

Waste Asset Management Plan

January 2023



RESTORE & THRIVE

ARMIDALE
Regional Council

QUALITY CONTROL		
OUR PURPOSE	Together, proud to deliver to the highest possible standards for ARC in all we do	
KEY DIRECTION	Strong Region (Engagement and Responsibility)	
GOAL	S2 - Strong governance and leadership that supports our region to grow and prosper	
STRATEGY	S2.2 - Ensure that strategic directions are informed by, and with, the community and stakeholders and are delivered effectively, and in consideration of available resources	
RESPONSIBLE OFFICER	Coordinator Strategic Infrastructure Planning	
REVIEW DATE	2024	
DATE	ACTION	RESOLUTION No
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21/10/2022	ARC – Documents endorsed by COAS	N/A
TBC	Council - Public Exhibition	TBC
TBC	Council - Adoption	TBC
NOTES	Nil	

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1. EXECUTIVE SUMMARY

1.1 Purpose of the Plan

This Asset Management Plan (AMP) details information about Solid Waste infrastructure assets with actions required to provide an agreed level of service to ensure safety, security and compliance with legislation in the most cost-effective manner while outlining associated risks. The plan defines the services to be provided, how the services are provided and what funds are required over the 10 year planning period. The AMP will link to a Long-Term Financial Plan (LTFP) which typically considers a 10 year planning period.

The AMP aligns with the Strategic Asset Management Plan (SAMP), which:

- Contains the longer term high level strategic initiatives that the organisation must take, in order to execute its asset management strategy, and
- Provides direction for development of asset management plans.

1.2 Asset Description

This plan covers the infrastructure assets that provide Solid Waste Management. The Armidale Local Government Area (LGA) comprises three landfills, two of which are inoperative, but can be used as a backup, and one operational, five waste transfer stations (WTS), two resource recovery centres and sheds and equipment necessary to carry out solid waste management operations within the LGA.

The assets included in this document consist of:

- Armidale Regional Landfill (Operating),
- Long Swamp Road (LSR) Landfill,
- LSR Resource Recovery Centre,
- Guyra Landfill,
- Guyra WTS,
- Guyra Resource Recovery Centre,
- Ben Lomond WTS,
- Hillgrove WTS,
- Wollomombi WTS,
- Ebor WTS,
- Sheds, and
- Equipment (e.g. Weighbridge, baler).

The above infrastructure assets have replacement value estimated at \$12.1 million.

1.3 Levels of Service

The allocation of the planned budget is sufficient to continue providing existing services at current levels for the planning period. In addition, during the landfill's operational years, a cash reserve is built up to cover future costs of landfill rehabilitation. The levels of service for the waste area will be undertaken and incorporated in the next review of this AMP.

The proposed permanent Special Rate Variation (SRV) of 50% for the General Fund over three years commencing in 2023-2024 financial year will not impact waste management services.

1.4 Future Demand

The factors influencing future demand and the impacts they have on service delivery are created by:

- Infrastructure resourcing,
- Council financial sustainability,
- Population growth,
- Increased industrial/commercial operations,
- Increased waste diversion from landfill,
- Implementation of new recycling strategies,
- Regulations and legislation changes.

These demands will be addressed using a combination of managing and/or upgrading existing assets and providing new assets when needed. Demand management practices may also include a combination of non-asset solutions, insuring against risks and managing failures. Non-asset solutions focus on providing the required service without the need for the Council to own the assets.

The opportunities identified to date for demand management are presented below. Further opportunities will be developed and documented in future iterations of this AMP.

- New waste diversion strategies,
- Seek and apply for grant funding for capital projects,
- Implement innovative clean and emission-reducing technologies in operational processes.

1.5 Lifecycle Management Plan

1.5.1 What does it cost?

The forecast lifecycle costs necessary to provide the services covered by this AMP includes operation, maintenance, renewal, acquisition, and disposal of assets. Although the AMP may be prepared for a range of time periods, it typically informs a Long-Term Financial Planning period of 10 years. Therefore, a summary output from the AMP is the forecast of 10 year total outlays, which for the waste asset class is estimated at \$87.8 million or \$8.8 million on average per year.

1.6 Financial Summary

1.6.1 What we will do

Estimated available funding for the 10 year period is \$87.8 million or \$8.8 million on average per year as per the Long-Term Financial plan or Planned Budget. This is 100% of the cost to sustain the level of service at the lowest lifecycle cost.

The reality is that only what is funded in the long-term financial plan can be provided. The Informed decision making depends on the AMP emphasising the consequences of Planned Budgets on the service levels provided and risks.

The anticipated planned budget for waste assets presents no shortfall of the forecast lifecycle costs required to provide services in the AMP compared with the Planned Budget currently included in the Long-Term Financial Plan. The forecast lifecycle costs and planned budgets is shown in figure 1.6.1.

Figure 1.6.1: Forecast Lifecycle Costs and Planned Budget

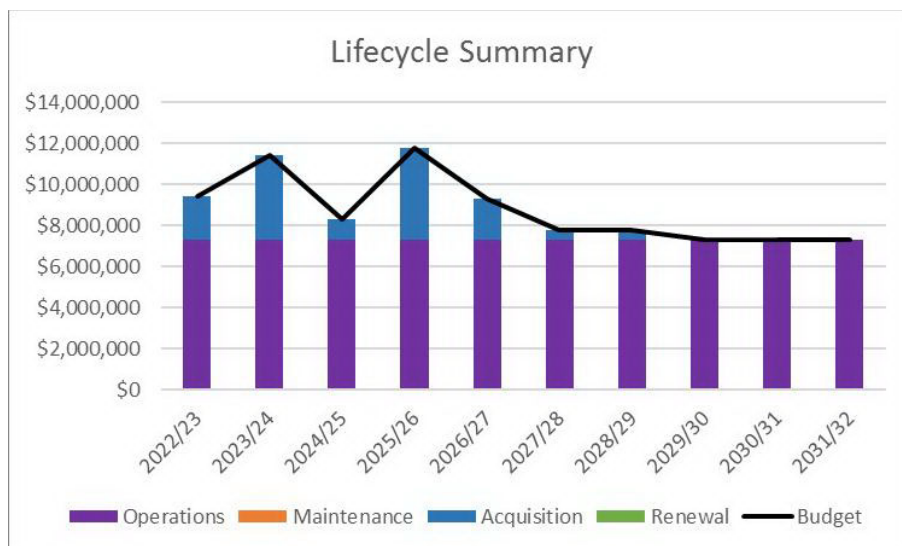


Figure values are in 2022 dollar value.

We plan to provide solid waste services for the following:

- Operation, maintenance, renewal and acquisition of assets regarding solid waste management to meet levels of service set by Council's annual budget,
- The major solid waste management plans within the 10-year planning period consist of building the second cell of the regional landfill, remediate and rehabilitate capped landfills and increase recycling practices.

1.6.2 What we cannot do

Council currently has enough budget to provide services at the desired levels of service, acquire essential equipment and carry out essential projects for solid waste management. However, it has a deficit of staff to carry out new and non-critical projects, such as:

- Acquisition of large/high precision equipment to increase the recovery rate of waste and diversion from the landfill,
- Capital projects to improve the allocation and/or treatment of collected recyclable materials,
- Submission of grant applications due to lack of staff.

1.6.3 Managing the risks

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

- Contamination of groundwater resources.

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

- Regular monitoring of asset performance and condition, and
- Carry out urgent operational and maintenance activities, when needed.

1.7 Asset Management Planning Practices

Key assumptions made in this AMP are:

- That a permanent SRV of 50% for the General Fund over three years will not impact waste services,
- Only projects included in the LTFP were considered,
- Budgets have been allocated based on the best available data on assets,
- Future demand for new assets,
- Data confidence level is low,
- Staff needs are not resourced adequately.

