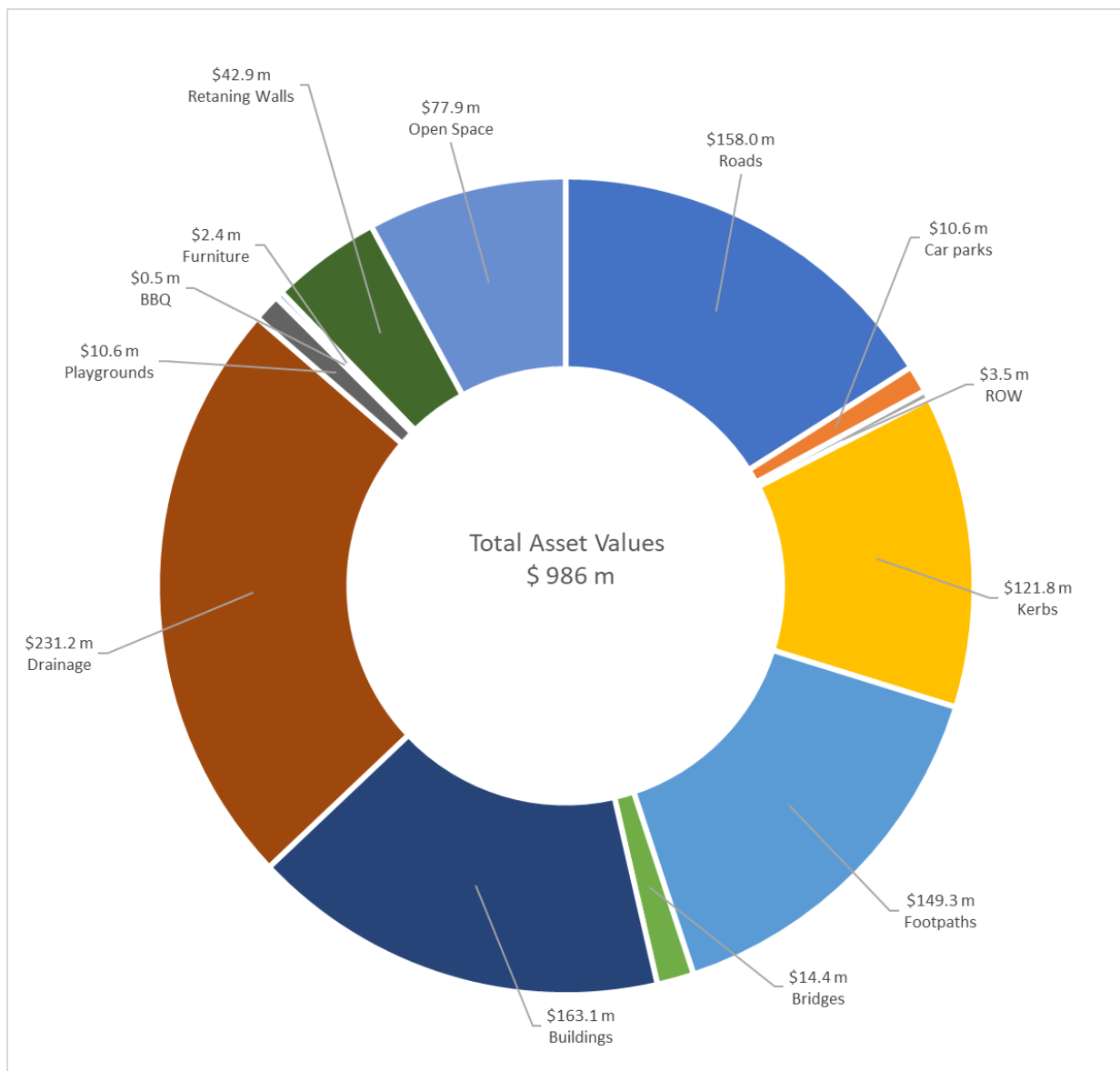


Figure 4: Assets Value



TRANSPORT



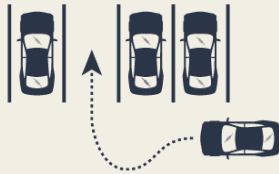
**SAFE AND
ACCESSIBLE PATHS**



**DRAINAGE AND
STORMWATER
MANAGEMENT**



**STREET AND
ROADSIDE
LANDSCAPING**



ACTIVITY CENTRES
Outdoor furniture,
signs, carparks etc



**PARKS AND
PLAYGROUNDS**



OUTDOOR SPORTS
Ovals and sportsfields



LEISURE



LIBRARIES



**CHILD, YOUTH
AND FAMILY**



ACTIVE AGEING
Program and service
for older people



**COMMUNITY
FACILITIES**
Neighbourhood houses,
community centres



ARTS



**WASTE
MANAGEMENT**



COUNCIL SERVICES
Commercial building,
civic centres, depots

Figure 5: Example of Council's Services

4. Life Cycle Management of Our Assets

Lifecycle management details how the Council creates, operates and manages assets at the agreed levels of service within available resources. Figure 6 shows components of lifecycle management.



Figure 6: Life Cycle Management of Assets

5. State of Assets (Current and Future Outlook)

Council's most recent State of Assets Report was adopted in 2019. This report presents a condition summary of Council's infrastructure assets with the exception of fleet, plant, equipment, trees and land.

Council applies a five point grading system, as summarised in Table 1, to assess the condition of Council's assets. This is consistent with the grading system recommended by the Institute of Public Works Engineering Australasia (IPWEA).

Table 1 | Condition Rating Definition

Condition Grading Scale	Name	Description
1	Very Good	Assets in as new condition
2	Good	Only planned maintenance required
3	Fair	Minor maintenance required plus planned maintenance
4	Poor	Major maintenance required
5	Very Poor	Significant renewal/rehabilitation required

Council carries out asset condition audits regularly and monitor the condition of our assets. This Plan presents current condition of assets and their predicted condition after 10 years. Council's Asset Management System has been used for predictive modelling. Three scenarios are considered to demonstrate predicted condition and required funding as follows:

Scenario 1 - Condition with the proposed funding level and renewing assets based on levels of service

Scenario 2 - Condition forecast with renewing assets when they reach Condition 4

Scenario 3 - Condition forecast with renewing assets when they reach Condition 5

Scenario 1: Condition with the proposed funding level and renewing assets based on levels of service

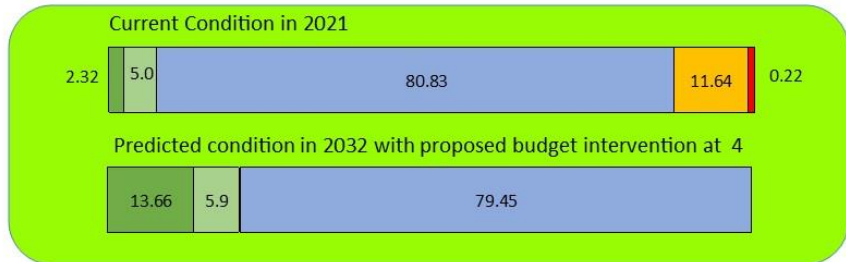
This option keeps Council's proposed funding level as it is and will target renewing assets when they reach their level of service. The level of service is defined by the intervention levels for renewal, which is Condition 4 or 5 depending of asset categories. Predicted condition of the assets at the end of the 10 year analysis period is shown in Figures 7, 8 and 9.

More details of the intervention levels and funding scenarios are discussed in Section 8.

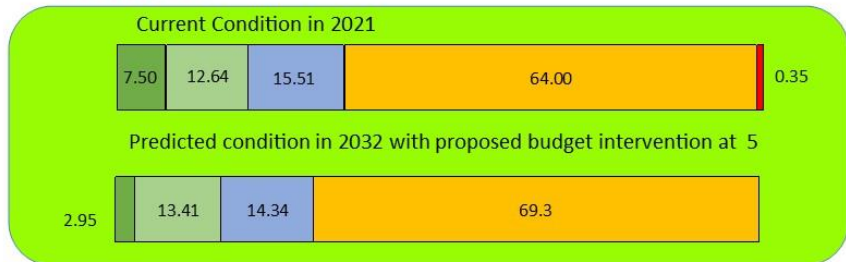
Asset Condition Guide - Condition as Percentage of Assets Value

Very Good	Good	Fair	Poor	Very Poor
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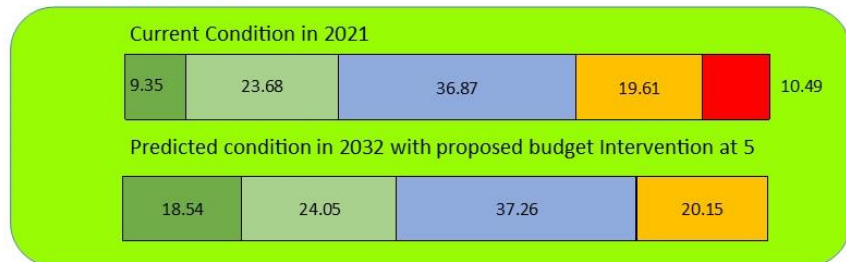
Pathways



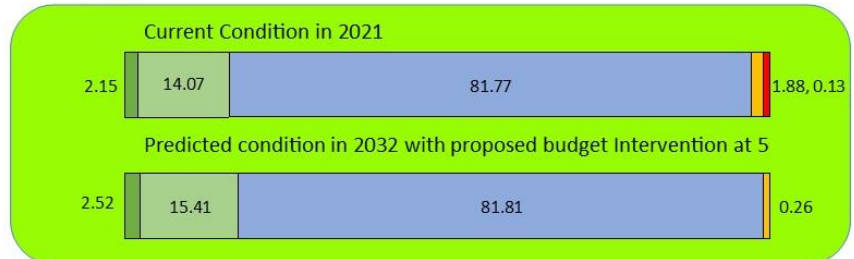
Road surface



Road Pavements



Kerbs



Stormwater Drains

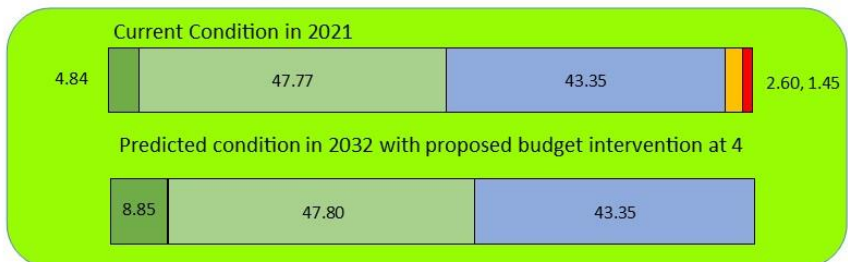
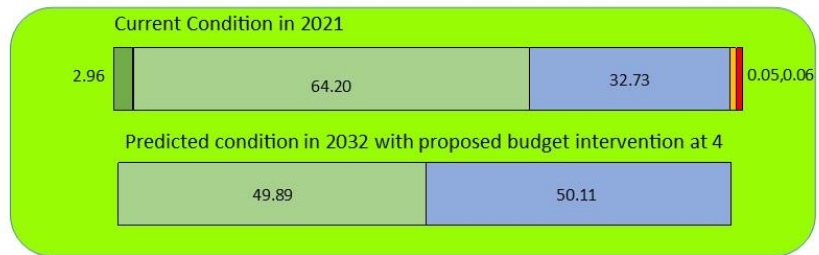


Figure 7: Asset Condition Considering Proposed Funding

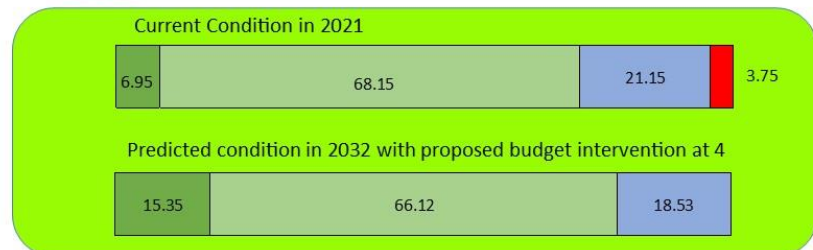
Asset Condition Guide - Condition as Percentage of Assets Value

