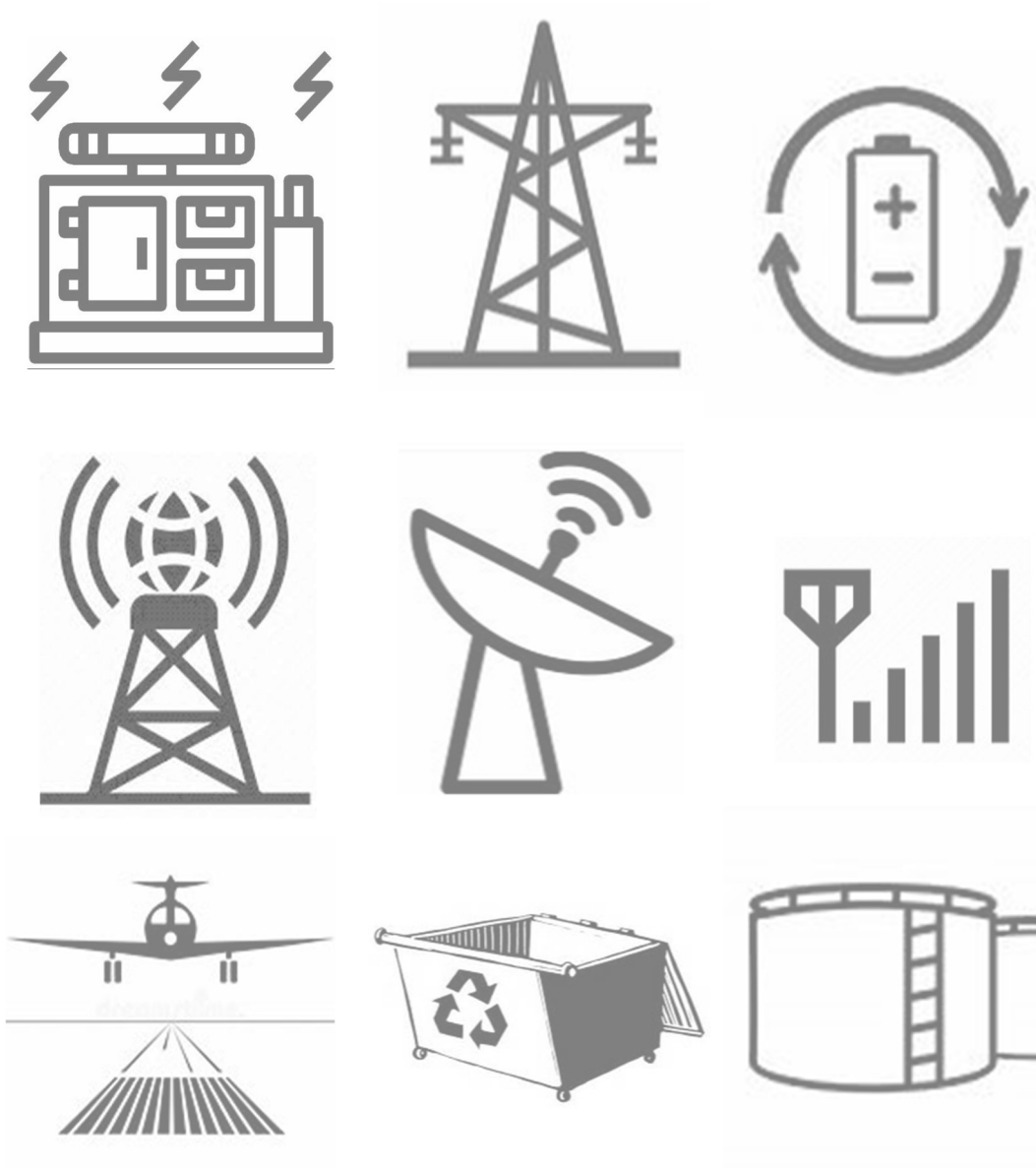
NORFOLK ISLAND
Regional Council

ASSET MANAGEMENT PLAN

Other Infrastructure



Adopted - 5 July 2023 (Res: 2023/67)

Document Control	Other Infrastructure Asset Management Plan

Rev No	Date	Effective Date	Revision Details	Author	Reviewer	Approver
Draft	June 2019		Draft	Alan Buckley		
Final	June 2019	26 June 2019	Final			Council
V1.0	June 2023		Draft	Roger Nielsen	Gordon Malesevic	Andrew Roach
Final	July 2023	5 July 2023	Adopted	Roger Nielsen		Council

Contents

1.0 EXECUTIVE SUMMARY

1.1 Context

This Asset Management Plan (AM Plan) details information about Other Infrastructure assets with actions required to provide an agreed level of service in the most cost-effective manner while outlining associated risks.

This plan covers the infrastructure assets In the Other Infrastructure network comprising:

- **Airport** including baggage handling, fencing, fuel handling, hardstand lighting and pilot aids
- **Ball Bay Fuel Farm** including fencing and fuel handling infrastructure
- **Electricity Supply** including batteries, fuel handling, generators, powerline network, substation/transformers and switchboards
- **Telecom** including batteries, billing system, firefighting, generators and the voice and data network
- **Waste Management** including batteries, bins, incinerator and recycling equipment
- **Works Depot** fuel handling infrastructure

The above infrastructure assets have an estimated replacement value of $70.1m as of December 2022[1].

1.2 Levels of Service

The allocation in the planned budget is sufficient to continue providing existing services at current levels for the planning period. The target level of service is to ensure that assets remain in a serviceable condition. However, there is a risk from operational skills and knowledge residing with a few long term employees.

Expectations from the community and service providers for affordable, reliable and sustainable services are the drivers for significant technological change to the provision of power through renewables, the transformation of waste management through recycling initiatives and faster more reliable connectivity through upgrades to internet services.

1.3 Condition Assessment

The June 2020 assessment of asset conditions[2] for this asset class identified that fifteen per cent of this asset class is rated as being in poor or very poor condition. This means that these assets have significant defects or are physically unsound. A further thirty four percent of this asset class is assessed as being in fair condition and requiring regular or significant maintenance to maintain service levels.

1.4 Lifecycle Management Plan

The forecast lifecycle costs necessary to provide the services covered by this AM Plan include operating, maintenance, renewal and acquisition of assets. The AM Plan informs a long-term financial planning period of ten years. Therefore, a summary output from the AM Plan is the forecast of ten year total outlays, which for the Other Infrastructure Class is estimated at $8.98m on average per year.

1.5 Financial Summary

The reality is that only what is funded in annual budgets can be provided. Informed decision making depends on the AM Plan emphasising the consequences of planned budgets on the service levels provided and risks. One of the key assumptions in this AM Plan is that there is sufficient funding in forward estimates of updated long term financial plans to cover the required outlays contained in this AM Plan.

[1] All figure values are shown in current-day dollars (December 2022). The gross carrying amount recorded in the asset register has been indexed using the Australia Producer Price Index published by the Australian Bureau of Statistics. See Appendix B for the index number applied to each Category.

[2] Australis Asset Advisory Group, 2020 NIRC Infrastructure Revaluation, June 2020

1.6 Monitoring and Improvement Program

Reviewing and updating this AM Plan as part of the annual budget process will ensure that it remains current and funding allocations are in line with service requirements. Asset management practices, asset hierarchy management and the asset management system will be reviewed in line with the improvement plan.

2.0 Introduction

2.1 Background

An AM Plan is developed to demonstrate planned management of assets and the services provided from those assets, compliance with regulatory requirements, and to define the funding needed to provide the planned levels of service over a ten year planning period.

The development of this AM Plan was guided by the AM Plan structure and content recommendations set down in the IPWEA's International Infrastructure Management Manual (IIMM, Version 6.0, 2020)

This AM Plan is to be read in conjunction with Council's Asset Management Policy and with reference to the current versions of the following key planning documents:

- Community Strategic Plan
- Long Term Financial Plan
- Operational Plan including the annual budget

Asset management planning within Council is developing. The aim is to have asset management plans at the IPWEA's Core maturity level[3]. This means that AM Plans contain content including asset information, levels of service, demand and lifecycle strategies linking to financial forecasts with key assumptions stated.

The Other Infrastructure assets covered by this AM Plan are shown in Table 2.1.

Table 2.1: Other Infrastructure assets covered by this AM Plan

Category	Estimated Replacement Value[4]	Category	Estimated Replacement Value
■ Airport	$6.42m	■ Telecom	$19.43m
■ Ball Bay Fuel Farm	$4.18m	■ Waste Management	$1.43m
■ Electricity Supply	$38.74m	■ Other	$610.2k

The above infrastructure assets have an estimated replacement value of $70.1m as of December 2022.

2.2 Asset Data

Council's Asset Management System, AssetFinda, currently stores data on Other Infrastructure assets controlled by Council.

The data being captured is reliant on the type of asset being entered into the AssetFinda system. For example, larger complex assets, such as networks, that have significant parts with differing lifecycles are componentised.

The asset hierarchy, componentisation and estimated useful lives are set down in Council Policy Statement No. 3.07 Asset Accounting Policy and are summarised in Table 5.3 of this AM Plan.

2.3 Key Stakeholders

Key stakeholders in the preparation and implementation of this AM Plan are shown in Table 2.3.

[3] IPWEA, 2020, Sec 3.6.5, Aligning the AM PLANs and Corporate Plan: identifies 5 levels of maturity from Aware to Advanced. Core level is level 3. Currently, Council's AM planning is considered to be at level 2, Basic.

[4] All figure values are shown in current-day dollars (December 2022). The gross carrying amount recorded in the asset register has been indexed using the Australia Producer Price Index published by the Australian Bureau of Statistics. See Appendix B for the index number applied to each Category.