1.8 Monitoring and Improvement Program

The next steps resulting from this AMP to improve asset management practices are:

- A Levels of Service (LoS) Framework will be adopted which includes defined Customer and Technical LoS and performance measures so levels of service can be assessed and used to inform asset management planning and expenditure investment. Customer LoS and Technical LoS information will be included in future iterations of this AMP,

- A region-wide inventory of assets will be carried out to capture all data on assets. This, as well as all data recorded in the Assets database will be consolidated to link with financial information. Council is investigating various models of Enterprise Asset Management Software that have the ability to consolidate or link financial and non-financial data on all asset classes so a complete inventory of assets is maintained. This will enable assets and finance departments to access one single repository of asset information, track and monitor asset condition, ensure transparency in planning processes and plan evidence based investments. Asset registers will be used to inform the next long term financial plan cycle to inform future iterations of this AMP,
- Council is currently undertaking an organisational re-structure to address resource planning. Resources will be allocated and staff will be appropriately trained to lift capability in asset management,
- The Asset Management Policy will be updated and AM Framework will be established. This will be used to inform future iterations of the AMP,
- Formal asset lifecycle management processes and systems will be implemented to improve asset management planning. This will be used to inform future iterations of the AMP,
- Formal asset management planning processes will be established across each asset group to ensure consistency in information included in the AMP,
- Customer satisfaction surveys will be undertaken to inform development of the LoS performance measured in the AMP,
- Consistent processes for asset condition assessments will be established and asset performance monitoring will be implemented to monitor, report and inform investments in future LTFP cycles and iterations of this AMP.
- Formal processes for prioritisation of investments in acquisition, operations, maintenance, renewals and capital upgrades will be established to inform development of long term forward works program for the LTFP and the future iterations of this AMP,
- AMPs will be used in the future to drive expenditure in assets so the information used to develop programs of work must be evidence based with a high degree of accuracy to justify the need for the investment. Council will specify their standard requirements for future AMPs.

2. INTRODUCTION

2.1 Background

This AMP communicates the requirements for the sustainable delivery of services through management of assets, compliance with regulatory requirements, and required funding to provide the appropriate levels of service over the planning period.

The AMP is to be read with the Armidale Regional Council's planning documents. This should include the Asset Management Policy and Asset Management Strategy, where developed, along with other key planning documents:

- Integrated Planning Framework which includes Advancing Our Region Your Community Plan 2022-2032,
- Resourcing Strategy which includes the Workforce Management Plan and Asset Management Strategy 2022, and
- The Strategic Asset Management Plan (SAMP).

Council undertook an Asset Management Maturity Assessment in July 2022. Based on a 55 (Core) target maturity level score, Council's overall AM maturity score is 32 (Basic) – i.e. minimum level processes and practices in place with a Maturity Gap of 23 points. The variance between the current and target score is 41%.

Council aims to lift its capability in asset management by addressing the gaps in AM practices identified in the Assessment. The Improvement Plan in the SAMP, contains 30 recommended improvement actions for Council achievable within 1-2 year period.

The infrastructure assets covered by this AMP include all solid waste assets, which are used to provide waste services. The infrastructure assets included in this plan have a total replacement value of \$12.1 million.

Key stakeholders in the preparation and implementation of this AMP are shown in Table 2.1.

Table 2.1: Key Stakeholders in the AMP

KEY STAKEHOLDERS	ROLE IN AMP
Councillors	• Represent needs of community, • Allocate resources to meet the organisation's objectives in providing services while managing risks, • Ensure organisation is financial sustainable.
General Manager	• Ensures ARC is aligned with the organisation's infrastructure services requirements and community expectations, • Allocate resources to meet the organisation's objectives in providing services while managing risks.
Chief Officer Assets and Services	• Overall responsibility for Asset Management, • Ensure funds are invested appropriately to ensure best value for money is delivered to the community,

KEY STAKEHOLDERS	ROLE IN AMP
	• Provide leadership in influencing decision making processes related to Asset Management.
Utilities Manager	• Provide Leadership for effective Asset Management, • Identify resource requirements for delivering various assets management services to the community, • Ensuring Asset Management services are provided in accordance with the Corporate Plan and organisational priorities, • Responsible for preparing budget submissions in accordance with the AMP, • Delivery of approved renewal and capital upgrade projects,
Waste Services Coordinator	• Ensures the overall programme proposed in the AMP is achievable and is aligned with the organisation's service requirements and the LTFP, • Responsible for reviewing and upkeep of the AMP, • Deliver services in a cost effective and sustainable manner, • Ensures BAU delivery requirements are aligned with AMP.
Outdoor crews (including team leaders)	• Operation and Maintenance management to meet agreed levels of service, • Monitoring asset performance and report issues that require senior management attention.
Assets Team and Asset Owners	• Preparation of AMP, • Responsible for reviewing and keeping AMP up to date, • Responsible for keeping asset data up to date, • Maintenance of corporate software.
Finance Team	• Maintenance of corporate software, • Financial accounting for assets.
State and Federal Government	• Promote Best Practice Asset management, • Recognises the importance of LGA Assets to the community and provide funding and other assistance to sustain.
Community	• Be aware of levels of service and costs, • Participate in consultation processes, • Provide feedback on services.

Our organisational structure for service delivery from infrastructure assets is detailed below:



2.2 Goals and Objectives of Asset Ownership

Our goal for managing infrastructure assets is to meet the defined level of service (as amended from time to time) in the most cost effective manner for current and future population. The key elements of infrastructure asset management are:

- Providing a defined level of service and monitoring performance,
- Managing the impact of growth through demand management and infrastructure investment,
- Taking a lifecycle approach to develop compliant and cost-effective management strategies for the long-term that meet the defined level of service,
- Identifying, assessing and appropriately controlling risks, and
- Linking to a Long-Term Financial Plan which identifies required, affordable forecast costs and how it will be allocated.

Key elements of the planning framework are:

- Stakeholder engagement,
- Levels of service – specifies the services and levels of service to be provided,
- Risk Management,
- Future demand – how this will impact on future service delivery and how this is to be met,

- Lifecycle management – how to manage its existing and future assets to provide defined levels of service,
- Financial summary – what funds are required to provide the defined services,
- Asset management practices – how we manage provision of the services,
- Monitoring – how the plan will be monitored to ensure objectives are met,
- Asset management improvement plan – how we increase asset management maturity.

Other references to the benefits, fundamentals principles and objectives of asset management are:

- International Infrastructure Management Manual 2015¹
- ISO 55000²

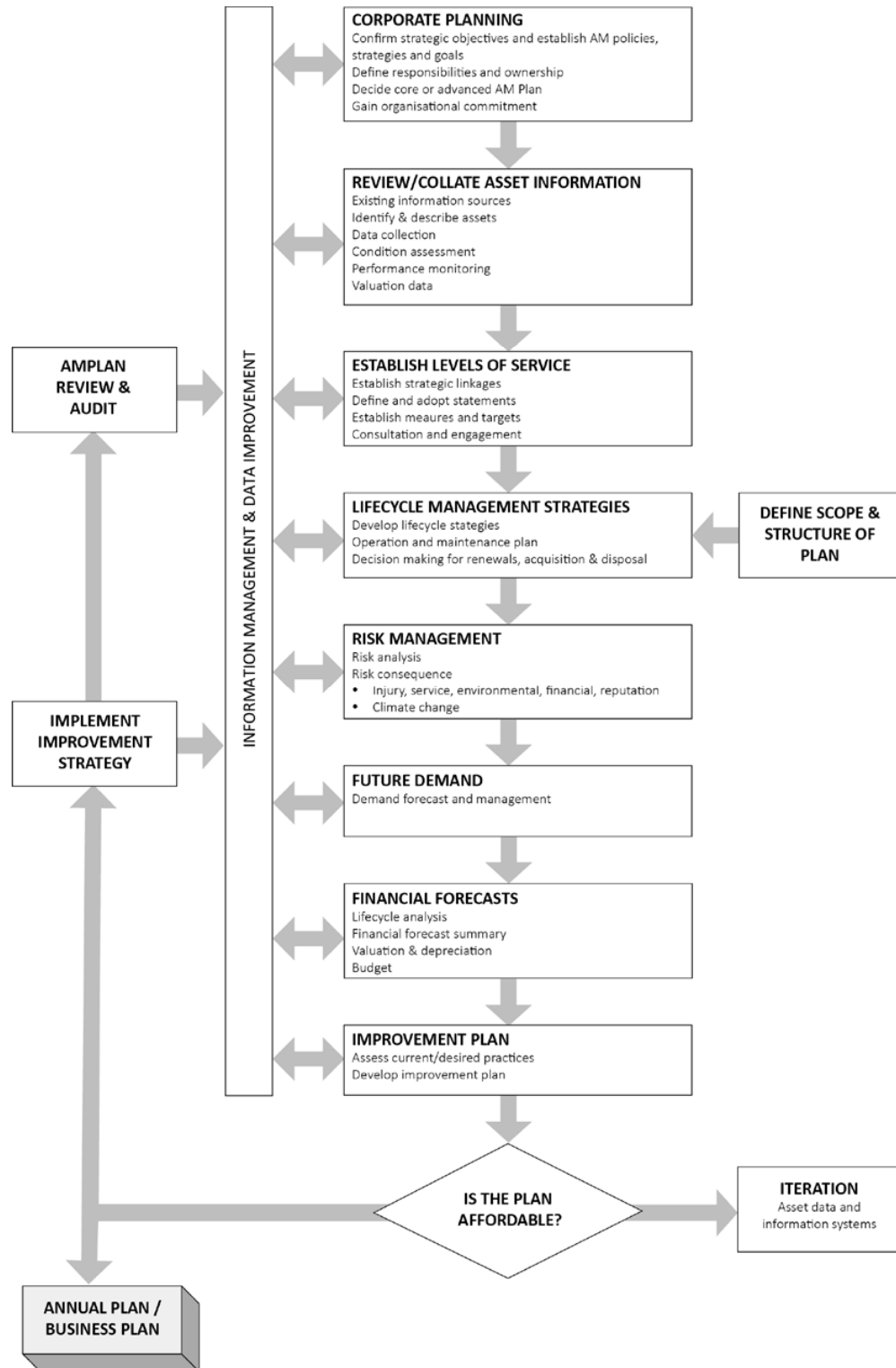
¹ Based on IPWEA 2015 IIMM, Sec 2.1.3, p 2 | 13

² ISO 55000 Overview, principles and terminology

A road map for preparing an AMP is shown below.