Very Good	Good	Fair	Poor	Very Poor
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Buildings



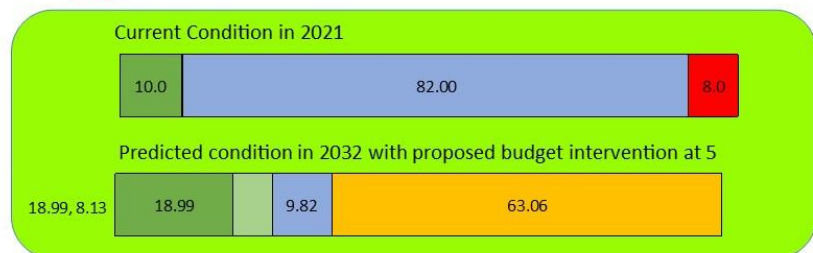
Bridges



Playgrounds



BBQs



Retaining Walls

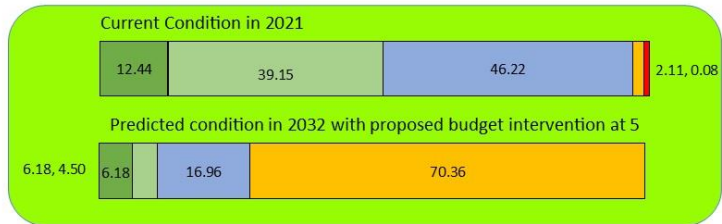


Figure 8: Asset Condition Considering Proposed Funding (Continued)

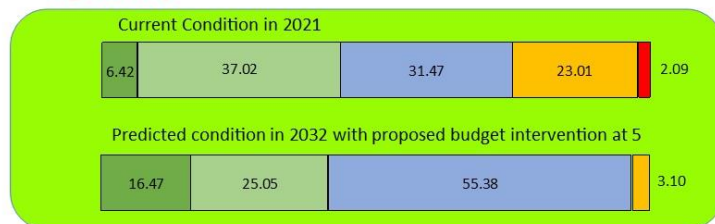
Asset Condition Guide - Condition as Percentage of Assets Value



Street and Park Furniture



Right of Ways



Other Open Space Assets



Car Parks

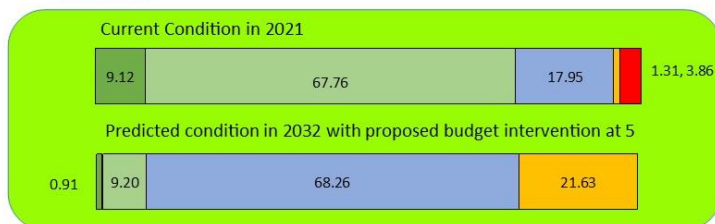


Figure 9: Asset Condition Considering Proposed Funding (Continued)

Scenario 2: Condition forecast, renewing assets when they reach Condition 4

This scenario considers an unconstrained budget and targets renewing assets when they reach Condition 4. It will renew assets as they reach Condition 4 and subsequently will require significantly more funding to achieve. Level of service will improve significantly.

Funding required for this option is discussed in Section 8. Figure 10 presents the condition forecast of assets after 10 years. This option will renew assets at Condition 4, therefore the forecast does not have any assets at Condition 4 or 5.

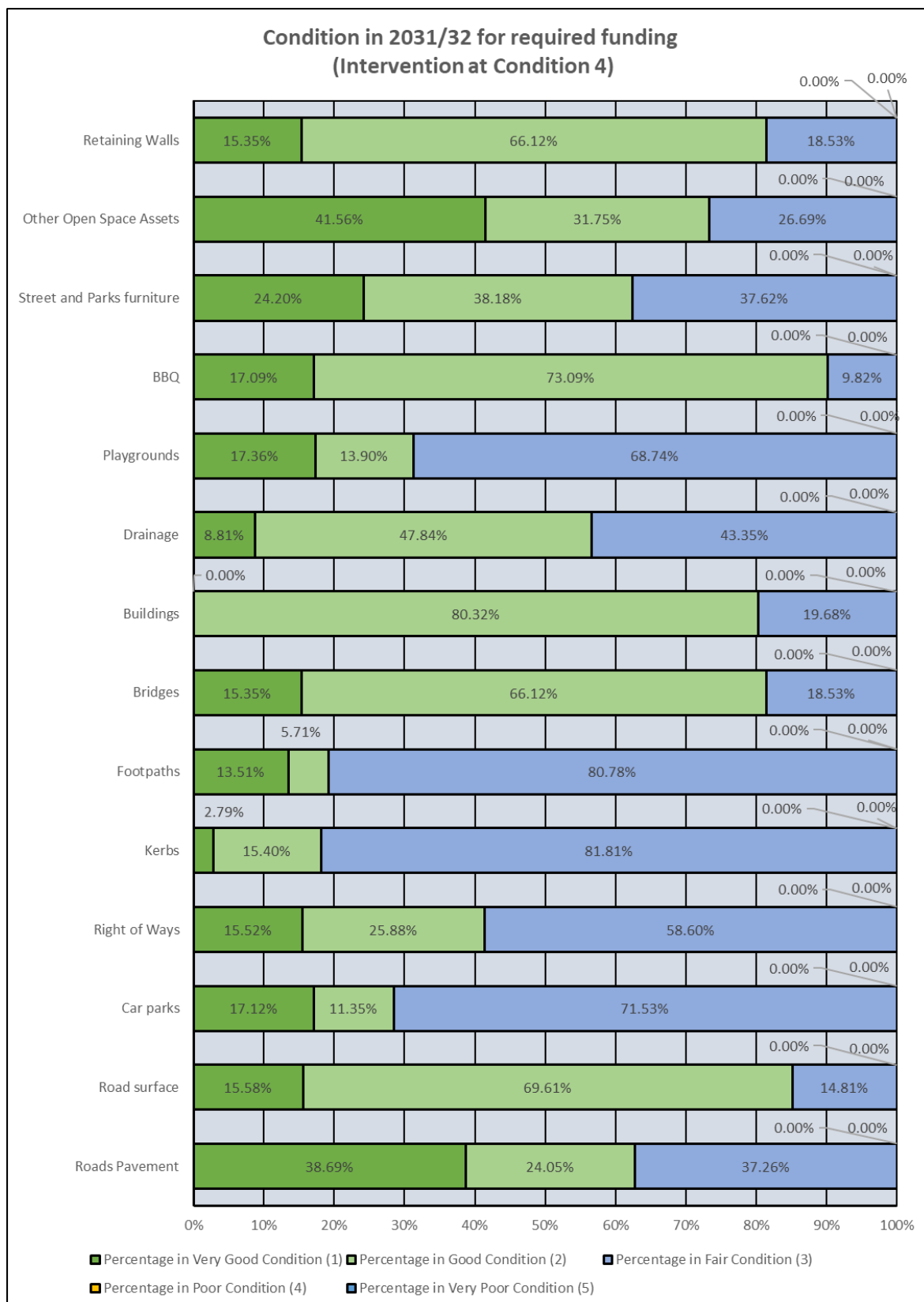


Figure 10: Asset Condition Considering Required Funding and Intervention at Condition 4

Scenario 3: Condition forecast, renewing assets when they reach Condition 5

This scenario considers an unconstrained budget and targets renewing assets when they reach Condition 5. It will renew assets as they reach at Condition 5. Funding required for this option is summarised in Section 8. Figure 11 presents the condition forecast of assets after 10 years. This option does not have any assets at Condition 5.

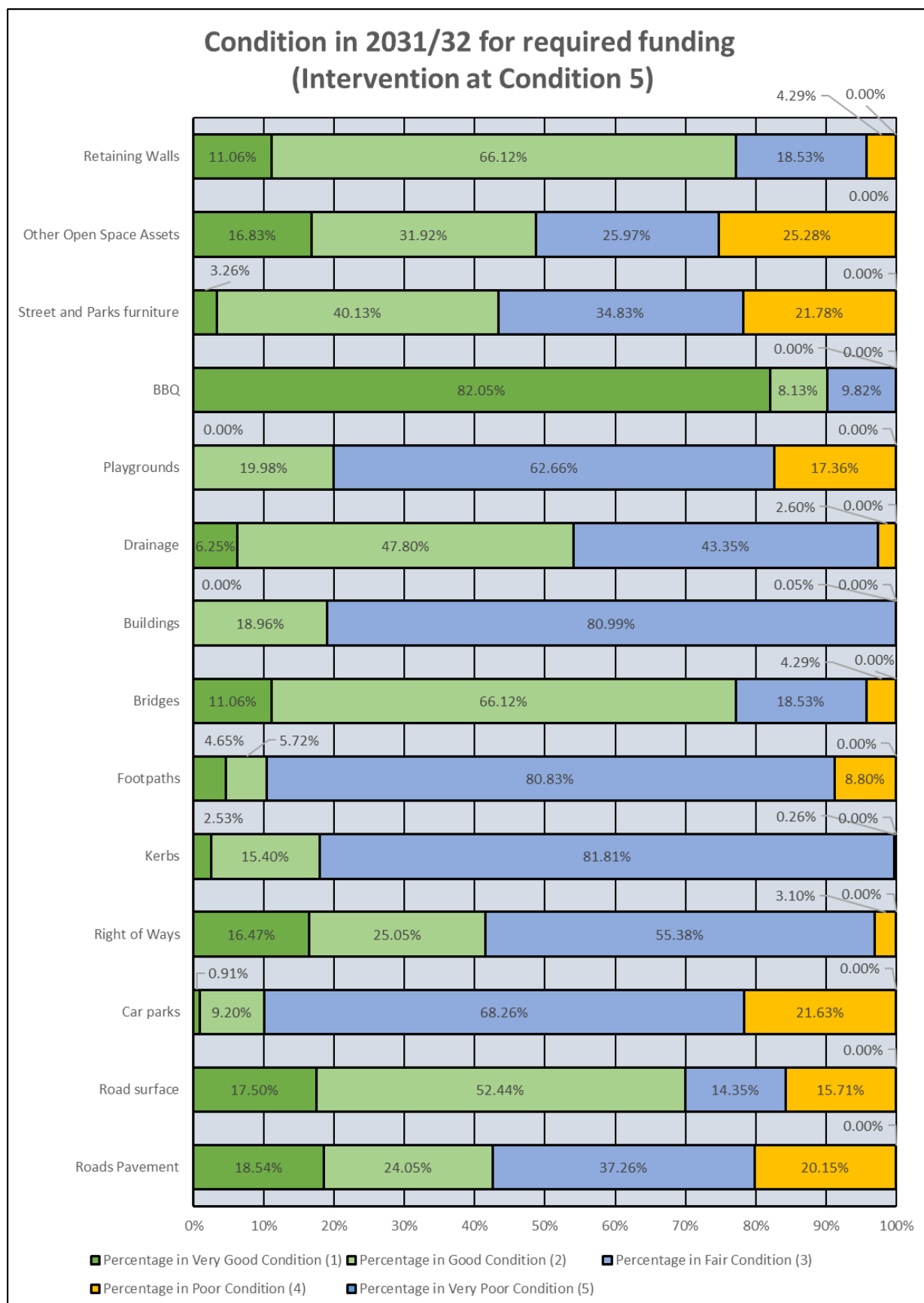


Figure 11: Asset Condition Considering Required Funding and Intervention at Condition 5