Table 2.3: Key Stakeholders in the AM Plan

Key Stakeholder	Role in Asset Management Plan
Norfolk Island Community	■ As regular consumers of the services provided by the assets.
Emergency services	■ As priority customers of the services provided by the assets.
Commercial customers	■ As significant consumers of the services provided by the assets.
Government services	■ As regular consumers of the services provided by the assets.
Tourists and visitors	■ As casual customers of the services provided by the assets.
Council Administrator and General Manager	■ Endorse the AM Plan, ■ Allocate resources to meet planning objectives in providing services while managing risks, ■ Ensure services are sustainable.
Audit and Risk Management Committee	■ Independent assurance and assistance to Council on Council's risk, control and compliance frameworks, and external accountability.
Management	■ Support the objectives of the AM Plan, ■ Provide strategic and operational input and support, ■ Project manage the design and implementation of renewal, upgrade and new construction of infrastructure assets. ■ Allocate and manage the necessary resources to support the implementation of the AM Plan.
Engineer and technical officers	■ Provide technical input and support, ■ Prepare and update works programmes, ■ Delivery of works programmes, ■ Update and maintain the integrity of asset data.
Corporate and Finance	■ Ensure the integrity of financial data relevant to the implementation of the AM Plan.
Council staff	■ Utilise the asset services in their roles with Council.

2.4 Goals and Objectives of Asset Management

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 the present and future community. We have acquired infrastructure assets by purchase, by contract, by construction by our staff and by donation of assets constructed by the Commonwealth and others.

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 developing 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.

2.5 AM Plan Framework

- The IIMM outlines that there is no single correct way to structure an AM Plan and many councils have developed their own[5]. This plan incorporates the IIMM AM Plan structure although it has modified elements to suit Council's asset management position at this point in time.
- The key structure of the plan is as follows:
    - Levels of service – specifies the services and levels of service to be provided,
    - 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,
    - Risk management,
    - Financial summary – what funds are required to provide the defined services,
    - Monitoring – how the plan will be monitored to ensure objectives are met,
    - Asset management improvement plan – how we increase asset management maturity.

[5] IPWEA, IIMM,2020, Sec 3.6.3, The Portfolio AM PLAN, Activity and Service Plans

3.0 LEVELS OF SERVICE

3.1 Community Research and Expectations

Council receives community input from a variety of sources including:

- the community strategic planning consultation process,
- feedback on Council's delivery program,
- submissions on the annual Operational Plan including the annual budget,
- reports from the Council advisory committees,
- consultation outcomes from planning and review undertakings, and
- ad hoc representations from community groups and individuals.

The **Norfolk Island Community Strategic Plan: 2016-2026** was prepared in consultation and cooperation with a broad cross section of the community and reflects the aspirations and values of the people who live on Norfolk Island. Development of the Plan was undertaken in three phases and included twenty-one focus groups, individual surveys, community workshops, public forums and a draft plan released for public consultation during each phase.

The community's vision and the Council's mission are set down in the Plan.

Our vision is:

> *Norfolk Island – the Best Small Island in the World*

Our mission is:

> *The Norfolk Island Regional Council will provide local civic leadership and governance through good decision making, accountability and transparency.*
>
> *We will protect and enhance our unique culture, heritage, traditions and environment for the Norfolk Island People. We will do this through promoting a healthy and sustainable lifestyle, by looking after our community assets, and by fostering a prosperous economy.*

The community's aspirations from the Strategic Plan are incorporated into the **Delivery Program** that each elected Council commits to undertake during its four-year term of office. These commitments are given substance by Council's annual **Operational Plan** which includes the annual budget. The cost to procure and renew assets are detailed in the annual budget along with the forecast operation and maintenance costs to ensure that the assets can deliver their intended level of service to the community.

The local government act covering Norfolk Island stipulates a minimum of twenty-eight days of public exhibition of the draft operational plan before it is adopted. During that period, submissions from the community are received and considered by Council.

Council advisory committees provide a structure for interested residents and subject matter experts to play an active role in contributing to council policy and direction. Advisory committees provide an important link for the council with the community and are supported via other community consultative methods.

Council has established four advisory committees, being:

- Business, Innovation and Tourism,
- Reserves and Conservation,
- Sustainability, and
- Youth.

3.2 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 are important to the community,
- whether they see value in what is currently provided and
- the likely trend over time based on the current budget provision

Table 3.2.1: Customer Values

Customer Values	Source
The Norfolk community sees value in the renovation of infrastructure and the provision of quality services.	Norfolk Island Community Strategic Plan: 2016-2026
Important issues the community wanted to see addressed: – waste infrastructure – renewable energy infrastructure, and – quality internet services.	Norfolk Island Community Strategic Plan: 2016-2026
Electricity supply customers see value in: – secure reliable electricity supply, and – reducing the cost of electricity.	EPC Technologies, Norfolk Island Current Status Report, 2021
Telecom customers see value in: – fast and reliable Internet, and – the availability of affordable internet products and services.	GWI Pty Ltd, Norfolk Island Aggregate data bandwidth demand and off-island connectivity report, April 2022

3.3 Levels of Service

Levels of service are the defined qualities of assets against which performance can be measured. A condition ranking is a technical measure of an asset's ability to provide the desired service to the community. By specifying a condition ranking level as a performance indicator, resources can be allocated to best achieve the desired community outcomes and demonstrate effective performance.

Table 3.3: Technical Levels of Service

Performance Measure	Level of Service Objective	Performance Measure	KPI	Average condition*
Condition	Serviceable condition of assets	Average condition of **airport** assets	Equal or less than condition rating 2	2.9

Performance Measure	Level of Service Objective	Performance Measure	KPI	Average condition*
Condition	Serviceable condition of assets	Average condition of **electricity** assets	Equal or less than condition rating 2	2.2
		Average condition of **fuel farm** assets	Equal or less than condition rating 3	2.9
		Average condition of **Telecom** assets	Equal or less than condition rating 2	2.8
		Average condition of **waste management** assets	Equal or less than condition rating 3	2.9
		Average condition of **other** assets	Equal or less than condition rating 3	1.9

* Based on the June 2020 Infrastructure revaluation undertaken by Australis Asset Advisory Group.

See section 5.3 below for information on asset conditions and the ranking system used by the Council.

It is important to monitor the service levels 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.

3.4 Legislative Requirements

There are many legislative requirements relating to the management of assets. The key legislative requirements that impact the Other Infrastructure Asset Class are outlined in Table 3.4.

Table 3.4: Legislative Requirements

Legislation	Requirement
Legislation applicable to all assets covered by this AM Plan	
Local Government Act 1993 (NSW) (NI)	Sets out the role, purpose, responsibilities, and powers of the Norfolk Island Regional Council including the preparation of a long-term financial plan supported by asset management plans for sustainable service delivery.
Employment Act 1988 (NI)	Part 4, Safe Working Practices, sets out employer and employee obligations to prevent a person's death, injury, or illness from being caused by a workplace, by a relevant workplace area, by work activities, or by machinery or substances for use at a relevant place.
Environment Act 1990 (NI)	To prevent, so far as is practicable, the degradation and destruction of the natural environment and landscape beauty of Norfolk Island.
Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)	To protect and manage unique plants, animals, habitats and places. This includes heritage sites and the Norfolk Marine Park.
Australian Accounting Standards (AAS)	The Local Government Act 1993 (NSW) (NI) requires Council to comply with AAS. Standard AASB 116, Property Plant and Equipment stipulates requirements on the recognition, valuation, depreciation and disposal of assets.
Planning Act 2002 (NI)	To provide planning and approval processes for the management, development and conservation of the natural and man-made resources of Norfolk Island for the social, health and economic welfare of the community and a better environment.
Building Act 2002 (NI)	To provide for procedures and processes for building approvals, inspections and compliance and development of the Norfolk Island Building Code.

Legislation	Requirement
Heritage Act 2002 (NI)	To provide for the promotion of the conservation of the heritage of Norfolk Island. Establishes the Heritage Register and the Panel of Heritage Advisers.
Legislation specific to airport assets	
Airport Act 1991 (NI)	Defines the airport land area; the making of regulations to control access to and security and safety at the airport; and the control of commercial activities at the airport.
Civil Aviation Act 1988 (Commonwealth)	The main object of this Act is to establish a regulatory framework for maintaining, enhancing and promoting the safety of civil aviation, with particular emphasis on preventing aviation accidents and incidents. Establishes the Civil Aviation Safety Authority.
Legislation specific to electricity assets	
Electricity Supply Act 1985 (NI)	An Act relating to the supply of electricity on Norfolk Island, and for related purposes.
Legislation specific to Telecom assets	
Telecommunications Act 1992 (NI)	To provide for the ownership and control of telecommunication services and the exercise of powers over land and other property in connection with telecommunication services.
Broadcasting Services Act 1992 (Commonwealth)	To provide for a regulatory environment that will facilitate the development of a broadcasting industry and a datacasting industry in Australia that is efficient, competitive and responsive to audience needs.
Radiocommunications Act 1992 (Commonwealth)	To provide for the management of radio frequencies in support of the communications policy objectives of the Commonwealth Government.

4.0 FUTURE DEMAND

4.1 Demand Drivers

Drivers affecting demand include things such as population change, regulations, changes in demographics, seasonal factors, vehicle ownership rates, community preferences and expectations, technological changes, economic factors, agricultural practices, environmental awareness, etc.

Norfolk Island is one of Australia's most isolated communities. It is an external Australian territory in the Pacific Ocean about 1600 km northeast of Sydney. The island has notable historic sites having been settled six weeks after Australia's initial settlement and is of significant biological importance with many native species being unique to the island.

The projection and impact on services from demand drivers on the Other Infrastructure Asset Class is documented in Table 4.1

Table 4.1: Demand Drivers and Impact on Services

Demand Drivers	Projection	Impact on Services
Population	Norfolk Island has a population of 2,188 (ABS 2021), this compares with a population of 1,748 (ABS 2016) and 1,796 in 2011 (Norfolk Island Government Census).	Minimal
Development	Moderate growth over the term of this plan	Minimal
Technological	Innovation and new service delivery across several services: – 50% + renewable power – Faster and more reliable internet – On-island recycling of waste into usable products.	Significant
Legislative change	Replacing current Norfolk legislation with Australian mainland legislation may impact the provision of services.	Unknown
Climate change	This may have an effect in the future, particularly if climate extremes such as increased rainfall eventuate	Unknown
Community expectations	Affordable, reliable, sustainable services	Significant

4.2 Demand Impact and Demand Management Plan

The impact of demand drivers that may affect future service delivery and use of assets will be managed through a combination of managing existing assets, upgrading 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.