Road Map for preparing an Asset Management Plan

Source: IPWEA, 2006, IIMM, Fig 1.5.1, p 1.11



3. LEVELS OF SERVICE

3.1 Customer Research and Expectations

This AMP is prepared to facilitate consultation prior to adoption of levels of service by the Armidale Regional Council. Future revisions of the AMP will incorporate customer consultation on service levels and costs of providing the service. This will assist Council and stakeholders in matching the level of service required, service risks and consequences with the customer's ability and willingness to pay for the service.

Management plays an important role in ensuring Council delivers the agreed levels of service³ to the community by allocating budgets that are informed by levels of service requirements to enable delivery of those projects that have been investigated and assessed to be of high risk to people or property.

We currently have no research on customer expectations. This will be investigated for future updates of the AMP.

3.2 Strategic and Corporate Goals

This AMP is prepared under the direction of the Community vision, mission, goals and objectives.

Our vision is:

'We want a harmonious region which celebrates diversity and uniqueness of our communities, provides opportunities for all people to reach their potential, encourages engagement without environment, cultures and lifestyles while supporting growth, opportunity and innovation.'

This AMP is prepared to meet Council's purpose, visionary goal and values.

Council's purpose is:

'Together, we are proud to deliver to the highest possible standards for ARC in all that we do. '

Council's visionary goal is:

'As a result of having a high performing team, by January 2023 we will be connected across the organisation with aligned priorities.'

³ Levels of Service Framework for all asset classes has yet to be developed and adopted by Council.

Council's values are:

- Inclusion
- Wellbeing
- Transparency
- Commitment

Strategic goals have been set by Council in Advancing our Region Your Community Plan 2022-2032 and the State of The Environment Report. The Community Plan has six key pillars and within each Pillar are two goals (G1 & G2) – which are the key community aspirations that Council seeks to achieve. The AM objectives are aligned with the goals of each Pillar. The Pillars are as follows:

- P1: Thriving Region – Economy and Vision
- P2: Connected Region – Transport and Technology
- P3: Future Region – Sustainability and Resilience
- P4: Liveable Region – Places and Spaces
- P5: Enriched Region – Community and Culture
- P6: Strong Region – Engagement and Responsibility

Strategic goals have been set in Advancing Our Region Your Community Plan 2022-2032. A summary of how they are addressed in this AMP is shown in table 3.2.

Table 3.2: Goals and how these are addressed in the Asset Management Plans

GOALS	AM OBJECTIVES	HOW GOALS AND OBJECTIVES ARE ADDRESSED IN THE AMP
P1, G1. A strong economy, sustainable growth and opportunity	AMO 2. Increase the level of maintenance and renewal activities to achieve the industry benchmark renewal ratio of $\geq 100\%$.	A program of works that reflects an increase in the level of maintenance and renewal activities.
P1, G2. A destination of choice, renowned for its beauty, heritage and unique attractions		This is a Plan that will address the renewals backlog over time to extend the life of the assets, and increase maintenance activities to ensure the assets continued operation.
P2, G1. Quality infrastructure that makes it safe and easy to travel around our region		
P2, G2. Transport and technology that enable connectivity both locally and outside the region	AMO 3. Apply lifecycle principles to asset management decisions	A Plan that applies lifecycle principles in the development of the program of works for asset maintenance, renewals and capital upgrades.
P3, G1. A flourishing natural environment		While this Plan requires an increase in investment in asset maintenance and

GOALS	AM OBJECTIVES	HOW GOALS AND OBJECTIVES ARE ADDRESSED IN THE AMP
that is protected and enhanced	AMO 4. Ensure the levels of service and infrastructure agreed with the community are consistently maintained.	renewals, the lifecycle approach will ensure Council is making informed decisions on its investment and achieve the value for money from its investment in the long term.
P3, G2. A clean, green, and responsible region		A lifecycle approach to asset management will also help Council achieve the financial sustainability over time.
P4, G1. Public spaces and infrastructure that facilitate health, community connections and opportunities		
P4, G2. Proactive, responsible, and innovative regional planning that grows us sustainably		A Plan that meets the community levels of service expectations.
P5, G1. Access to the services and support that facilitate quality of life		While the Levels of Service measures have yet to formally adopted and agreed with the community, this Plan, has been developed with the aim of achieving a consistently high levels of service.
P5, G2. A proud, inclusive and cohesive community that celebrates our region in all its diversity and culture	AMO 1. Lift capability in asset management by 41% within 1-2 years. AMO 5. Lift capability and capacity of the workforce to meet the long term service commitments to the community.	This Plan has been developed in parallel with the establishment of an AM Framework and planned improvements in AM practice areas to lift capability in delivering asset management services.
P6, G1. An informed and activity engaged community that builds partnerships and shapes its future.		This is a Plan that is responsive to the needs of the community.
P6, G2. Strong governance and leadership that supports our region to grow and prosper.		This Plan is informed by the Council's Workforce Management Plan, which addresses the need to improve workforce capacity and capability to enable Council to efficiently and effectively manage its assets and meet its long term service commitments to the community.

3.3 Legislative Requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of waste services are outlined in Table 3.3.

Table 3.3: Legislative Requirements

LEGISLATION	REQUIREMENT
Local Government Act 1993	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery.
Crown Land Management Act 2016 No 58	Provides for the ownership, use and management of the Crown land of New South Wales, and the clarity concerning the law applicable to Crown land and the requirement of environmental, social, cultural heritage and economic considerations to be taken into account in decision-making about Crown land and to provide for the consistent, efficient, fair and transparent management of Crown land for the benefit of the people of New South Wales.
Australian Accounting Standards	Establishes the financial reporting standards for the valuation, revaluation and depreciation of assets.
Environmental Planning and Assessment Act 1979	- Promote social and economic welfare for the community and a better environment by proper management, development and conservation of the State's natural and other resources, - Facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment, - Promote the orderly and economic use and development of land - Protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats, - Promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage), - Promote good design and amenity of the built environment, - Promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants, - Promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State and to provide increased opportunity for community participation in environmental planning and assessment.
Work Health and Safety Act 2011	Promote improvements in work health and safety practices whilst assisting in the preservation of public health and safety in all undertakings of the organisation.
POEO Act 1997	- Protect, restore and enhance the quality of the environment in New South Wales, having regard to the need to maintain ecologically sustainable development, - Provide increased opportunities for public involvement and participation in environment protection, - Ensure that the community has access to relevant and meaningful information about pollution,

LEGISLATION	REQUIREMENT
	• Reduce risks to human health and prevent the degradation of the environment by the use of mechanisms that promote pollution prevention and cleaner production, reduction to harmless levels of the discharge of substances likely to cause harm to the environment, elimination of harmful wastes, reduction in the use of materials and the re-use, recovery or recycling of materials, making of progressive environmental improvements, including the reduction of pollution at source and monitoring and reporting of environmental quality on a regular basis, • Rationalise, simplify and strengthen the regulatory framework for environment protection, • Improve the efficiency of administration of the environment protection legislation, • Assist in the achievement of the objectives of the Waste Avoidance and Resource Recovery Act 2001.
Waste Avoidance and Resource Recovery Act 2001	• Encourage the most efficient use of resources and to reduce environmental harm in accordance with the principles of ecologically sustainable development, • Ensure resource management options are considered against a hierarchy in the following order: a. Avoidance and reduction of waste, b. Re-use of waste, c. Recycling, processing or reprocessing waste, d. Recovery of energy, e. Disposal. • Provide for the continual reduction in waste generation, • Minimise the consumption of natural resources and the final disposal of waste by encouraging the avoidance of waste and the reuse and recycling of waste, • Ensure that industry shares with the community the responsibility for reducing and dealing with waste, • Ensure the efficient funding of waste and resource management planning, programs and service delivery, • Achieve integrated waste and resource management planning, programs and service delivery on a State-wide basis, • Assist in the achievement of the objectives of the Protection of the Environment Operations Act 1997.