6. Challenges

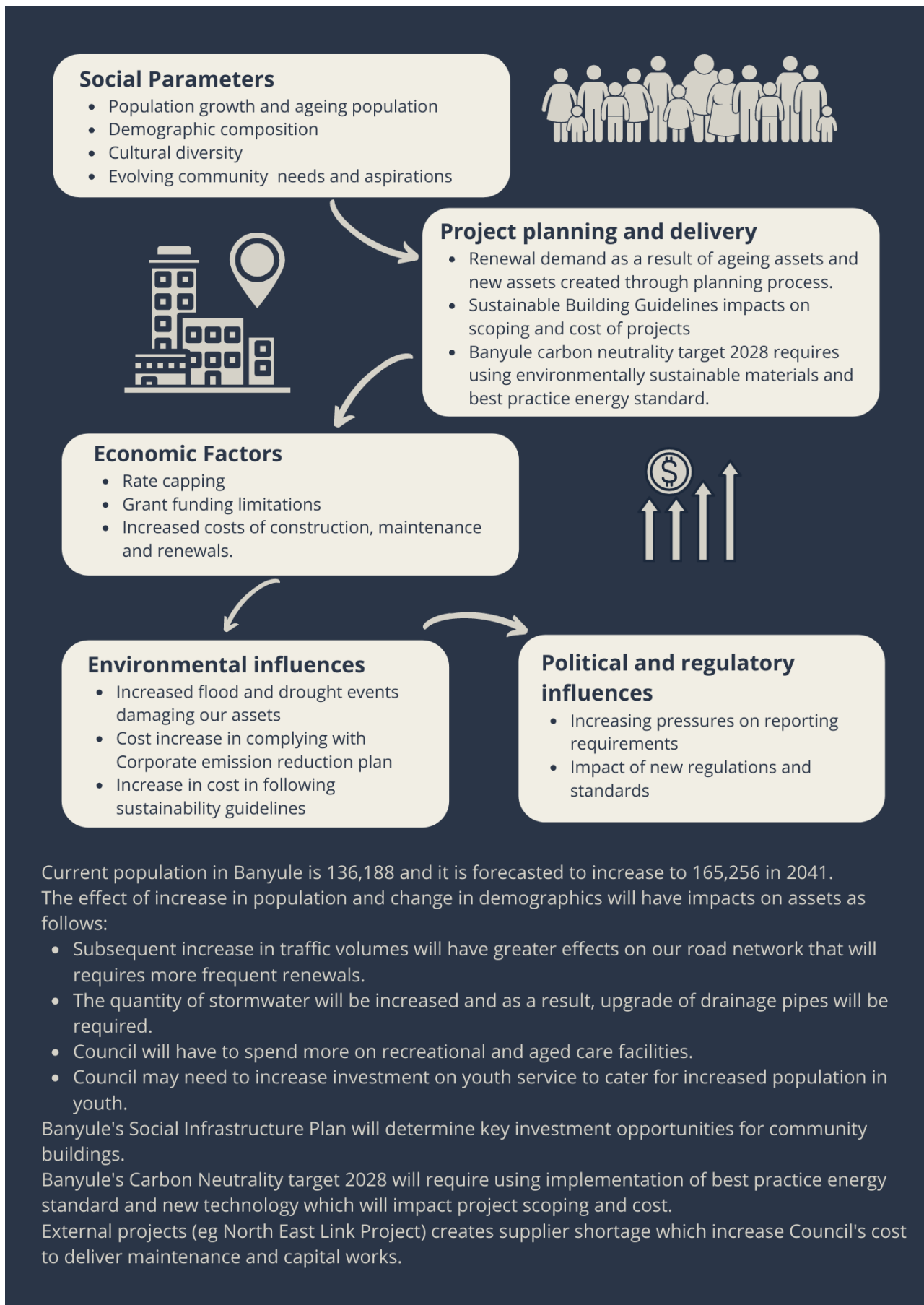


Figure 12: Challenges

7. Strategic Intent for Investment

We plan our investments to minimise the lifecycle cost and to ensure the sustainability of our assets. Our expenditure is categorised based on activity types. Future asset investment needs are predicted based on available data and asset condition. Council's Asset Management System is utilised to predict asset deterioration and renewal required into the future.

7.1 Expenditure Categories

Council's expenditure to manage infrastructure assets is broadly grouped into either recurrent or capital. Figure 13 depicts the details of expenditure categories.

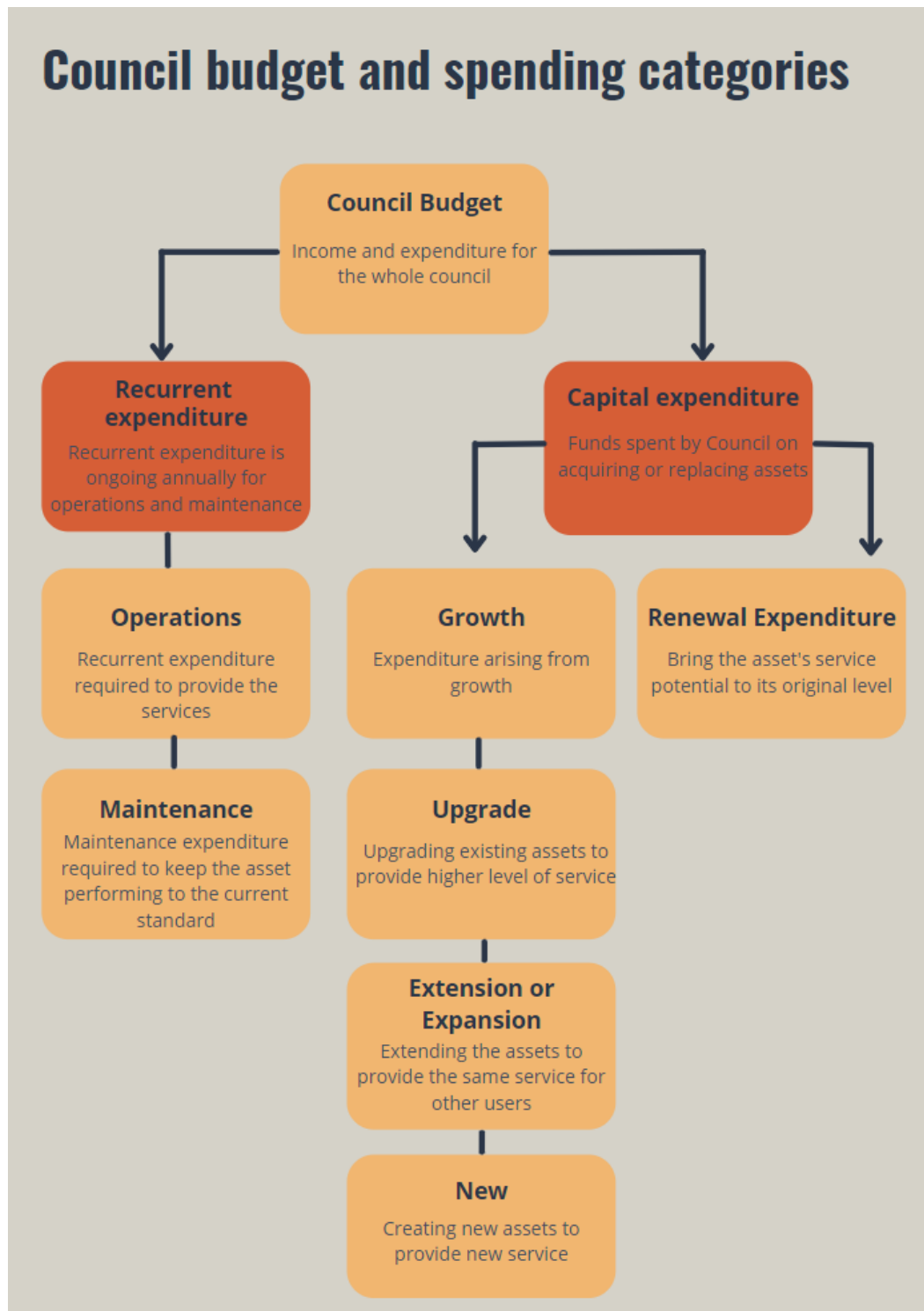


Figure 13: Expenditure Categories

Recurrent Expenditure

Recurrent expenditure includes both operational and maintenance activities to provide services.

Operation is regular activity required to maintain the service level even if the assets are in excellent condition without any defects. For instance, cleaning, street sweeping, utilities costs.

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, e.g. pothole patching and crack sealing of road, footpath wedging and grinding, replacing or repairing small components of buildings. Maintenance actions do not extend the life of assets.

Capital Expenditure

Capital expenditure includes renewal, upgrade, expansion and new assets.

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 considered to be an upgrade/expansion or new work expenditure resulting in additional future operations and maintenance costs.

Examples of renewal include:

- Resurfacing roads
- Replacing footpath segments, kerb and channel, bridge components
- Replacing drainage pipes and pits
- Replacing major building components (e.g. roof, kitchen, fit outs, mechanical, any structural components)
- Replacing existing Parks and Open Space assets (e.g. playground, BBQ, seats)

Upgrade is required to provide higher level of service such as sealing an unsealed road, converting open drains to underground drainage.

Expansion is required to extend the capacity of the service. For instance, road widening, installing bigger drainage pipes, extending buildings. They may result from growth, social or environmental needs.

New works are those that create a new asset that did not previously exist.

7.2 Investment Principles

Council's investments on our asset portfolio is guided by level of service, statutory requirements and the Social Infrastructure Framework. The levels of service are defined to respond to our requirement to deliver public value, which is informed by community needs and aspirations and feasible long term financial plan. Levels of service provide the basis for the life cycle management strategies including recurrent and capital expenditure.

Recurrent activities including operation and maintenance are non-discretionary as they are required to keep the service operational and safe. Asset renewals are also non-discretionary, however standard practice is to shift budget from one asset category to another subject to the condition and community need. Any upgrade, expansion and creation of new assets are discretionary items, which should be provided to respond to population growth, demographics, changes in demand, budget constraints, grant opportunities, consolidation or reimagining of assets.

7.3 Community Expectation

In accordance with the Local Government Act (2020), Banyule City Council engaged with the community in 2020/21, driven by principles of deliberative engagement, to inform the development of the Banyule Community Vision 2041 and Council Plan 2021-2025. Community feedback was also sought regarding Council's capital expenditure in various assets.

Presented below in Figure 15 are the responses to the question 'When considering how Council spends on Capital works, do you think Council should spend more, the same or less?'. A total of 320 responses was received for this question.

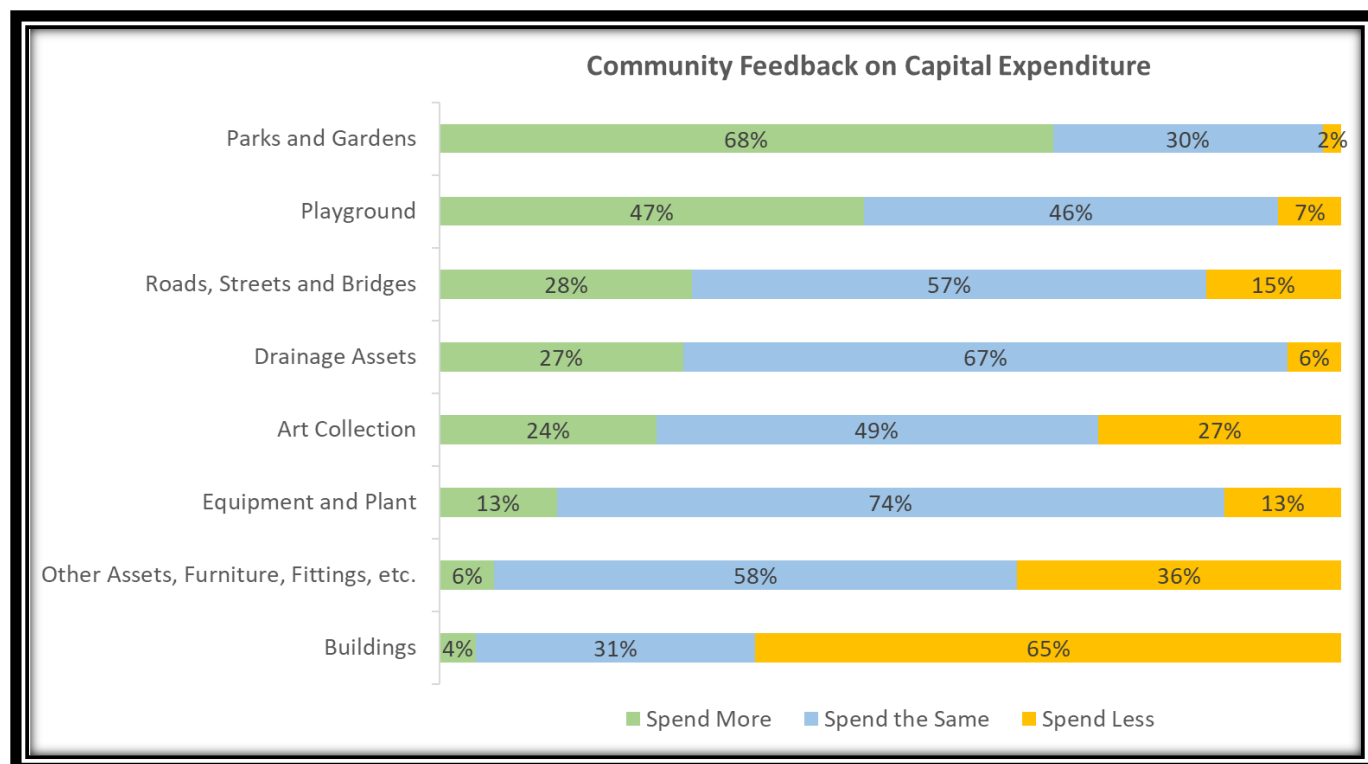


Figure 14: Community Feedback of Capital Expenditures

Overall, participants would like to see Council spend more on parks and gardens. We heard that Council should spend the same on equipment and plant, drainage and road assets, other assets including furniture and fittings and the arts collection, and that Council should spend less on buildings. Key strategies the community provided are:

- Most preferred was to spend more on fixing existing infrastructure rather than building anything new.
- Least preferred was to borrow funds to build new infrastructure.
- Council should find efficiencies to reduce costs and fully utilise existing assets.

