



ASSET MANAGEMENT PLAN

Liverpool Plains Shire Council

Aerodromes

Document Control	Asset Management Plan
------------------	-----------------------

Document ID : 2020 Aerodrome AMP

Rev No	Date	Revision Details	Author	Reviewer	Approver
01	February 2012	Initial version	SH	BM	GT
2.0	December 2020	Review to contemporary standards for SRV	DES		

The entity can choose either template to write/update their plan regardless of their level of asset management maturity and in some cases may even choose to use only the Executive Summary.

The illustrated content is suggested only and users should feel free to omit content as preferred (e.g. where info is not currently available).

This Asset Management Plan may be used as a supporting document to inform an overarching Strategic Asset Management Plan.

© Copyright 2020 – All rights reserved
 The Institute of Public Works Engineering Australasia

Contents

1.0	EXECUTIVE SUMMARY	5
1.1	The Purpose of the Plan.....	5
1.2	Asset Description	5
1.3	Levels of Service.....	5
1.4	Future Demand.....	5
1.5	Lifecycle Management Plan.....	5
1.6	Financial Summary.....	5
1.7	Asset Management Planning Practices.....	7
1.8	Monitoring and Improvement Program	7
2.0	Introduction	8
2.1	Background	8
2.2	Goals and Objectives of Asset Ownership	9
3.0	LEVELS OF SERVICE	11
3.1	Customer Research and Expectations	11
3.2	Strategic and Corporate Goals.....	11
3.3	Legislative Requirements.....	11
3.4	Customer Values.....	12
3.5	Customer Levels of Service	13
3.6	Technical Levels of Service.....	13
4.0	FUTURE DEMAND	16
4.1	Demand Drivers	16
4.2	Demand Forecasts	16
4.3	Demand Impact and Demand Management Plan	16
4.4	Asset Programs to meet Demand.....	16
4.5	Climate Change Adaptation.....	16
5.0	LIFECYCLE MANAGEMENT PLAN	18
5.1	Background Data	18
5.2	Operations and Maintenance Plan	21
5.3	Renewal Plan	22
5.4	Summary of future renewal costs.....	24
5.5	Acquisition Plan	25
5.6	Disposal Plan.....	26
6.0	RISK MANAGEMENT PLANNING	27

6.1	Critical Assets	27
6.2	Risk Assessment.....	27
6.3	Infrastructure Resilience Approach	29
6.4	Service and Risk Trade-Offs	29
7.0	FINANCIAL SUMMARY	30
7.1	Financial Sustainability and Projections	30
7.2	Funding Strategy.....	31
7.3	Valuation Forecasts	31
7.4	Key Assumptions Made in Financial Forecasts	32
7.5	Forecast Reliability and Confidence.....	32
8.0	PLAN IMPROVEMENT AND MONITORING	34
8.1	Status of Asset Management Practices	34
8.2	Improvement Plan	34
8.3	Monitoring and Review Procedures	34
8.4	Performance Measures	34
9.0	REFERENCES	36
10.0	APPENDICES	37
Appendix A	Acquisition Forecast.....	37
Appendix B	Operation Forecast	38
Appendix C	Maintenance Forecast	39
Appendix D	Renewal Forecast Summary	40
Appendix E	Disposal Summary.....	41
Appendix F	Budget Summary by Lifecycle Activity	42

1.0 EXECUTIVE SUMMARY

1.1 The Purpose of the Plan

This Asset Management Plan (AM Plan) details information about infrastructure assets with actions required to provide an agreed level of service 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 to provide over the 20 year planning period. The AM Plan will link to a Long-Term Financial Plan which typically considers a 10-year planning period.

1.2 Asset Description

This plan covers the infrastructure assets at Council's Aerodrome

The aerodrome comprises:

- Unsealed runway 14/32
- Sealed runway 06/24
- Runway lighting
- Sealed taxiways
- Terminal building and storage sheds
- Car park and access road

The above infrastructure assets have replacement value estimated at \$4,395,934.

1.3 Levels of Service

The allocation in the planned budget is sufficient to continue providing existing services at current levels for the planning period.

