Shellharbour
CITY COUNCIL

Asset Management Plan

2021 - 2031

Version	Date	Reference
0.1	March 2019	
0.2	November 2019	
0.3	December 2019	11351222 v1
0.4	April 2020	11351222 v2
0.5	April 2021	

Draft

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1 Executive Summary

Shellharbour City Council manages 54,818 assets with a Current Asset Cost of $1,203.0m. With approximately 29,145 dwellings in the Shellharbour Local Government Area, this equates to an asset value of $41.30k per dwelling. This Asset Management Plan analyses the current state of these assets and recommends resource allocations for the next 10 years.

The average confidence level of the data regarding these assets is currently medium. There have been significant improvements in this data over recent years due to extensive asset inspections, which are scheduled to continue on a rolling program.

Detailed risk assessments are to be contained within the asset class-specific Asset Management Plans. Risks associated with operating Council assets are largely acceptable, but require further consideration when risk appetite statements are finalised. The most common risk treatments required to reduce present risks are the finalisation of comprehensive inspection and maintenance schedules within Council's Asset Management Information System.

Current Levels of Service are generally appropriate when considering previous community engagement. Council's assets are in good condition on average, with an overall rating of 1.7 out of 5. Waste assets are in the best condition with an average rating of 1.0 and Stormwater assets are in the poorest condition with an average rating of 2.0.

Asset base growth has been forecast using committed and expected upgrade expenditure, as well as dwelling growth forecasts, indexation and forecast efficiencies due to advances in systems, processes, tools, machinery and materials. This growth will result in an additional asset value of $551.7m over the next 10 years. It should be noted that this forecast excludes grant funding for asset upgrades. This, along with other possible major upgrade projects are contained in Appendix A for consideration and potential addition.

Growth rates for each asset class have been calculated and used to inform recommended budgets associated with the corresponding asset lifecycle costs. This enables similar Levels of Service to be sustained throughout the asset base growth over the next 10 years. These forecasts results in allocations of $17.8m for asset upgrades, $189.3m for asset renewals and $438.1m for maintenance and operations, totalling $645.2m over the next 10 years. Figure 1-1 shows these allocations while Figure 1-2 illustrates this scenario across the asset classes.

It is recommended that Council endorse this Asset Management Plan for public exhibition.

	2021/ 22	2022/ 23	2023/ 24	2024/ 25	2025/ 26	2026/ 27	2027/ 28	2028/ 29	2029/ 30	2030/ 31
Maint/Ops	$40.6m	$41.1m	$41.7m	$42.4m	$43.2m	$44.1m	$44.9m	$45.8m	$46.6m	$47.5m
Renewal	$15.6m	$17.2m	$17.9m	$18.4m	$18.9m	$19.3m	$19.8m	$20.2m	$20.7m	$21.1m
Upgrade	$4.1m	$5.5m	$0.3m	$0.3m	$0.3m	$0.3m	$6.3m	$0.3m	$0.3m	$0.3m
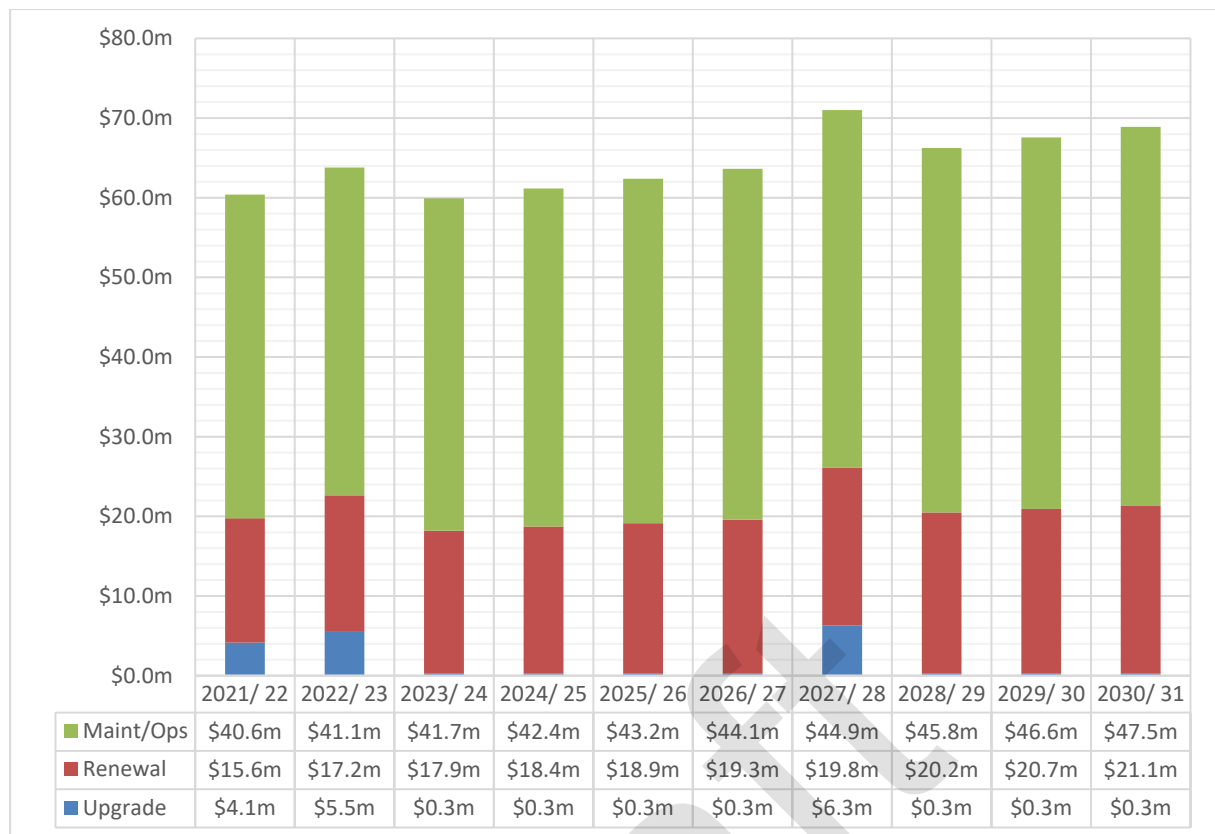
Figure 1-1: Recommended Overall Expenditure

	2021/ 22	2022/ 23	2023/ 24	2024/ 25	2025/ 26	2026/ 27	2027/ 28	2028/ 29	2029/ 30	2030/ 31
Business	$9.0m	$10.0m	$9.5m	$9.6m	$9.7m	$9.9m	$10.1m	$10.2m	$10.3m	$10.5m
Waste	$12.5m	$16.2m	$11.6m	$11.8m	$12.0m	$12.1m	$18.4m	$12.5m	$12.7m	$12.9m
Transport	$10.6m	$9.6m	$9.9m	$10.3m	$10.6m	$10.9m	$11.2m	$11.5m	$11.9m	$12.2m
Stormwater	$2.4m	$2.7m	$2.8m	$2.8m	$2.9m	$3.0m	$3.1m	$3.1m	$3.2m	$3.3m
Open Spaces	$9.8m	$9.9m	$10.1m	$10.3m	$10.6m	$10.9m	$11.2m	$11.5m	$11.8m	$12.1m
Buildings and Pools	$13.3m	$12.7m	$13.3m	$13.4m	$13.6m	$13.8m	$14.0m	$14.3m	$14.5m	$14.7m

Figure 1-2: Recommended Overall Expenditure by Asset Class

2   Introduction

Asset Management Plans (AMPs) are required in the Integrated Planning and Reporting (IP&R) Framework, produced by the Office of Local Government and shown in Figure 2-1, under the Resourcing Strategy.
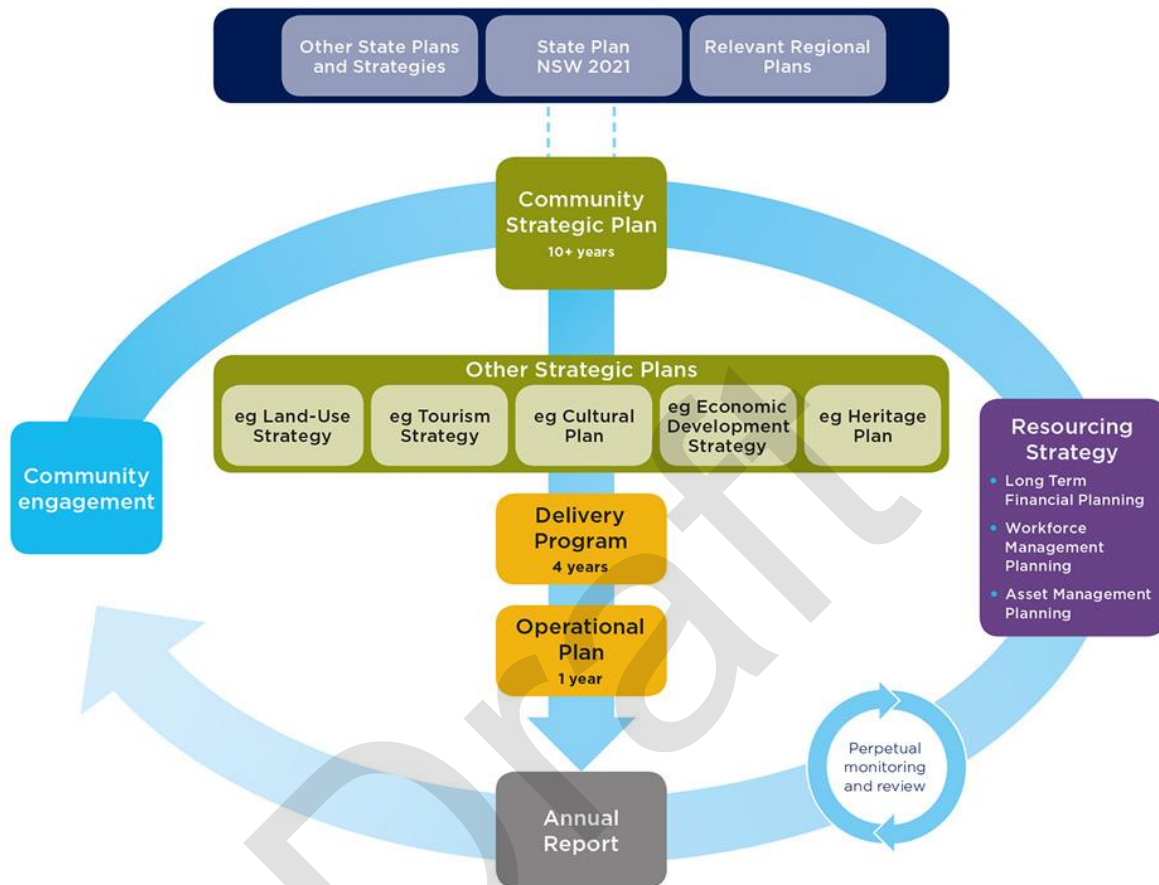
Figure 2-1: Integrated Planning and Reporting (IP&R) Framework

This AMP has been prepared in accordance with the International Infrastructure Management Manual (Institute of Public Works Engineering Australasia, 2015). It assumes the current number of dwellings in the Shellharbour Local Government Area is 29,145 (.id, 2021). A forecast indexation rate of 2% per annum from FY22-FY24, then 2.3% for FY25 and then 2.5% for the remainder of the forecast is utilised accordance with the Long Term Financial Plan (Shellharbour City Council, 2021).

2.1   Asset Management Plan Structure

The AMP Structure is illustrated in Figure 2-2. This AMP includes all Council assets that are in use, except Fleet, Intangible Assets and Land Stock.
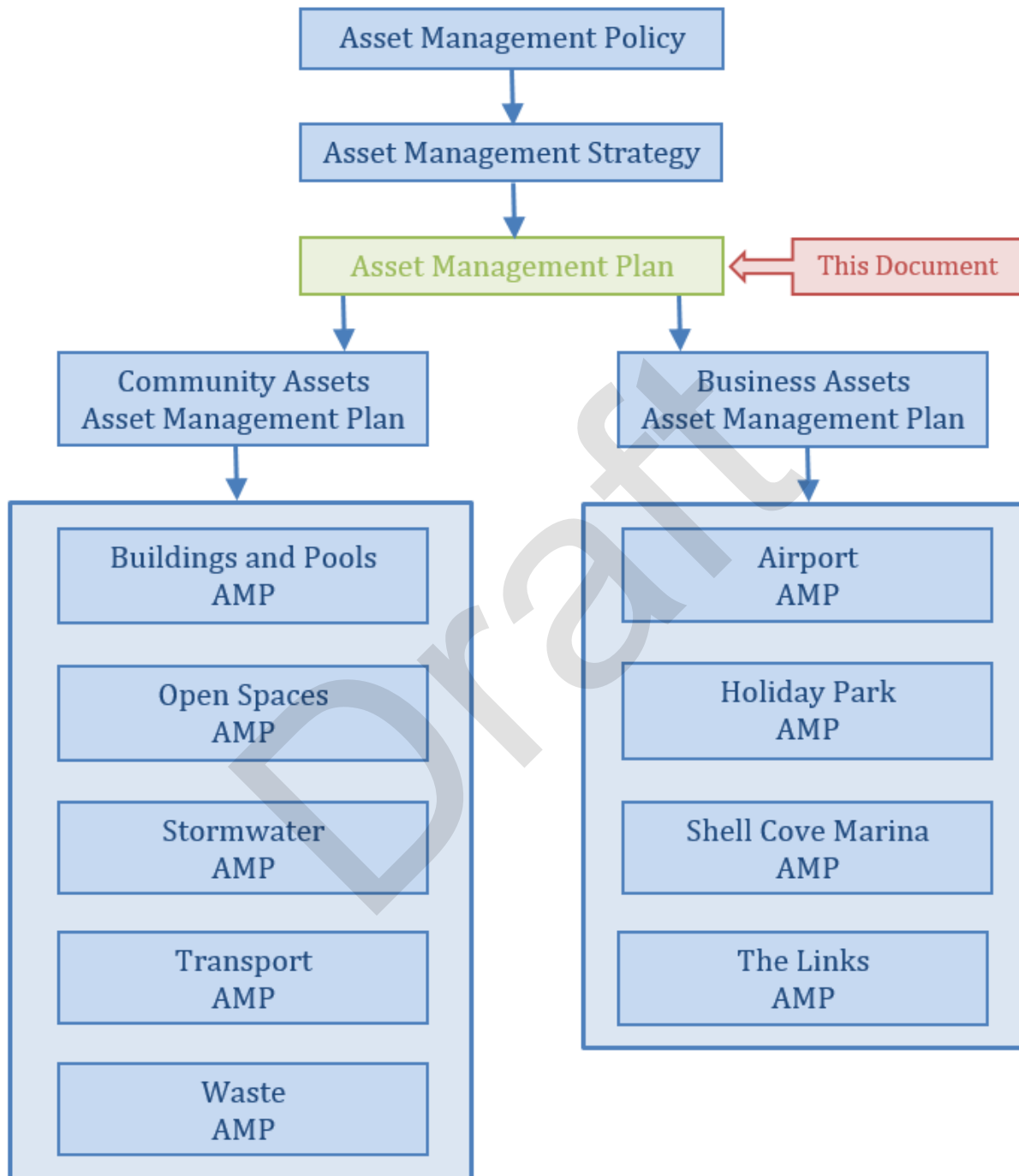
Figure 2-2: Asset Management Plan Structure

2.2   Community Engagement

The Community Satisfaction Survey (Shellharbour City Council, 2019) has been considered in the preparation of this AMP. Further community engagement is required in future revisions, particularly to further refine Levels of Service.

It is recommended that Council endorse this AMP for public exhibition, together with the 2021/22 Operational Plan and Long Term Financial Plan. Submissions will be noted with responses and resulting actions reported to Council.