Subject to available resources, demand management plans will be developed in future revisions of this AM Plan.

5.0 LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the 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

The assets covered by this AM Plan are shown in Table 5.1.1.

Table 5.1.1: Assets covered by this Plan

Category and sub-category	Estimated Replacement Value[6]	Category and sub-category	Estimated Replacement Value
■ **Airport**	**$6.42m**	■ **Telecom**	**$19.43m**
– Baggage handling	$291.8k	– Batteries	$81.2k
– Fencing	$366.3k	– Billing system	$594.6k
– Fuel handling	$589.3k	– Fire fighting	$129.2k
– Hardstand lighting	$4.27m	– Generators	$101.5k
– Other	$187.8k	– Voice and Data Network	$18.48m
– Pilot aids	$711.7k		
■ **Ball Bay Fuel Farm**	**$4.18m**	■ **Waste Management**	**$1.43m**
– Fencing	$40k	– Batteries	$22.2k
– Fuel handling	$4.14m	– Bins	$101.7k
		– Incinerator	$94.9k
		– Recycling equipment	$1.21m
■ **Electricity Supply**	**$38.75m**	■ **Other**	**$610.2k**
– Batteries	$2.47m	– Works depot fuel handling	$96.3k
– Generators	$3.56m	– Sport and recreation	$296.6k
– Powerline network	$27m	– Weighbridge	$205.2k
– Substation/Transformers	$4.1m	– Desalination tanks	$12k
– Switchboards	$1.53m		

The electricity supply assets are the most significant category within the Other Infrastructure asset class making up 55% of the estimated replacement cost. Telecom assets constitute 27%, with airport assets being 9%. Collectively, the categories of the fuel farm, waste management and others make up the final 9% of the estimated replacement cost for this asset class.

5.1.2 Asset capacity and performance

Assets are generally provided to meet design standards where these are available. However, there are insufficient resources to assess and address all deficiencies.

[6] All figure values are shown in current-day dollars (December 2022). The gross carrying amount recorded in the asset register has been indexed using the Australia Producer Price Index published by the Australian Bureau of Statistics. See Appendix B for the index number applied to each Category.

5.1.3 Asset condition

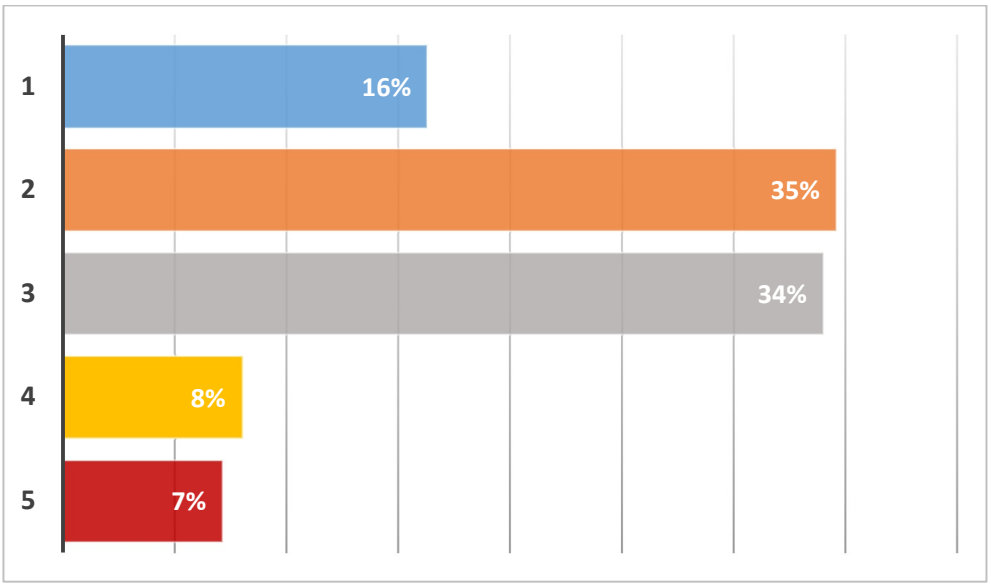
Condition is measured using a 1 – 5 grading system[7] as detailed in Table 5.1.3. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level, however, for reporting in the AM plan results are translated to a 1 – 5 grading scale for ease of communication.

Table 5.1.3: 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 maintain service
4	**Poor**: significant defects, higher order cost intervention likely
5	**Very Poor**: physically unsound and/or beyond rehabilitation, immediate action required

The condition profile of the Council's Other Infrastructure assets is shown in Figure 1.

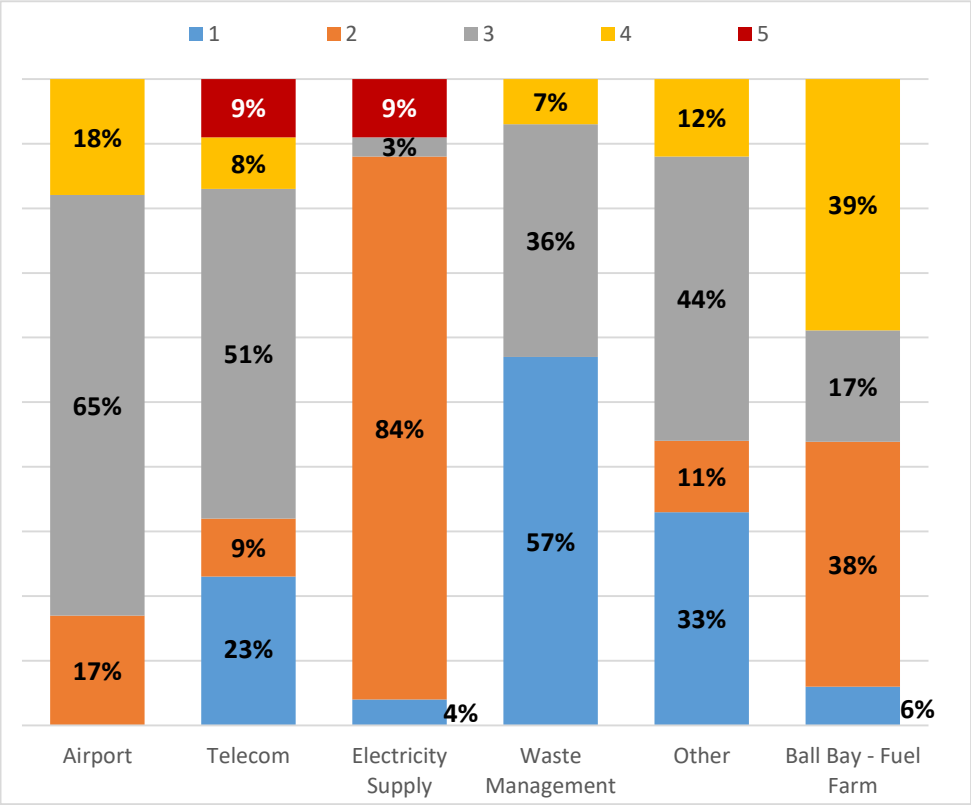
Figure 1: Asset Condition Profile



The June 2020 assessment of asset conditions for this asset class identified that fifteen per cent of this asset class is rated as being in poor or very poor condition. This means that these assets have significant defects or are physically unsound. A further thirty four percent of this asset class is assessed as being in fair condition and requiring regular or significant maintenance to maintain service levels.

[7] IPWEA, 2020, IIMM, Sec 2.5.4

Figure 2: Asset Category Condition Profile



Asset condition gradings for existing assets are assessed at the time of a comprehensive revaluation or from technical reports. Renewal and new assets are given a condition grading of 1 at the date of commissioning. The most recent comprehensive revaluation of Other Infrastructure assets was for the financial year ending 30 June 2020[8].

5.2 Operations and Maintenance Work

Operations are the regular day to day activities undertaken by the Council in order to provide a level of service to the community. To be able to deliver these services, the Council is required to allocate funds for resources such as staff wages, utility consumption, fuel, overheads, contractors, etc.

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. An example of a typical maintenance activity is the servicing of the power generators' diesel engines to ensure they continue to operate within specified parameters.

The Council does not distinguish between operating and maintenance costs in the works and finance systems.

[8]Australis Asset Advisory Group, 2020 NIRC Infrastructure Revaluation, June 2020

The trend in operation and maintenance costs is shown in Table 5.2.

Table 5.2: Operating and Maintenance Cost[9]

Cost Centre	2022 Actuals $(000)	2023 Budget $(000)	2024 Forecast $(000)
Electricity	2,692	2,759	3,511
Fuel Farm	99	137	152
Telecom	1,742	1,702	2,084
Waste Management	1,943	2,488	2,705
Total	6,475	7,087	8,451

The direct allocation of operating and maintenance costs attributable to the provision of services from Other Infrastructure is not possible due to these assets being spread across several cost centres and there is no distinction between operating and maintenance costs in the works and financial systems. Data in Table 5.2 shows operating and maintenance costs for four of the cost centres when Other Infrastructure assets constitute the majority of the assets being utilised for the provision of services. The Airport has been excluded as Other Infrastructure assets are a minor component of its asset base.

Planned or scheduled maintenance is repair work identified and managed through planned inspections by assessing the condition of the assets through various skilled technicians and general condition surveys.

Reactive maintenance is all maintenance that is not planned. The assessment and priority of reactive maintenance work is undertaken by staff using experience and judgement.

Apart from the Airport and the Ball Bay–Fuel Farm, maintenance work undertaken for this class of assets is reactive.

Forecast operations and maintenance costs

In general, maintenance costs will vary in relation to the total value of the asset stock. If additional assets are acquired, future maintenance costs will increase. If assets are disposed of future maintenance costs are expected to decrease.

Looking beyond the 2024 forecast, electricity production costs are expected to drop as renewable power generation reduces the power generator's diesel consumption and waste management costs are expected to reduce as on-island recycling diminishes the volume of waste being transported off-island. This AM Plan will be updated once the impact of these initiatives has been factored into budgets.

5.3 Renewal Plan

Renewal is 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. Work over and above restoring an asset to its original service potential is considered to be an acquisition resulting in additional future maintenance costs.