The main service consequences of the Planned Budget are:

- Major renewals near the end of the plan are currently unfunded, condition will continue to be monitored

1.4 Future Demand

Given the aerodrome is well below capacity, it is not expected that demand management practices will be needed within the 20-year planning horizon of this asset management plan Lifecycle Management Plan.

1.5 Lifecycle Management Plan

1.5.1 What does it Cost?

The forecast lifecycle costs necessary to provide the services covered by this AM Plan includes operation, maintenance, renewal, acquisition, and disposal of assets. Although the AM Plan 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 AM Plan is the forecast of 10-year total outlays, which for aerodrome is estimated as \$1,093,787 or \$109,379 on average per year.

1.6 Financial Summary

1.6.1 What we will do

Estimated available funding for the 10 year period is \$821,400 or \$82,140 on average per year as per the Long-Term Financial plan or Planned Budget. This is 75.1% of the cost to sustain the current level of service at the lowest lifecycle cost.

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

The anticipated Planned Budget for the aerodrome leaves a shortfall of \$27,239 on average per year of the forecast lifecycle costs required to provide services in the AM Plan compared with the Planned Budget currently included in the Long-Term Financial Plan. This is shown in the figure below.

Forecast Lifecycle Costs and Planned Budgets

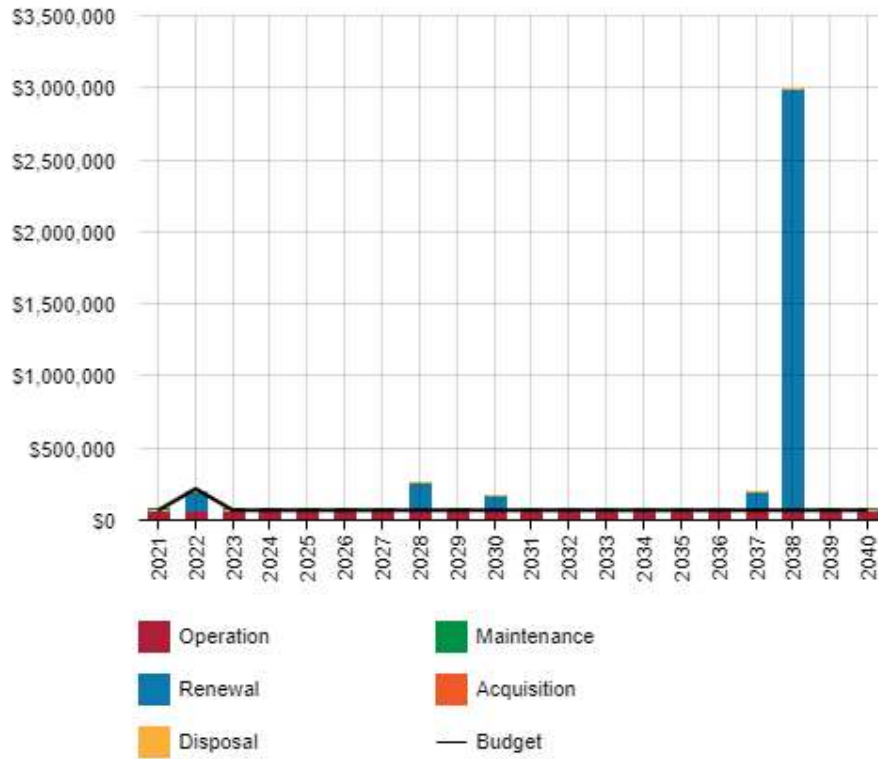


Figure Values are in current dollars.

We plan to provide aerodrome services for the following:

- Operation, maintenance, renewal and acquisition of runways, taxiways, and buildings to meet service levels set by Council in annual budgets.
- Resealing of runway 06/24 within the 10-year planning period.

1.6.2 What we cannot do

We currently do **not** allocate enough budget to sustain these services at the proposed standard or to provide all new services being sought. Works and services that cannot be provided under present funding levels are:

- Pavement renewals without specific grant funding
- Sealing of runway 14/32

1.6.3 Managing the Risks

Our present budget levels are sufficient to continue to manage risks in the medium term.