3   Asset Data

Council utilises TechnologyOne Corporate Enterprise Suite as the core component of its Asset Management Information System (AMIS). Whilst Council's AMIS is reasonably mature, the highest priority improvements, listed in the Improvement Plan in Section 8, are finalising the implementation of the Defects and Scheduled Maintenance functions.

3.1   Asset Inventory

Council manages 54,818 assets with a Current Asset Cost of $1203.0m. Detailed revaluations of asset classes are undertaken in accordance with Fair Value accounting standards (Australian Accounting Standards Board, 2019) on a rolling program every 4 years, consistent with Table 5-4.

The current values of each asset class are shown in Figure 3-1. Infrastructure assets are assets that are included in Special Schedule 7 (SS7) reporting, such as Buildings, Roads and Stormwater Drainage. Non-Infrastructure assets are all other assets included in Note 10 reporting, such as Plant and Equipment, Furniture and Fittings, and Land (Office of Local Government, 2019). These two categories together comprise all depreciable assets for the purposes of this AMP.

	Buildings and Pools	Open Spaces	Stormwater	Transport	Waste	Business
Non-Infrastructure	$12.3m	$204.1m		$50.1m	$22.2m	$49.7m
Infrastructure	$176.6m	$37.5m	$188.8m	$422.7m	$17.3m	$21.7m
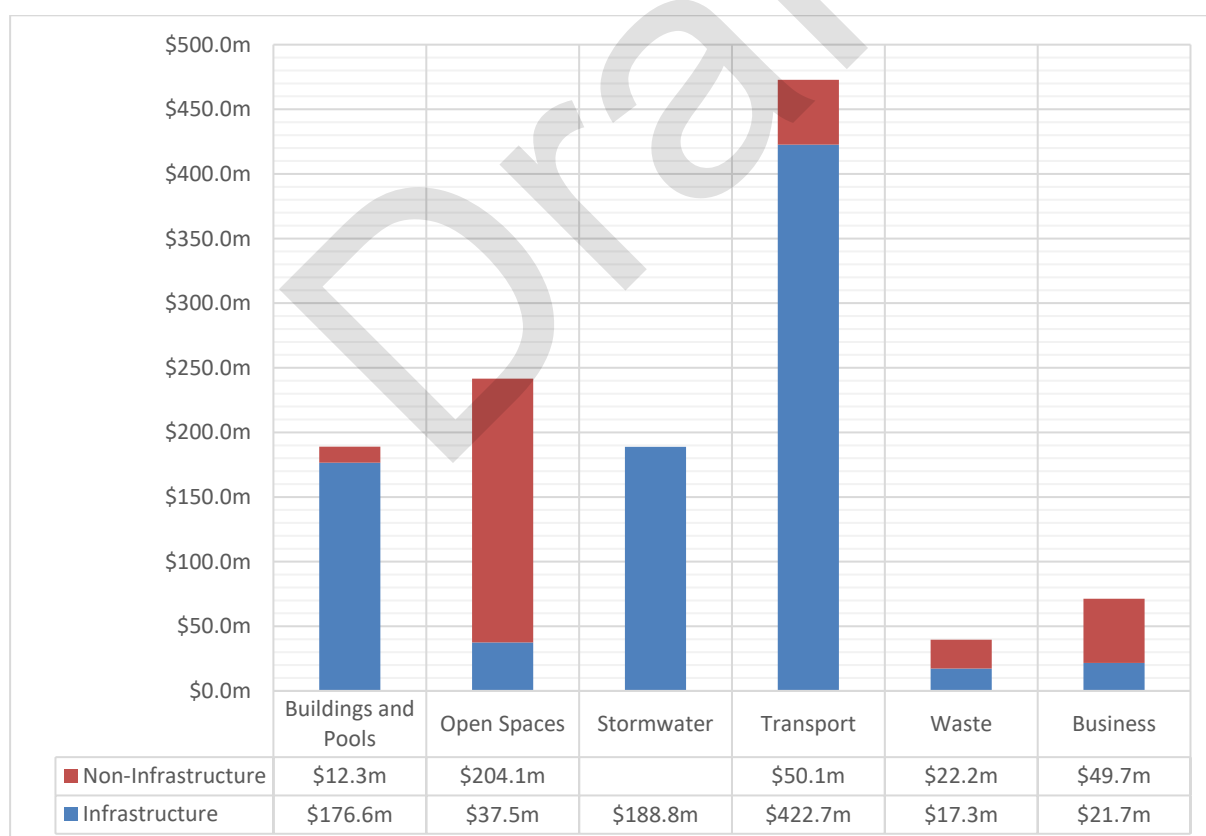
Figure 3-1: Asset Inventory by Current Asset Cost

3.2   Age Profile

Construction years have not been recorded for many older assets. As a result, when comprehensive inspections and revaluations are undertaken, construction years are estimated using the asset condition and expected useful life, assuming straight-line deterioration.

As a result, the Written Down Value of the asset can be used, together with the Useful Life, to calculate an estimated construction year. The estimated decades of construction of infrastructure assets are shown in Figure 3-2.

	1920s	1930s	1940s	1950s	1960s	1970s	1980s	1990s	2000s	2010s	2020s
■ Business			$2.7m				$0.8m	$0.6m	$7.3m	$10.2m	$0.0m
■ Waste							$0.1m	$0.2m	$0.2m	$16.9m	
■ Transport	$10.1m	$0.4m	$17.5m	$11.6m	$45.2m	$32.3m	$33.4m	$78.6m	$86.0m	$99.7m	$7.8m
■ Stormwater	$4.1m	$0.3m	$6.7m	$4.7m	$24.6m	$16.4m	$18.2m	$31.3m	$25.8m	$55.9m	$0.9m
■ Open Spaces						$0.6m	$0.5m	$2.3m	$9.4m	$23.2m	$1.5m
■ Buildings and Pools					$0.6m	$10.1m	$24.6m	$20.7m	$34.1m	$84.8m	$1.8m
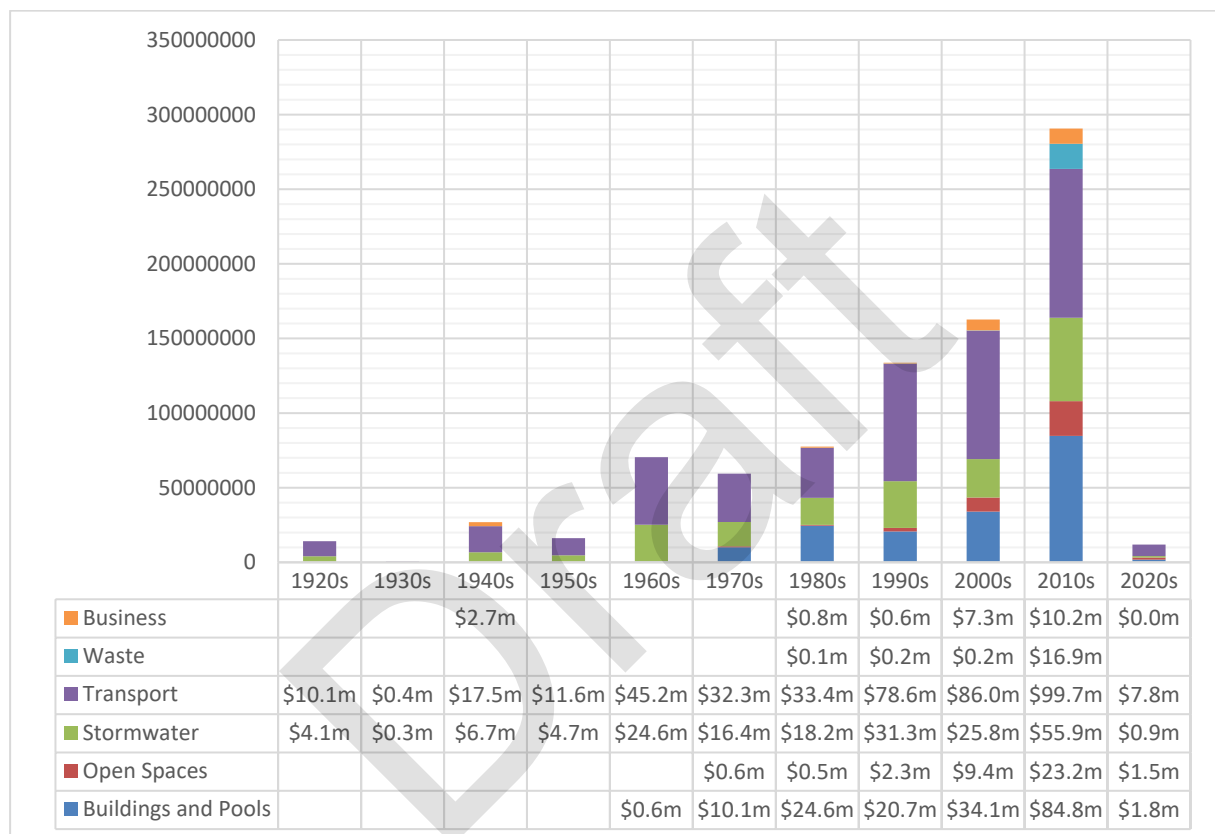
Figure 3-2: Age Profile of Infrastructure by Current Asset Cost

3.3   Asset Condition

Asset conditions are assessed as part of comprehensive network inspections, conducted per the schedule contained in Section 5.3. These assessments are undertaken in accordance with the relevant Practice Notes issued by the Institute of Public Works Engineering Australasia. The condition rating scale is 1-5:

1. As new / excellent
2. Good / satisfactory
3. Fair / tolerable
4. Poor / intolerable
5. Very poor / reconstruction required

Asset condition by Current Asset Cost is shown in Figure 3-3 and average condition by Current Asset Cost are contained in Table 3-1. The Infrastructure Backlog Ratio and Cost to Bring Assets to Agreed Service Level are reported in SS7 of Council's annual financial statements and compared to a benchmark (Office of Local Government, 2019).

	1	2	3	4	5
Business	$17.5m	$3.8m	$0.4m	$0.0m	
Waste	$16.8m	$0.2m	$0.3m	$0.0m	
Transport	$188.0m	$177.2m	$50.2m	$6.6m	$0.7m
Stormwater	$69.6m	$48.7m	$64.1m	$5.4m	$1.1m
Open Spaces	$21.0m	$7.7m	$6.8m	$1.6m	$0.2m
Buildings and Pools	$113.0m	$40.1m	$20.6m	$2.9m	$0.1m
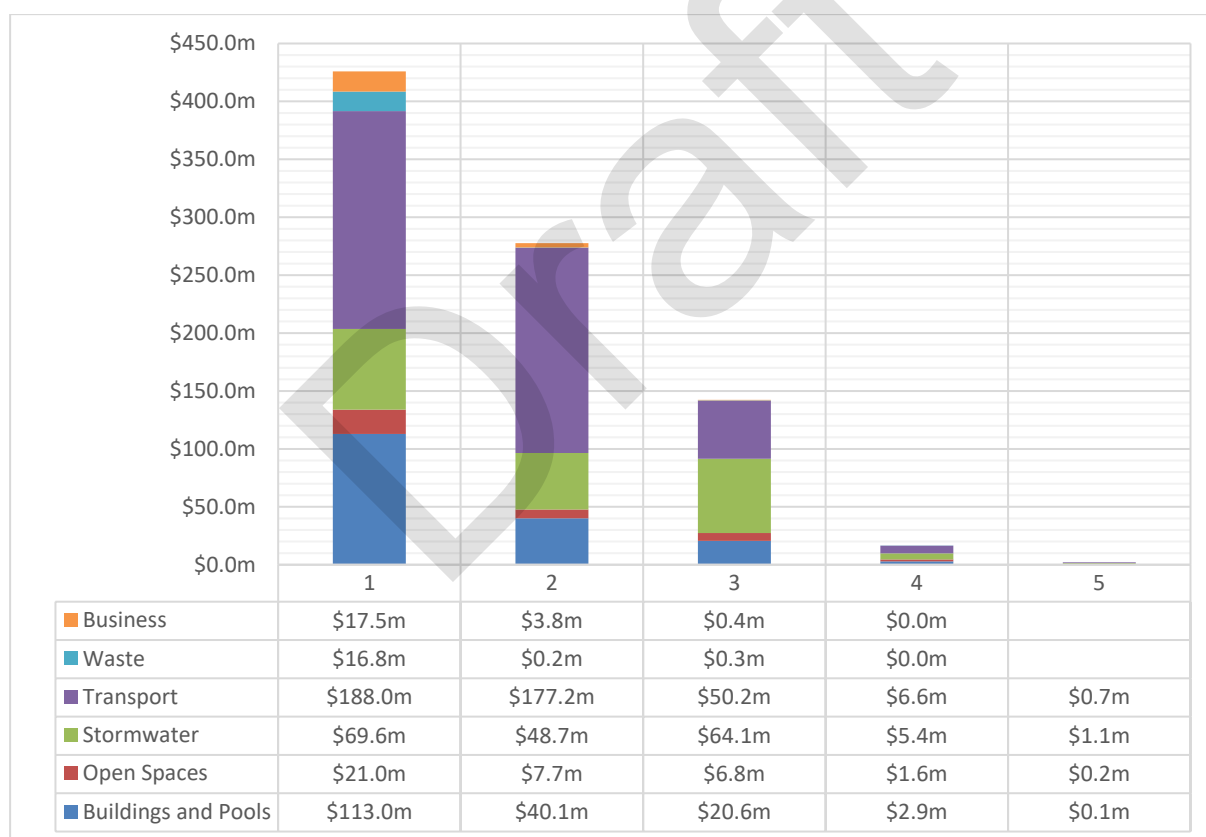
Figure 3-3: Asset Condition of Infrastructure by Current Asset Cost

Asset Class	Average Condition
Buildings and Pools	1.5
Open Spaces	1.7
Stormwater	2.0
Transport	1.7
Waste	1.0
Business	1.2
Overall	**1.7**

Table 3-1: Average Condition of Infrastructure by Current Asset Cost

In Council's 2018/19 financial statements, the results were:

Infrastructure Backlog Ratio = Estimated cost to bring to satisfactory standard
Net carrying amount of infrastructure

= $9.3m
$639.13m

= 1.45%   <   2% benchmark   PASS

Cost to Bring Assets to   = Estimated cost to bring assets to an agreed level of service
Agreed Service Level   Gross replacement cost

= $18.6m
$864.5m

= 2.1% <   4.5% benchmark   PASS

The overall average condition of Council's assets is good / satisfactory. However, there are sufficient assets in condition 4 and 5, plus those trending from 3 towards 4, to fully utilise available renewal budgets.

This is particularly the case as renewals entail bringing an asset to the Modern Engineering Equivalent Replacement Asset (MEERA), which generally requires more expenditure than the Current Asset Cost. This situation means that renewals often result in an increased financial burden by expanding Council's asset values.

Together with current accounting standards of using Fair Value to inform depreciation (Australian Accounting Standards Board, 2019) which in turn informs required renewal expenditure, this poses a significant problem. While these issues are not resolved in this AMP, they are raised as a discussion point for consideration in future revisions.

3.4   Data Confidence

Data collection has occurred over time and has focused on the highest priority items, such as Condition and Current Asset Cost. Confidence in this data has increased markedly in recent years due to the engagement of contractors to undertake comprehensive asset inspections. The full data structure of Council's AMIS is contained in the class-specific AMPs.

The confidence of the collected data has been assessed by testing samples for accuracy. The results of this analysis are displayed in Figure 3-4, which results in an overall rating of medium confidence data. The highest priority improvements are required in the Buildings and Pools, and Business Asset Classes. It should be noted that No Data generally does not mean that entire assets are not recorded. Rather, it refers to particular information about certain assets that may be incomplete, such as the number of toilet cubicles within a Sports Facility Building.