Assets requiring renewal are identified using 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.

[9] Depreciation expense and an allocation of Council wide overheads are excluded from these figures.

The typical useful lives of assets used to develop projected asset renewal forecasts along with the average remaining useful life of each subcategory are shown in Table 5.3. Asset useful lives were last reviewed in August 2019.[10]

Table 5.3: Useful Lives of Assets

Asset Category / Subcategory	Useful life	Average remaining useful life
Airport		
– Baggage handling system	30 years	9 years
– Fencing	30 years	12 years
– Fuel handling	20 - 60 years	11 years
– Hardstand lighting	30 years	26 years
– Other	5 years	1 year
– Pilot aids	20 – 30 years	10 years
Ball Bay – fuel farm		
– Fencing	30 years	21 years
– Fuel handling	20 – 60 years	18 years
Electricity supply		
– Batteries	20 years	17 years
– Fuel handling	20 – 60 years	36 years
– Generators	20 – 40 years	15 years
– Powerline network	60 – 80 years	36 years
– Substation/transformers	30 – 40 years	16 years
– Switchboards	30 – 40 years	5 years
Telecom		
– Batteries	10 – 15 years	2 years
– Billing system	10 years	7 years
– Fire fighting	40 years	14 years
– Generators	20 – 40 years	3 years
– Voice and data network	10 – 60 years	12 years
Waste management		

[10] Asset Accounting Policy, Council policy number 3.07

Asset Category / Subcategory	Useful life	Average remaining useful life
– Batteries	20 years	0 years
– Bins	20 years	18 years
– Incinerator	30 years	26 years
– Recycling equipment	20 – 30 years	14 years
Other		
– Fuel handling – Works Depot	20 – 40 years	16 years
– Sport and recreation	20 – 40 years	17 years
– Weighbridge	40 years	22 years
– Desalination tanks	40 years	37 years

5.3.1 Renewal strategy

The Council plans capital renewal projects to meet the level of service objectives and minimise infrastructure service risks by:

- Planning and scheduling renewal projects to deliver the defined level of service most efficiently,
- Undertaking project scoping for all capital renewal projects to identify:
    - the service delivery 'deficiency', present risk and optimum time for renewal/replacement,
    - the project objectives to rectify the deficiency,
    - the range of options, estimated capital and life cycle costs for each option that could address the service deficiency,
    - evaluate the options against evaluation criteria adopted by the Council, and
    - select the best option to be included in capital renewal programs,
- Using 'low cost' renewal methods (cost of renewal is less than replacement) wherever possible,
- Review current and required skills base to determine if contractors will be required or the workforce requires training and development to meet required construction and renewal needs,
- Review management of capital renewal and replacement activities to ensure Council is obtaining the best value for resources used.

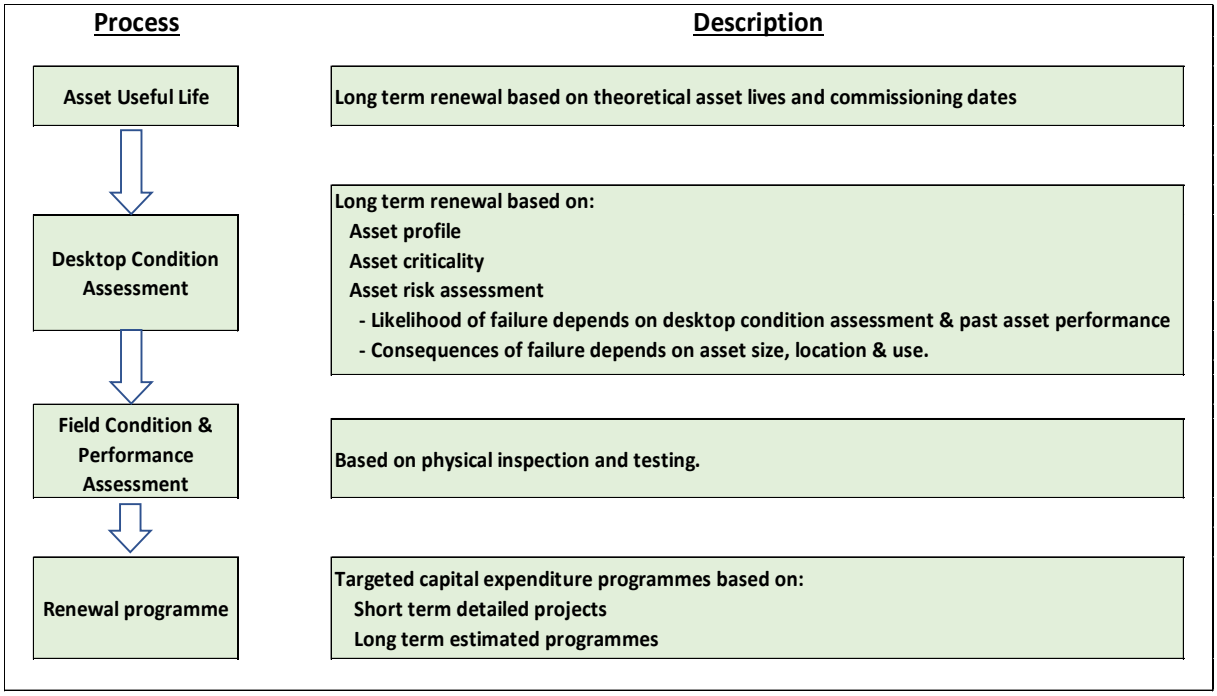
5.3.2 Renewal process

Assets requiring renewal are identified from estimates of remaining life obtained from the asset register. Identified assets are inspected to verify the accuracy of the remaining life estimate and to develop a preliminary renewal estimate. Verified proposals will be ranked by priority and available funds and scheduled in future works programmes.

Priority rankings vary between asset classes and are contingent upon the asset's criticality, consequences of failure and defined service levels.

The renewal process is summarised in the following diagram.

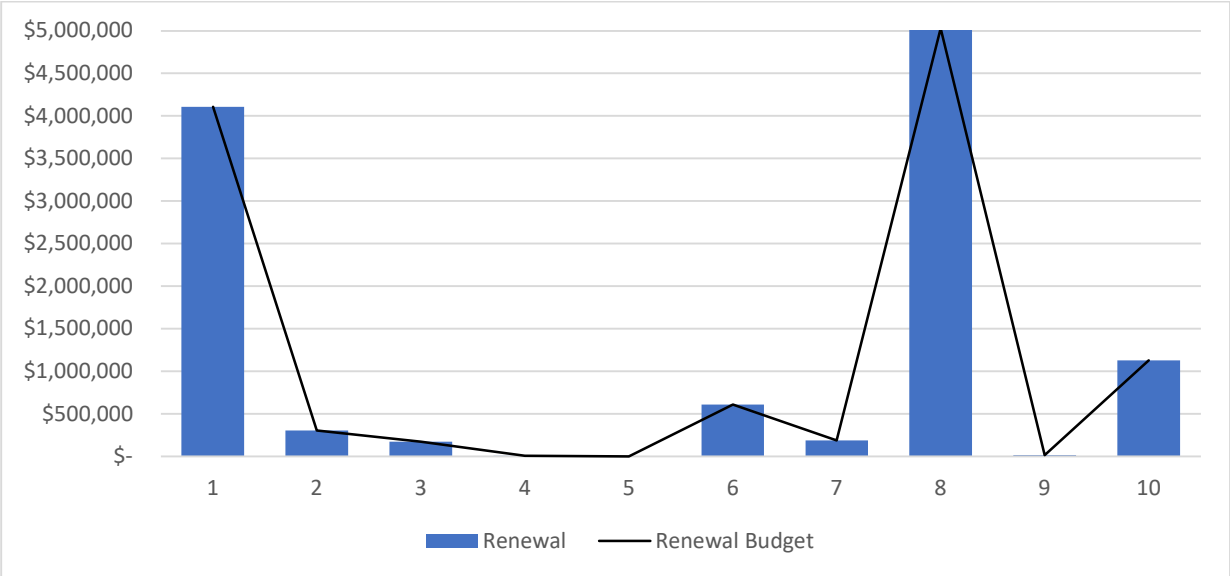
Figure 3: Renewal process



5.4 Summary of future renewal costs

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 4. A detailed summary of the forecast renewal costs is shown in Appendix A.

Figure 4: Forecast Renewal Costs and Planned Budget



All figure values are shown in current-day dollars (December 2022).[11]

[11] The gross carrying amount recorded in the asset register has been indexed using the Australia Producer Price Index published by the Australian Bureau of Statistics. See Appendix B for the index number applied to each Category.

Assets requiring renewal are identified from estimates of remaining life obtained from the asset register while the budget forecast is based on an estimate of what can be achieved with the available resources. The total budget allocation required over the ten year period is $11.6m, averaging $1.16m per year.

By using the renewal process identified in section 5.3.2 above, the replacement of assets which are not critical can be deferred to balance service delivery with funding limits. A risk analysis will be included as part of this process to identify those assets with the lowest risk being scheduled for future periods. A consequence of renewal deferral is increased maintenance costs that will need to be assessed and included in future versions of this AM Plan.

5.5 Acquisition Plan

Acquisitions are new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its existing capacity. They may result from growth, demand, and social or environmental needs. Assets may also be donated or come under the control of the Council.

5.5.1 Selection criteria

Proposed acquisition of new assets, and upgrade of existing assets, are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Potential upgrades and new works should be reviewed to verify that they are essential to the provision of services to the community. The proposed upgrade and new work analysis should also include the development of a preliminary renewal estimate to ensure that the services are sustainable over the longer term. Verified proposals can then be ranked by priority and available funds and scheduled in future works programmes.

5.5.2 Future asset acquisitions

When a council commits to new assets, it must be prepared to fund future operations, maintenance and renewal costs. Council must also account for future depreciation when reviewing long-term sustainability.

Expenditure on new assets in the capital works program will be accommodated in the long-term financial plan, but only to the extent that there is available funding.

Planned future acquisitions for Infrastructure programmes are listed in Table 5.5.2.