The main risk consequences are:

- Reduced capacity of the runways leading to restrictions in planes that can access it
- Increased risk of litigation due to personal injury

- Increased risk of litigation due to property damage

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

- Aggressively seeking grant funding for renewal works
- Employing low cost renewal techniques

1.7 Asset Management Planning Practices

Key assumptions made in this AM Plan are:

- Council's current asset register is complete
- That Council will be able to undertake the renewals 'in house'
- That Council will receive approval for the SRV

Assets requiring renewal are identified from either the asset register or an alternative method.

- The timing of capital renewals based on the asset register is applied by adding the useful life to the year of acquisition or year of last renewal,
- Alternatively, an estimate of renewal lifecycle costs is projected from external condition modelling systems and may be supplemented with, or based on, expert knowledge.

The Asset Register method was used to forecast the renewal lifecycle costs for this AM Plan.

This AM Plan is based on a high level of confidence information.

1.8 Monitoring and Improvement Program

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

- Undertake ground truthing of asset register to confirm assets owned by Council
- Investigate feasibility of the aerodrome
- Investigate options to increase revenue from aerodrome
- Undertake community satisfaction survey
- Incorporate asset financial data into Long Term Financial Plan

2.0 Introduction

2.1 Background

This AM Plan 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 AM Plan is to be read with the Liverpool Plains Shire Council planning documents. This should include the Asset Management Policy and Asset Management Strategy, where developed, along with other key planning documents:

- Community Strategic Plan 2017 - 2027
- Long Term Financial Plan
- Local Environmental Plan
- Workforce Plan

Comment on the current status of Asset Management in the Organisation.

The infrastructure assets covered by this AM Plan include 2 runways, taxiways, lighting, and buildings. For a detailed summary of the assets covered in this AM Plan refer to Table in Section 5.

These assets are used to provide aerodrome services.

The infrastructure assets included in this plan have a total replacement value of \$4,395,934.

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

Table 2.1: Key Stakeholders in the AM Plan

Key Stakeholder	Role in Asset Management Plan
Councillors	<ul style="list-style-type: none"> ■ Represent needs of community/shareholders, ■ Allocate financial resources to meet planning objectives in providing services while managing risks, ■ Ensure service is sustainable.
General Manager	<ul style="list-style-type: none"> ■ Allocate human resources to meet planning objectives in providing services while managing risks, ■ To ensure that all staff are educated in asset management and that responsibilities are communicated to staff, ■ To provide leadership and coordination for the implementation of asset management across the business units, <p>To raise awareness and provide education of asset management across Council.</p>
Director Engineering Services	<ul style="list-style-type: none"> ■ To develop, review and oversee the Asset Management Policy and Asset Management Plans, ■ To implement the improvement activities identified within the plan, <p>Ensure that all asset data is kept up to date and inspections are undertaken in accordance with the agreed levels of service.</p>
Community	End user of the assets

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 present and future consumers. 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.

Key elements of the planning framework are

- 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.