	Buildings and Pools	Open Spaces	Stormwater	Transport	Waste	Business
High	31%	90%	54%	47%	40%	10%
Medium	25%	7%	34%	20%	25%	35%
Low	4%	0%	5%	4%	20%	30%
No Data	40%	3%	7%	30%	15%	25%
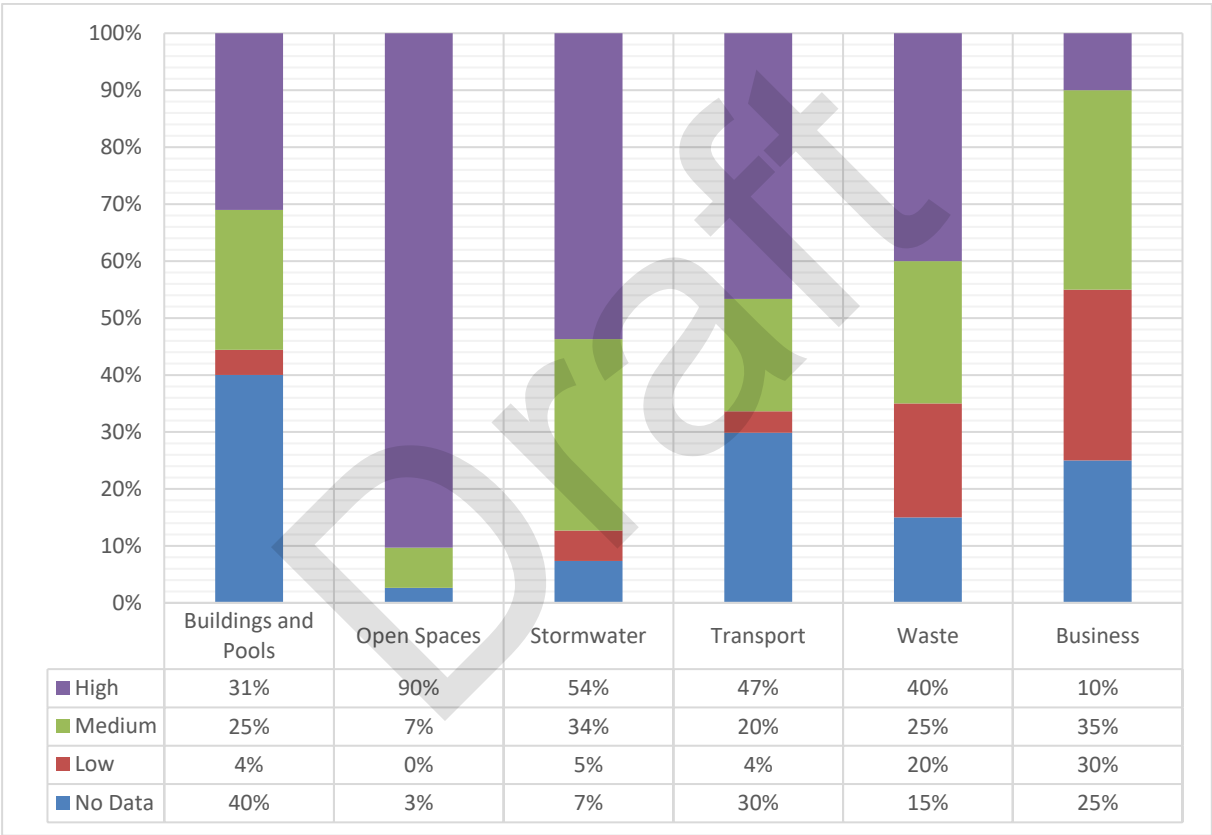
Figure 3-4: Data Confidence

4   Risk Management

Risk is the effect of uncertainty on Shellharbour City Council's ability to achieve its objectives. Risk Management is the process of systematically identifying, monitoring, treating and reporting these risks.

The risk management process starts with identifying risks in the context of Shellharbour City Council's operations. The identified risks are rated to enable appropriate prioritisation and planning for the risk treatments to be incorporated into Shellharbour City Council's operations.

Risks are rated prior to recognising applicable 'internal controls' to enable the selection of controls that will reduce either the likelihood or consequence of the risk occurring. At this stage, the risk rating is referred to as the 'inherent risk' rating. When the risk is rated after taking into account the existing or proposed controls, it is referred to as the 'residual risk' rating. The objective is to implement appropriate controls to reduce the inherent risk down to an acceptable level of residual risk.

High-level risk assessments have been conducted in accordance with the Risk Management Toolkit (Shellharbour City Council, 2018) and ISO 3100:2018 (International Organization for Standardization, 2018). As some assets that Council manage are inherently high risk, these risk assessments will require revision following completion of Council's risk appetite statements.

The resulting risk registers are contained in the asset class-specific AMPs. The highest priority action contained within these risk registers is the finalisation of maintenance and inspection schedules within Council's AMIS. This action, alongside further consultation on risk management with maintainers and operators, is prioritised in the Improvement Plan contained in Section 8.

5 Levels of Service

Levels of Service (LoS) are comprised of four components: provision, renewal, maintenance and operations. In this AMP, maintenance and operations are considered together, but these should be separated in future revisions. These four components are best understood in isolation, but an adjustment to one results in changes to others, so they must be considered together. More detail on these LoS are contained in the asset class-specific AMPs.

5.1 Provision Level of Service

The Provision LoS relates to what Council provides, how much and where. The assets have a Current Asset Cost of $1,203.0m. With 29,145 dwellings, this equates to an asset value of $41.3k per dwelling. This value is spread across the asset classes as shown in Figure 5-1. The asset class-specific AMPs define more details of what and how much is to be provided within these asset classes and geographic locations such as parks, sportsfields and town centres.

	Total
■ Buildings and Pools	$6.5k
■ Open Spaces	$8.3k
■ Stormwater	$6.5k
■ Transport	$16.2k
■ Waste	$1.4k
■ Business	$2.4k
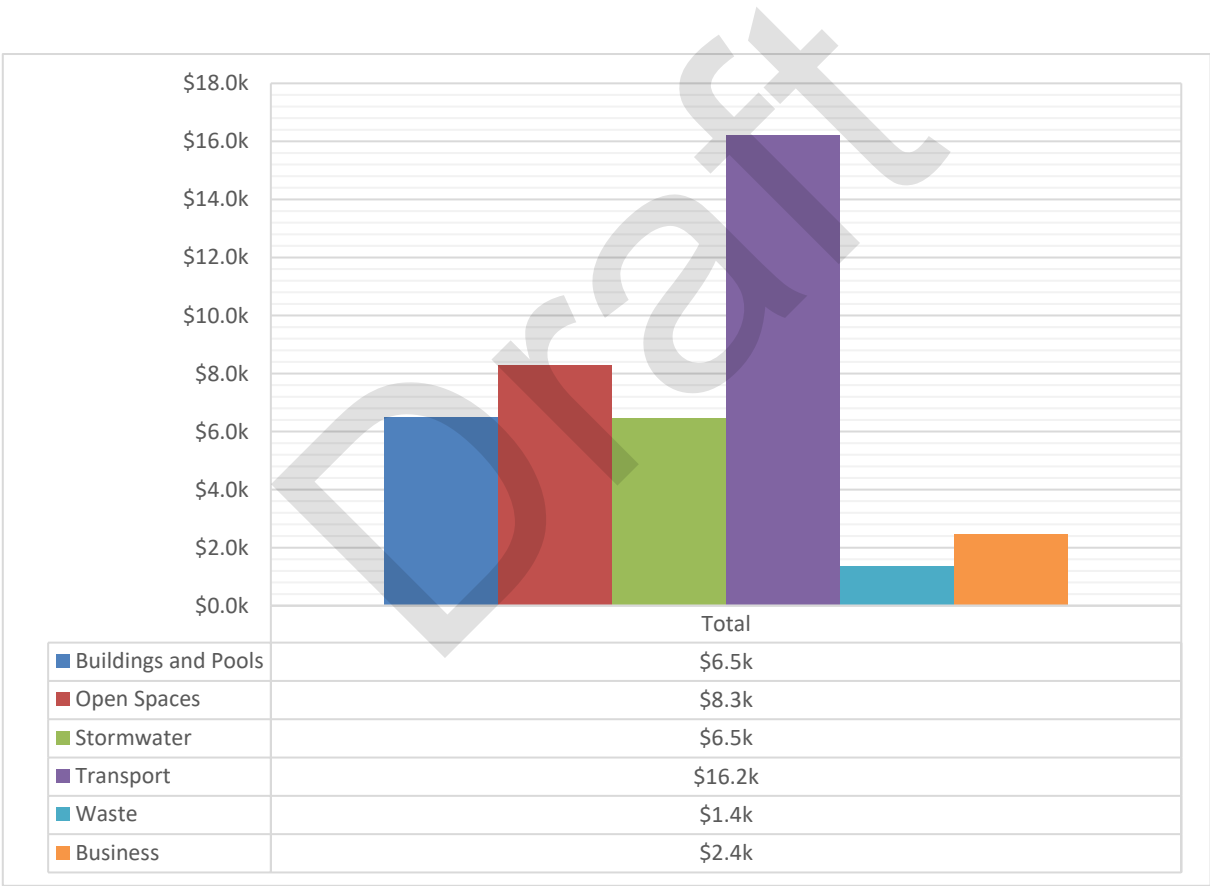
Figure 5-1: Current Asset Cost per Dwelling

The spatial distribution of Community Assets (except Waste) per Dwelling is relatively well spread, as illustrated in Figure 5-2. Shellharbour City Centre, Croom and Dunmore are outliers due to a low number of dwellings at this time.
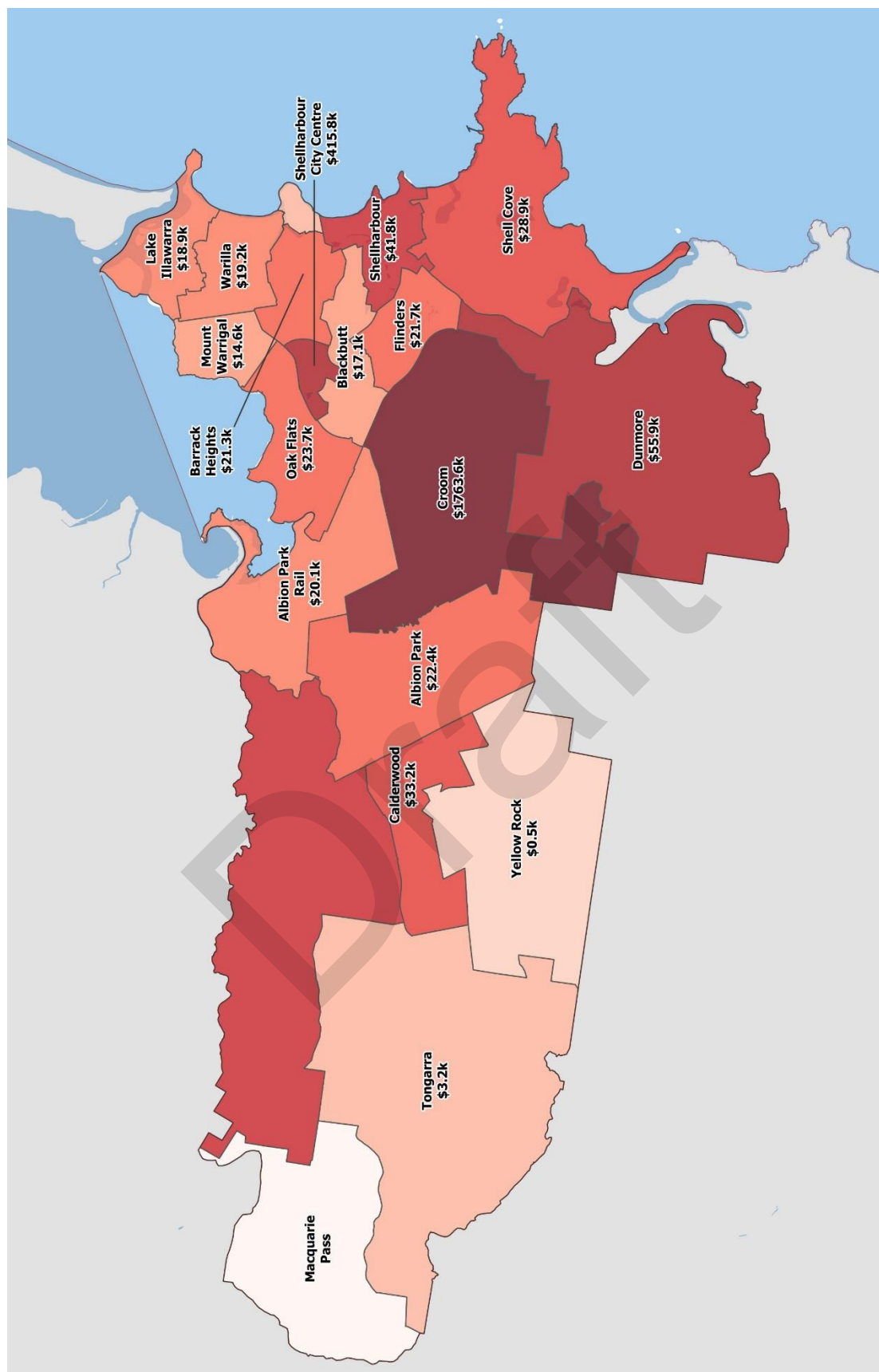
Figure 5-2: Current Asset Cost of Community Assets (except Waste) per Dwelling

5.2   Renewal Level of Service

The Renewal LoS defines how often Council intends to replace existing assets with a Modern Engineering Equivalent Replacement Asset (MEERA), including disposal of the existing asset. Adjusting this frequency has significant implications for annual depreciation, as well as required maintenance and operations expenditures. Shorter useful lives generally result in less required maintenance, all other factors being equal, and vice versa. Average useful lives for depreciable assets as defined in Section 3.1 are shown in Table 5-1 and those for Infrastructure assets as defined by SS7 and used for Infrastructure Renewal Ratio purposes are contained in Table 5-2.

Asset Class	Current Asset Cost	Recommended Annual Renewals	Average Useful Life
Buildings and Pools	$188.9m	$5.9m	32
Open Spaces	$44.3m	$1.6m	28
Stormwater	$188.5m	$1.5m	126
Transport	$367.6m	$5.5m	67
Waste	$39.5m	$1.3m	31
Business	$31.4m	$1.0m	30
Total	**$860.1m**	**$16.9m**	**51**

Table 5-1: Renewal Levels of Service for Depreciable Assets

Asset Class	Current Asset Cost	Required Annual Renewals	Average Useful Life
Buildings and Pools	$176.6m	$4.6m	38
Open Spaces	$37.5m	$1.4m	26
Stormwater	$188.8m	$1.5m	126
Transport	$422.7m	$5.5m	77
Waste	$17.3m	$0.2m	70
Business	$21.7m	$0.5m	43
Total	**$864.6m**	**$13.8m**	**63**

Table 5-2: Renewal Levels of Service for Infrastructure Assets

As previously discussed in Section 3.3, there is an issue with relying on Current Asset Cost to inform annual renewal expenditure. As engineering standards improve, the MEERA generally costs significantly more to design, construct, maintain and operate than the existing asset. This is not considered by Fair Value accounting standards (Australian Accounting Standards Board, 2019).

As this is an issue facing many local governments, at this time it is considered beyond the scope of this AMP and is raised for discussion only, but needs to be addressed in future revisions.

5.3 Maintenance and Operations Level of Service

Detailed Maintenance and Operations LoS are contained in the asset class-specific AMPs and the resulting overall ratios are shown in Table 5-3. The Community Satisfaction Survey (Shellharbour City Council, 2019) indicates these ratios are generally appropriate. Benchmarking with other local governments will be undertaken in future revisions of this AMP, which will assist with further refining these LoS.