Table 5.5.2 Planned Future Acquisitions

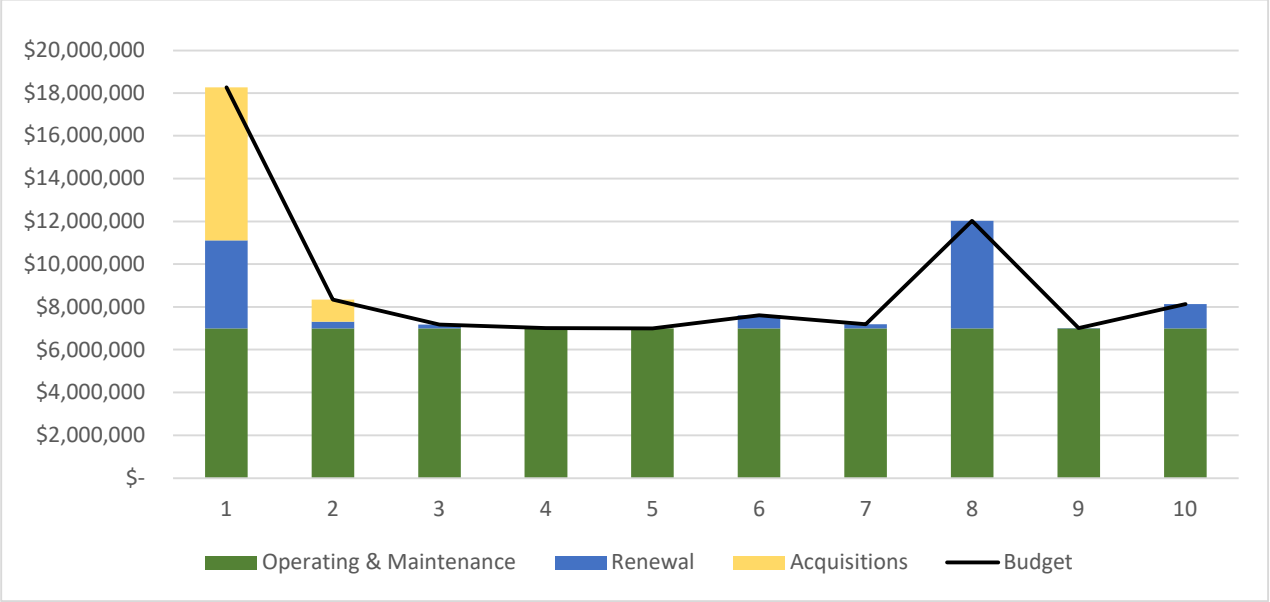
Programme description	Forecast period	Forecast
Renewable power generation including smart metres	2024 to 2025	$2.8m
Faster and more reliable access to the Internet	2024	$2.4m
Transition to renewable waste management practices	2024	$200k
Upgrading the Norfolk Airport infrastructure	2024	$2.6m

5.6 Summary of asset forecast costs

The financial projections from this asset plan are shown in Figure 5. These projections include the estimated forecast costs for operating, maintenance, renewal and acquisitions. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs needed to minimise the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving a balance between costs, levels of service and risk to achieve the best value outcome.

Figure 5: Lifecycle Summary



All figure values are shown in current-day dollars (December 2022). The gross carrying amount recorded in the asset register has been indexed using the Australia Producer Price Index published by the Australian Bureau of Statistics. See Appendix B for the index number applied to each Category.

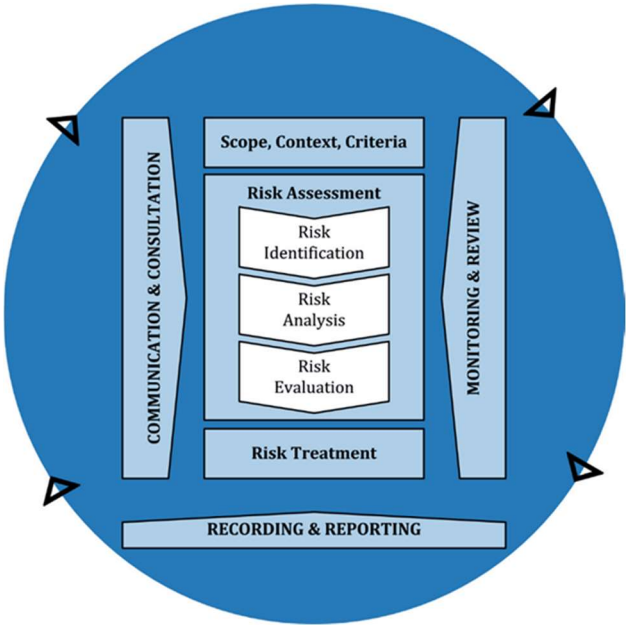
6.0 RISK MANAGEMENT PLANNING

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.

The risk management process used is shown in Figure 6 below.

Figure 6: Risk Management Process – Abridged

Source: ISO 31000:2018, Figure 1, p9



It is an analysis and problem-solving technique designed to provide a logical process for the management of unacceptable risks.

6.1 Risk Assessment

A risk assessment documents the significance of risks through the allocation of a risk rating to each identified risk, the evaluation of those risks, and the development of a risk treatment plan for each risk.

Council manages risks at the strategic level throughout the organisation and at the operational level.

The NIRC Strategic Risk Register (2023) contains information on risk assessment, risk rating and required actions for strategic risk management.

An assessment of strategic risks[12] has identified 2 significant strategic risks relating to effective asset management which are summarised in Table 6.1.1.

Table 6.1.1 Significant Strategic Risks

Risk Description	Detail	Risk Rating*
Sub-optimal management of infrastructure & assets	Asset management and infrastructure strategies do not meet the needs of the Council or the community. Assets and infrastructure are not appropriately maintained and replaced in accordance with established levels of service.	High 16

[12] Refer NIRC Strategic Risk Register, 2023.

Risk Description	Detail	Risk Rating*
Financial sustainability is compromised	Council is unable to maintain its financial and infrastructure capital over the medium to long term due to poor short-term financial decisions, and/or political and management financial literacy deficiencies.	Moderate 8

* See the NIRC Strategic Risk Register for an understanding of the risk ratings.

Identified operational risks associated with the service delivery of the assets covered by this AM Plan are summarised in Table 6.1.2.

Table 6.1.2 Identified Operational Risks

Detail	Risk Treatment
Reliance on a few long-term staff as plant operators, electrical leads and generalists (meter reading, pole replacements, airport lighting etc)[13]	Succession planning for key operational positions to be included in workforce management planning.
High reliance on the knowledge of individuals, with only limited documentation of operational activity and procedures. This creates key-person risk across the organisation.	Document operational practices to encourage consistency in activity and the transfer of knowledge. Develop schematics including technical specifications of the electricity and communication networks.
Ageing infrastructure backlog: asset register data identifies $4.1m of renewal works that are required in 2024 to clear the backlog. This includes $3.7m of renewals in power generation infrastructure.	A technical assessment of the power generation infrastructure to accurately determine its remaining useful life.
There are no ongoing resources to ensure the collection, recording and maintenance of asset data.	Establish a permanent asset management position with sufficient authority to establish and maintain asset management practices across the organisation.

[13] EPC Technologies, Norfolk Island Current Status Report, November 2021

7.0 FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. 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 AM Plan for this service area. The two indicators are the:

- asset renewal funding ratio (proposed renewal budget for the next ten years/forecast renewal costs for next ten years), and
- medium-term forecast costs/proposed budget (over ten years of the planning period).

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio is 100% due to the assumption that all identified renewal works are funded over the ten year planning period.

The Asset Renewal Funding Ratio is an important indicator and illustrates that over the next ten years we expect to have the necessary funds required for the renewal of assets.

The forecast renewal work along with the estimated cost of each renewal project is provided in Appendix A.

Medium-term – ten year financial planning period

This AM Plan identifies the forecast operating, maintenance, renewal and acquisition costs required to provide an agreed level of service to the community over the ten year period. This provides input into the long term financial planning process aimed at providing the required services in a sustainable manner.

The forecast costs over the ten year planning period is $8.97m on average per year. Currently, this is fully funded.

7.1.2 Forecast costs (outlays) for the long-term financial plan

Table 7.1.2 shows the forecast costs (outlays) required for consideration in the ten year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the long-term financial plan.

Forecast costs are shown in current-day dollars (December 2022).

Table 7.1.2: Forecast Costs (Outlays) for the Long-Term Financial Plan

Plan Period	Year	Operating and Maintenance $	Renewal $	Acquisitions $	Total Outlays $
1	2024	7,000,000	4,104,124	7,160,000	18,264,124
2	2025	7,000,000	302,973	1,034,000	8,336,973
3	2026	7,000,000	174,423		7,174,423
4	2027	7,000,000	8,309		7,008,309
5	2028	7,000,000	-		7,000,000
6	2029	7,000,000	609,586		7,609,586
7	2030	7,000,000	187,785		7,187,785
8	2031	7,000,000	5,029,603		12,029,603
9	2032	7,000,000	14,672		7,014,672
10	2033	7,000,000	1,127,749		8,127,749

7.2 Funding Strategy

The proposed funding for assets is outlined in the Council's Long Term Financial Plan and annual budget.

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

7.3 Asset Valuations

The best available estimate of the value of assets included in this AM Plan is shown below. The assets are valued at the gross carrying amount recorded in the asset register. The estimated renewal cost is the gross carrying amount indexed using the Australia Producer Price Index published by the Australian Bureau of Statistics.:

Estimated Renewal Cost (December 2022)[14]	$70,823,520
Gross carrying amount (June 2022)[15]	$59,879,816
Depreciated Cost[16]	$30,595,936
Annual Depreciation	$1,752,645

7.4 Key assumptions made in financial forecasts

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

Key financial assumptions made in this AM Plan are:

- Data recorded in the asset register is a fair reflection of the condition and remaining useful life of the assets in this asset class.
- The indexed gross carrying amount is a fair estimate of the asset class's current replacement cost.
- The operating and maintenance forecast cost is the average of the totals in Table 5.2 rounded down to account for expected savings and will remain constant over the ten year plan.
- There is sufficient funding in forward estimates of updated long term financial plans to cover the required outlays contained in this AM Plan.