3.4 Customer Values

Service levels are defined in three ways, customer values, customer levels of service and technical levels of service.

Customer Values indicate:

- What aspects of the service is important to the customer,
- Whether they see value in what is currently provided,
- The likely trend over time based on the current budget provision,
- Whether we achieve the objectives of the Waste Avoidance and Resource Recovery Act 2001.

Community consultation has been undertaken for the preparation of the new long term community strategic plan and outcomes of the consultation and the values have been defined as follows:

What customer love and value about our region:

4. Our Natural Environment – our climate, seasons, natural beauty, Wildlife and National Parks.
5. Our Location – Halfway between Sydney and Brisbane, and a short drive to the Coast.
6. Our Community – The people diversity and volunteers that make up our community.
7. Parks and Playgrounds – Our many beautiful outdoor spaces including parks, gardens and local playgrounds.
8. Arts Culture and Heritage – Beautiful architecture, local history and the many arts organisations, events and performances in the region.
9. Education and Training – Long established university, TAFE digital hub, and variety of local schools.

Our community's 2032 vision for our Region (ranked in priority order):

1. Economically robust
2. Environmentally sustainable
3. Led through good governance
4. Strong tourism sector
5. A cohesive community

What the community wants improved in our Region (ranked in priority order):

1. Transport and Infrastructure
2. Environmental Sustainability
3. Economic Development
4. Shopping
5. Tourism

3.5 Customer Levels of Service

The Customer Levels of Service are considered in terms of:

- **Condition** How good is the service ... what is the condition or quality of the service?
- **Function** Is it suitable for its intended purpose Is it the right service?
- **Capacity/Use** Is the service over or under used ... do we need more or less of these assets?

In Table 3.5 under each of the service measures types (Condition, Function, Capacity/Use) there is a summary of the performance measures, the current performance, and the expected performance based on the current budget allocation.

Table 3.5: Customer Level of Service Measures⁴

TYPE OF MEASURE	LEVEL OF SERVICE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET
Condition	Whether the condition of facilities and equipment meets required standards.	Maintain overall condition rating scores between 1-3 (Very good – Fair).	Overall condition of structures between 2-3 (Good-Fair). No condition report available for the other asset groups.	The planned budget is used appropriately to renovate structures and maintain satisfactory condition levels.
	Confidence levels		Medium <i>Professional judgement supported by data sampling</i>	Medium <i>Professional judgement supported by data sampling</i>
Function	Measure of whether the asset is appropriate for its intended use.	Ability to manage all types of incoming waste.	Meets expected level of service.	With population growth, more resources will have to be allocated to solid waste management.
	Confidence levels		Low <i>Professional Judgement with no data evidence</i>	Low <i>Professional Judgement with no data evidence</i>
Capacity	Whether the capacity of the assets and equipment are sufficient.	Ability to manage all incoming waste.	Meets expected capacity levels.	Budget for the expansion of the landfill is already under discussion for the next update of this AMP.
	Confidence levels		Low <i>Professional Judgement with no data evidence</i>	Low <i>Professional Judgement with no data evidence</i>

3.6 Technical Levels of Service

To deliver the customer values, and impact the achieved Customer Levels of Service, are operational or technical measures of performance. These technical measures relate to the activities and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

Technical service measures are linked to the activities and annual budgets covering:

- **Acquisition** – the activities to provide a higher level of service (e.g. automate a WTS, expand recycling centres, having additional weighbridges) or a new service that did not exist previously (e.g. construction of a new landfill).
- **Operation** – the regular activities to provide services (e.g. opening hours, waste collection, lawn mowing, energy consumption, inspections, etc.).
- **Maintenance** – the activities necessary to retain an asset as near as practicable to an appropriate service condition. Maintenance activities enable an asset to provide service for its planned life (e.g. pump check, desilting of dams, building and structure repairs).
- **Renewal** – the activities that return the service capability of an asset up to that which it had originally provided (e.g. pipe or fence replacement, landfill rehabilitation).

⁴ Yet to be adopted by Council. Presented here for the purposes of this AMP.

Table 3.6 shows the activities expected to be provided under the current 10 year planned budget allocation, and the forecast activity requirements being recommended in this AMP. The proposed position is to be agreed by Council, following community consultation, trade-off of levels of service performance and costs and risk within available resources in the long-term financial plan.

Table 3.6: Technical Levels of Service⁵

LIFECYCLE ACTIVITY	PURPOSE OF ACTIVITY	ACTIVITY MEASURE	CURRENT PERFORMANCE*	RECOMMENDED PERFORMANCE **
Acquisition/ Upgrades	Construction of Regional Landfill's cell #2	Construction based on cell #1 closeout forecast	Cell #1 fill rate tracking	Cell #1 closeout forecast revised annually
	Acquisition of new equipment and automation of current services	Improved accuracy in operational activities and increased service level	Many operations that can be performed digitally require manpower	Better service to the community. Allocate outdoor staff to more relevant roles
	Increase in recycling rates	The volume of waste diverted from the landfill	No budget planned for this activity	Annual review of the volume of recyclable waste collection
	Implementation of renewable energy strategies	Reduced electricity costs	No budget planned for this activity	Yearly review of savings in electricity costs
		Budget	<i>As per Total planned budget for 10 years</i>	<i>As per Total forecast cost for 10 years</i>
Operation	Improve service level and reduce costs	Feedback from residents on the quality of service, downtime, volume of waste diverted from the landfill	Low rate of complaints from residents, replacement of contractors by ARC staff to manage waste operations	Finding better strategies to deal with waste collection in areas with low population density
		Budget	<i>As per Total planned budget for 10 years</i>	<i>As per Total forecast cost for 10 years</i>
Maintenance	Ensure all assets are in adequate condition	Asset condition reports. Landfill monitoring	Quarterly groundwater analysis. Environmental monitoring data reports. Building condition assessments	Establish regular maintenance inspections. Perform condition reports for all assets in addition to buildings

⁵ Refer to Footnote No 5.

LIFECYCLE ACTIVITY	PURPOSE OF ACTIVITY	ACTIVITY MEASURE	CURRENT PERFORMANCE*	RECOMMENDED PERFORMANCE **
		Budget	<i>As per Total planned budget for 10 years</i>	<i>As per Total forecast cost for 10 years</i>
Renewal	Remediation and rehabilitation of landfills. Ensure all assets are in adequate condition	Asset condition reports. Landfill monitoring	Remediation and rehabilitation process on-track with forecast. Asset condition meets required standards	Also include other assets in the renewal forecast, if the register demonstrates necessity
		Budget	<i>As per planned budget for 10 years</i>	<i>As per total forecast cost for 10 years</i>
Disposal	No assets are planned for disposal	N/A	N/A	N/A
		Budget	<i>No planned budget for the next 10 years</i>	<i>No forecast cost for the next 10 years</i>

It is important to monitor the levels of service regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged changing circumstances such as technology and customer priorities will change over time.

4. FUTURE DEMAND

4.1 Demand Drivers

Drivers affecting demand include things such as demographic change, regulations, climate change, seasonal factors, consumer preferences and expectations, technological changes, economic factors, agricultural practices, environmental awareness, etc.

4.2 Demand Forecasts

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in Table 4.3.

4.3 Demand Impact and Demand Management Plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 4.3.

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

Opportunities identified to date for demand management are shown in Table 4.3. Further opportunities will be developed in future revisions of this AMP.

Table 4.3: Demand Management

DEMAND DRIVERS	PRESENT POSITION	PROJECTION	IMPACT ON SERVICES
Council financial sustainability	The Council's current LTFP meets the budget required to continue to provide a satisfactory level of service.	This plan anticipates the proposed acquisition/ upgrade of waste assets in the short/medium term	Without additional funding, the available resources will not meet population growth.
Have essential staff	Council is filling operational positions. Gap in project management role.	Hire staff with suitable knowledge and invest in their training to increase employee retention rates.	Downtime and limited ability to carry out projects to improve services.
Changes in legislative/ statutory requirements	There is staff capable of keeping waste operations up to date with current legislation.	Have more employees able to endorse new legislation/statutory requirements.	Failure to apply current legislation may cause delays in construction/ operations and fines.

DEMAND DRIVERS	PRESENT POSITION	PROJECTION	IMPACT ON SERVICES
Climate change/ Environmental sustainability	Food Organics and Garden Organics (FOGO) kerbside collection service and recycling strategies.	Increase the number of sustainable practices and strategies.	Increased revenue and reduce environmental impact.