Asset Class	Current Asset Cost	Annual Maintenance and Operations Budget	Ratio (Annual Budget / Asset Cost)
Buildings and Pools	$188.9m	$7.5m	4.0%
Open Spaces	$241.6m	$8.3m	3.4%
Stormwater	$188.8m	$0.8m	0.4%
Transport	$472.8m	$3.6m	0.8%
Waste	$39.6m	$11.1m	28.1%
Community	**$1,131.6m**	**$2.7m**	**0.2%**
Business	$71.4m	$6.5m	9.1%
Total	**$1,203.0m**	**$40.4m**	**3.4%**

Table 5-3: Maintenance and Operations Levels of Service for all Assets

In addition to these ratios, maintenance defect categories are contained in the asset class-specific AMPs. Defects will be reported in future revisions of all AMPs so that trends can be identified and maintenance efficiency can be benchmarked. Additionally, customer requests will be analysed and the results included, which will provide another indicator of community satisfaction.

The next highest priority improvement is the finalisation of scheduling maintenance and operations activities in the AMIS. Following this, analysis of maintenance and operations requirements with degradation of asset lifecycles will be analysed and considered. These actions are included in the Improvement Plan contained in Section 8.

Table 5-4 contains the frequency for comprehensive network inspections. Some are on a rolling program with inspections being conducted every year, such as Stormwater and Buildings. Others will be conducted all at once, for example Transport. This is in addition to routine inspections undertaken by Council. Details of more regular inspections, such as quarterly playground inspections, are contained in the asset class-specific AMPs.

Comprehensive revaluations will be undertaken on each asset class every 4 years in a rolling program, consistent with Table 5-4. In the interim years, fair value assessments will be documented annually for each asset class.

Asset Class	Comprehensive Inspection Frequency (Years)	Annualised Network Inspection Percentage	Revaluation Frequency (Years)
Buildings and Pools	4	25%	4
Open Spaces	4	25%	4
Stormwater	20	5%	4
Transport	4	25%	4
Waste	4	25%	4
Business	4	25%	4

Table 5-4: Asset Inspection and Revaluation Frequencies

6   Asset Growth

Council's asset base will expand over the next 10 years through committed and expected upgrade expenditure, assets contributed by development through conditions of consent, and the Local Infrastructure Contributions Plan (9th Review) (Shellharbour City Council, 2019). It can be decreased through asset disposals; however, no significant disposals are currently committed. In this analysis, all future asset values, as well as planned and recommended expenditures, assume indexation rate of 2% per annum from FY22-FY24, then 2.3% for FY25 and then 2.5% for the remainder of the forecast. This is decreased by a forecast 1% efficiency factor from expected systems, processes, tools, machinery and materials improvements.

6.1   Asset Upgrades

Asset upgrades are capital projects resourced by Council or grant funding, but excluding Development Contributions, that involve existing assets being enhanced or new assets being constructed. Grant funding involving asset upgrades is not considered from 2022/23 onwards within this AMP. It, along with other potential upgrade projects and their associated lifecycle costs over the next 10 years, are presented in Appendix A for consideration.

Currently committed upgrade expenditure is included from the Capital Works Program within the Delivery Program 2018-2021 (Shellharbour City Council, 2018). Expenditure from 2022/23 onwards are forecasts and this expenditure is displayed in Figure 6-1, which totals $17.8m over 10 years.

	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
■ Business	$0.6m	$0.6m		$0.0m		$0.0m	$0.0m			
■ Waste	$1.2m	$4.6m					$6.0m			
■ Transport	$1.2m									
■ Stormwater		$0.3m	$0.3m	$0.3m	$0.3m	$0.3m	$0.3m	$0.3m	$0.3m	$0.3m
■ Open Spaces	$0.1m									
■ Buildings and Pools	$1.1m									

Figure 6-1: Asset Upgrade Expenditure

6.2   Assets Contributed by Development through Conditions of Consent

As development occurs, particularly at Shell Cove, Calderwood and Tullimbar, it is intended that infrastructure be provided at a rate consistent with the Provision LoS in existing parts of the Shellharbour Local Government Area. Data over recent years indicates that assets contributed by development through conditions of consent grow the existing asset base at a rate similar to the dwelling growth rate.

Figure 6-2 shows the forecast increase in dwellings of 4,621 over 10 years (.id, 2021). This development, together with the Local Infrastructure Contributions Plan (9th Review) (Shellharbour City Council, 2019), comprises the major component of asset base growth which is forecast over the next 10 years.

	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Dwellings	29,673	30,201	30,729	31,257	31,785	32,181	32,577	32,974	33,370	33,766
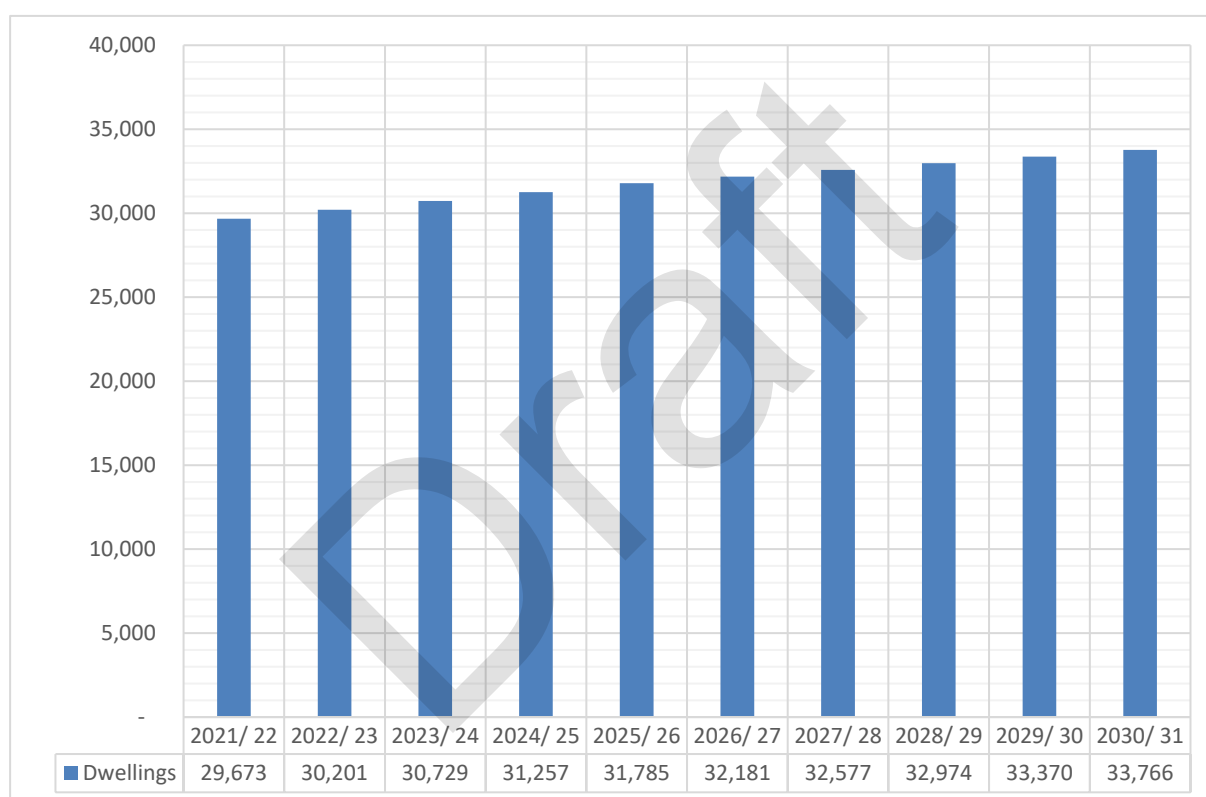
Figure 6-2: Forecast Dwellings in Shellharbour LGA (.id, 2021)

Figure 6-3 displays the expected value of contributed assets resulting from this development of $271.8m. The Shell Cove Marina is included as the large increase in Business contributions forecast in 2021/22 and 2022/23.

	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
■ Business	$90.8m	$22.5m								
■ Transport	$8.9m	$9.0m	$9.2m	$9.4m	$9.6m	$7.3m	$7.4m	$7.5m	$7.6m	$7.7m
■ Stormwater	$3.6m	$3.7m	$3.7m	$3.7m	$3.8m	$2.9m	$2.9m	$3.0m	$3.0m	$3.1m
■ Open Spaces	$4.4m	$4.6m	$4.6m	$4.7m	$4.8m	$3.6m	$3.7m	$3.7m	$3.8m	$3.8m
■ Buildings and Pools										
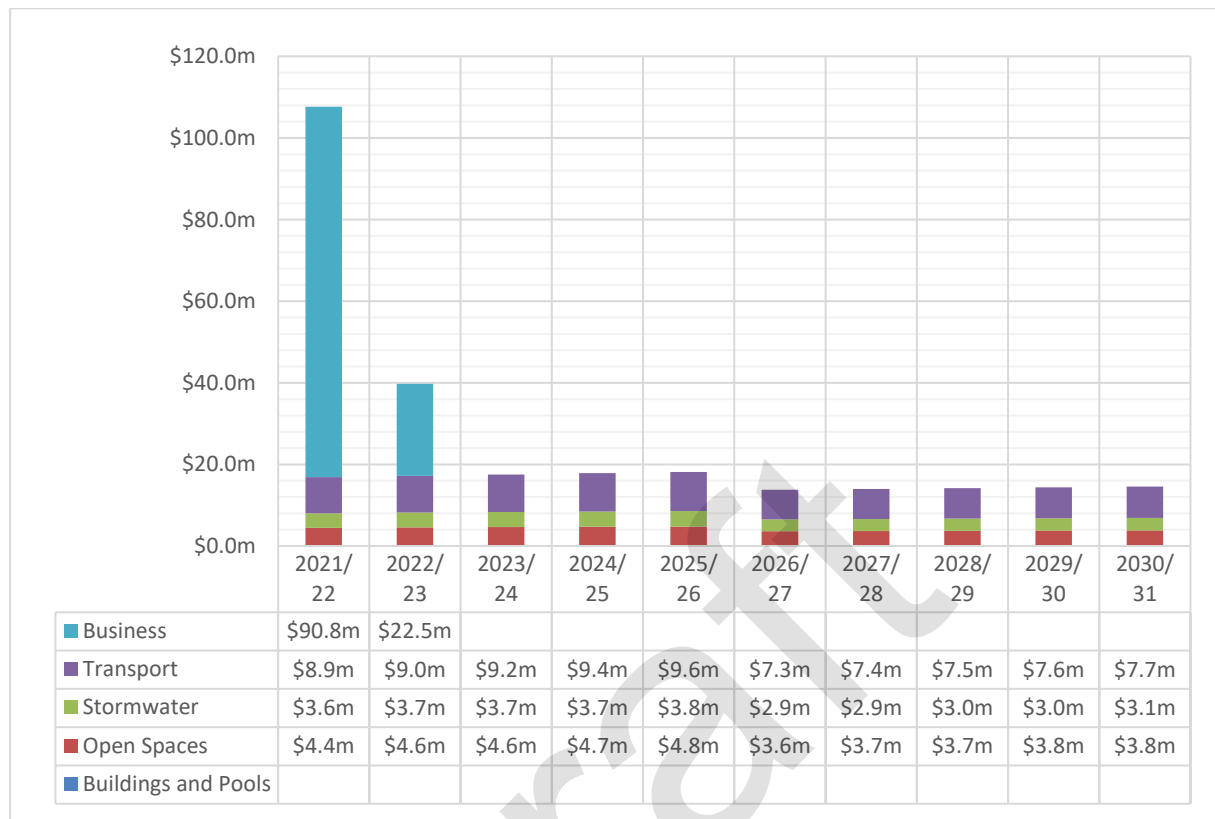
Figure 6-3: Assets Contributed by Development through Conditions of Consent

6.3   Development Contributions

An important funding source for new infrastructure are Development Contributions collected under Section 7.11 of the Environmental Planning and Assessment Act. These contributions fund a significant proportion, though not all, of the infrastructure required by new development. Under the present Contributions Plan (Shellharbour City Council, 2019), infrastructure to a total value of $121.6m is to be provided by 2028, as shown in Figure 6-4, although $43.1m of this is to be provided by Council under the apportionment requirements of the Plan.

The Contributions Plan is to be reviewed in the coming years to account for the dwelling increase in Section 6.2, and a new list of infrastructure matched to the projected income collected from the contributions will be an outcome of this review. Alternative development contribution funds such as Works in Kind Agreements or Planning Agreements may be negotiated which will further augment the infrastructure to be provided by Development Contributions. This alternative may be more beneficial to Council's financial sustainability.

Further review of this AMP following the preparation of the new Contributions Plan will determine the extent to which Development Contributions meet the need for new infrastructure or whether additional funding from other sources may be needed.

	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
■ Transport	$0.1m	$0.4m	$6.7m	$7.8m				$0.9m		
■ Stormwater		$1.9m								
■ Open Spaces	$1.0m	$4.6m	$1.3m	$0.2m						
■ Buildings and Pools	$1.9m	$9.7m	$14.8m							
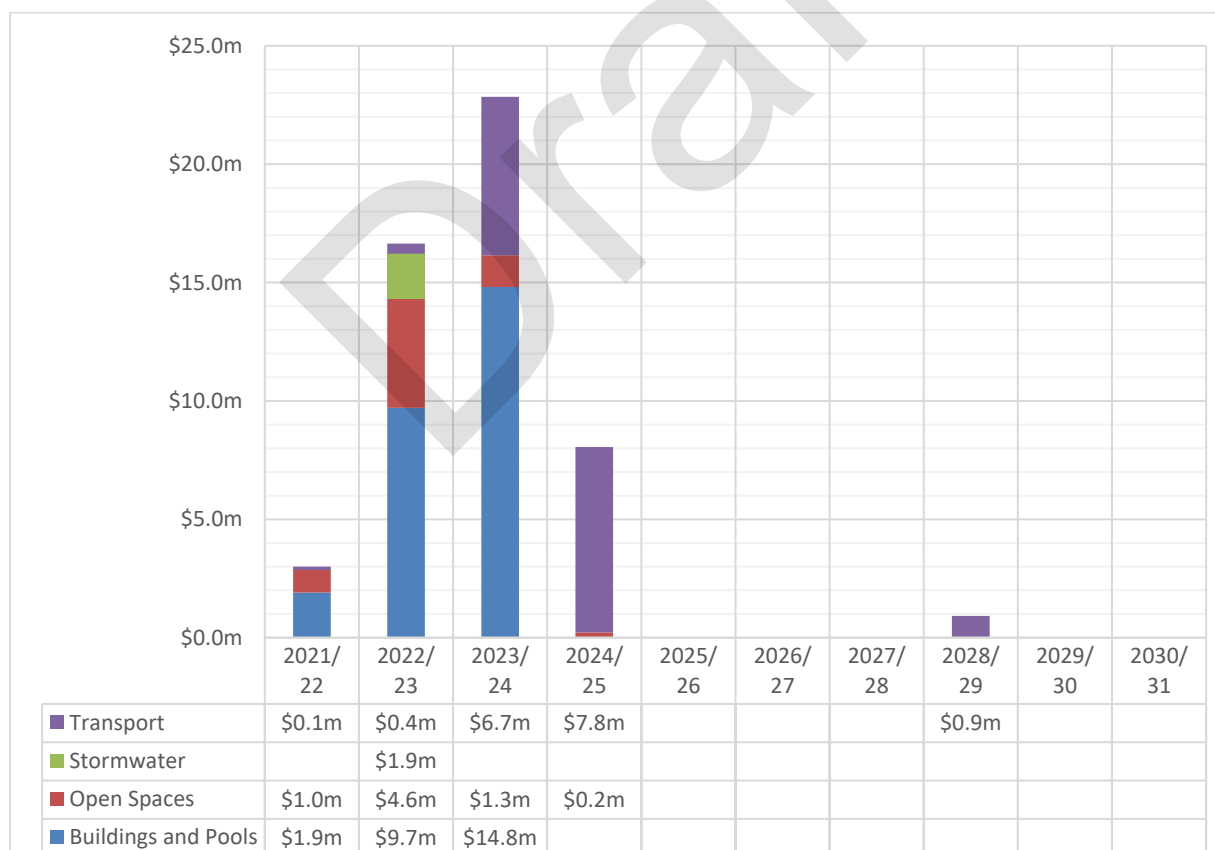
Figure 6-4: Development Contributions

6.4   Asset Disposals

Asset disposals entail the removal of an existing asset without replacing it with a similar asset. No such disposals are considered in this AMP. This may be examined in future revisions when considering the results of community engagement.