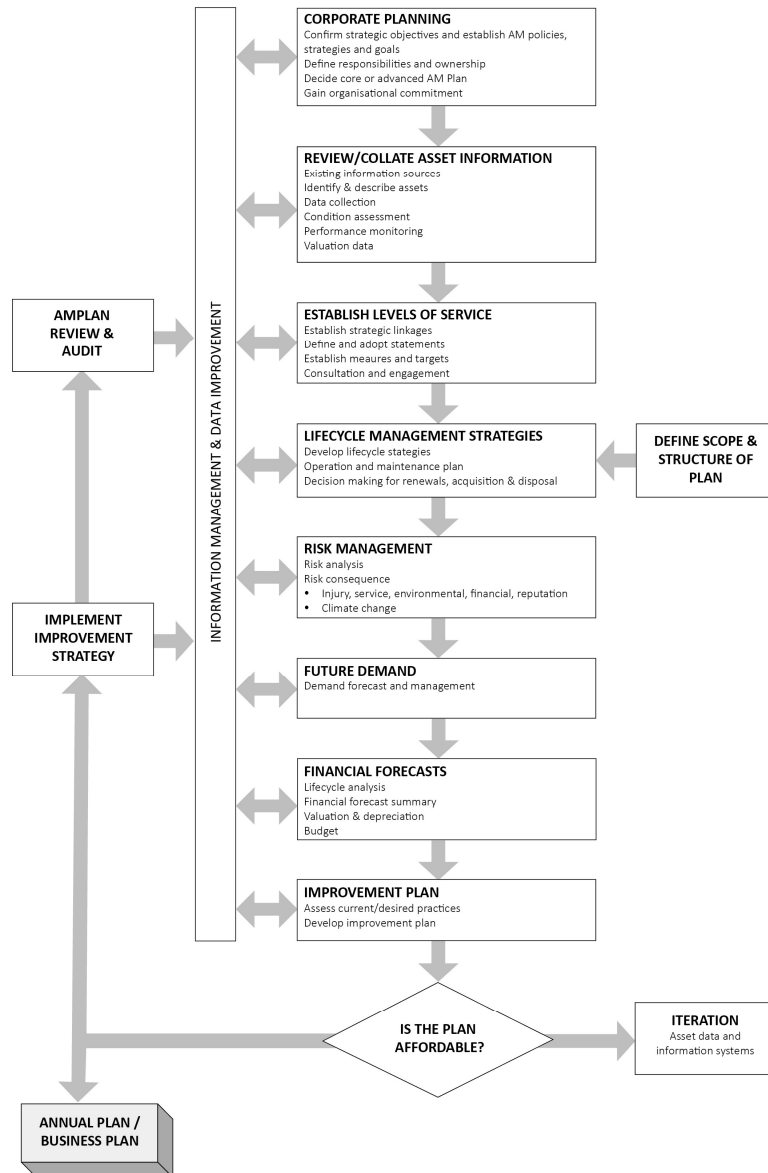
Other references to the benefits, fundamentals principles and objectives of asset management are:

- International Infrastructure Management Manual 2015 ¹
- ISO 55000²

A road map for preparing an AM Plan is shown below.

Road Map for preparing an Asset Management Plan

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



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

² ISO 55000 Overview, principles and terminology

3.0 LEVELS OF SERVICE

3.1 Customer Research and Expectations

This AM Plan is prepared to facilitate consultation prior to adoption of levels of service by the Council. Future revisions of the AM Plan will incorporate customer consultation on service levels and costs of providing the service. This will assist the 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.

3.2 Strategic and Corporate Goals

This AM Plan is prepared under the direction of the Liverpool Plains Shire Council vision, mission, goals and objectives.

Our vision is:

In 2027 the Liverpool Plains Shire Council aspires to have a great rural lifestyle with access to quality services, strong community, council and business leadership, whilst encouraging a thriving economy and a sustainable environment to carry us on to the future.

To direct our Council forward, we will focus on four strategic target areas which have emerged from the Community Engagement process. These are the dynamic links that the Liverpool Plains Shire Council will plan to meet our social, environmental, economic and civic leadership necessities to foster a more enhanced, engaged community

Strategic goals have been set by the Liverpool Plains Shire Council. The relevant goals and objectives and how these are addressed in this AM Plan are summarised in Table 3.2.

Table 3.2: Goals and how these are addressed in this Plan

Goal	Objective	How Goal and Objectives are addressed in the AM Plan
1.4	Our transport and telecommunications options support our business and lifestyle	Provides for aerial travel into and out of Liverpool Plains Shire Council through private planes
3.1	Our infrastructure is well planned and maintained and will meet our needs now and, in the future,	This plan provides for sustainable, evidence-based renewals and maintenance on our transportation aerodrome network.
3.4	Our local farming is sustainable	This plan provides for the ongoing use of the aerodrome by local crop-dusting businesses