4.4 Asset Programs to meet Demand

New assets required to meet demand may be acquired, donated or constructed. Additional assets are presented in appendix B.

Acquiring new assets will commit the Council to ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs for inclusion in the long-term financial plan.

4.5 Climate Change Adaptation

The impacts of climate change may have a significant impact on the assets we manage and the services they provide. In the context of the Asset Management Planning process climate change can be considered as both a future demand and a risk.

How climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which we respond and manage those impacts⁶.

As a minimum we consider how to manage our existing assets given potential climate change impacts for our region⁷. Risk and opportunities identified to date are shown in Table 4.5.1

Table 4.5.1 Managing the Impact of Climate Change on Assets and Services

CLIMATE CHANGE DESCRIPTION	PROJECTED CHANGE	POTENTIAL IMPACT ON ASSETS AND SERVICES	MANAGEMENT
Higher / recurrent rainfall events	Increased frequency and intensity	- Increased leachate generation, - More recurrent and faster filling of the sediment dam, - Higher risk of damaging outdoor assets,	- Improve the leachate pumping system from the leachate dam to the landfill surface, - Implement a leachate treatment system, - Find alternative solutions to reduce water level in the sediment dam.

⁶ IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

⁷ Council has yet to develop asset resilience strategies for its assets.

CLIMATE CHANGE DESCRIPTION	PROJECTED CHANGE	POTENTIAL IMPACT ON ASSETS AND SERVICES	MANAGEMENT
Temperature variation	Warmer summers	- Higher risk of bushfires and spontaneous combustion at the landfill, - Increased odour and pest activity in landfills.	- No bushfire prone areas within 1km surrounding area, - Daily cover, - Diversion of highly combustible materials from landfill, - FOGO to reduce Organic Matter in landfills.

Additionally, the way in which we construct new assets should recognise that there is opportunity to build in resilience to climate change impacts. Building resilience can have the following benefits:

- Assets will withstand the impacts of climate change,
- Services can be sustained, and
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint.

The impact of climate change on assets is a new and complex discussion and further opportunities will be developed in future revisions of this AMP.

5. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how Council plans to manage and operate the assets at the agreed levels of service (Refer to Section 3) while managing life cycle costs.

5.1 Background Data

5.1.1 Physical parameters

This AMP includes landfills, WTS, recycling centres and equipment. It has a current replacement cost of \$12.1 million. Currently, there is no single asset register that includes all assets in this asset group. This is an improvement action for this AMP.

5.1.2 Asset age profile

Construction dates of waste assets, are not available. Asset age profile cannot be provided for this AMP. Construction dates will need to be captured in a region-wide inventory of assets, which is an improvement action for Council. Once construction dates are available, an Age Profile Graph can be provided in future revisions of this AMP.

5.1.3 Asset capacity and performance

Assets are generally required to meet design standards where available. However, there is insufficient resources to address all known deficiencies. Locations where deficiencies in service performance are known are detailed in Table 5.1.3.

Table 5.1.3: Known Service Performance Deficiencies

LOCATION	SERVICE DEFICIENCY
Office	Lack of staff to manage new projects and to apply for capital project grants.
Regional Landfill / Recycling Centre	Operational issues by contractors.

The above service deficiencies were identified from ad hoc inspections conducted by staff.

5.1.4 Asset condition

Condition is currently monitored informally and since cyclic condition inspections of all asset classes are not a regular practice, there exists a very low data confidence in current condition of assets. Overall, waste assets are not regularly inspected, monitored or assessed. This is an improvement action for Council and will be addressed when Council implements its asset lifecycle approach to management of assets.

Condition is measured using a 1 – 5 grading system⁸ as detailed in Table 5.1.4. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level, however, for reporting in the AMP results are translated to a 1 – 5 grading scale for ease of communication.

Table 5.1.4: Condition Grading System

CONDITION GRADING	DESCRIPTION OF CONDITION
1	Very Good: free of defects, only planned and/or routine maintenance required
2	Good: minor defects, increasing maintenance required plus planned maintenance
3	Fair: defects requiring regular and/or significant maintenance to reinstate service
4	Poor: significant defects, higher order cost intervention likely
5	Very Poor: physically unsound and/or beyond rehabilitation, immediate action required

Waste assets were not condition rated. The condition profile of these assets is therefore, unavailable and cannot be provided in the AMP.

5.2 Operations and Maintenance Plan

Operations include regular activities to provide services. Examples of typical operational activities include salaries, materials, contracts, fuel, licenses and staff training.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating. Examples of typical maintenance activities include pipe and fence inspection and equipment repairs.

Assessment and maintenance are carried out by the waste team through inspections, experience and judgment. The monitoring of landfills after their closure is scheduled and carried out by outsourced companies. However, there is no established maintenance plan or budget forecast for typical maintenance, which is performed only when necessary.

⁸ IPWEA, 2015, IIMM, Sec 2.5.4, p 2|80.

5.2.1 Asset hierarchy

An asset hierarchy is a logical index of all equipment, machines, and components, and how they work together. It is critical for understanding how action on one asset affects other assets, establishing a parent-child relationship amongst multiple assets. Building and understanding the asset hierarchy is critical to efficiently track, schedule, and identify the root causes of problems.

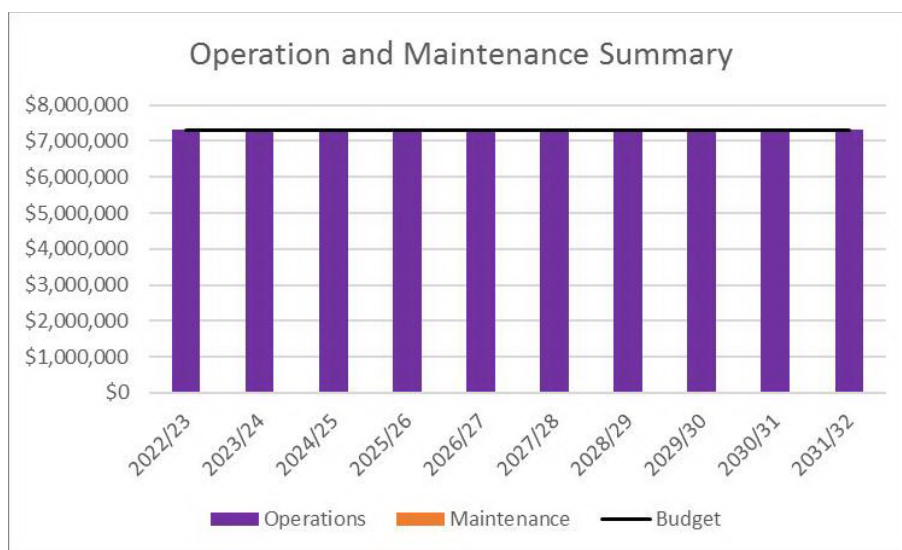
The asset hierarchy is unavailable and is an improvement action for this AMP.

5.2.2 Summary of forecast operations and maintenance costs

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs may increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease. Figure 5.2.2 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance Planned Budget.

There is no budget allocation for maintenance in the LTFP 2022-2032. Waste management currently runs reactive maintenance when necessary. Implementing a maintenance budget is an improvement plan included in this AMP.

Figure 5.2.2: Operations and Maintenance Summary



All forecast values are shown in 2022 dollar value.

Operating costs are steady, assuming that the annual population growth rate of Armidale LGA⁹ remains below 1% and the acquisition of new equipment or the construction of a new landfill does

⁹ NSW Population Projections, 2019, Armidale Regional Council, p 2

not necessarily entail an increase in staff, since the new landfill cell only starts operating when the old landfill cell ceases operation. The forecasted budget increase for operation and maintenance is aligned with the annual Consumer Price Index increase of 2.5%¹⁰.

5.3 Renewal Plan

Renewal is major capital work which does not significantly alter the original service provided by the asset, but restores, rehabilitates, replaces or renews an existing asset to its original service potential.

Assets requiring renewal are identified from one of two approaches in the Lifecycle Model.

- The first method uses Asset Register data to project the renewal costs (current replacement cost) and renewal timing (acquisition year plus updated useful life to determine the renewal year), or
- The second method uses an alternative approach to estimate the timing and cost of forecast renewal work (i.e. condition modelling system, staff judgement, average network renewals, or other).

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in Table 5.3.

Table 5.3: Useful Lives of Assets

ASSET (SUB) CATEGORY	USEFUL LIFE
Landfills	10 years (per cell)
Buildings	50 years
Fence	30 years

The estimates for renewals in this AMP were based on the alternate method.