[14] The gross carrying amount recorded in the asset register has been indexed using the Australia Producer Price Index published by the Australian Bureau of Statistics. See Appendix B for the index number applied to each Category.

[15] The book value before deducting accumulated depreciation as recorded in the asset register.

[16] Also reported as Written Down Value, Carrying amount or Net Book Value.

8.0 PLAN IMPROVEMENT AND MONITORING

8.1 Asset management and financial data source

This AM Plan utilises Asset management and financial data sourced from council's asset register being the Assetfinda product supplied and maintained by Univerus software solutions.

The data being captured relies on the type of asset data being entered into the AssetFinda system. For example, larger complex assets, such as roads, that have significant parts with differing lifecycles are componentised.

The asset hierarchy, componentisation and estimated useful lives are set down in Council Policy Statement No. 3.07 Asset Accounting Policy and are summarised in Table 5.3 of this AM Plan.

Council utilises modules in the Civica enterprise management system to process and store financial information. The general ledger records and reports high level financial information across the Council while the work order system is designed to record, track and report the detail of financial transactions. There are only consolidated work orders being used to record transactions for the assets in this AM Plan. Therefore, there is no distinction between operating and maintenance costs; capital works are commingled into a single work order making it impossible to identify and cost individual works for updating the asset register without the assistance of the engineer and technical staff.

The Civica fleet management module is utilised by Council. It has the capacity to allocate time in use charges to work orders. This function is not being utilised so fleet usage is not being costed to maintenance or capital works.

8.2 Improvement Plan

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

Table 8.2: Improvement Plan

Task #	Task	Timeline
1	Develop and implement a schedule for asset revaluations, both desktop and comprehensive revaluations. The period of the schedule should align with the ten year period of this plan.	By the end of October 2023
2	Review the estimated useful lives of assets. Amend the useful life brackets in the Asset Accounting Policy with all amendments	By the end of December 2023
3	Consider the development of a succession plan for key operational positions for inclusion in the workforce management plan.	By the end of December 2023
4	Develop criticality criteria and a 5-level single score criticality rating and rate the assets covered by this AM Plan to assist with planning and the scheduling of works.	By the end of March 2024
5	Establish an inspection programme for assets covered by this AM Plan and undertake planned maintenance to reduce the extent of reactive maintenance.	By the end of December 2024
6	Document operational practices to encourage consistency in activity and the transfer of knowledge.	By the end of December 2024
7	Develop schematics including technical specifications of the electricity and communication networks.	Subject to available resources
8	Develop demand management plans.	Subject to available resources

8.3 Monitoring and Review Procedures

This AM Plan will be reviewed in time for 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 AM Plan 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 will be incorporated into the Long-Term Financial Plan once completed.

9.0 REFERENCES

- IPWEA, 2020, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org
- IPWEA, 2015, 'Australian Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org
- ISO, 2014, ISO 55000:2014, Asset management overview, principles and terminology
- ISO, 2018, ISO 31000:2018, Risk management – Guidelines
- Norfolk Island Regional Council, Policy Statement No. 4.04: Asset Management Policy, V2, Draft
- Norfolk Island Community Strategic Plan: 2016-2026
- Norfolk Island Regional Council, Draft Operational Plan 2023-2024
- Norfolk Island Regional Council, Operational Plan 2022-2023
- Norfolk Island Regional Council, Policy Statement No. 3.07: Asset Accounting Policy
- Norfolk Island Regional Council, Strategic Risk Register, 2023
- Australis Asset Advisory Group, 2020 NIRC Infrastructure Revaluation, June 2020, COMMERCIAL-IN-CONFIDENCE
- Leading Edge Aviation Planning Professionals Pty Ltd., Norfolk Island Airport Master Plan Draft Final Report, July 2020
- EPC Technologies, Norfolk Island Current Status Report, November 2021
- GWI Pty Ltd, Norfolk Telecom Alternate Arrangements -Options Discussion Paper, March 2022, COMMERCIAL-IN-CONFIDENCE
- GWI Pty Ltd, Norfolk Island Aggregate data bandwidth demand and off-island connectivity report, April 2022, COMMERCIAL-IN-CONFIDENCE
- Australian Bureau of Statistics, Time Series 6427.0, Producer Price Indexes, Australia, December 2022
- Incite.Energy, Norfolk Island Residential Solar and Battery Offering – Information Pack VERSION 1, May 2023

10.0 APPENDICES

Appendix A 10 year Renewal Forecast

Renewal Year	Category	Asset ID	Asset Name	Estimated Renewal Cost
2024				**4,104,124**
2024	**Airport**			
2024	Airport	10689.0	Emergency stop fuel switch for Jet A-1 fuel by "BOVAN" type F7-CP, S/N: 21O162-O1	16,599
2024	Ball Bay - Fuel Farm			
2024	Ball Bay - Fuel Farm	10678.0	"CMG" Model PPD16OL42-4, 15KW mobile pressure pump (2003)	19,919
2024	Ball Bay - Fuel Farm	10679.0	"CMG" Model type SGA132M-4, 7,5KW, 3 phase compressor	7,470
2024	Ball Bay - Fuel Farm	10680.0	"DICON ELECTRICAL" Model diesel fire pump controller switchboard	24,899
2024	Ball Bay - Fuel Farm	10681.0	"EBSPRAY" Model RO3664 transfer fuel pumps with piping and all valves x 2	172,630
2024	**Electricity Supply**			
2024	Electricity Supply	10528.0	"CATERPILLAR" Model Generator, S/N: CO89127/01, 1,140KVA, Number 4 generator	512,468
2024	Electricity Supply	10529.0	"CATERPILLAR" Model HC736G Generator, S/N: W5875/01, 1,296KVA, Number 6	606,870
2024	Electricity Supply	10530.0	"CATERPILLAR" Model SC736G Generator, S/N: L6590, 1,296KVA, Number 5	606,870
2024	Electricity Supply	10534.0	Distribution Electrical Switchboard Cabinet - Custom Built for Generator 4	169,924
2024	Electricity Supply	10535.0	Distribution Electrical Switchboard Cabinet - Custom Built for Generator 5	169,924
2024	Electricity Supply	10536.0	Distribution Electrical Switchboard Cabinet - Custom Built for Generator 6	169,924
2024	Electricity Supply	10538.0	Distribution Electrical Switchboard Cabinet - Custom Built for Main Distribution Board	264,326
2024	Electricity Supply	10539.0	Distribution Electrical Switchboard Cabinet - Custom Built for Power Factor Corrector	141,603
2024	Electricity Supply	10667.0	Substation/Transformer Location - Power Station - 1, 2, 3, 4 750 kVA Capacity - 15	946,717
2024	Electricity Supply	11260.0	Radiator Towers for Caterpillar generators x3	167,349
2024	**Other**			
2024	Other	10552.0	Concrete finished Skate Park/bowl	27,162
2024	**Telecom**			
2024	Telecom	10545.0	"ERICSSON" Model AXE 103 ESDN landline switch for capacity of 2,300 numbers (1992). Support Capabil	0
2024	Telecom	10546.0	"ERS" Emergency reporting system, 12 panel switch	0

Renewal Year	Category	Asset ID	Asset Name	Estimated Renewal Cost
2024	Telecom	10547.0	Rack 01 - "AUSMODE" Model AM113A 50 amp switched mode rectifiers x 9	0
2024	Telecom	10548.0	Rack 01 - "AUSMODE" Model AM129C 450 amp base distribution module	0
2024	Telecom	10549.0	Rack 02 Unbranded power distribution panel with output fuse fail alarm and "SAFECLIP" Model fuse by	0
2024	Telecom	10614.0	Airport beacon with timber structure stand 1950's (Airport)	32,311
2024	Telecom	10646.0	2 banks of 50 2 volt battery banks	0
2024	Telecom	10649.0	"EATON" Model Powerware Controller board cabinet and UPS equipment including DC Distribution Module	0
2024	Telecom	10650.0	"ERICSSON" Model 2G Network 3 x cabinet panels and Cell Banks and various equipment forming part of	0
2024	Telecom	10655.0	"VERTEX RSI" Model 253 tracking receiver	0
2024	Telecom	10656.0	Unbranded transceivers stream 1 and 2 x 2	0
2024	Telecom	10662.0	"EXICOM" Model COM10 High OHMIC Distribution Model type 501 x 3	0
2024	Telecom	10700.0	"TUNRA" Model TS2000 Antenna Control Unit	0
2024	Telecom	10705.0	"EXICOM" Model type 687 Alarm Sense Module for 2G Network	0
2024	Telecom	10707.0	"ERICSSON" Model RBS 200 GSM cells Banks for 2G Mobile network (Telecom) x 2	0
2024	Telecom	10709.0	"INVENSYS" Model 240 volt battery bank	18,464
2024	Telecom	10711.0	"POLAR ELECTRONIC" 6 port model CN2-4 filter Telecom	6,462
2024	Telecom	10713.0	"ANDREWS" Model satellite dish 9.3 diameter with C-Band two way satellite and associated switch gea	0
2024	Telecom	10714.0	2 x various controller cabinets with various equipment including 16 port sharing switch, "SYMETRICO	0
2024	Telecom	10716.0	"WOODS" Model 1280A battery charger, S/N 6998 (Telecom) x 2	0
2024	Telecom	10717.0	"WOODS" Model 81A ripple filter model 12248ORF (Telecom) x 2	0
2024	Telecom	10720.0	"DUNLITE" Model 75.090312, S/N: 82905, 90KVA generator No. 1	0
2024	Telecom	10721.0	"DUNLITE" Model 75.090312, S/N: 82941, 90KVA generator No. 2	0
2024	Telecom	10725.0	Unbranded chrome/black public payphone	0
2024	Telecom	10727.0	Common Control Cubicle and Distribution Electrical Switchboard Cabinet - Custom Built for Generator	0
2024	Waste Management			