6.5   Asset Indexation

Indexation rate of 2% p.a from FY22-FY24, then 2.3% for FY25 and then 2.5% for the remainder of the forecast has been utilised in the Long Term Financial Plan (Shellharbour City Council, 2021). The same rate has been adopted in this AMP to ensure that lifecycle costs and associated budgets are comparable in future financial years.

6.6   Asset Efficiency Factor

An efficiency factor of 1% is utilised in this analysis to account for advances in systems, processes, tools, machinery and materials. These improvements are expected to reduce the lifecycle costs associated with managing Council assets, so it is subtracted from total asset base growth.

6.7   Asset Base Growth

Total asset base growth is comprised these components:

- Asset upgrades – Section 6.1
- Assets contributed by development through conditions of consent – Section 6.2
- Development Contributions – Section 6.3
- Subtracting asset disposals – Section 6.4
- Indexation – Section 6.5
- Subtracting efficiency factor – Section 6.6

Figure 6-5 shows this forecast asset base growth of $551.7m over 10 years, including both indexation and efficiency factor.

	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
■ Business	$93.1m	$25.1m	$1.9m	$2.6m	$3.0m	$3.0m	$3.1m	$3.1m	$3.1m	$3.2m
■ Waste	$1.6m	$5.1m	$0.5m	$0.6m	$0.7m	$0.7m	$6.9m	$0.9m	$0.9m	$0.9m
■ Transport	$15.1m	$14.5m	$21.1m	$24.4m	$18.1m	$16.0m	$16.4m	$17.7m	$17.1m	$17.4m
■ Stormwater	$5.6m	$7.9m	$6.1m	$6.9m	$7.5m	$6.7m	$6.8m	$6.9m	$7.1m	$7.2m
■ Open Spaces	$8.0m	$11.8m	$8.7m	$8.5m	$9.0m	$8.0m	$8.2m	$8.3m	$8.5m	$8.7m
■ Buildings and Pools	$4.9m	$11.8m	$17.0m	$2.9m	$3.4m	$3.4m	$3.5m	$3.6m	$3.6m	$3.7m
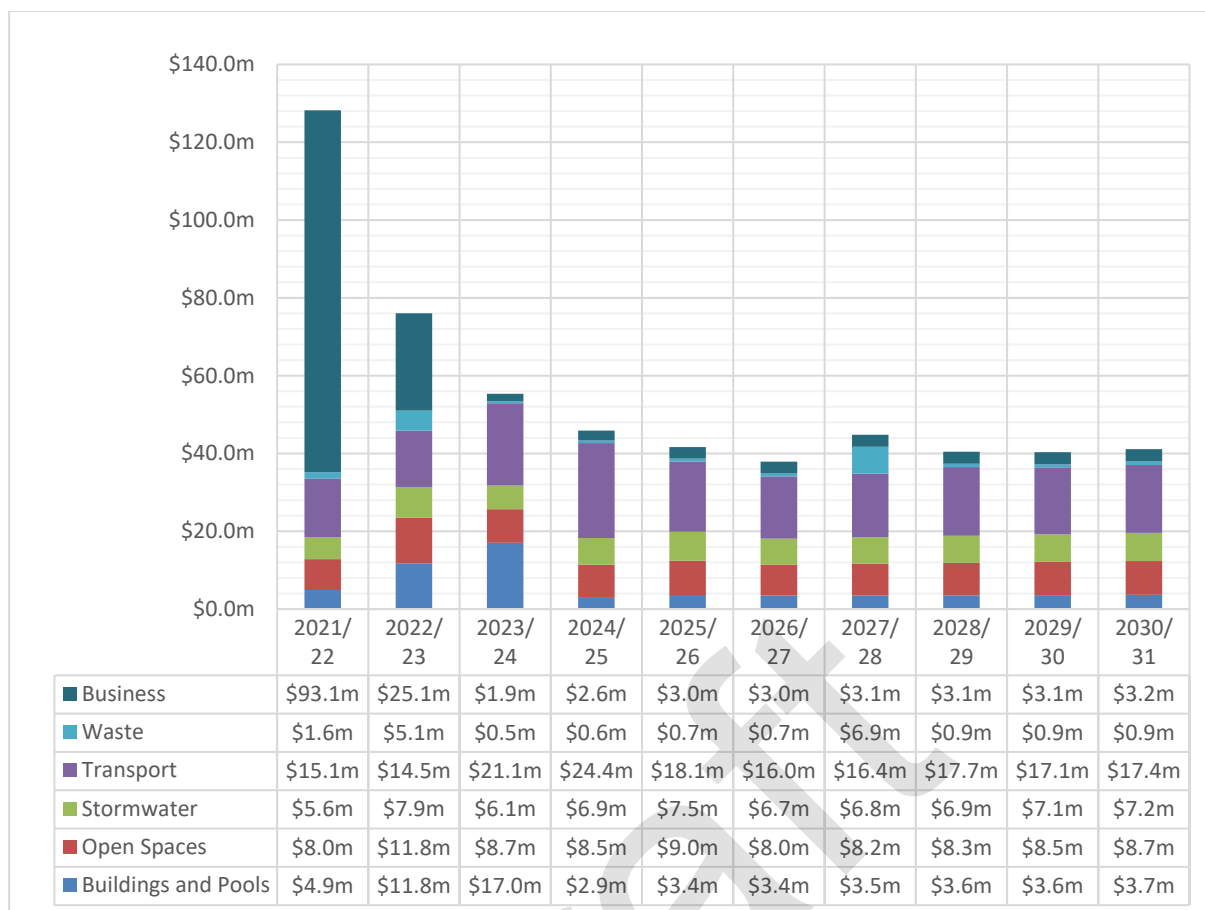
Figure 6-5: Asset Base Growth including Indexation and Efficiency Factor

7   Lifecycle Management

The Council assets described in Section 3, with the growth forecast in Section 6, require resourcing across their lifecycle in order to achieve the LoS contained in Section 5. The two main components are renewal expenditure, and maintenance and operations expenditure, which sum together to give the recommended overall expenditure on Council assets over the next 10 years.

7.1   Recommended Renewal Expenditure

To ensure that the overall good asset condition described in Section 3.3 is maintained and the Infrastructure Backlog Ratio benchmark is achieved, capital renewal works should be undertaken when assets reach the end of their useful lives. These capital renewal works involve disposing of the existing asset and constructing the MEERA, despite asset valuations not considering the additional costs of the MEERA.

If the expiry of useful lives or asset conditions are solely relied upon to inform these recommended renewals, annual budgets fluctuate significantly, which creates difficulties from a resourcing perspective. Rather, it is better practice to average out the recommended renewal expenditure in order to reduce annual fluctuations. When future Delivery Programs are prepared, actual allocations to each asset class may vary depending upon the scale of individual projects.

As discussed in Section 3.3 and 5.2, Current Asset Costs are generally inadequate to construct the MEERA. However, this is an industry-wide issue so is not considered further in this AMP.

Figure 7-1 shows the renewal expenditure recommended for all depreciable assets, of $227.8m. This is the recommended allocation of renewal expenditure in order to provide the LoS described in Section 5.2.

The required renewal expenditure for Infrastructure assets only is shown in Figure 7-2. $189.1m is required to renew Infrastructure assets over the next 10 years in order to meet the Infrastructure Renewal Ratio in SS7 (Office of Local Government, 2019).

This renewal expenditure results in long-term average forecasts for the capital SS7 ratios as shown in Figure 7-3 and Figure 7-4. When reporting on actuals, the ratios will fluctuate annually due to various factors such as scheduled inspections suddenly affecting reported asset conditions, periodic revaluations and unforeseen project delivery issues.

	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Business	$2.3m	$3.3m	$3.3m	$3.3m	$3.4m	$3.4m	$3.5m	$3.5m	$3.6m	$3.7m
Waste	$1.4m	$1.6m	$1.6m	$1.6m	$1.6m	$1.6m	$1.9m	$1.9m	$1.9m	$1.9m
Transport	$5.8m	$6.0m	$6.2m	$6.5m	$6.7m	$6.9m	$7.1m	$7.3m	$7.5m	$7.7m
Stormwater	$1.6m	$1.7m	$1.7m	$1.8m	$1.8m	$1.9m	$1.9m	$2.0m	$2.0m	$2.1m
Open Spaces	$1.7m	$1.7m	$1.8m	$1.8m	$1.9m	$2.0m	$2.0m	$2.1m	$2.1m	$2.2m
Buildings and Pools	$6.1m	$6.5m	$7.0m	$7.1m	$7.2m	$7.3m	$7.4m	$7.6m	$7.7m	$7.8m
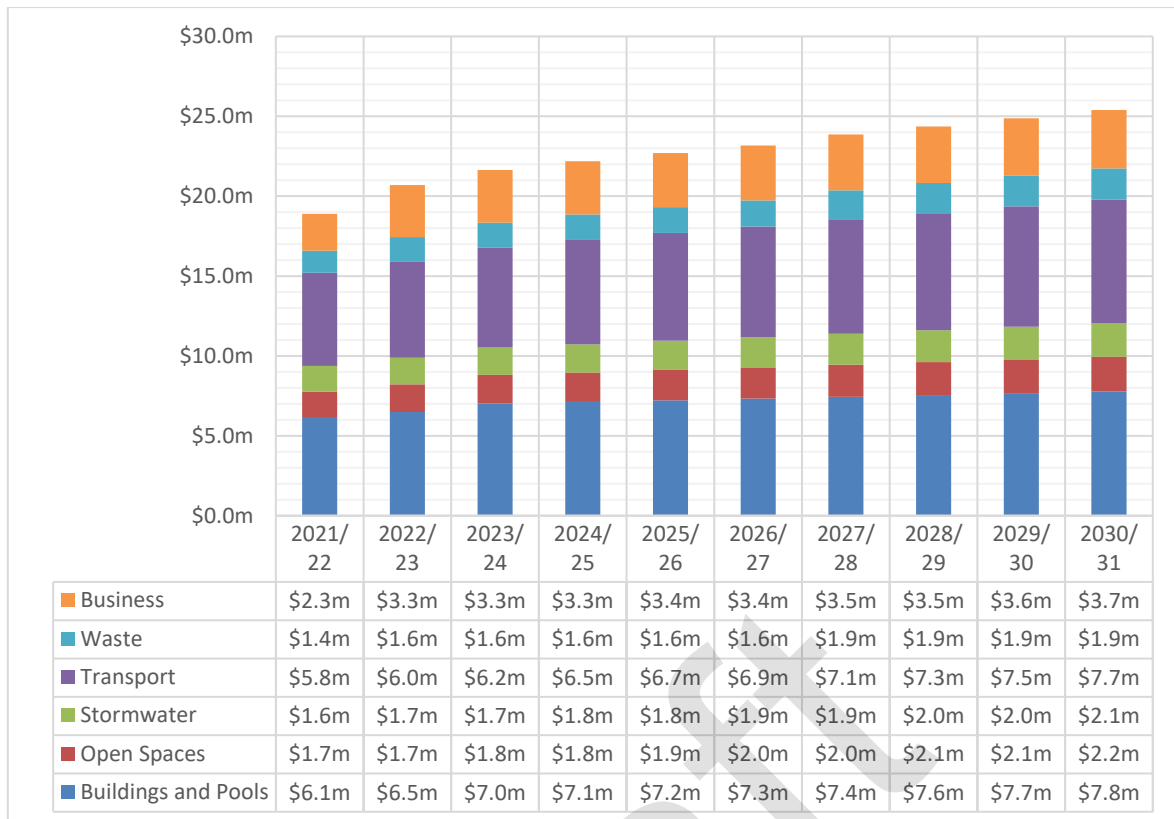
Figure 7-1: Recommended Renewal Expenditure

	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Business	$1.7m	$2.6m	$2.6m	$2.7m	$2.7m	$2.8m	$2.8m	$2.8m	$2.9m	$2.9m
Waste	$0.3m	$0.3m	$0.3m	$0.3m	$0.3m	$0.3m	$0.4m	$0.4m	$0.4m	$0.4m
Transport	$5.8m	$6.0m	$6.2m	$6.5m	$6.7m	$6.9m	$7.1m	$7.3m	$7.5m	$7.7m
Stormwater	$1.6m	$1.7m	$1.7m	$1.8m	$1.8m	$1.9m	$1.9m	$2.0m	$2.0m	$2.1m
Open Spaces	$1.5m	$1.6m	$1.6m	$1.7m	$1.7m	$1.8m	$1.8m	$1.9m	$1.9m	$2.0m
Buildings and Pools	$4.8m	$5.1m	$5.5m	$5.5m	$5.6m	$5.7m	$5.8m	$5.9m	$6.0m	$6.1m
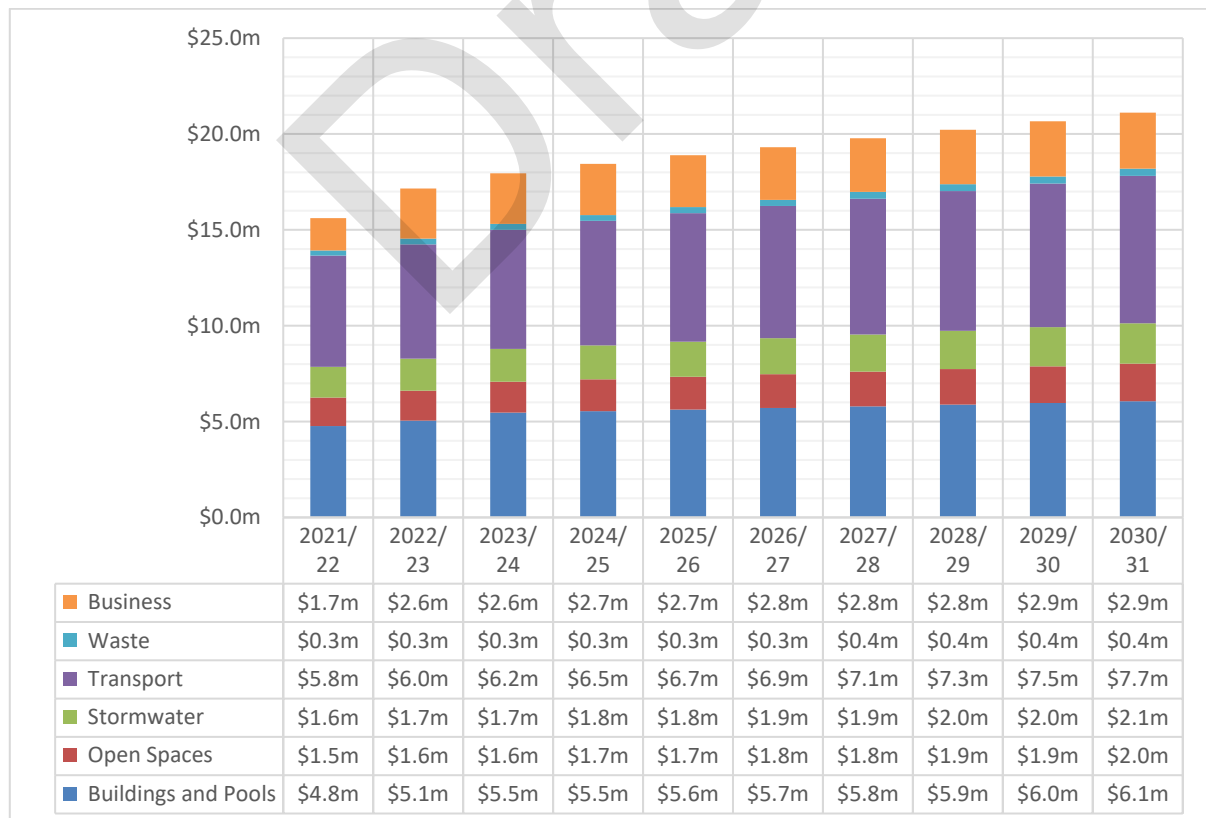
Figure 7-2: Required Infrastructure Renewal Expenditure

Figure 7-3: Special Schedule 7 Infrastructure Renewal Ratio Forecast

	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Infrastructure Renewal Ratio	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Renewal Benchmark	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Backlog Ratio	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%
Backlog Benchmark	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Bring to LoS Ratio	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%
Bring to LoS Benchmark	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%

Figure 7-4: Special Schedule 7 Bring to LoS and Backlog Ratio Forecasts

7.2   Recommended Maintenance and Operations Expenditure

To sustain the Maintenance and Operations LoS described in Section 5.3, Figure 7-5 shows the recommended maintenance and operations expenditure of $438.1m over 10 years. This has been calculated from the asset base growth described in Section 6.7 and funding available in the Long Term Financial Plan. Funding constraints prevent maintenance and operations expenditure from increasing in unison with full asset base growth rate and so a staggered approach is instead adopted. Across all years, maintenance & operations expenditure increases in accordance with Asset Indexation and the Efficiency Factor as a minimum. However, asset base growth from Asset Upgrades, Assets Contributed by Development through Conditions of Consent and Development Contributions is only considered to the extent that funding allows. Over the life of the AMP these components of asset base growth influence maintenance and operations expenditure in increasing fashion, with their considered discount rate reducing from 90% in 2022/23 to only 10% in 2027/28.