5.3.1 Renewal ranking criteria

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing asset to deliver the service for which it was acquired to facilitate (e.g. increase recycling centre waste capacity), or
- To ensure the asset is of sufficient quality to meet service requirements (e.g. condition of a WTS).

It is possible to prioritise renewals by identifying assets or asset groups that:

¹⁰ Resourcing Strategy, 2022, Armidale Regional Council, p 61

- Have a high consequence of failure,
- Have high use and subsequent impact on users would be significant,
- Have higher than expected operational or maintenance costs, and
- Have potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.¹¹

5.3.2 Summary of future renewal costs

There is no forecast of asset renewal in the LTFP.

For the purposes of this AMP, landfill rehabilitation was considered as an acquisition cost.

5.4 Acquisition Plan

Acquisition reflects new assets that did not previously exist or works that will upgrade or improve an existing asset beyond its current capacity. It may be a result of growth, demand, social or environmental needs. Assets may also be donated to ARC.

The construction of cell #2 of the regional landfill is included in the 10-year financial plan and is in line with the municipality's proposed plans for population and employment growth over the next 20 years. By reaching a larger population with purchasing power, the demand for solid waste management will increase. New assets may be required to meet the new demand in addition to the search for new techniques to increase the diversion of waste from landfill.

5.4.1 Selection criteria

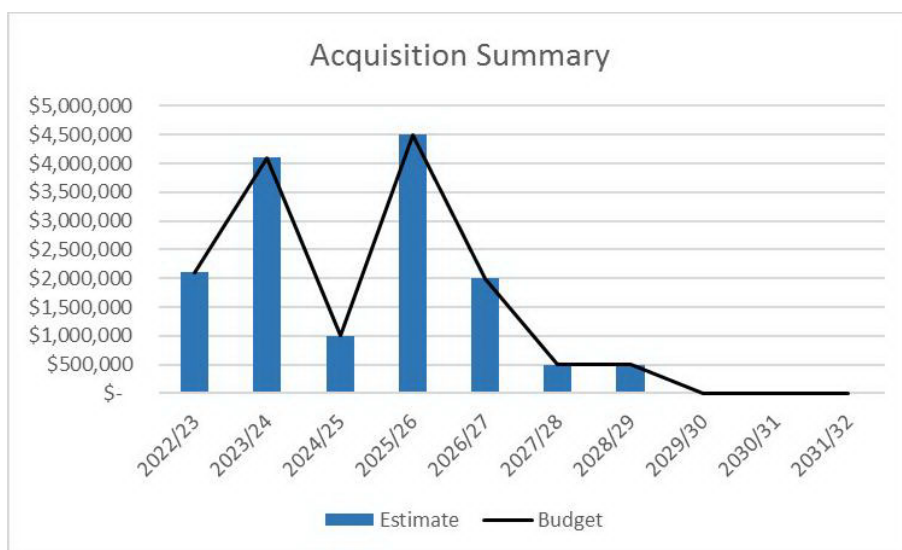
Proposed acquisition of new assets and the upgrade of existing assets are identified from various sources, such as community requests, proposals identified by strategic plans, or increased demand. Potential upgrades and acquisitions are analysed and verified if they are essential to the Council needs and sustainable in the long-term.

New/upgraded assets and services are to be funded from the revenue generated by the solid waste management fees and charges, and grants where available.

5.4.2 Summary of future asset acquisition costs

Forecast acquisition asset costs are summarised in Figure 5.4.2 and shown relative to the proposed acquisition budget. The forecast acquisition capital works program is shown in Appendix B.

¹¹ Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

Figure 5.4.2: Acquisition Summary

All forecast values are shown in 2022 dollar value.

Committing to new assets implies committing to future operating, maintenance and renewal costs. Future depreciation must also be taken into account when analysing long-term sustainability. Regarding the long-term impacts of acquiring assets. Expenditure on new assets and services in the capital works program will be accommodated in the long-term financial plan, but only to the extent that there is available funding.

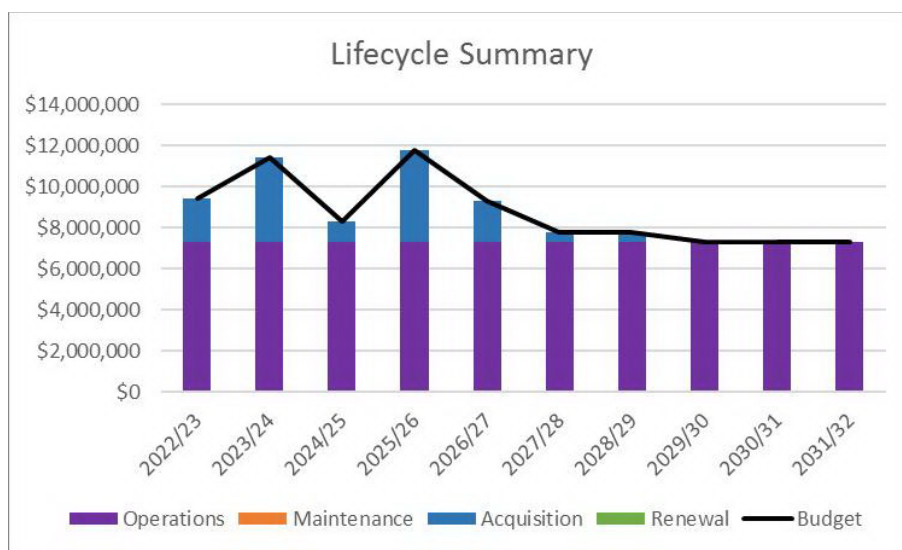
5.5 Disposal Plan

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition or relocation. There are no forecast disposals in LTFP 2022-2032 to be reported in this AMP.

5.6 Summary of asset forecast costs

The financial projections of this AMP are shown in Figure 5.7 and detailed in Appendix A. These projections include forecast costs of acquisition, operation, maintenance, renewal, and disposal. The forecast costs are displayed in relation to the proposed budget.

The forecast costs are represented by the bars, while the proposed budget line indicates the estimated available funding for the next 10 years. The gap between the forecast and the proposed budget is the basis of the discussion on achieving balance between costs, levels of service and risk to achieve the best value outcome.

Figure 5.7: Lifecycle Summary

All forecast values are shown in 2022 dollar value.

The proposed budget for the projects included in the 10-year planning corresponds to the expected costs, since all projects presented are essential to keep waste assets sector operating, as well as its level of service. If there are new acquisitions, renewals, or changes to the 10-year plan, these will be added to future updates of this AMP.

6. RISK MANAGEMENT PLANNING

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: ‘coordinated activities to direct and control with regard to risk’.¹²

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

6.1 Critical Assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarised in Table 6.1. Failure modes may include physical failure, collapse or essential service interruption.

Table 6.1: Critical Assets

CRITICAL ASSETS	CRITICAL FAILURE MODE	OPERATIONS & MAINTENANCE ACTIVITIES
Equipment	Breakdown	Service interruption or delay
Landfill	Erosion / collapse	Service interruption or delay and environmental damage
Stormwater and leachate dams	Overflow	Environmental damage

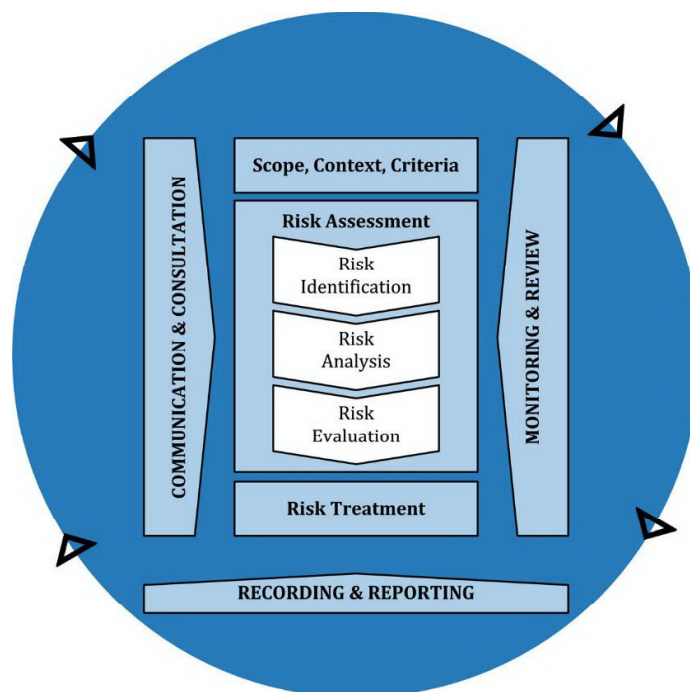
6.2 Risk Assessment

The risk management process used is shown in Figure 6.2 below.