Renewal Year	Category	Asset ID	Asset Name	Estimated Renewal Cost
2024	Waste Management	10734.0	"WESTERN ELECTRIC" Model 1d16OL Power pack for crusher 50 H.Z	22,233
2025				**302,973**
2025	**Airport**			
2025	Airport	10695.0	No. 1 Hydro Filter System for Jet A-1, "GILBARCO" Model V2233 AUTUR Filter Separator, S/N: O24-B3N	24,899
2025	Airport	10696.0	No. 2 TTUL filter system for Jet A-1, model FCS658F-4N27 comprising liquid separator filter, transf	24,899
2025	Airport	11359.0	Airport Master Plan	187,785
2025	Telecom			
2025	Telecom	10701.0	"SOLA" Model UPS Distribution board -	0
2025	Waste Management			
2025	Waste Management	10732.0	"RAMJET" Model hydraulic Can Crusher,2001	65,390
2026				**174,423**
2026	**Ball Bay - Fuel Farm**			
2026	Ball Bay - Fuel Farm	10682.0	"FAUDI" Model FCS1063.8K2, S/N: 10609, 1,300 Litre per minute filter transfer to pipes and pumps	58,163
2026	Ball Bay - Fuel Farm	10683.0	"FAUDI" Model FCS659-F4N27, S/N: 57124O 2 element fuel filter at 1,046 litre per minute flow rate	58,163
2026	Ball Bay - Fuel Farm	10684.0	"FORD" Model 6 cylinder diesel fire pump and associated pipes, valves, controllers etc. (1970's)	58,097
2027				**8,309**
2027	**Telecom**			
2027	Telecom	10657.0	"ERICSSON" Model EDN312xe ADSL - DSJAM Cards x 2	5,539
2027	Telecom	10659.0	"CODAN" Model 6570 remote controller	0
2027	Telecom	10661.0	"SMC" Model SMC 80234L2 Tiger Switch 10/100/1000	2,770
2027	Telecom	10704.0	"COMTECH" Model CRS-300 redundancy switch	0
2029				**609,586**

Renewal Year	Category	Asset ID	Asset Name	Estimated Renewal Cost
2029	**Airport**			
2029	Airport	10387.0	"REIL" Runway end ID lighting. Allowance for REIL Lighting at Runway Ends x 6	179,269
2029	Airport	10401.0	"AVGAS System - (1995) fuel hose reel and meter with emergency pump stop and fence at 8m length	24,899
2029	**Waste Management**			
2029	Waste Management	10730.0	"BRENTWOOD RECYCLING" Rotating shredder and conveyor belt (2003)	111,163
2029	Waste Management	10731.0	"GLASS AGGREGATE SYSTEMS" Model HCV100 glass crusher H-100VT, S/N: 52OO9N1AU, 3 Phase approximately	120,318
2029	Waste Management	10733.0	"TELLOR" Model HVVG series 5OOO, S/N: 5000-3 (2006) 13,000 GVM mobile greens mulcher with inbound c	173,937
2031				**5,029,603**
2031	**Telecom**			
2031	Telecom	11391.0	Blue Arcus Model Arcus Core 4G Main Voice and Data framework	287,201
2031	Telecom	11392.0	Blue Arcus Model Arcus Core 3G Main Voice and Data framework	237,979
2031	Telecom	11393.0	Dell R640 Server. Backup to 3G/4G Core	24,940
2031	Telecom	11394.0	Blue Arcus Model Arcus Billing system Main	286,038
2031	Telecom	11395.0	Blue Arcus Server for Backup Billing	22,541
2031	Telecom	11396.0	Cisco Models Nexus 3k & Cisco 3650 Main, Backup & Spares Network Switch Fiber Backhaul	47,843
2031	Telecom	11397.0	Zabbix 5.0 Network Monitoring	15,986
2031	Telecom	11398.0	Redcom Model Slice 2100 V5.2c Call Switching Node	113,560
2031	Telecom	11399.0	Redcom Model MA0709-013 Cooling module & MA0705-302 Spare slice line module spare	7,207
2031	Telecom	11400.0	Audiocodes M800B-ESBC Transcoder	9,976
2031	Telecom	11401.0	Audiocodes M800B Transcoder Spare SBC	9,976
2031	Telecom	11402.0	Keymile Model MG M2510 MSAN subrack 1 & 2	149,988
2031	Telecom	11403.0	Keymile Spare Packages - varioius	35,917
2031	Telecom	11404.0	Eaton Eqpt cabinet, Access Power Solution & 2KW 48V DC Rectifer - 9 units	10,292
2031	Telecom	11405.0	Huawei RAN Model BSC 6910 Remote Network Controller for 3G Radios	725,094
2031	Telecom	11406.0	Huawei RAN Models BBU 5910, Power & Alarm cards, 4G RRU x 3, 4G/3G Antenna x 3 & 3G RRU x 3	174,280

Renewal Year	Category	Asset ID	Asset Name	Estimated Renewal Cost
2031	Telecom	11407.0	Huawei RAN Spares - BBU & Cards, RRU & Antenna for 4G/3G	51,617
2031	Telecom	11408.0	Ericsson Tems pocket Drive Test Tool Phone for Samsung S5	4,445
2031	Telecom	11409.0	Agrandtech SIM Cards - Initial purchase 10,000 pieces	39,688
2031	Telecom	11410.0	Winner Sun Model PO3-4G Fixed wireless landline - 30 units	2,381
2031	Telecom	11411.0	Blue Arcus Model Arcus Core 4G Voice and Data framework	276,937
2031	Telecom	11412.0	Blue Arcus Model Arcus Core 3G Voice and Data framework	237,979
2031	Telecom	11413.0	Blue Arcus Model Arcus Billing system	286,038
2031	Telecom	11414.0	Cisco Models Nexus 3k & Cisco 3650 Network Switch Fiber Backhaul	20,696
2031	Telecom	11415.0	Huawei DC Power system & Dist unit	10,454
2031	Telecom	11416.0	Eaton AC Inverter Pure sinewave	5,765
2031	Telecom	11417.0	Cisco Model 2960 Fiber Backhaul Network Switch x 7 sites	22,570
2031	Telecom	11418.0	Eaton Eqpt cabinet, Access power solution, 2KW 48VDC Rectifier, Battery x 8 pieces, circuit breaker	62,763
2031	Telecom	11419.0	Huawei RAN Models BBU 5910, Power & Alarm cards, 4G RRU x 3, 4G/3G Antenna x 3, 3G RRU x 3 x 7 sit	1,225,902
2031	Telecom	11420.0	Huawei Model ATADU2016v06 Tower mounted amplifiers 4G x 2/3G x 2 - Kingston site only	19,050
2031	Telecom	11423.0	Speedcast Antenna bracket x 7 sites	15,240
2031	Telecom	11424.0	Lianstar L700 U900 Repeater 1 - Telecom Anson Bay	15,650
2031	Telecom	11425.0	Lianstar L700 U900 Repeater 2 - Anson Forestry	15,650
2031	Telecom	11426.0	Lianstar L700 U900 Repeater 3 - Not yet installed	15,650
2031	Telecom	11427.0	Lianstar L700 U900 Repeater 4 - Not yet installed	16,510
2031	Telecom	11428.0	Suman 4.5m C Band Tx/Rx Earth Station Antenna	121,219
2031	Telecom	11429.0	C Band LNB 1:1 Redundancy Kit (2 LNB's + RDC & WG Kit)	19,445
2031	Telecom	11430.0	80W C Band SSPB 1:1 Redundancy Kit (2 BUC's + RDC & WG Kit)	317,392
2031	Telecom	11431.0	Hot Spot Wi-Fi (HSG gateway + LOG collector + HAS Firewall + MAP indoor/outdoor wireless access poi	67,744
2032				**14,672**
2032	**Telecom**			

Renewal Year	Category	Asset ID	Asset Name	Estimated Renewal Cost
2032	Telecom	11783.0	Sisco Data Switch	9,156
2032	Telecom	11784.0	Nexus Router 9200 with 48p 1/10G/25GSFP+ and 6P 40G QSF	5,516
2033				**1,127,749**
2033	**Airport**			
2033	Airport	10398.0	Surrounding Perimeter Fencing for Airport at approximate length of 8,300 metres excluding front Nor	101,485
2033	Airport	10403.0	"GILBARCO" Model T334DG, S/N: 8848, 45/Litre Min (2008) Diesel fuel bowser pumps	19,919
2033	Airport	10404.0	"GILBARCO" Model T334DG, S/N: 8850, 45/Litre Min (2008) Petrol fuel bowser pumps	19,919
2033	Airport	10671.0	Baggage claim carousel approximately 25 metres length	125,247
2033	Airport	10672.0	Check in conveyor system at approximately 17 metres length	82,995
2033	Airport	10673.0	Check in counter desk with "ICONIX" Model weigh scale x 4	66,396
2033	Airport	10674.0	Inbound conveyor roller to X-Ray at 1,000mm length	5,734
2033	Airport	10675.0	Outbound conveyor roller to X-Ray at 2m length	11,468
2033	Airport	10676.0	Windsocks - Primary x 1	31,387
2033	Airport	10677.0	Windsocks - Secondary x 2	48,389
2033	**Electricity Supply**			
2033	Electricity Supply	10544.0	Dummy Load Electricity Equipment	84,962
2033	**Other**			
2033	Other	10670.0	"GILBARCO" Model T334DG, 454 Litre/Min (2008) fuel bowser pumps x 2	49,797
2033	**Telecom**			
2033	Telecom	10660.0	"SUMAN" Model 4.5m diameter satellite dish C-Band and associated switch gear,	480,051

Appendix B ABS Producer Price Indexes, Australia

As an estimate of replacement cost, each asset in each category of this AM Plan has the gross carrying amount recorded in the asset register indexed using an index from the Australia Producer Price Index published by the Australian Bureau of Statistics.

Source:

- ABS 6427.0 Producer Price Indexes, Australia
- Table 12. Output of the Manufacturing industries
- Series end date of December 2022

The specific index for each category is listed in Table B.1.

Table B.1: ABS Index applied to each category

Category	Index number and description
Airport	2599 Other manufacturing n.e.c.
Electricity	243 Electrical equipment manufacturing
Fuel Farm	2231 Boiler, tank and other heavy gauge metal container manufacturing
Telecom	2422 Communication equipment manufacturing
Waste Management	2599 Other manufacturing n.e.c.
Other	2599 Other manufacturing n.e.c.