7.4 Climate Change – Risks and Mitigation

Under the Local Government Act 2020, Councils are now required to consider opportunities for climate mitigation (carbon emission reductions) and plan for projected climate change risks.

Council is committed to achieving carbon neutrality for the organisation by 2028 and for the municipality by 2040. Projects or suppliers addressing climate change as such obtain higher priority scorings in project evaluations.

Buildings contribute a greater level of carbon emissions compared to other asset classes. Recognising this, Council has recently developed the Sustainable Building Guidelines to ensure the delivery of best practice energy standards that align with the organisations carbon neutrality focus. These guidelines will apply to any Council building projects including renewals, maintenance upgrades and new builds, ensuring minimisation of the carbon footprint caused by Council's buildings.

For other infrastructure, Council is also committed to trialling or implementing the best available products to contribute to the carbon neutrality target. For instance, Council has trialled modified asphalt made from recycled plastic, glass, toner cartridges, and reclaimed asphalt for road resurfacing.

Council recognises the need to consider climate risk within asset planning, as we build adaptation and resilience to future climate impacts. We know we are experiencing the impacts of climate change today and will continue to do so. Temperatures extremes, and increasing incidents of floods and bushfires require us to consider how to build in a way that minimises our exposure and vulnerability to these events. Key strategies implemented here will support the Victorian Government's Built Environment Climate Change Adaptation Action Plans.

7.5 Financial Sustainability

Good asset management practice relies on Council being financially sustainable. The Victorian Auditor General Office (VAGO) uses Renewal Gap Ratio (RGR) and Capital Replacement Ratio (CRR) as indicators relating to asset management. The RGR is calculated by comparing renewal and upgrade expenditure to depreciation and the CRR is capital expenditure to depreciation.

Table 2 outlines the criteria VAGO applies to assess each council's financial sustainability risk.

Table 2 | Criteria to Assess Financial Sustainability Risk

Risk	Renewal Gap Ratio	Capital Replacement Ratio
High	Less than 0.5 - Spending on existing assets has not kept pace with consumption of these assets.	Less than 1.0 - Spending on capital works has not kept pace with consumption of assets.
Medium	0.5 to 1.0 - May indicate insufficient spending on renewal of existing assets.	1.0 to 1.5 - May indicate spending on asset renewal is insufficient.
Low	More than 1.0 - Low risk of insufficient spending on assets.	More than 1.5 - Low risk of insufficient spending on asset renewal.

The following section highlights the current capital expenditure for various asset classes for the next 10 years. It also predicts the expenditure required for the same analysis period and identifies gaps.

8. Financial Forecast

8.1 Roads

Assets Included

- Sealed and unsealed road pavement and surface
- Kerbs and table drains
- Carparks
- Right of Ways

Services Provided

- To ensure the connectivity and mobility of the community with a safe road network

Total Replacement Value

- \$293.8 M
- 30% of Asset Portfolio of \$986 M

Financial indicators (10 Years)

- Renewal Gap Ratio 0.70
- Capital Replacement Ratio 0.70
- Risk Level Medium

Assets Life in Years

- Sealed road pavement 100
- Right of ways 50
- Asphalt surface 25
- Spray seal 15
- Slurry Seal 10
- Kerbs 70

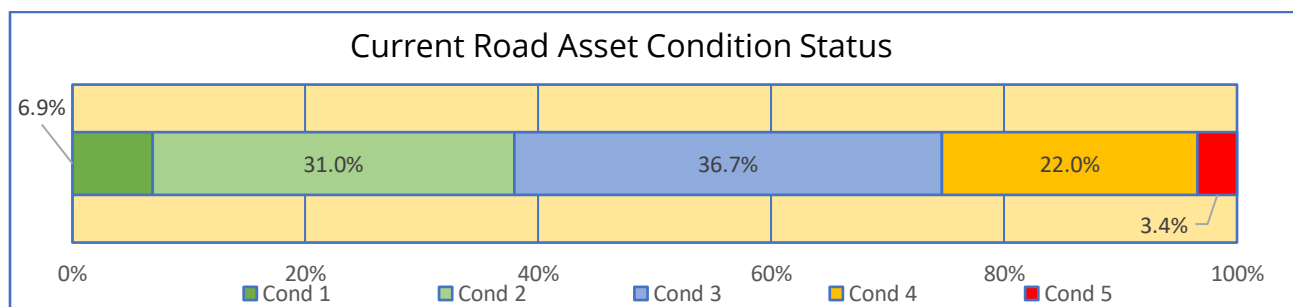
Confidence level of the existing data

- Inventory data 95%
- Condition data 95%

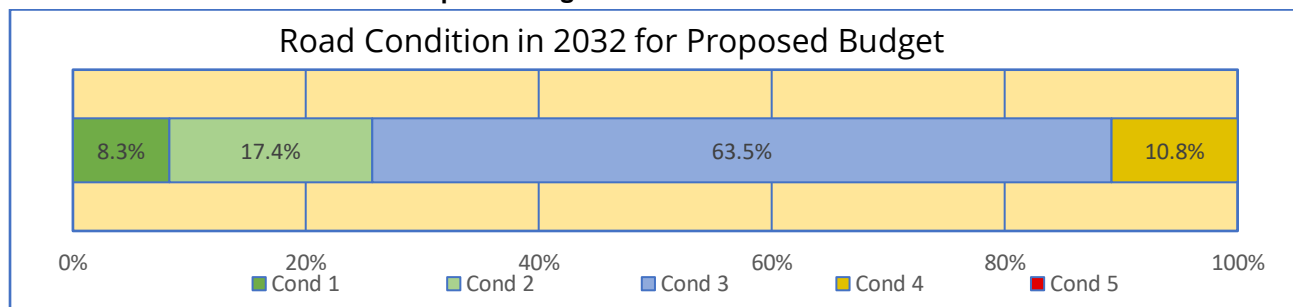
Renewal Required and Funding Gap

- Total renewal funds allocated \$38.3 M
- Scenario-1:
- Required funds for intervention at Condition 4 (model output) \$88.3 M
 - Funding gap for intervention at condition 4 \$56.3 M
- Scenario-2:
- Required funds for intervention at Condition 5 (model output) \$38.3 M
 - Funding gap for intervention at condition 5 \$0

Current Condition:

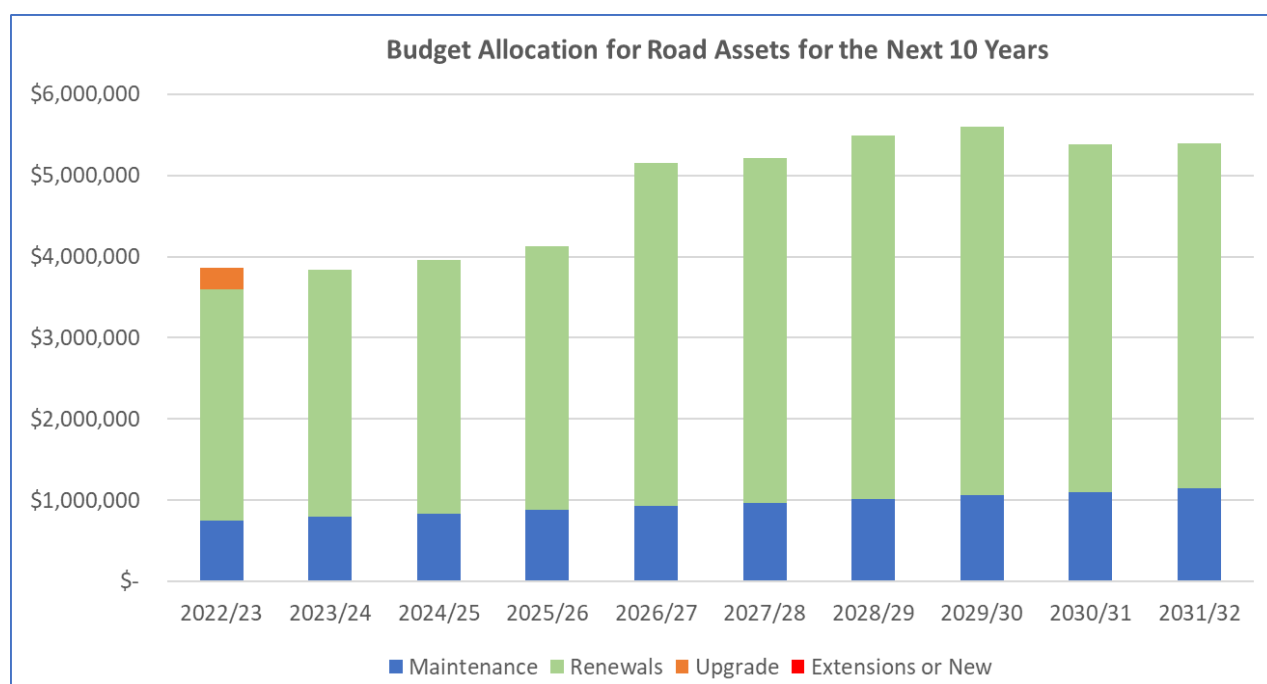


Predicted Condition in 2032 with Proposed Budget:



Recurrent and Capital Expenditure for next 10 years

Year	Maintenance (\$M)	Renewals (\$M)	Upgrade (\$M)	Extensions or New (\$M)
2022/23	\$ 0.75	\$2.84	0.27	0
2023/24	\$ 0.79	\$3.04	0	0
2024/25	\$ 0.84	\$2.97	0	0
2025/26	\$ 0.88	\$3.24	0	0
2026/27	\$ 0.93	\$4.22	0	0
2027/28	\$ 0.97	\$4.25	0	0
2028/29	\$ 1.01	\$4.47	0	0
2029/30	\$ 1.06	\$4.54	0	0
2030/31	\$ 1.10	\$4.28	0	0
2031/32	\$ 1.15	\$4.25	0	0
Total	\$ 9.47	\$38.28	0.27	0



Example of activities carried out under each expenditure category			
Maintenance	Renewals	Upgrades	New or Extensions
<ul style="list-style-type: none"> Regular inspections Pothole patching Line marking Cleaning table drains Sweeping General upkeep of the road network 	<ul style="list-style-type: none"> Major patching Road resurfacing Road reconstruction 	<ul style="list-style-type: none"> Carpark upgrade work included in next 10 years 	<ul style="list-style-type: none"> No new and extension work included in next 10 years

Comments

- Council has more recently been underspending on renewal of roads, including carpark and kerb and channel.
- There is a need to explore more recycled and environmentally sustainable materials for road infrastructure to address Banyule's carbon neutrality target 2028.

Recommendations

- Scenario-2 is recommended, which is to renew road assets reaching at condition 5 (Very Poor).
- It is proposed to increase renewal funding by \$6.3 M over the next 10 years, approximately \$1 million annually starting from 2026/27, reallocated from other asset classes.