It is an analysis and problem-solving technique designed to provide a logical process for the selection of treatment plans and management actions to protect the community against unacceptable risks.

The process is based on the fundamentals of International Standard ISO 31000:2018.

¹² ISO 31000:2009, p 2

Figure 6.2: Risk Management Process – Abridged

Source: ISO 31000:2018, Figure 1, p9

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan¹³. The residual risk and treatment costs of implementing the selected treatment plan is shown in Table 6.2. It is essential that these critical risks and costs are reported to management and the Council.

¹³ An Infrastructure Risk Management Plan has yet to be developed in accordance with Council's Risk Policy. This is an improvement action for Council.

Table 6.2: Risks and Treatment Plan

SERVICE OR ASSET AT RISK	WHAT CAN HAPPEN	RISK RATING (VH, H)	RISK TREATMENT PLAN	RESIDUAL RISK*
Guyra Landfill	Heavy Storm / Groundwater Contamination	H	Sprinkle Leachate Back To The Landfill	L
Long Swamp Rd Landfill	Heavy Storm / Groundwater Contamination	H	Sprinkle Leachate Back To The Landfill	L
Regional Landfill (Leachate Collection Pond)	Leachate Containment System Failure / Groundwater Contamination	H	Repair The Leachate Containment System	M
Regional Transfer Stations	Oil Spill / Soil And Groundwater Contamination	H	Bumped Concrete Floor To Store Oil Barrels	M
Resource Recovery Centre	Chemical Spill / Soil And Groundwater Contamination	H	Bumped Concrete Floor	M

Note * the residual risk is the risk remaining after the selected risk treatment plan is implemented.

6.3 Infrastructure Resilience Approach

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions we need to understand our capacity to 'withstand a given level of stress or demand', and to respond to possible disruptions to ensure continuity of service. Resilience recovery planning, financial capacity, climate change risk assessment and crisis leadership have yet to be undertaken and developed by Council.

ARC currently do not measure resilience in service delivery. This will be included in future iterations of the AMP.

6.4 Service and Risk Trade-Offs

The decisions made in adopting this AMP are based on the objective to achieve the optimum benefits from the available resources.

6.4.1 What we cannot do

Council currently has enough budget to provide services at the desired levels of service, acquire essential equipment and carry out essential projects for solid waste management. However, it has a deficit of staff to carry out new and non-critical projects, such as:

- Acquisition of large/high precision equipment to increase the recovery rate of waste and diversion from the landfill,
- Capital projects to improve the allocation and/or treatment of collected recyclable materials, and
- Submission of grant applications due to lack of staff.

6.4.2 Service trade-off

If there is forecast work (operations, maintenance, renewal, acquisition or disposal) that cannot be undertaken due to available resources, then this will result in service consequences for users. These service consequences include:

- Delay in kerbside collection,
- Increased waste levy.

6.4.3 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- Reduced landfill lifespan,
- Increased waste disposal fees,
- Reduced customer satisfaction level.

These actions and expenditures are considered and included in the forecast costs.

7. FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AMP. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

7.1 Financial Sustainability and Projections

7.1.1 Sustainability of service delivery

There are two key indicators of sustainable service delivery that are considered in the AMP for this service area. The two indicators are the:

- Asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years), and
- Medium term forecast costs/proposed budget (over 10 years of the planning period).

7.1.2 Asset Renewal Funding Ratio

The Asset Renewal Funding Ratio is an important indicator and illustrates that over the next 10 years we expect to have $\geq 100\%$ of the funds required for the optimal renewal of assets

There is no forecast of asset renewal in the LTFP.

7.1.3 Medium term – 10 year financial planning period

This AMP identifies the forecast operations, maintenance and renewal costs required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

This forecast work can be compared to the proposed budget over the first 10 years of the planning period to identify any funding shortfall.

The forecast operations, maintenance and renewal costs over the 10 year planning period is \$87.8 million, while the budget for the same period is \$87.8 million. This indicates that 100% of the forecast costs needed to provide the reduced services documented in this AMP are accommodated in the proposed budget.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to achieve a financial indicator of approximately 1.0 for the first years of the AMP and ideally over the 10 year life of the Long-Term Financial Plan.

7.1.4 Forecast Costs (outlays) for the long-term financial plan

Table 7.1.4 shows the forecast costs (outlays) required for consideration in the 10 year long-term financial plan.

Having a balance between the anticipated expenditures, required to deliver the agreed LoS, with the planned budget allocations in the long-term financial plan means that services are delivered in a financially sustainable manner.

Table 7.1.4: Forecast Costs (Outlays) for the Long-Term Financial Plan

YEAR	ACQUISITIONS	OPERATIONS	MAINTENANCE	RENEWALS	TOTAL
2022	\$2,100,000	\$7,309,000	\$0	\$0	\$9,409,000
2023	\$4,100,000	\$7,309,000	\$0	\$0	\$11,409,000
2024	\$1,000,000	\$7,309,000	\$0	\$0	\$8,309,000
2025	\$4,500,000	\$7,309,000	\$0	\$0	\$11,809,000
2026	\$2,000,000	\$7,309,000	\$0	\$0	\$9,309,000
2027	\$500,000	\$7,309,000	\$0	\$0	\$7,809,000
2028	\$500,000	\$7,309,000	\$0	\$0	\$7,809,000
2029	\$0	\$7,309,000	\$0	\$0	\$7,309,000
2030	\$0	\$7,309,000	\$0	\$0	\$7,309,000
2031	\$0	\$7,309,000	\$0	\$0	\$7,309,000
TOTALS	\$14,700,000	\$73,090,000	\$0	\$0	\$87,790,000

*Forecast only include projects in the 10 year capital program. Forecast costs are shown in 2022 dollar value.

7.2 Funding Strategy

The proposed funding for assets is outlined in Council's budget and Long-Term financial plan.

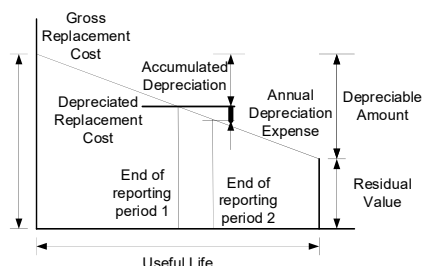
The financial strategy of the entity determines how funding will be provided, whereas the AMP communicates how and when this will be spent, along with the service and risk consequences of various service alternatives.

7.3 Valuation Forecasts

7.3.1 Asset valuations

The best available estimate of the value of assets included in this AMP are shown below. The assets are valued at fair value at cost to replace service capacity:

Replacement Cost (Current/Gross)	\$12,144,000
Depreciable Amount	\$11,286,000
Depreciated Replacement Cost ¹⁴	\$989,000
Depreciation	\$421,000



7.3.2 Valuation forecast

Asset values are forecast to increase as additional assets are added to the service.

Additional assets will generally add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts.

7.4 Key Assumptions Made in Financial Forecasts

In compiling this AMP, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AMP and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AMP are:

- That a permanent SRV of 50% for the General Fund over three years will not impact waste services,
- Only projects included in the LTFP were considered,
- Budgets have been allocated based on the best available data on assets,
- Future demand for new assets,
- Data confidence level is low,
- Staff needs are not resourced adequately.

¹⁴ Also reported as Written Down Value, Carrying or Net Book Value.

7.5 Forecast Reliability and Confidence

The forecast costs, proposed budgets, and valuation projections in this AMP are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is classified on an A - E level scale¹⁵ in accordance with Table 7.5.1.

Table 7.5.1: Data Confidence Grading System

CONFIDENCE GRADE	DESCRIPTION
A. Very High	Data based on sound records, procedures, investigations and analysis, documented properly and agreed as the best method of assessment. Dataset is complete and estimated to be accurate $\pm 2\%$
B. High	Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example some of the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation. Dataset is complete and estimated to be accurate $\pm 10\%$
C. Medium	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated $\pm 25\%$
D. Low	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. Dataset may not be fully complete, and most data is estimated or extrapolated. Accuracy $\pm 40\%$
E. Very Low	None or very little data held.

The estimated confidence level for and reliability of data used in this AMP is shown in Table 7.5.2.

Table 7.5.2: Data Confidence Assessment for Data used in AMP

DATA	CONFIDENCE ASSESSMENT	COMMENT
Demand drivers	D	Professional judgment and limited traffic data
Growth projections	C	NSW government report
Operations expenditures	B	Finance reports
Maintenance expenditures	B	Finance reports
Projected Renewal	D	Professional judgment
- Asset values	D	Finance reports
- Asset residual values	D	Finance reports
- Asset useful lives	D	Professional judgment
- Condition modelling	D	Professional judgment
- Asset Register	D	A draft asset register was created to enable the development of this AMP

The estimated confidence level and reliability of data used in this AMP are considered low confidence.