This recommended maintenance and operations expenditure, which is desired by the community, is 10% greater than the required maintenance and operations described in SS7, which is the bare minimum expected by the community. This is shown in the long-term average Asset Maintenance Ratio forecast in Figure 7-6. When reporting on actuals, this ratio will fluctuate due to unforeseen delivery issues.

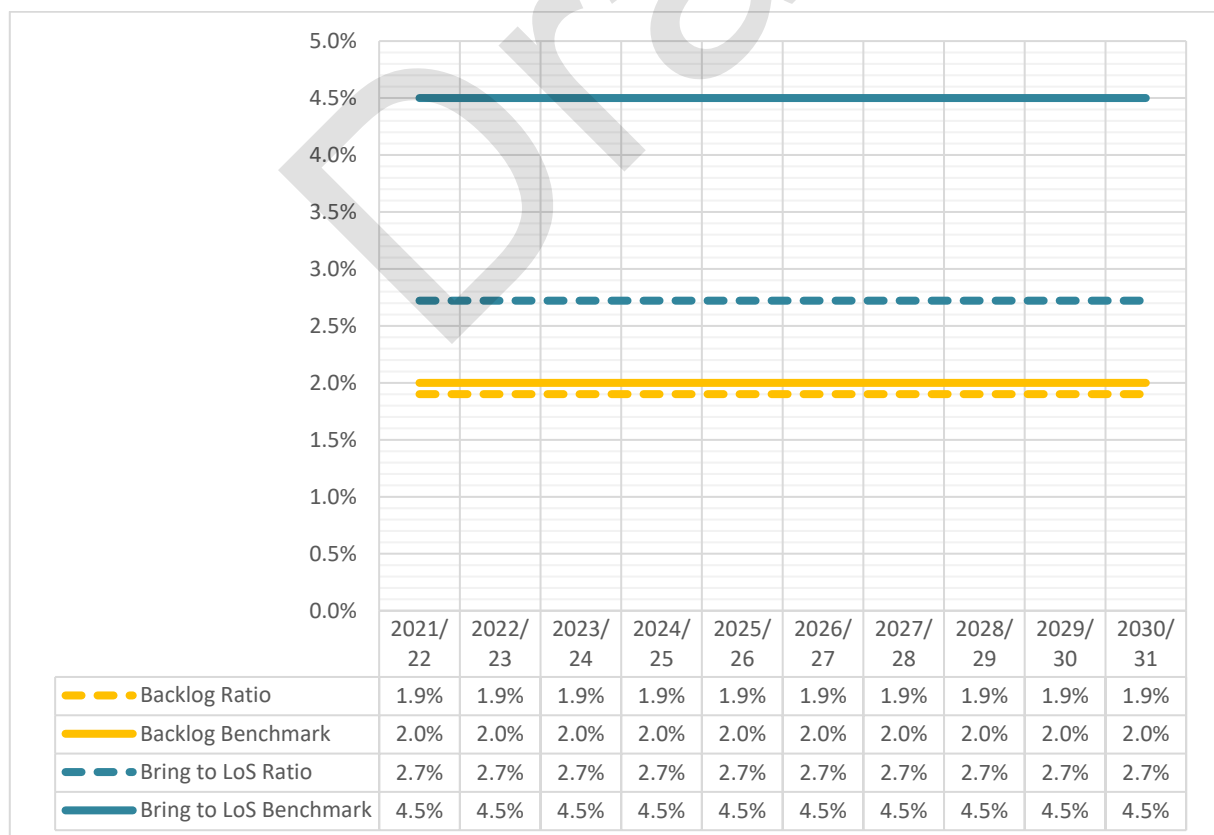|	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
■ Community Overheads	$2.7m	$2.7m	$2.8m	$2.8m	$2.9m	$3.0m	$3.0m	$3.1m	$3.2m	$3.2m
■ Business	$6.7m	$6.8m	$6.8m	$6.9m	$7.0m	$7.1m	$7.2m	$7.4m	$7.5m	$7.6m
■ Waste	$11.1m	$11.2m	$11.3m	$11.5m	$11.6m	$11.8m	$12.0m	$12.2m	$12.4m	$12.5m
■ Transport	$3.6m	$3.7m	$3.7m	$3.8m	$3.9m	$4.0m	$4.1m	$4.3m	$4.4m	$4.5m
■ Stormwater	$0.8m	$0.8m	$0.8m	$0.8m	$0.8m	$0.9m	$0.9m	$0.9m	$0.9m	$0.9m
■ Open Spaces	$8.3m	$8.4m	$8.5m	$8.7m	$8.9m	$9.1m	$9.4m	$9.6m	$9.9m	$10.1m
■ Buildings and Pools	$7.5m	$7.6m	$7.8m	$7.9m	$8.0m	$8.1m	$8.2m	$8.4m	$8.5m	$8.6m

Figure 7-5: Recommended Maintenance and Operations Expenditure

	2021/ 22	2022/ 23	2023/ 24	2024/ 25	2025/ 26	2026/ 27	2027/ 28	2028/ 29	2029/ 30	2030/ 31
Asset Maintenance Ratio	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Maintenance Benchmarck	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
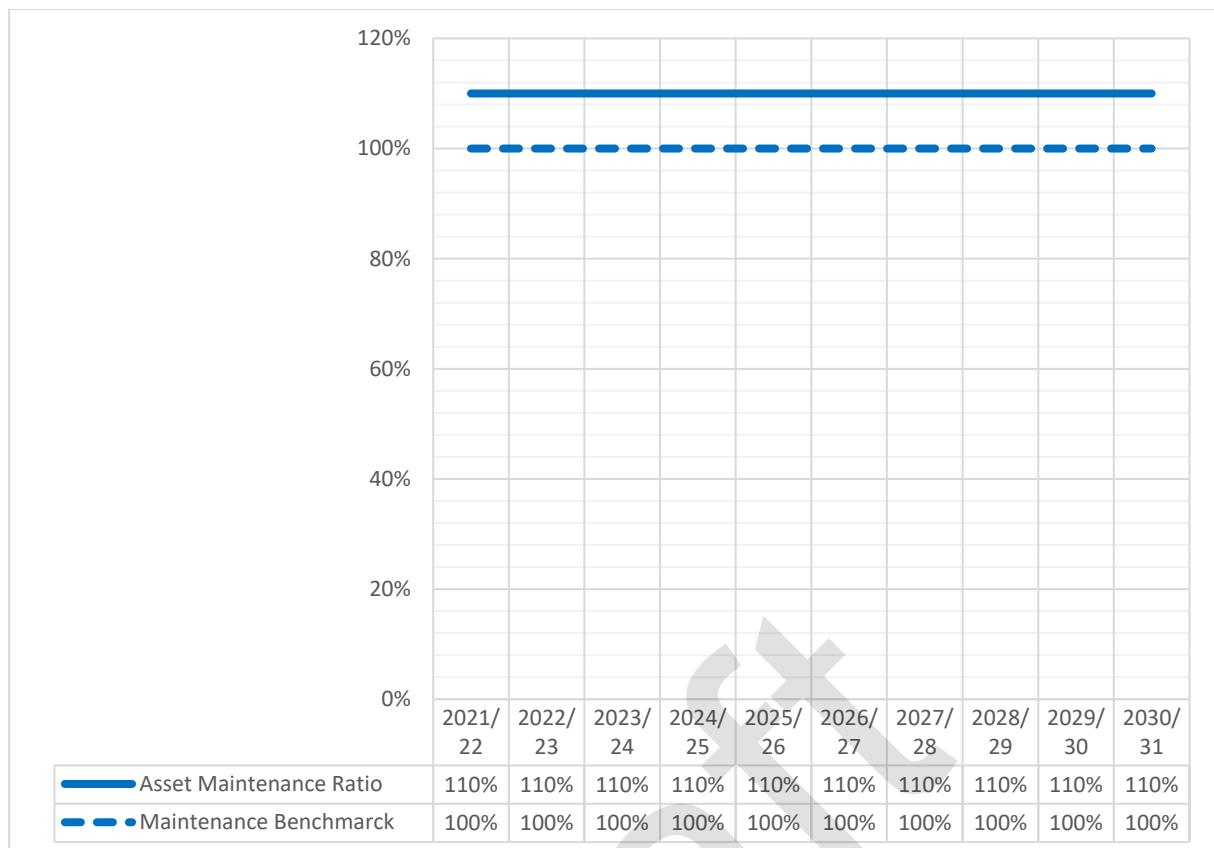
Figure 7-6: Special Schedule 7 Asset Maintenance Ratio Forecast

7.3   Recommended Overall Expenditure

The recommended overall expenditure is a combination of the asset upgrades from Section 6.1, the renewals from Section 7.1, and the maintenance and operations from Section 7.2, resulting in a total of $645.0m over 10 years. Figure 7-7 shows this recommended expenditure, while Figure 7-8 illustrates the spread across the asset classes.

	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Maint/Ops	$40.6m	$41.1m	$41.7m	$42.4m	$43.2m	$44.1m	$44.9m	$45.8m	$46.6m	$47.5m
Renewal	$15.6m	$17.2m	$17.9m	$18.4m	$18.9m	$19.3m	$19.8m	$20.2m	$20.7m	$21.1m
Upgrade	$4.1m	$5.5m	$0.3m	$0.3m	$0.3m	$0.3m	$6.3m	$0.3m	$0.3m	$0.3m
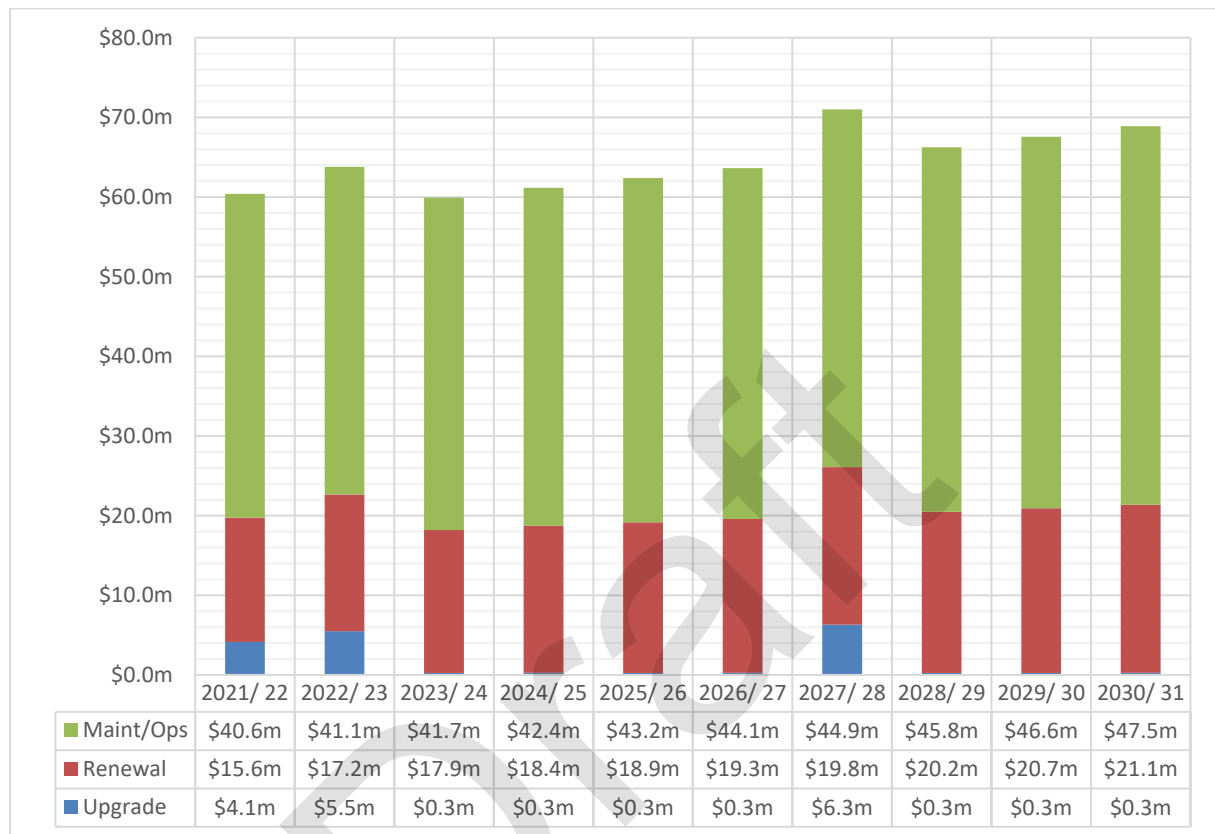
Figure 7-7: Recommended Overall Expenditure