8.2 Footpath

Assets Included

- Footpaths - Concrete
- Footpaths – Asphalt
- Footpaths – Pavers
- Footpaths - Gravel

Services Provided

- To ensure the connectivity of the community with a safe footpath network.
- To provide safe and enjoyable walking paths.

Total Replacement Value

- \$149.3 M
- 15% of Asset Portfolio of \$986 M

Financial indicators

- Renewal Gap Ratio 1.16
- Capital Replacement Ratio 1.22
- Risk Level Low

Assets Life in Years

- Concrete footpaths 60
- Asphalt footpaths 30
- Gravel footpath 10
- Pavers 60

Confidence level of the existing data

- Inventory data 95%
- Condition data 95%

Renewal Required and Funding Gap

- Total renewal funds allocated \$28.90 M

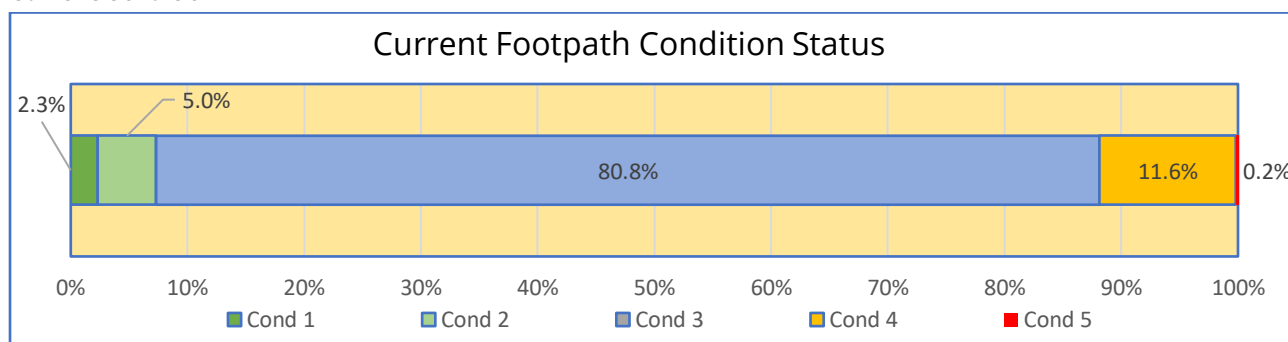
Scenario-1:

- Required funds for intervention at Condition 4 (model output) \$20.7 M
- Funding gap for intervention at condition 4 -\$8.2 M

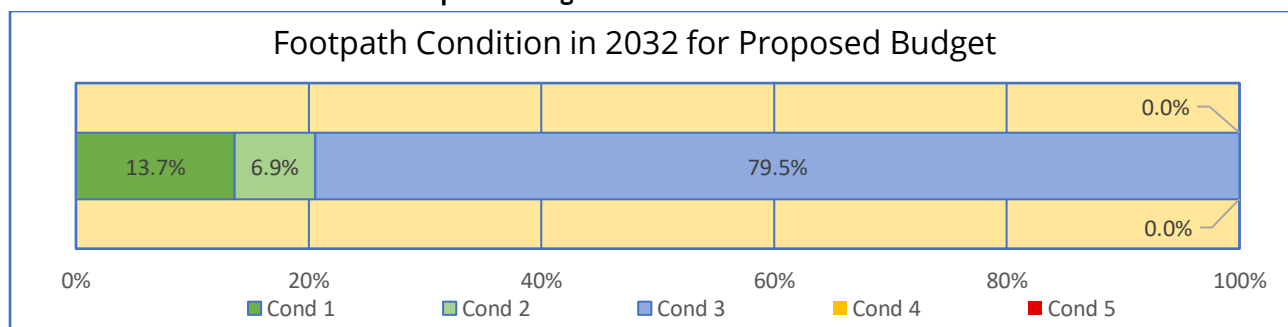
Scenario-2:

- Required funds for intervention at Condition 5 (model output) \$19.1 M
- Funding gap for intervention at condition 5 -\$9.8 M

Current Condition:

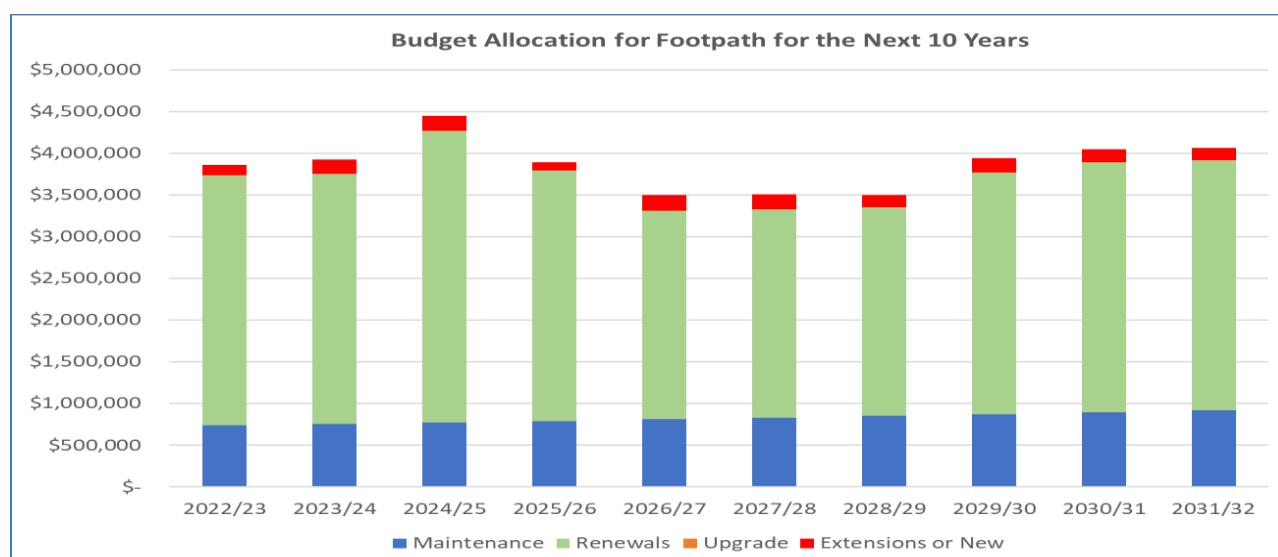


Predicted Condition in 2032 with Proposed Budget:



Recurrent and Capital Expenditure for next 10 years

Year	Maintenance (\$M)	Renewals (\$M)	Upgrade (\$M)	Extensions or New (\$M)
2022/23	\$ 0.73	\$3.00	0	\$ 0.13
2023/24	\$ 0.75	\$3.00	0	\$ 0.17
2024/25	\$ 0.77	\$3.50	0	\$ 0.18
2025/26	\$ 0.79	\$3.00	0	\$ 0.10
2026/27	\$ 0.81	\$2.50	0	\$ 0.19
2027/28	\$ 0.83	\$2.50	0	\$ 0.18
2028/29	\$ 0.85	\$2.50	0	\$ 0.15
2029/30	\$ 0.87	\$2.90	0	\$ 0.17
2030/31	\$ 0.90	\$3.00	0	\$ 0.15
2031/32	\$ 0.92	\$3.00	0	\$ 0.15
Total	\$ 8.23	\$28.90	0	\$ 1.57



Example of activities carried out under each expenditure category			
Maintenance	Renewals	Upgrades	New or Extensions
<ul style="list-style-type: none"> Regular inspections Wedging Replacing damaged bays 	<ul style="list-style-type: none"> Replacing damaged bays Re-gravelling of gravel footpaths Laying asphalts on damaged sections 	<ul style="list-style-type: none"> No upgrade work included in next 10 years 	<ul style="list-style-type: none"> Extending existing footpaths or constructing new footpaths

Comments

- Council's footpath network has a large number of localised defects (eg. tripping hazards), which require fixing by renewing associated footpath bays. This is required in accordance with the Road Management Plan, which is a legal obligation for Council.
- Therefore, overall asset condition rating does not fully reflect renewal needs. Renewing footpath bays associated with localised defects is also required.
- A condition audit of Council's footpath is due this financial year, 2021/22, which will help better understand the current footpath condition and more accurate renewal needs.
- There is a need to explore more recycled and environmentally sustainable materials for footpath renewal to address Banyule's carbon neutrality target 2028.

Recommendations

- Scenario 1 is recommended for footpaths, maintaining current funding in the short term.
- This is sufficient renewal funding to maintain overall asset condition, as well as manage localised defect repairs in accordance with the Road Management Plan.

8.3 Bridge

Assets Included

- Road bridges and culverts 10
- Footbridges 55

Financial indicators

- Renewal Gap Ratio 6.11
- Capital Replacement Ratio 6.11
- Risk Level Low

Services Provided

- To ensure the connectivity and mobility of the community with a safe road and pathways network
- Providing safe walking paths in reserves.

Assets Life in Years

- Concrete vehicular bridges 100
- Concrete vehicular culverts 100
- Steel frame and concrete deck bridges 80
- Timber Bridges 60

Total Replacement Value

- \$14.4 M
- 1.5% of Asset Portfolio of \$986 M

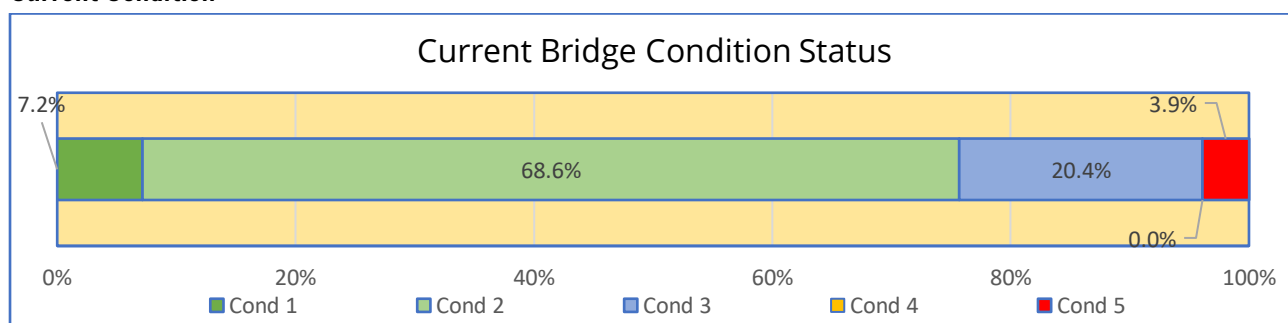
Confidence level of the existing data

- Inventory data 95%
- Condition data 95%

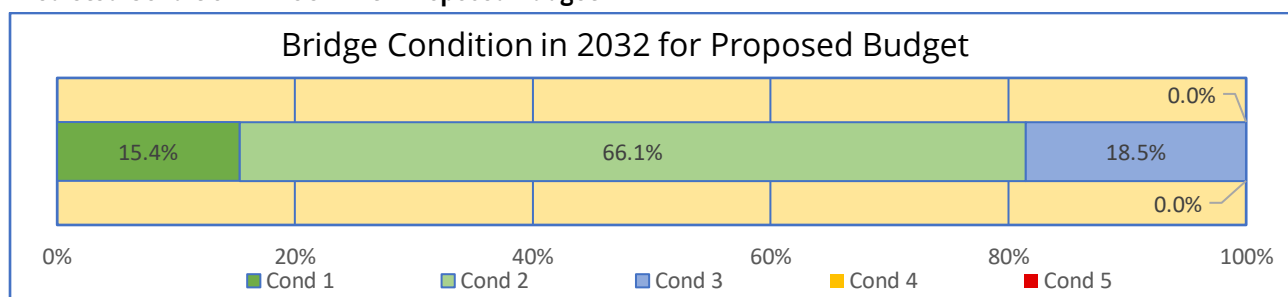
Renewal Required and Funding Gap

- Total renewal funds allocated \$6.1 M
- Scenario-1:
- Required funds for intervention at Condition 4 (model output) \$1.5 M
 - Funding gap for intervention at condition 4 -\$4.6 M
- Scenario-2:
- Required funds for intervention at Condition 5 (model output) \$0.54 M
 - Funding gap for intervention at condition 5 -\$5.6 M