¹⁵ IPWEA, 2015, IIMM, Table 2.4.6, p 2|71.

8. PLAN IMPROVEMENT AND MONITORING

8.1 Status of Asset Management Practices¹⁶

8.1.1 Accounting and financial data sources

This AMP utilises accounting and financial data. The source of the data is Technology One.

8.1.2 Asset management data sources

This AMP also utilises asset management data from Council asset records and staff knowledge.

8.2 Improvement Plan

It is important that an entity recognise areas of their AMP and planning process that require future improvements to ensure effective asset management and informed decision making. The improvement plan generated from this AMP is shown in Table 8.2.

Table 8.2: Improvement Plan

#	TASKS	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1	Investigate service deficiencies of all assets and document it in future iterations of this AMP.	Waste Services Coordinator	Waste Services Coordinator, contractors	2022-24
2	Carry out resilience assessment of assets and formalise resilience strategies for adoption by Council. Document in future iterations of this AMP.	Utilities Manager	Utilities Manager, contractors	2022-24
3	Prepare Infrastructure Risk Management Plan in accordance with Council's Risk Policy and risk management procedures. Plan to be informed by the assessment of risks of the waste asset class.	Waste Services Coordinator	Waste Services Coordinator, contractors	2022-24
4	Assess criticality of assets. By identifying critical assets and failure modes Council can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets. Document in future iterations of this AMP.	Utilities Manager	Utilities Manager, Waste Services Coordinator, contractors	2022-24
5	Adopt a Levels of Service Framework which include defined Customer and Technical LoS and performance	Utilities Manager	Assets, Utilities Manager	2022-24

¹⁶ ISO 55000 Refers to this as the Asset Management System

#	TASKS	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
	measures and incorporate in future iterations of this AMP.			
6	Council to invest in Enterprise Asset Management Software that links assets data with financial information. The assets department needs to take ownership of the system, record and manage asset data and activities, and maintain complete and accurate inventory of assets. Incorporate in next AMP update.	Chief Officer Corporate and Community	Finance and corporate management	2022-24
7	Allocate resources and train staff to lift capability in asset management. Define roles and responsibilities to manage assets, systems and monitor development and implementation of the AMP.	Corporate management	Assets, finance and corporate management	2022-24
8	Communicate asset valuation results to designated asset planners so these can be used to inform planning of renewal activities in forward works program. Monitor AMP implementation.	Assets	Assets and finance	2022-24
9	Update Asset Management Policy and establish AM Framework. Incorporate in next AMP update.	Assets	Assets, finance and corporate management	2022-24
10	Establish asset lifecycle management processes and set up systems to implement life cycle approaches in asset management planning. Incorporate in future iterations of this AMP.	Assets, finance and corporate management	Assets, finance and corporate management	2022-24
11	Establish standard asset management planning processes across the organization to ensure consistency in the information generated within each department.	Assets, finance and corporate management	Assets, finance and corporate management	2022-24
12	Carry out customer satisfaction surveys to inform the development of levels of service performance measured by Council.	Communications	Assets and corporate management	2022-24
13	Establish formal processes to assess asset condition and asset performance monitoring. These will be used to plan investments in the LTFP and future iterations of this AMP.	Utilities Manager, assets	Assets and finance	2022-24
14	Set up formal processes for prioritisation of investments in acquisition, operations, maintenance, renewals and capital upgrades to inform development of long term forward works program for the LTFP and incorporate in the next iteration of this AMP.	Assets, finance and corporate management	Assets, finance and corporate management	2022-24

#	TASKS	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
15	AMPs in the future will be used to drive expenditure in assets so the information used to develop the works programs must be evidence based with a high degree of accuracy to justify the need for the investment. Council must set their standard requirements for AMPs.	Assets, finance and corporate management	Assets, finance and corporate management	2022-24

8.3 Monitoring and Review Procedures

This AMP will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AMP will be reviewed and updated annually to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget are incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan once completed.

The AMP has a maximum life of 4 years and is due for complete revision and updating within 2 years of each Armidale Regional Council election.

8.4 Performance Measures

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

- The number of complaints and requests for service,
- The number of issues resolved,
- The response time to address issues and complaints,
- The change in backlog, asset maintenance and renewal ratios.

9. REFERENCES

- IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM
- IPWEA, 2015, 3rd edn., 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM
- IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/namsplus.
- IPWEA, 2015, 2nd edn., 'Australian Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/AIFMM.
- IPWEA, 2020 'International Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney
- IPWEA, 2018, Practice Note 12.1, 'Climate Change Impacts on the Useful Life of Assets', Institute of Public Works Engineering Australasia, Sydney
- IPWEA, 2012, Practice Note 6 Long-Term Financial Planning, Institute of Public Works Engineering Australasia, Sydney, <https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn6>
- IPWEA, 2014, Practice Note 8 – Levels of Service & Community Engagement, Institute of Public Works Engineering Australasia, Sydney, <https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn8>
- ISO, 2014, ISO 55000:2014, Overview, principles and terminology
- ISO, 2018, ISO 31000:2018, Risk management – Guidelines
- Armidale Regional Council, Advancing Our Region, Your Community Strategic Plan 2022-2032
- NSW Population Projections, 2019, Armidale Regional Council
- Resourcing Strategy, 2022, Armidale Regional Council
- Armidale Regional Council, Long Term Financial Plan Budgets 2022-2032

10. APPENDICES

10.1 Appendix A - Expenditure Forecast 2022-2032

WASTE

10 Year forecast 2022-2032

ACTIVITY	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	Total 10 Years
OPERATIONS & MAINTENANCE											
<i>Operations</i>	\$ 7,309,000	\$ 7,309,000	\$ 7,309,000	\$ 7,309,000	\$ 7,309,000	\$ 7,309,000	\$ 7,309,000	\$ 7,309,000	\$ 7,309,000	\$ 7,309,000	\$ 73,090,000
<i>Maintenance</i>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sub-total Operations & Maintenance	\$ 7,309,000	\$ 7,309,000	\$ 7,309,000	\$ 7,309,000	\$ 7,309,000	\$ 7,309,000	\$ 7,309,000	\$ 7,309,000	\$ 7,309,000	\$ 7,309,000	\$ 73,090,000
RENEWALS											
<i>All waste assets</i>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sub-total Renewals	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UPGRADE & NEW											
<i>All waste assets</i>	\$ 2,100,000	\$ 4,100,000	\$ 1,000,000	\$ 4,500,000	\$ 2,000,000	\$ 500,000	\$ 500,000	\$ -	\$ -	\$ -	\$ 14,700,000
Sub-total Upgrade & New	\$ 2,100,000	\$ 4,100,000	\$ 1,000,000	\$ 4,500,000	\$ 2,000,000	\$ 500,000	\$ 500,000	\$ -	\$ -	\$ -	\$ 14,700,000
Total	\$ 9,409,000	\$ 11,409,000	\$ 8,309,000	\$ 11,809,000	\$ 9,309,000	\$ 7,809,000	\$ 7,809,000	\$ 7,309,000	\$ 7,309,000	\$ 7,309,000	\$ 87,790,000

10.2 Appendix B - Acquisition Project Summary

YEAR	ITEM	PROJECT DESCRIPTION	ESTIMATE '000
2022	1	Finalise automation of Ebor Waste Transfer Station, and survey Wollomombi and Hillgrove residents for feedback on future kerbside collection or alternative options	\$300
	2	Installation of Long Swamp Road Baler	\$1,200
	3	Regional Landfill - SCADA telemetry, pump Automation, drainage works, and leachate management	\$100
	4	Regional Landfill Capital Works	\$500
2022	TOTAL		\$2,100
2023	1	Long Swamp Road - Landfill rehabilitation	\$500
	2	Waste Landfill Remediation Works (Guyra WTS, LS Rd Landfill, Regional Landfill)	\$3,600
2023	TOTAL		\$4,100
2024	1	Regional Landfill - Second Cell	\$500
	2	Long Swamp Road - Landfill rehabilitation	\$500
2024	TOTAL		\$1,000
2025	1	Regional Landfill - Second Cell	\$4,000
	2	Long Swamp Road - Landfill rehabilitation	\$500
2025	TOTAL		\$4,500
2026	1	Regional Landfill - Second Cell	\$1,500
	2	Long Swamp Road - Landfill rehabilitation	\$500
2026	TOTAL		\$2,000
2027	1	Long Swamp Road - Landfill rehabilitation	\$500
2027	TOTAL		\$500
2028	1	Long Swamp Road - Landfill rehabilitation	\$500
2028	TOTAL		\$500