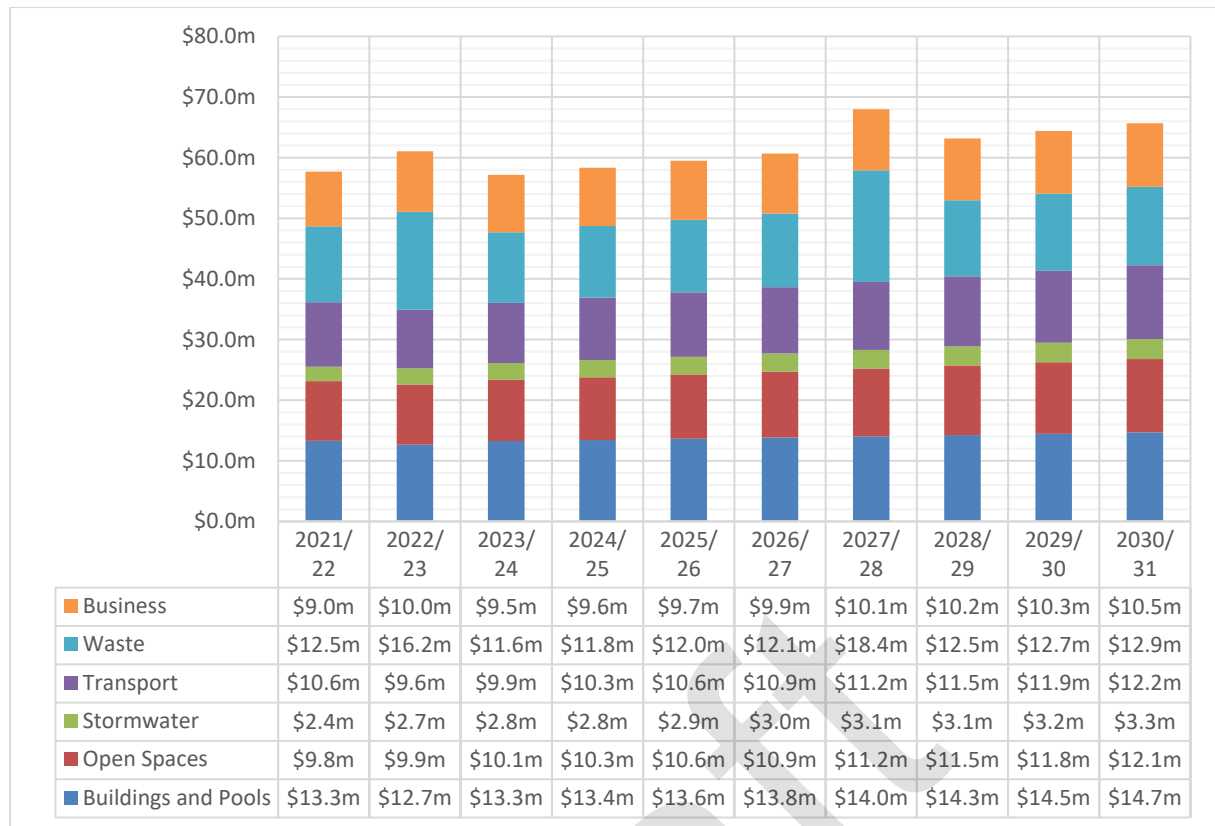|	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Business	$9.0m	$10.0m	$9.5m	$9.6m	$9.7m	$9.9m	$10.1m	$10.2m	$10.3m	$10.5m
Waste	$12.5m	$16.2m	$11.6m	$11.8m	$12.0m	$12.1m	$18.4m	$12.5m	$12.7m	$12.9m
Transport	$10.6m	$9.6m	$9.9m	$10.3m	$10.6m	$10.9m	$11.2m	$11.5m	$11.9m	$12.2m
Stormwater	$2.4m	$2.7m	$2.8m	$2.8m	$2.9m	$3.0m	$3.1m	$3.1m	$3.2m	$3.3m
Open Spaces	$9.8m	$9.9m	$10.1m	$10.3m	$10.6m	$10.9m	$11.2m	$11.5m	$11.8m	$12.1m
Buildings and Pools	$13.3m	$12.7m	$13.3m	$13.4m	$13.6m	$13.8m	$14.0m	$14.3m	$14.5m	$14.7m

Figure 7-8: Recommended Overall Expenditure by Asset Class

8 Improvement Plan

Proposed improvements to this AMP are recorded in Table 8-1, ranked according to priority and the resources required for each task.

Rank	Improvement	Completed by
1	Separate maintenance and operations within AMP	Apr 2022
2	Analyse asset expenditure requirements against rate revenue	Apr 2022
3	Finalise Community asset class-specific AMPs	Dec 2022
4	Finalise Business asset class-specific AMPs	Dec 2023
5	Achieve ISO 55001 accreditation for Council's AMS	Dec 2024

Table 8-1: Improvement Plan

9 Glossary

Asset Class	Categories of similar assets, brought together for the purposes of management and reporting
Asset Management Plan (AMP)	Long-term plan that outlines Levels of Service and the resources required to achieve these targets
Asset Management System (AMS)	Interacting elements of an organisation which achieve asset management objectives
Asset Management Information System (AMIS)	Processes, data, software and hardware applied to provide the essential outputs for effective asset management
Condition	The physical state of assets, recorded on a 1-5 scale
Current Asset Cost (CAC)	The amount that would be currently required to replace the service capacity of an asset
Defect	An imperfection which affects the amenity, service capacity or safety of an asset
Depreciation	The systematic allocation of Current Asset Cost over the Useful Life of an asset; all depreciation in this AMP is straight-line
Fair Value	The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.
Infrastructure Backlog Ratio	Estimated cost to bring to satisfactory standard / Net carrying amount of infrastructure (benchmark < 2%)
Infrastructure Renewal Ratio	Asset renewal expenditure / Depreciation, amortisation and impairment (benchmark > 100%)
Level of Service (LoS)	Definitions of the outputs and objectives that Council intends to deliver to the community
Modern Engineering Equivalent Replacement Asset (MEERA)	An asset, constructed to relevant standards of the time, that provides similar community benefit
Written Down Value	Current Asset Cost less depreciation incurred to-date

10 References

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Appendix A   Possible Additions

Major projects included in these appendices can be added in part or in full, if proportionate asset lifecycle funding can be allocated. These possible additions will be prioritised in future revisions, considering community engagement.

Item	Description	Upgrade	Renewal	Maintenance and Operations	Total
A-1	Lake Illawarra Coastal Management Program	$1.2m	$4.2m	$2.0m	**$7.4m**
A-2	Shell Cove Harbour Precinct Maintenance and Operations	$0.0m	$0.0m	$8.3m	**$8.3m**
A-3	$1.0m Annual Upgrade Grants	$0.0m[1]	$1.3m	$1.2m	**$2.5m**
A-4	Parks Master Plans	$12.4m	$1.5m	$1.5m	**$15.5m**
A-5	Tripoli Way Extension	$14.0m	$1.0m	$0.7m	**$15.7m**
A-6	Shellharbour Boardwalk	$3.8m	$0.7m	$0.7m	**$5.2m**
A-7	Koona Bay Shared Use Path	$5.2m	$0.5m	$0.3m	**$6.0m**
A-8	Cemeteries Master Plans	$4.4m	$0.5m	$0.2m	**$5.1m**
	Total	**$41.0m**	**$9.7m**	**$15.0m**	**$65.7m**

[1] The $1.0m of annual upgrade grant funding is not considered Council upgrade expenditure

Appendix A-1   Lake Illawarra Coastal Management Program

Lake Illawarra Coastal Management Program (CMP) has been developed between Shellharbour City Council, Wollongong City Council and the Lake Illawarra Estuary Management Committee. The draft CMP was submitted to the NSW Government for certification in April 2020, which subsequently occurred in November 2020. Actions arising from this plan are modelled below to commence from the first year of the program, however, at the time of writing, resources have yet to be committed. As such, the funding for this program is included outside of the core model until long-term funding commitments are made. The 10-year lifecycle cost as it relates to this AMP would be approximately $7.4m.

	2021/ 22	2022/ 23	2023/ 24	2024/ 25	2025/ 26	2026/ 27	2027/ 28	2028/ 29	2029/ 30	2030/ 31
■ Maint/Ops	$0.2m	$0.2m	$0.3m	$0.2m	$0.3m	$0.2m	$0.2m	$0.2m	$0.2m	$0.0m
■ Renewal	$0.6m	$0.6m	$0.6m	$0.6m	$0.3m	$0.3m	$0.3m	$0.3m	$0.3m	$0.0m
■ Upgrade	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m	$0.0m
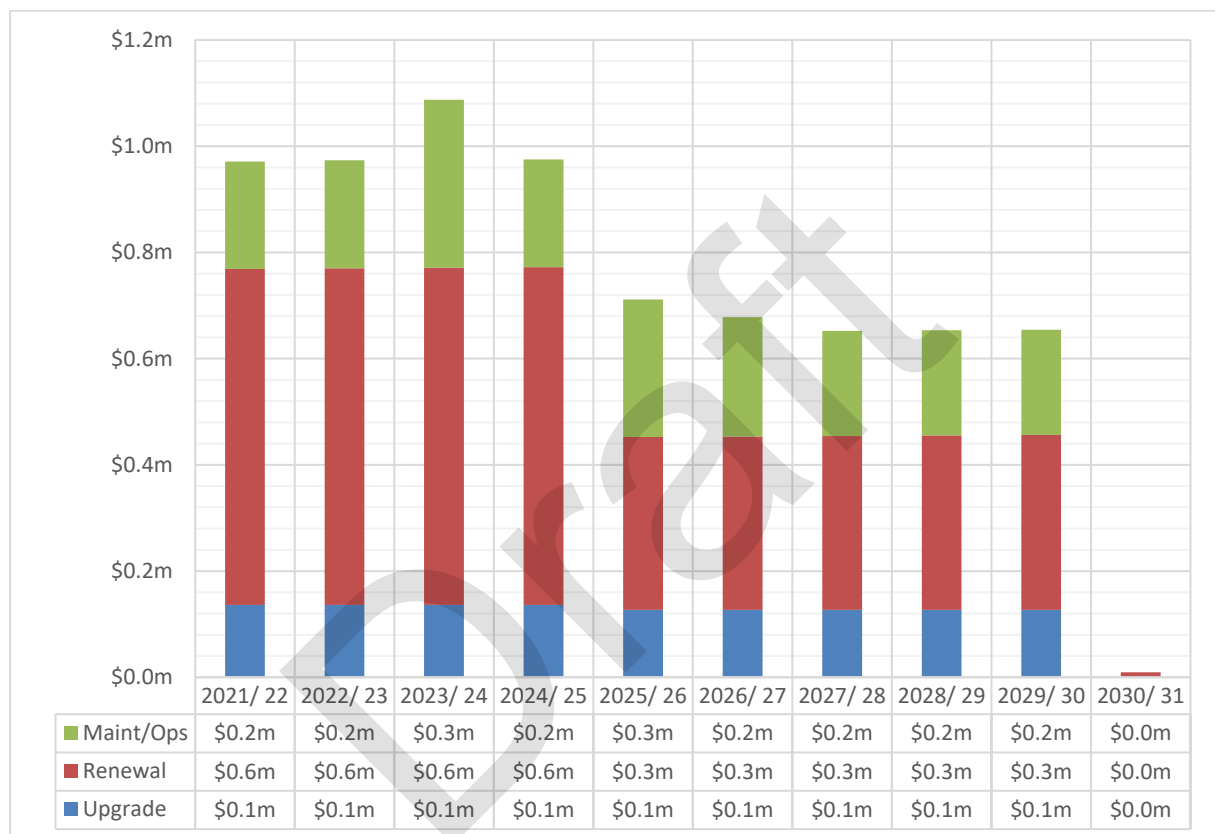
Appendix A-2 Shell Cove Harbour Precinct Maintenance and Operations

There is currently uncertainty over the management structure for the Shell Cove Harbour Precinct. A minimal maintenance and operations allowance has been included in all options of the AMP; however, should Council ultimately be responsible for all maintenance and operations, this additional allocation will be required. The 10-year lifecycle cost as it relates to this AMP would be approximately $8.3m.

	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Maint/Ops	$0.7m	$0.8m	$0.8m	$0.8m	$0.8m	$0.8m	$0.9m	$0.9m	$0.9m	$0.9m
Renewal										
Upgrade										

Appendix A-3 $1.0m Annual Upgrade Grants

No grant funding for capital upgrade purposes have been included in any of the options within this AMP outside of the 2018-2021 Delivery Program. In this appendix, an estimate of the additional lifecycle costs resulting from an annual $1.0m of annual upgrade grant funding has been calculated based on typical asset costs. Whilst this analysis returns additional lifecycle costs of $2.5m over 10 years, this could vary significantly depending upon the particular type of assets that ultimately receive funding. Similarly, the $1.0m annual figure for these grants can be adjusted. The 10-year lifecycle cost as it relates to this AMP would be approximately $2.5m.

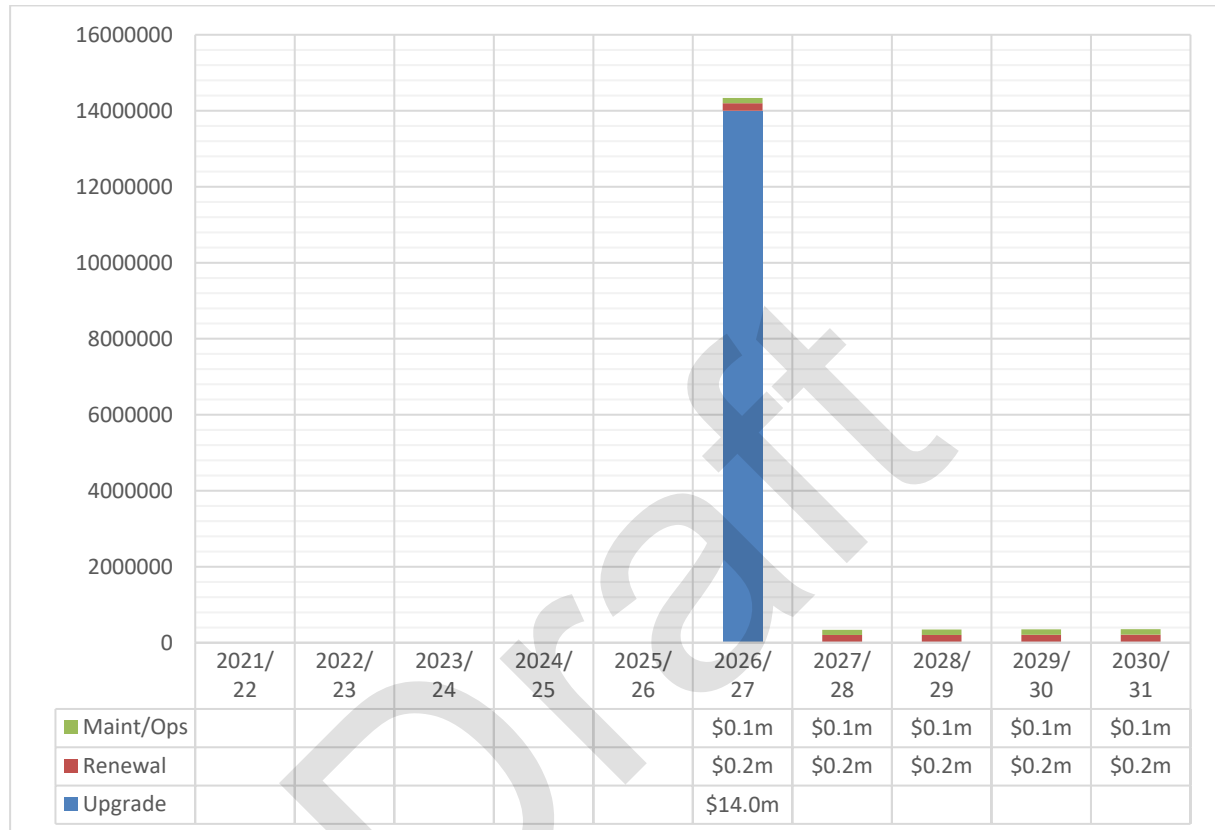|	2021/ 22	2022/ 23	2023/ 24	2024/ 25	2025/ 26	2026/ 27	2027/ 28	2028/ 29	2029/ 30	2030/ 31
Maint/Ops	$0.0m	$0.0m	$0.1m	$0.1m	$0.1m	$0.1m	$0.2m	$0.2m	$0.2m	$0.2m
Renewal	$0.0m	$0.0m	$0.1m	$0.1m	$0.1m	$0.1m	$0.2m	$0.2m	$0.2m	$0.2m
Grant	$1.0m	$1.0m	$1.0m	$1.0m	$1.0m	$1.1m	$1.1m	$1.1m	$1.1m	$1.1m
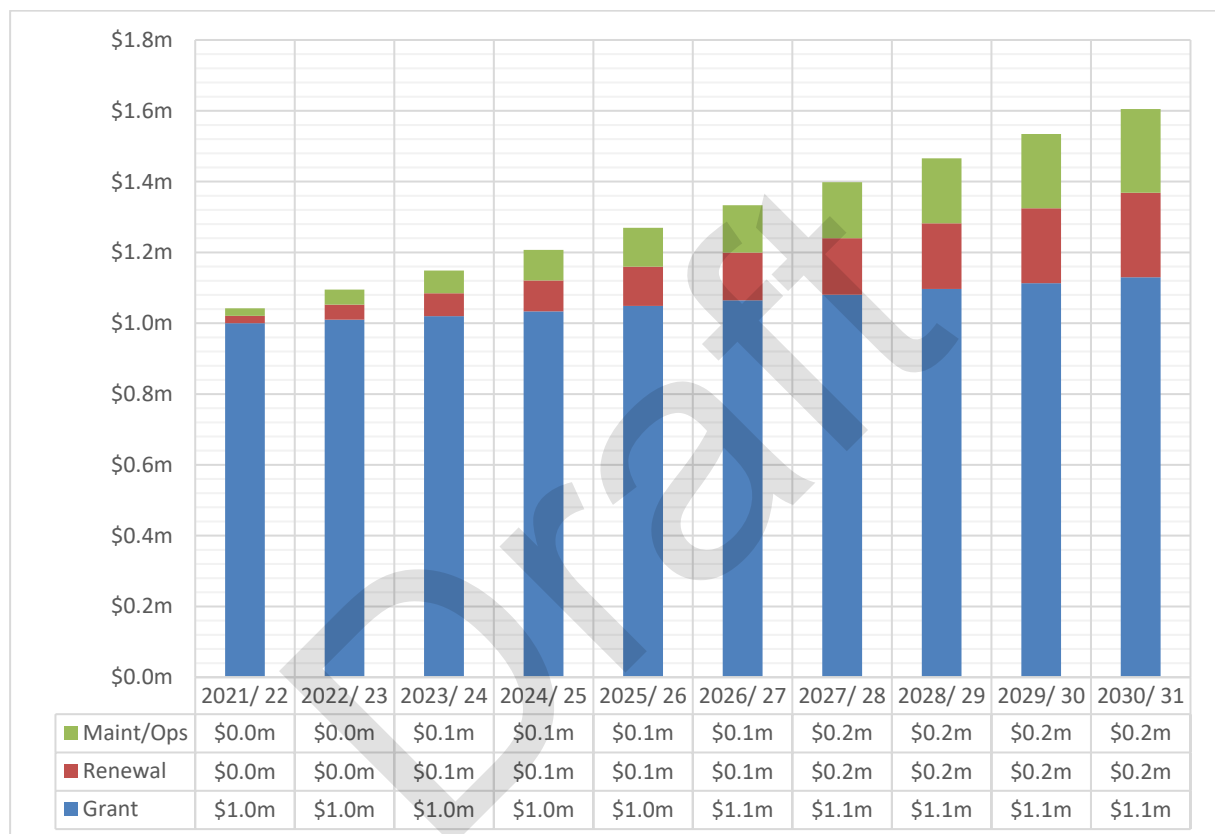
Appendix A-4   Parks Master Plans