Current Condition:

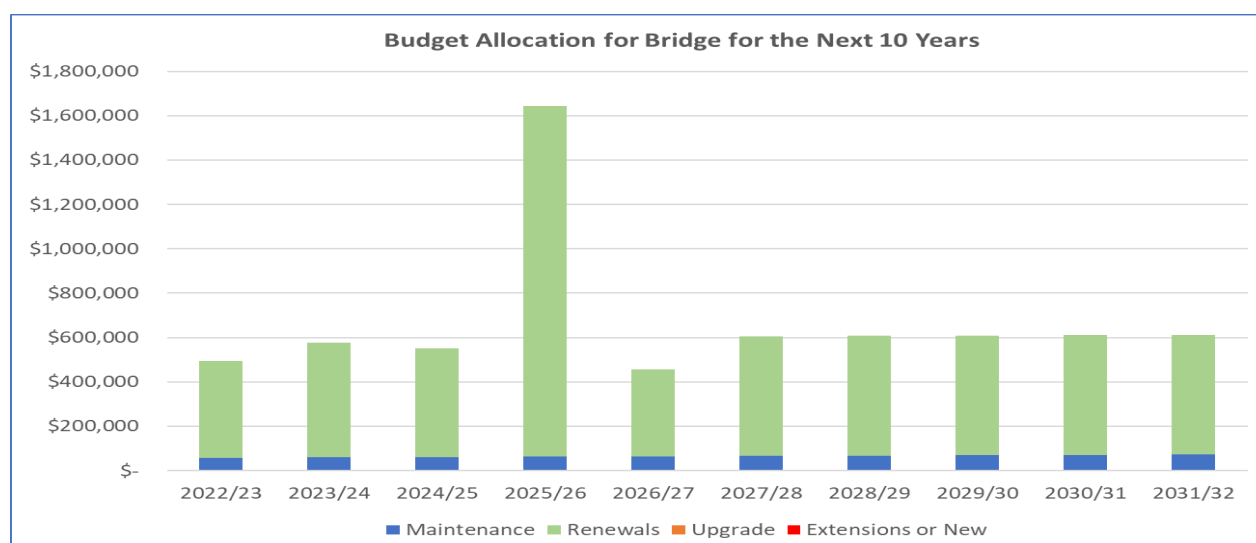


Predicted Condition in 2032 with Proposed Budget:



Recurrent and Capital Expenditure for next 10 years

Year	Maintenance (\$M)	Renewals (\$M)	Upgrade (\$M)	Extensions or New (\$M)
2022/23	\$ 0.06	\$ 0.44	\$ -	\$ -
2023/24	\$ 0.06	\$ 0.52	\$ -	\$ -
2024/25	\$ 0.06	\$ 0.49	\$ -	\$ -
2025/26	\$ 0.06	\$ 1.58	\$ -	\$ -
2026/27	\$ 0.07	\$ 0.39	\$ -	\$ -
2027/28	\$ 0.07	\$ 0.54	\$ -	\$ -
2028/29	\$ 0.07	\$ 0.54	\$ -	\$ -
2029/30	\$ 0.07	\$ 0.54	\$ -	\$ -
2030/31	\$ 0.07	\$ 0.54	\$ -	\$ -
2031/32	\$ 0.07	\$ 0.54	\$ -	\$ -
Total	\$ 0.66	\$ 6.11	\$ -	\$ -



Example of activities carried out under each expenditure category			
Maintenance	Renewals	Upgrades	New or Extensions
<ul style="list-style-type: none"> Level 1, 2 and 3 Inspections Reactive repairs of defects identified through the inspections 	<ul style="list-style-type: none"> Replacing damaged Bridge decks Replacing damaged bridge components Protective works of abutments and piers 	<ul style="list-style-type: none"> No upgrade work included in next 10 years 	<ul style="list-style-type: none"> No New or extension works included in next 10 years

Comments

- Most of Council's bridges are footbridges used by pedestrians only.
- Council carries out Level 2 bridge inspection for the whole network every 2 years.
- Majority of Council's bridges are in good condition.
- Current renewal requirement of the bridges is therefore not high.
- The renewal ratio for bridges is exaggerated by the low number of bridge assets and the need for complete renewal of one bridge within the next 10 years.
- In current practice, Council considers replacing damage components rather than renewing whole bridges.
- Council also applies environmentally sustainable materials for replacing bridge deck and other components.

Recommendations

- It is recommended to keep the current renewal funding as it is.

8.4 Stormwater Drainage

Assets Included

- Pipes including channels 804 km
- Pits 35,205 no.

Financial indicators

- Renewal Gap Ratio 0.67
- Capital Replacement Ratio 0.76
- Risk Level Medium

Services Provided

- Conveyance of stormwater from private and public land.
- Protect the community from flooding.
- Improve the quality of stormwater discharge to natural waters.

Assets Life in Years

- Stormwater pits and pipes 100

Total Replacement Value

- \$231 M
- 23% of Asset Portfolio of \$986 M

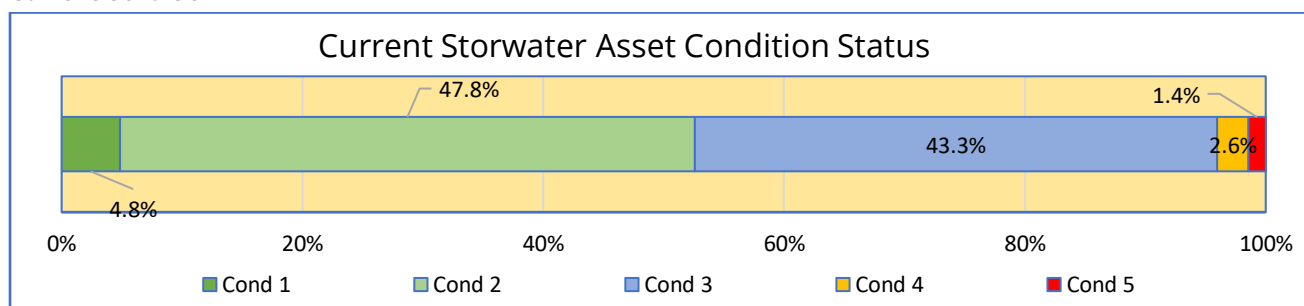
Confidence level of the existing data

- Inventory data 95%
- Condition data 10%

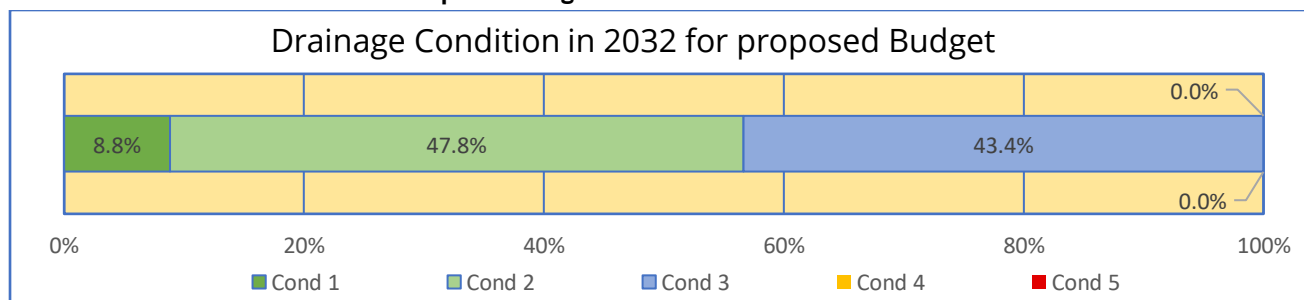
Renewal Required and Funding Gap

- Total renewal funds allocated \$14.3 M
- Scenario-1:
- Required funds for intervention at Condition 4 (model output) \$9.4 M
 - Funding gap for intervention at condition 4 -\$4.9 M
- Scenario-2:
- Required funds for intervention at Condition 5 (model output) \$3.3 M
 - Funding gap for intervention at condition 5 -\$10 M

Current Condition:

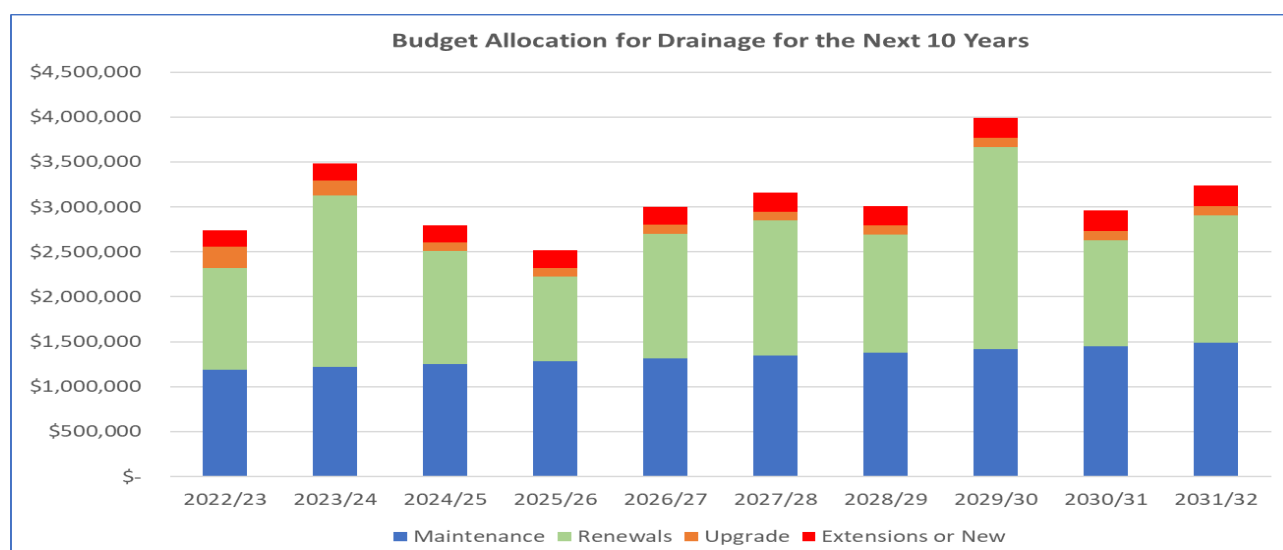


Predicted Condition in 2032 with Proposed Budget:



Recurrent and Capital Expenditure for next 10 years

Year	Maintenance (\$M)	Renewals (\$M)	Upgrade (\$M)	Extensions or New (\$M)
2022/23	\$ 1.19	\$ 1.13	\$ 0.24	\$ 0.18
2023/24	\$ 1.22	\$ 1.91	\$ 0.17	\$ 0.19
2024/25	\$ 1.25	\$ 1.26	\$ 0.09	\$ 0.19
2025/26	\$ 1.28	\$ 0.94	\$ 0.10	\$ 0.20
2026/27	\$ 1.32	\$ 1.39	\$ 0.10	\$ 0.20
2027/28	\$ 1.35	\$ 1.50	\$ 0.10	\$ 0.21
2028/29	\$ 1.38	\$ 1.31	\$ 0.10	\$ 0.21
2029/30	\$ 1.42	\$ 2.25	\$ 0.10	\$ 0.22
2030/31	\$ 1.45	\$ 1.18	\$ 0.10	\$ 0.22
2031/32	\$ 1.49	\$ 1.42	\$ 0.11	\$ 0.23
Total	\$ 13.35	\$ 14.28	\$ 1.21	\$ 2.05



Example of activities carried out under each expenditure category			
Maintenance	Renewals	Upgrades	New or Extensions
<ul style="list-style-type: none"> CCTV inspections of pipes and pits Reactive repairs of defects identified Pipe and pit cleaning 	<ul style="list-style-type: none"> Replacing damaged pipes and pits 	<ul style="list-style-type: none"> Replacing under capacity pipes with larger pipes 	<ul style="list-style-type: none"> Installing stormwater and water sensitive urban design activities Extending the drainage network Installation of stormwater quality improvement devices

Comments

- Condition inspection of pipes is comparatively expensive. As a result, Council has very limited drainage condition data.
- Renewal funding requirement has been forecasted based on age of the pipe network.
- The average age of the pipe network is approximately 54 years, which is at the middle of its useful life, 100 years.
- Council has been inspecting one per cent of its network annually, to obtain a good sample size after 5 years in order to get a sample condition data.
- 60% of the pipe network is running full in a 5-year flood event. This means there is a possibility of flooding for higher flood events.
- Current renewal funding is allocated based on identified flooding problems.
- Upgrading and creating new drainage pipes are also considered to cope with future growth.