Appendix C Glossary

Asset

A resource controlled by an entity as a result of past events and from which future economic benefits are expected to flow to the entity. Infrastructure assets are a sub-class of property, plant and equipment which are non-current assets with a life greater than 12 months and enable services to be provided.

Asset* (Council definition)

This means property, plant and equipment controlled by the Council that supports the provision of services to the community or produces revenue to contribute to the provision of services or is held for administration purposes and is expected to be used for more than 12 months. Infrastructure is included in this definition

Asset Category

Sub-group of assets within a class hierarchy for financial reporting and management purposes.

Asset Class

A group of assets having a similar nature or function in the operations of an entity, and which, for purposes of disclosure, is shown as a single item without supplementary disclosure.

Asset Condition Assessment

The process of continuous or periodic inspection, assessment, measurement and interpretation of the resultant data to indicate the condition of a specific asset so as to determine the need for some preventative or remedial action.

Asset Hierarchy

A framework for segmenting an asset base into appropriate classifications. The asset hierarchy can be based on asset function or asset type or a combination of the two.

Asset Management (AM)

The combination of management, financial, economic, engineering and other practices applied to physical assets with the objective of providing the required level of service in the most cost effective manner.

Asset Management Plan (AM Plan)

A plan developed for the management of each asset class that identifies asset service standards and long-term (at least 10 years) projects and cash flow estimates for maintenance, rehabilitation, replacement and improvement.

Asset Management Policy*

A Council policy that describes how Council intends to apply asset management across the organisation. It establishes the Asset Management Strategy; asset management plans and allocates responsibility to ensure effective asset management.

Asset Management Strategy*

The Council document that describes the strategy for asset management covering the development and implementation of plans and programmes for asset creation, operation, maintenance, rehabilitation/replacement, disposal and performance monitoring to ensure that the desired levels of service and other operational objectives are achieved.

Asset Register*

A record of asset information including inventory, historical, condition, construction, technical and financial details.

Asset Renewal Funding Ratio

The ratio of the net present value of asset renewal funding accommodated over a 10 year period in a long term financial plan relative to the net present value of projected capital renewal expenditures identified in an AM Plan for the same period.

Capital Expenditure (Renewal, Upgrade, Acquisition)

Relatively large (material) expenditure, which has benefits, expected to last for more than 12 months. Capital expenditure includes renewal, rehabilitation, expansion and upgrade. Where capital projects involve a combination of renewal, expansion and/or upgrade expenditures, the total project cost needs to be allocated accordingly.

Capitalisation Threshold

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

Carrying Amount

The amount at which an asset is recognised after deducting any accumulated depreciation / amortisation and accumulated impairment losses thereon.

Commissioned

When the asset is in the location and condition necessary for it to be capable of operating in the manner intended by management. The date depreciation commences.

Community Strategic Plan*

Council document that states the community's vision and aspirations for a period of ten years.

Component

Specific parts of an asset having independent physical or functional identity and having specific attributes such as different life expectancy, maintenance regimes, risk or criticality.

Cost of an Asset

The amount of cash or cash equivalents paid or the fair value of the consideration given to acquire an asset at the time of its acquisition or construction, including any costs necessary to place the asset into service. This includes one-off design and project management costs.

Critical Assets

Assets for which the financial, business or service level consequences of failure are sufficiently severe to justify proactive inspection and rehabilitation. Critical assets have a lower threshold for action than noncritical assets.

Current Replacement Cost (CRC)

The cost the entity would incur to acquire the asset on the reporting date. The cost is measured by reference to the lowest cost at which the gross future economic benefits could be obtained in the normal course of business or the minimum it would cost, to replace the existing asset with a technologically modern equivalent new asset (not a second hand one) with the same economic benefits (gross service potential) allowing for any differences in the quantity and quality of output and in operating costs.

Depreciable Amount (DA)

The cost of an asset, or other amount substituted for its cost, less its residual value.

Depreciated Replacement Cost (DRC)

The current replacement cost (CRC) of an asset less, where applicable, accumulated depreciation calculated on the basis of such cost to reflect the already consumed or expired future economic benefits of the asset.

Depreciation / Amortisation

The systematic allocation of the depreciable amount (service potential) of an asset over its useful life.

Expenses

Decreases in economic benefits during the accounting period in the form of outflows or depletions of assets or increases in liabilities that result in decreases in equity, other than those relating to distributions to equity participants.

Fair Value

The amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties, in an arm's length transaction.

Funding Gap

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

Gross Carrying Amount

The amount that a class of assets is recognised prior to deducting any accumulated depreciation and accumulated impairment losses.

Impairment Loss

The amount by which the carrying amount of an asset exceeds its recoverable amount.

Infrastructure Assets

Physical assets that contribute to meeting the needs of organisations or the need for access to major economic and social facilities and services, e.g. roads, drainage, footpaths and cycleways. These are typically large, interconnected networks or portfolios of composite assets. The components of these assets may be separately maintained, renewed or replaced individually so that the required level and standard of service from the network of assets is continuously sustained. They are fixed in place and are often have no separate market value.

Level of Service

The defined service quality for a particular service/activity against which service performance may be measured. Service levels usually relate to quality, quantity, reliability, responsiveness, environmental impact, acceptability and cost.

Life Cycle Cost *

1. Total LCC The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, rehabilitation and disposal costs.

2. Average LCC: the life cycle cost (LCC) is the average cost to provide the service over the longest asset life cycle. It comprises average operations, maintenance expenditure and asset consumption expense, represented by depreciation expense projected over 10 years. The Life Cycle Cost does not indicate the funds required to provide the service in a particular year.

Maintenance

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, e.g. road patching but excluding rehabilitation or renewal. It is the operating expenditure required to ensure that the asset reaches its expected useful life.

- **Planned maintenance**

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

• Reactive maintenance

Unplanned repair work that is carried out in response to service requests and management/ supervisory directions.

• Specific maintenance

Maintenance work to repair components or replace sub-components that needs to be identified as a specific maintenance item in the maintenance budget.

• Unplanned maintenance

Corrective work required in the short-term to restore an asset to working condition so it can continue to deliver the required service or to maintain its level of security and integrity.

Maintenance Expenditure *

Recurrent expenditure, which is periodically or regularly required as part of the anticipated schedule of works required to ensure that the asset achieves its useful life and provides the required level of service. It is expenditure, which was anticipated in determining the asset's useful life.

Materiality

The notion of materiality guides the margin of error acceptable, the degree of precision required and the extent of the disclosure required when preparing general purpose financial reports. Information is material if its omission, misstatement or non-disclosure has the potential, individually or collectively, to influence the economic decisions of users taken on the basis of the financial report or affect the discharge of accountability by the management or governing body of the entity.

Net Present Value (NPV)

The value to the organisation of the cash flows associated with an asset, liability, activity or event calculated using a discount rate to reflect the time value of money. It is the net amount of discounted total cash inflows after deducting the value of the discounted total cash outflows arising from e.g. the continued use and subsequent disposal of the asset after deducting the value of the discounted total cash outflows.

Operations

Regular activities to provide services such as public health, safety and amenity, e.g. street sweeping, grass mowing and street lighting.

Operating Expenditure

Recurrent expenditure, which is continuously required to provide a service. In common use the term typically includes, e.g. power, fuel, staff, plant equipment, on-costs and overheads but excludes maintenance and depreciation. Maintenance and depreciation is on the other hand included in the operating expense category of financial reports.

Operating Expense

The gross outflow of economic benefits, being cash and non-cash items, during the period arising in the course of ordinary activities of an entity when those outflows result in decreases in equity, other than decreases relating to distributions to equity participants.

Operations, Maintenance and Renewal Financing Ratio

Ratio of estimated budget to projected expenditure for operations, maintenance and renewal of assets over a defined time (e.g. 5, 10 and 15 years).

Operational Plan*

Council's annual action plan for achieving the community priorities outlined in the Community Strategic Plan. Includes the annual budget and revenue policy.

Rate of Annual Asset Consumption *

The ratio of annual asset consumption relative to the depreciable amount of the assets. It measures the amount of the consumable parts of assets that are consumed in a period (depreciation) expressed as a percentage of the depreciable amount.

Rate of Annual Asset Renewal *

The ratio of asset renewal and replacement expenditure relative to the depreciable amount for a period. It measures whether assets are being replaced at the rate they are wearing out with capital renewal expenditure expressed as a percentage of the depreciable amount (capital renewal expenditure/DA).

Recoverable Amount

The higher of an asset's fair value, less costs to sell and its value in use.

Remaining Useful Life

The time remaining until an asset ceases to provide the required service level or economic usefulness. Age plus remaining useful life is useful life.

Residual Value

The estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life.

Risk Management

The application of a formal process to the range of possible values relating to key factors associated with a risk in order to determine the resultant ranges of outcomes and their probability of occurrence.

Road Pavement

The formed and sealed part of the road reserve used for traffic, generally measured from the back of kerb to back of kerb (or shoulder).

Road

Includes the entire gazetted road reserve area from property boundary to property boundary.

Service Potential

The total future service capacity of an asset. It is normally determined by reference to the operating capacity and useful life of an asset. A measure of service potential is used in the not-for-profit sector/public sector to value assets, particularly those not producing a cash flow.

Specific Maintenance

Replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, replacement of air conditioning equipment, etc. This work generally falls below the capital/ maintenance threshold and needs to be identified in a specific maintenance budget allocation.

Sub-Component

Smaller individual parts that make up a component part.

Useful Life

Either:

(a) the period over which an asset is expected to be available for use by an entity, or

(b) the number of production or similar units expected to be obtained from the asset by the entity.

It is estimated or expected time between placing the asset into service and removing it from service, or the estimated period of time over which the future economic benefits embodied in a depreciable asset, are expected to be consumed by the Council.

Verge

The area from behind a kerb or road shoulder to a private property boundary.

Value in Use

The present value of future cash flows expected to be derived from an asset or cash generating unit. It is deemed to be depreciated replacement cost (DRC) for those assets, whose future economic benefits are not primarily dependent on the asset's ability to generate net cash inflows, where the entity would, if deprived of the asset, replace its remaining future economic benefits.

Source: IPWEA, 2020, Glossary
* Additional and modified glossary items shown