Lifecycle costings on the recently completed Reddall Reserve and McDonald Park Master Plans have been prepared based on the cost estimates. Several actions arising from these plans have been completed or scheduled and as such aren't included in the analysis below. Further consideration will be given to them in the Open Spaces AMP. The 10-year lifecycle cost as it relates to this AMP would be approximately $12.6m.

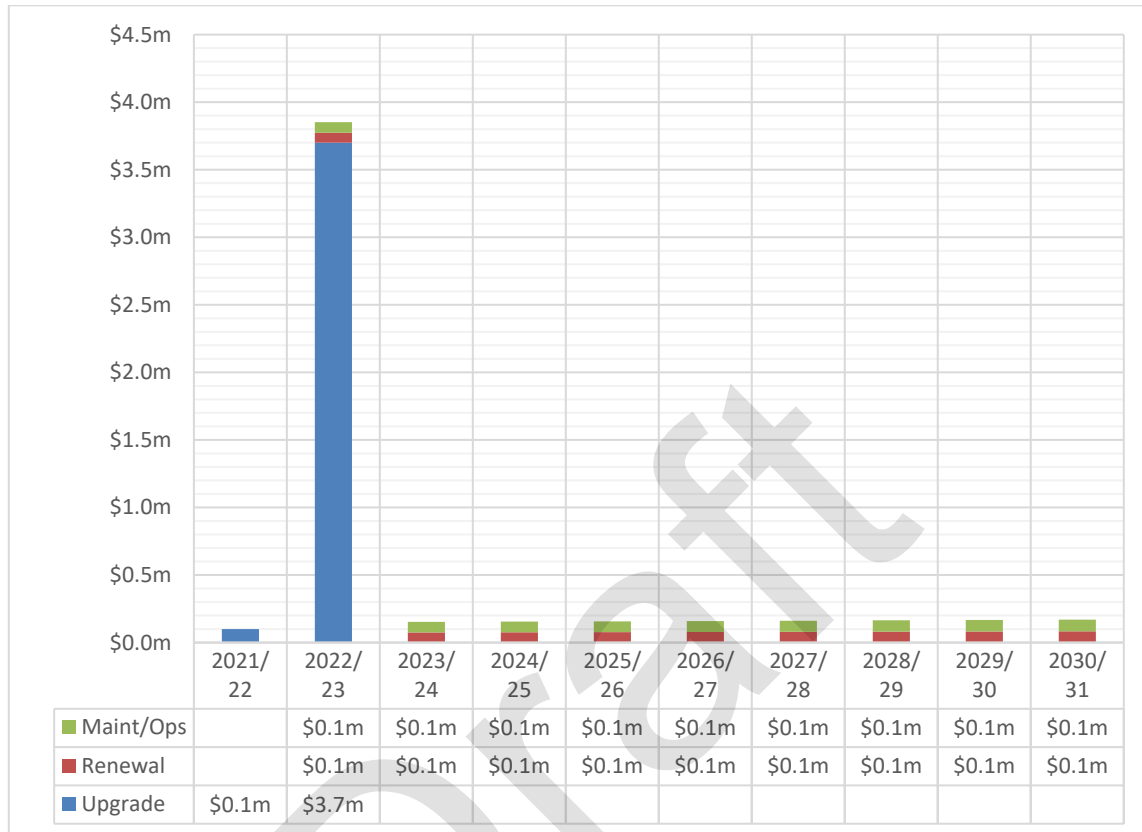|	2021/ 22	2022/ 23	2023/ 24	2024/ 25	2025/ 26	2026/ 27	2027/ 28	2028/ 29	2029/ 30	2030/ 31
■ Maint/Ops	$0.0m	$0.0m	$0.1m	$0.1m	$0.1m	$0.2m	$0.2m	$0.3m	$0.3m	$0.3m
■ Renewal	$0.0m	$0.0m	$0.1m	$0.1m	$0.1m	$0.2m	$0.2m	$0.3m	$0.3m	$0.3m
■ Upgrade	$0.0m	$1.6m	$1.1m	$1.0m	$3.1m	$1.1m	$1.5m	$2.9m	$0.0m	$0.0m

Appendix A-5   Tripoli Way Extension

The Tripoli Way extension project has featured within the Development Contributions Plan since 1993. This allocation is considered within the AMP. However, that allocation was only intended as a partial funding source for the project. The source of the remaining funds are yet to be finalised, but this is being actively pursued. The 10-year lifecycle cost as it relates to this AMP would be approximately $15.7m.

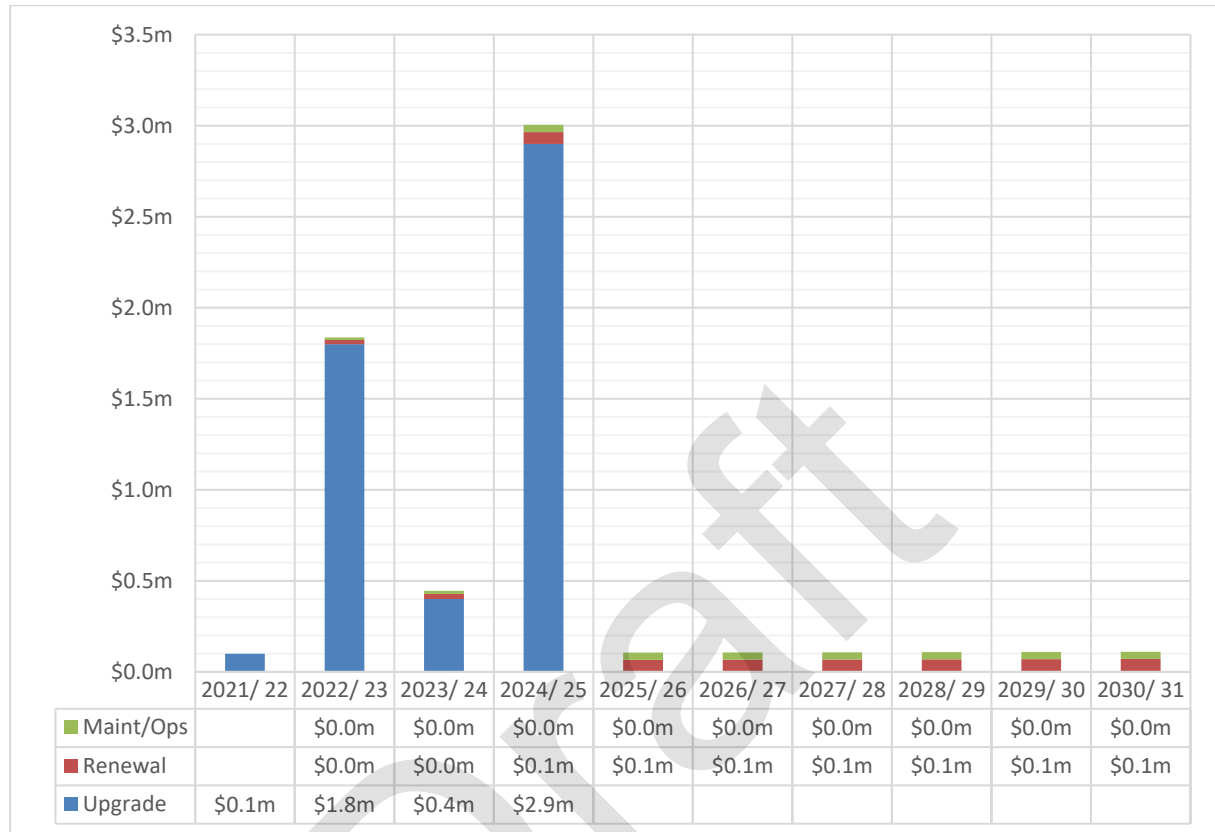|	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
■ Maint/Ops						$0.1m	$0.1m	$0.1m	$0.1m	$0.1m
■ Renewal						$0.2m	$0.2m	$0.2m	$0.2m	$0.2m
■ Upgrade						$14.0m				

Appendix A-6   Shellharbour Boardwalk

Shellharbour Boardwalk was identified in the 2010 Shared Use Path Master Plan. Concept designs have been prepared and lifecycle costs estimated accordingly. The 10-year lifecycle cost as it relates to this AMP would be approximately $5.2m.

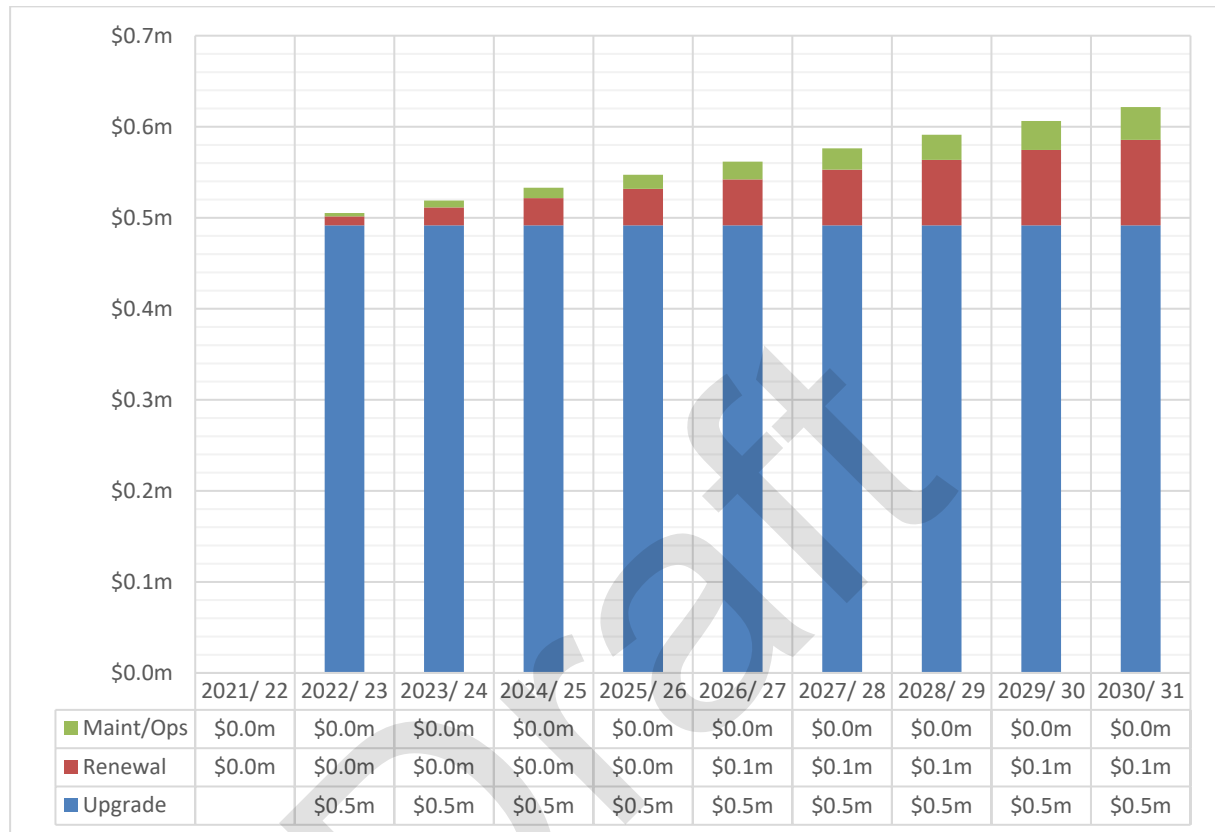|	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Maint/Ops		$0.1m	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m
Renewal		$0.1m	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m
Upgrade	$0.1m	$3.7m								

Appendix A-7   Koona Bay Shared Use Path

Koona Bay Shared Use Path was identified in the 2010 Shared Use Path Master Plan. Concept designs have been prepared and lifecycle costs estimated accordingly. The 10-year lifecycle cost as it relates to this AMP would be approximately $6.0m.

	2021/ 22	2022/ 23	2023/ 24	2024/ 25	2025/ 26	2026/ 27	2027/ 28	2028/ 29	2029/ 30	2030/ 31
Maint/Ops		$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m
Renewal		$0.0m	$0.0m	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m
Upgrade	$0.1m	$1.8m	$0.4m	$2.9m						

Appendix A-8   Cemeteries Master Plans

Council has drafted Master Plans for Albion Park and Shellharbour Cemeteries. Additional lifecycle costs have been projected based on the associated cost estimates. It is assumed that 100% of the Shellharbour and 80% of the Albion Park Master Plans could be completed over 10 years. The 10-year lifecycle cost as it relates to this AMP would be approximately $5.1m.

	2021/ 22	2022/ 23	2023/ 24	2024/ 25	2025/ 26	2026/ 27	2027/ 28	2028/ 29	2029/ 30	2030/ 31
Maint/Ops	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m
Renewal	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m
Upgrade		$0.5m	$0.5m	$0.5m	$0.5m	$0.5m	$0.5m	$0.5m	$0.5m	$0.5m

Shellharbour
CITY COUNCIL

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