Recommendations

- It is recommended to continue the current capital funding.

8.5 Building

Assets Included

• Administration	12
• Health & Aged Services	4
• Leisure, Recreation & Culture	153
• Major Projects & Infrastructure	2
• Operations	13
• Parks and Gardens	108
• Economic development	17
• Family Service	63
Total buildings included	372

Services Provided

- Community services
- Sports and recreation
- Health services
- Youth services
- Senior citizen services

Total Replacement Value

- \$163 M
- 17% of Asset Portfolio of \$986 M

Financial indicators

• Renewal Gap Ratio	3.92
• Capital Replacement Ratio	4.12
• Risk Level	Low

Assets Life in Years

• External Finishes	15
• Internal finishes, fire protection, Doors	20
• Electrical items	25
• Fences, Hydraulic, Fit out and windows	30
• External structures	40
• Roof and plumbing	45
• External finishes, paving and roads	50
• Superstructure and substructure	80

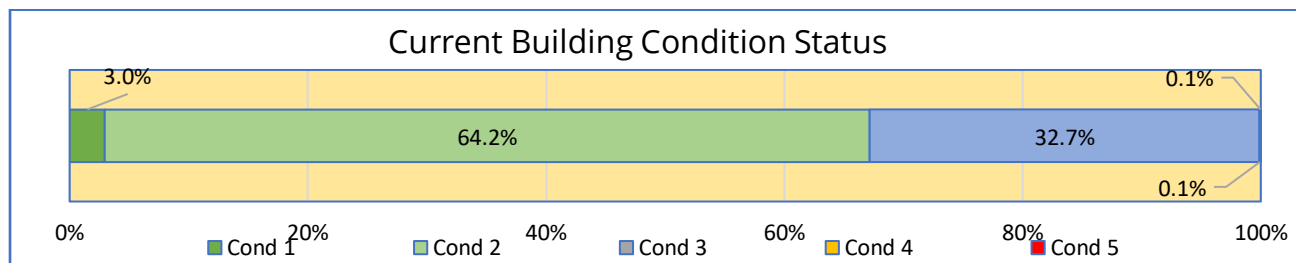
Confidence level of the existing data

• Inventory data	95%
• Condition data	95%

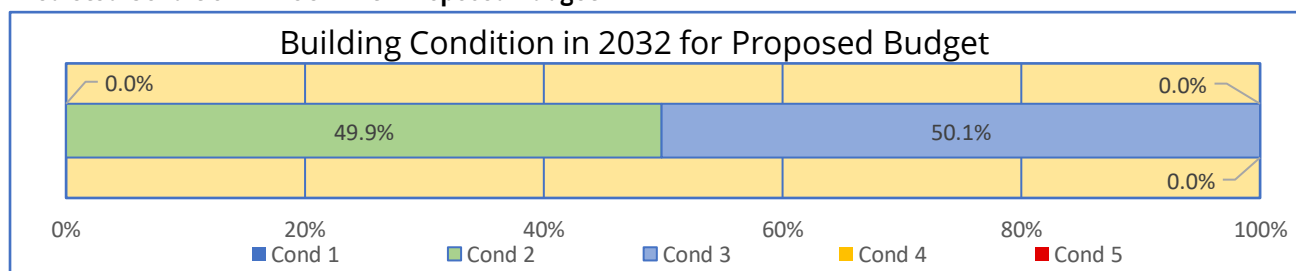
Renewal Required and Funding Gap

• Total renewal funds allocated	\$53.3 M
Scenario-1:	
• Required funds for intervention at Condition 4 (model output)	\$99.6 M
- Funding gap for intervention at condition 4	\$46.3 M
Scenario-2:	
• Required funds for intervention at Condition 5 (model output)	\$38.1 M
- Funding gap for intervention at condition 5	-\$15.2 M

Current Condition:

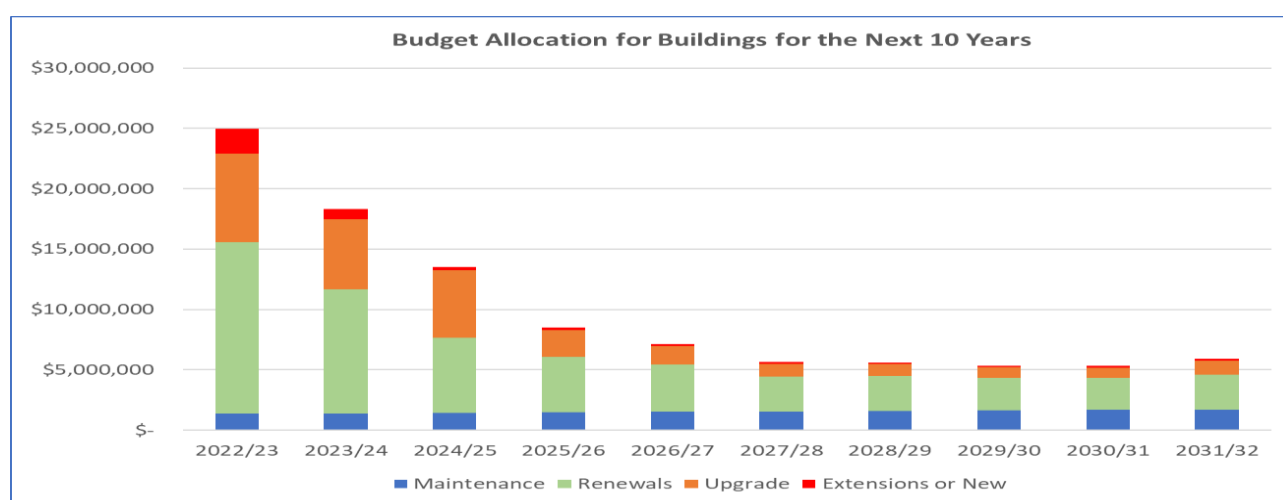


Predicted Condition in 2032 with Proposed Budget:



Recurrent and Capital Expenditure for next 10 years

Year	Maintenance (\$M)	Renewals (\$M)	Upgrade (\$M)	Extensions or New (\$M)
2022/23	\$ 1.38	\$ 14.22	\$ 7.31	\$ 2.06
2023/24	\$ 1.41	\$ 10.28	\$ 5.79	\$ 0.85
2024/25	\$ 1.44	\$ 6.24	\$ 5.55	\$ 0.27
2025/26	\$ 1.48	\$ 4.59	\$ 2.24	\$ 0.19
2026/27	\$ 1.52	\$ 3.94	\$ 1.54	\$ 0.15
2027/28	\$ 1.56	\$ 2.89	\$ 1.07	\$ 0.15
2028/29	\$ 1.59	\$ 2.89	\$ 1.02	\$ 0.10
2029/30	\$ 1.63	\$ 2.69	\$ 0.90	\$ 0.10
2030/31	\$ 1.68	\$ 2.69	\$ 0.84	\$ 0.15
2031/32	\$ 1.72	\$ 2.89	\$ 1.18	\$ 0.15
Total	\$ 15.41	\$ 53.29	\$ 27.44	\$ 4.17



Example of activities carried out under each expenditure category			
Maintenance	Renewals	Upgrades	New or Extensions
<ul style="list-style-type: none"> Reactive repairs of defects identified through the inspections and customer requests Essential Safety Measure inspections Cleaning and pest control Painting 	<ul style="list-style-type: none"> Replacing damaged building components Replacing heating or cooling systems Replacing damaged assets within the building premises 	<ul style="list-style-type: none"> Building extensions Sustainability improvement such as solar panels, water harvesting etc 	<ul style="list-style-type: none"> Construction of new building to adapt population changes and demand.

Comments

<ul style="list-style-type: none"> Council carried out building condition audit in 2019/20. Therefore, condition data is up to date. Current funding considers renewal of some components (e.g. structures, low usage building components) at Condition 5 and some components (fit outs, high usage buildings) at Condition 4, which is a common practice across the industry. In addition, Council considers climate risks in prioritising building renewals and upgrades. For instance: <ul style="list-style-type: none"> Replacement of gas equipment is prioritised for renewal over existing electric. Upgrading to energy-efficient heating and cooling systems are prioritised to reduce the cost of achieving thermal comfort as a result of climate change. Council is committed to applying the Sustainable Building Guidelines for any building projects including renewals and upgrades to address carbon neutrality target 2028. Banyule is also preparing a Social Infrastructure Framework (SIF) and a Community Infrastructure Plan (CIP), which will help understand more accurate capital funding required for buildings.
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Recommendations

- It is recommended to continue with the current renewal funding.
- Continue with the development of the Community Infrastructure Plan (CIP) to better inform future capital spending needs for buildings, whilst considering community feedback received during the deliberative community engagement in 2020/21.

8.6 Parks and Open Space

Assets Included

• Playgrounds	146
• BBQ	39
• Furniture (Street and parks)	1192
• Retaining Walls	2672
• Other open space assets	1498

Services Provided

- Access to high quality open space.
- To ensure the cities open space and street scape are presentable, aesthetic and pleasing.
- Provide safe walking paths in reserves.

Total Replacement Value

- \$134.3 M
- 14% of Asset Portfolio of \$986 M

Financial indicators

• Renewal Gap Ratio	1.34
• Capital Replacement Ratio	1.39
• Risk Level	Low

Assets Life in Years

• Playgrounds	15
• BBQ	20
• Timber furniture	10
• Steel or aluminium furniture	15
• Recycled plastic furniture	20
• Sleepers R/Walls	50
• Stone R/walls	60
• Concrete R/walls	80

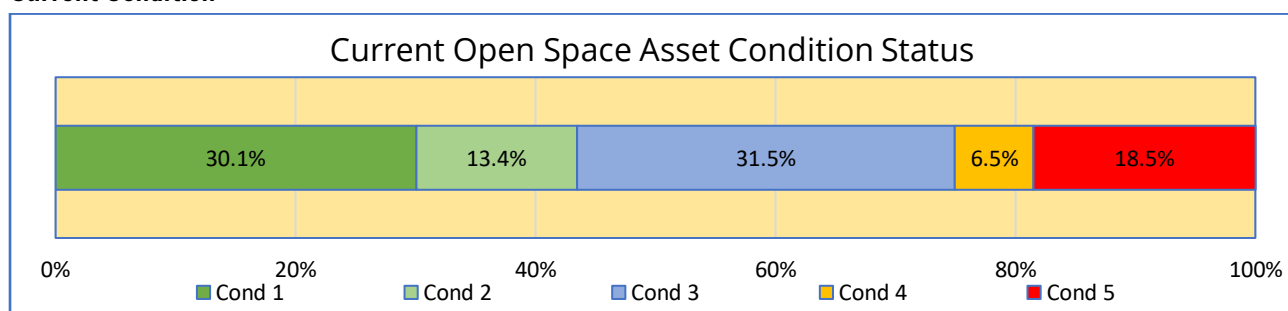
Confidence level of the existing data

• Inventory data	80%
• Condition data	50%

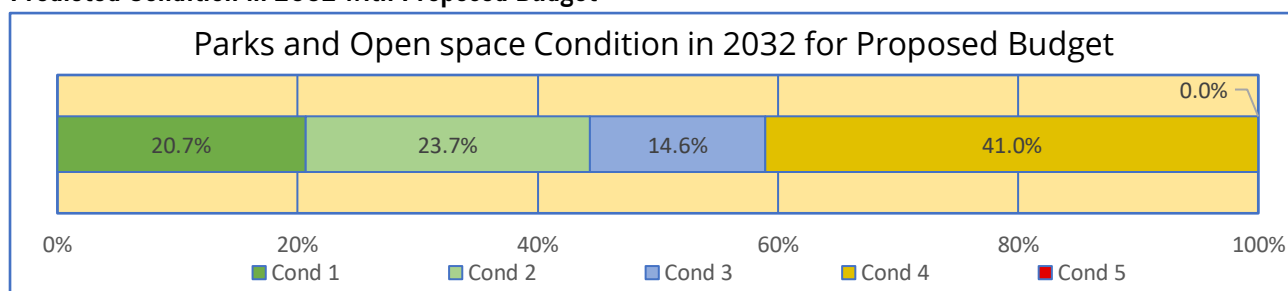
Renewal Required and Funding Gap

• Total renewal funds allocated	\$32.6 M
Scenario-1:	
• Required funds for intervention at Condition 4 (model output)	\$80 M
- Funding gap for intervention at condition 4	\$47.43 M
Scenario-2:	
• Required funds for intervention at Condition 5 (model output)	\$31.2 M
- Funding gap for intervention at condition 5	-\$1.37 M

Current Condition:

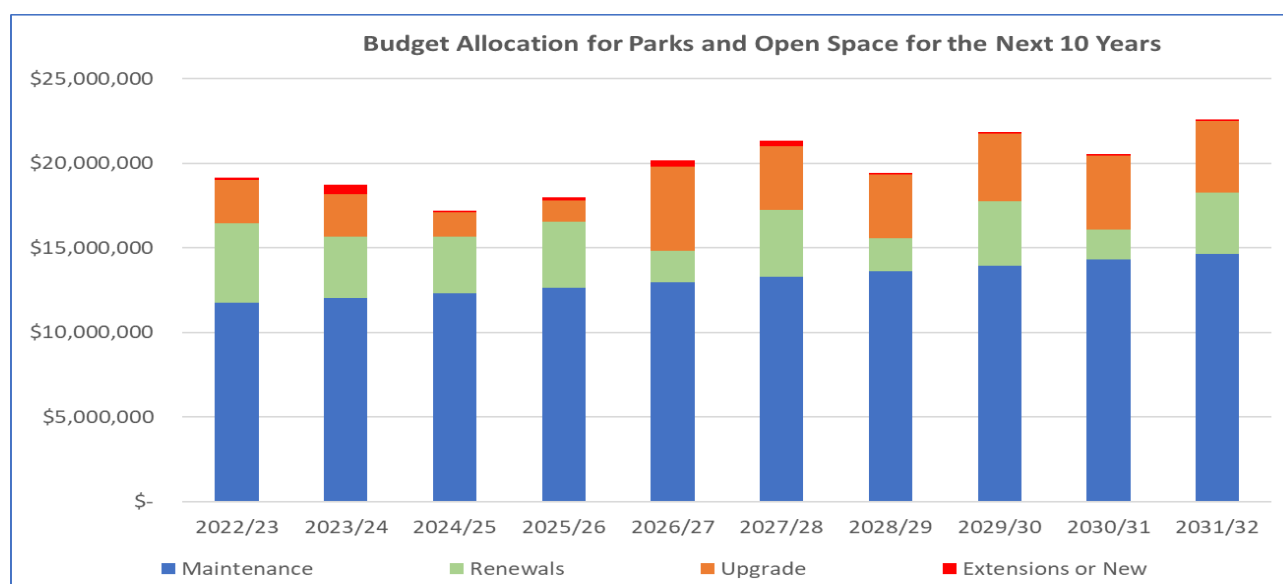


Predicted Condition in 2032 with Proposed Budget:



Recurrent and Capital Expenditure for next 10 years

Year	Maintenance (\$M)	Renewals (\$M)	Upgrade (\$M)	Extensions or New (\$M)
2022/23	\$ 11.74	\$ 4.70	\$ 2.57	\$ 0.14
2023/24	\$ 12.03	\$ 3.65	\$ 2.51	\$ 0.56
2024/25	\$ 12.33	\$ 3.31	\$ 1.46	\$ 0.09
2025/26	\$ 12.64	\$ 3.91	\$ 1.26	\$ 0.21
2026/27	\$ 12.96	\$ 1.89	\$ 4.97	\$ 0.39
2027/28	\$ 13.28	\$ 3.98	\$ 3.76	\$ 0.34
2028/29	\$ 13.62	\$ 1.94	\$ 3.77	\$ 0.09
2029/30	\$ 13.96	\$ 3.79	\$ 4.01	\$ 0.09
2030/31	\$ 14.30	\$ 1.79	\$ 4.37	\$ 0.09
2031/32	\$ 14.66	\$ 3.61	\$ 4.25	\$ 0.09
Total	\$ 131.53	\$ 32.57	\$ 32.91	\$ 2.05



Example of activities carried out under each expenditure category			
Maintenance	Renewals	Upgrades	New or Extensions
<ul style="list-style-type: none"> Proactive inspections Reactive repairs of defects identified through the inspections and customer requests Mowing, vegetation and weed control Litter collection and cleaning Graffiti removal 	<ul style="list-style-type: none"> Replacing damaged or old equipment in playgrounds and parks Replacing damaged park and street furniture and signs. Replacing existing playground 	<ul style="list-style-type: none"> Refurbishment of existing parks and reserves 	<ul style="list-style-type: none"> Constructing new playgrounds and reserves

Comments

- Council's Parks and Open Space (POS) assets inventory and condition require improvements.
- Regular condition audit of POS data is expensive due to having a large portfolio and the diversity of these assets.
- Community prefers to increase funding for POS and improve the level of service.

Recommendations

- Scenario 2 is recommended, which is to renew POS assets at Condition 5.
- An additional \$10 million for POS asset renewal and upgrade is proposed to improve the level of service. This funding is included in the 10 year Financial Plan.

9 Summary and Recommendations

Council's recurrent expenditure including operation and maintenance is required to keep Council's services operational and safe for the community.

Figure 16 depicts the proposed capital funding distribution among various asset categories.

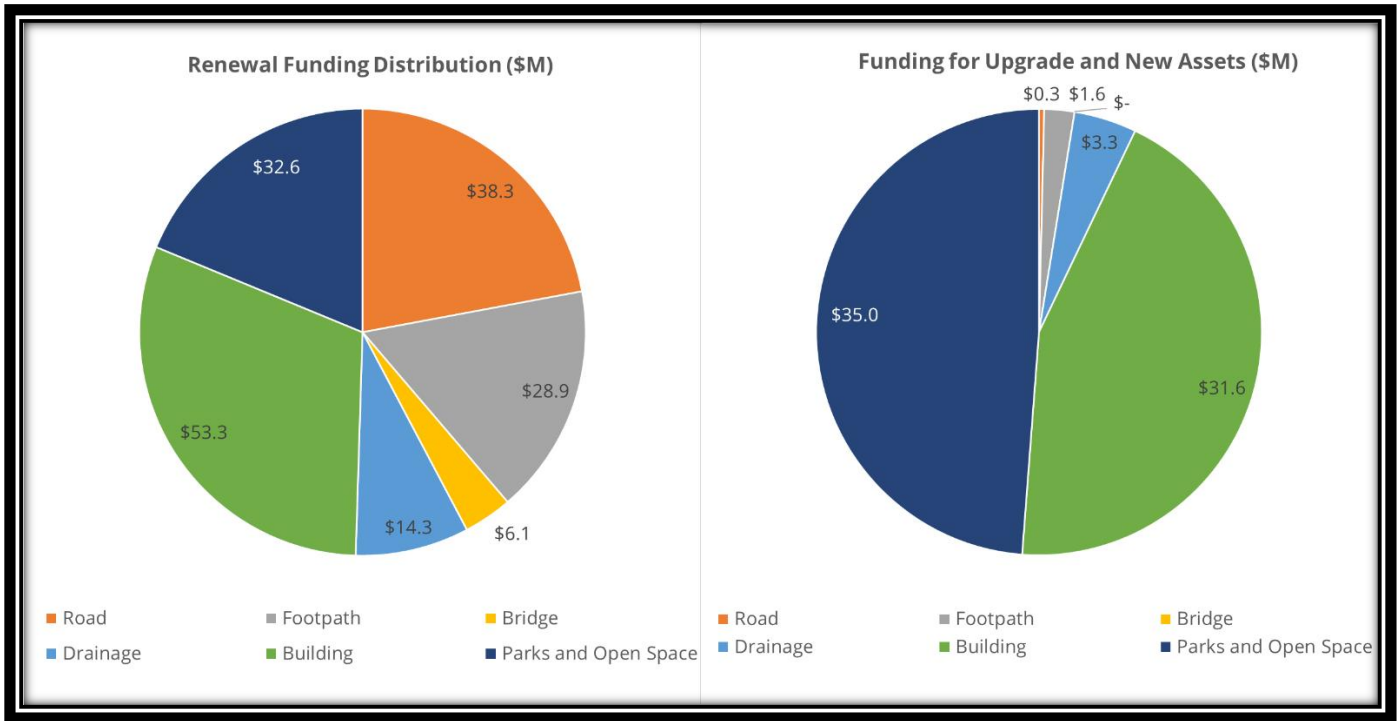


Figure 15: Capital Funding Distribution

Findings

- Council's renewal budget over the next 10 years is \$173 million.
- Building and POS consume 50 per cent of this allocation. Road and footpath are 22 and 17 per cent respectively.
- Council's total budget for upgrading and creating new assets is \$72 million over the next 10 years. Almost half (49 per cent) of it is allocated for POS, which supports community preferences.
- A major part (44 per cent) is allocated toward buildings, which may be a concern for managing other assets. Creating new buildings also increases operational and maintenance costs significantly.
- Banyule is preparing a Community Infrastructure Plan (CIP), which will help understand more accurate capital funding required for buildings.

Proposed Renewal Funding Vs Renewal Funding Required

A comparison between renewal funding allocated and required for different asset categories along with Renewal Gap Ratio is summarised in Table 3.

Table 3 | Proposed Renewal Funding Vs Renewal Funding Required

Asset Category	VAGO Financial sustainability indicators		Renewal Modelling Financial Indicator			
	Renewal Gap Ratio	Risk Level	Renewal Funding Allocation, (\$M)	Required Renewal Funding (\$M)	Renewal Intervention, Condition	Financial Sustainability (%)
Road	0.7	Medium	38.3	38.3	5	100%
Footpath	1.16	Low	28.9	20.7	4	140%
Bridge	6.11	Low	6.1	1.5	4	402%
Drainage	0.67	Medium	14.3	9.4	4	152%
Building	3.92	Low	53.3	38.1	4 & 5	140%
Parks and Open Space	1.34	Low	32.6	31.2	5	104%
Total			173.4	139.2		125%

Comments

- Council's overall renewal funding is 25 per cent higher than that required to keep up with asset consumption (depreciation).
- This additional renewal funding is required to renew any premature failures of assets, legislative and safety compliance, and also to implement best practice energy standard to address Banyule's carbon neutrality target 2028.
- Council spending on renewing buildings, footpaths and bridges is appropriate. These assets are financially sustainable for the next 10 years.
- Council's renewal funding for drainage asset is also appropriate considering the renewal requirement. However, the RGR, which considers depreciation, indicates that renewal funding is insufficient.
- Drainage assets are long life (100+ years) assets and the average age of Banyule's drainage network is at the middle of its useful life. Therefore, current renewal requirement is less than depreciation. When this asset class approaches the end of its useful life, renewal needs will increase significantly. It is recommended to continue with the current drainage funding.
- Road assets including carpark and kerb and channel are financially at medium risk. Council has been underspending on roads, carparks and kerb and channel in recent years.
- Parks and Open Space is also at the medium to low risk financially. Current renewal funding looks appropriate to maintain overall asset condition, however the community has shown a preference to improve the level of service of POS.

Recommendations

- It is recommended to implement the renewal funding proposed by this plan, as summarised in Table 3.
- This includes increasing renewal funding by \$6.3 million over the next 10 years for roads (including carparks and kerb and channel) compared to previous planning, through the redistribution of renewal funding across asset classes.
- Maintain renewal spending on drainage, bridges and buildings, and continue with the development of the Community Infrastructure Plan to better inform future capital spending needs for buildings.
- Provide an additional \$10 million towards the renewal and upgrade of Parks and Open Space assets, as the community has shown a preference to improve the level of service of POS. This funding is included in the 10 year Financial Plan.