3.3 Legislative Requirements

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

Table 3.3: Legislative Requirements

Legislation	Requirement
Local Government Act 1993 (and Regulation 2005)	Sets out the responsibilities and powers of local government to provide an accountable, effective, efficient, sustainable and open system of local government. This includes the preparation of a LTFP supported by AMPs.
Civil Aviation Act 1988 (CAA)	Sets out the responsibilities of operators of aerodromes to ensure the safety of the aviation industry
Airspace Act 2007	Sets out responsibilities around the use of Australian airspace
NSW Environmental Planning and Assessment Act 1979	Specifies the environmental considerations required in all development activities.
Protection of the Environment Operations Act 1997	Protects, restore and enhance the quality of the environment. Provides regulation activities, licensing and includes the monitoring and reporting on waste outputs.
Soil Conservation Act 1938	The objective of this Act is the conservation of soil resources and farm water resources and includes the mitigation of erosion and land degradation
Native Vegetation Act (2003)	To provide for, encourage and promote the management of native vegetation, and revegetation/rehabilitation of land.
Threatened Species Conservation Act (1995)	Conserve biological diversity and promote ecologically sustainable development.
Work Health and Safety Act 2011 (and Regulations 2017)	An Act to provide for the protection of the health, safety and welfare of the workplace, workers and other persons.
Independent Pricing and Regulatory Tribunal Act 1992	This Act enables the Tribunal to determine and advise on process and pricing policy for Government monopoly services. Provides a framework and guidelines to determine developer and “user pays” charging system.
State Environmental Planning Policy (Infrastructure) 2007	This Planning Instrument provides for Council to undertake works to maintain its infrastructure with reduced approval requirements

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 and
- the likely trend over time based on the current budget provision

Table 3.4: Customer Values

Service Objective:			
Customer Values	Customer Satisfaction Measure	Current Feedback	Expected Trend Based on Planned Budget
That the airport is available for use	Number of runway closures per year	Nil received	Nil change

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 measure being used, the current performance, and the expected performance based on the current budget allocation.

These are measures of fact related to the service delivery outcome (e.g. number of occasions when service is not available or proportion of replacement value by condition %'s) to provide a balance in comparison to the customer perception that may be more subjective.

Table 3.5: Customer Level of Service Measures

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Condition	That facilities are suitable condition for use	Number of NOTAMS relating to asset condition	Not measured	Slight increase towards the end of the planning period
	Confidence levels		Medium	Low
Function	That the runways can accommodate appropriate planes	Size of plane approved	Sealed runway 5,700kg Unsealed runway: PCN 8/F/B/580(84PSI)/U	Nil change
	Confidence levels		High	High
Capacity	That the facilities cater for the air traffic volumes	Number of landings	Not measured	Nil change
	Confidence levels		Low	Low

3.6 Technical Levels of Service

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. widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (e.g. a new library).
- **Operation** – the regular activities to provide services (e.g. opening hours, cleansing, mowing grass, energy, 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. road patching, unsealed road grading, 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. road resurfacing and pavement reconstruction, pipeline replacement and building component replacement),

Service and asset managers plan, implement and control technical service levels to influence the service outcomes.³

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 AM Plan.

Table 3.6: Technical Levels of Service

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
TECHNICAL LEVELS OF SERVICE				
Acquisition	Nil planned	N/A	N/A	N/A
		Budget	\$0	\$0
Operation	That vegetation is maintained to prevent Obstacle Limitation Surface (OLS) encroachments	No increase in objects within OLS	13 objects within OLS (2016 survey)	13 objects within OLS
		Budget	\$59,640	\$59,640
Maintenance	Maintenance grading of unsealed runway	No large loose stones on runway surface	Graded twice yearly	Graded as needed based on inspections
		Budget	\$7,500	\$7,500
Renewal	Resealing of runway	Resealed every 15 years	The Renewal activities that can be done within the current Planned Budget restraints	The Renewal activities we would like to do as per the Lifecycle Forecast
	What is the purpose of the Activity	Describe the Measure being used for performance monitoring	The Renewal activities that can be done within the current Planned Budget restraints	The Renewal activities we would like to do as per the Lifecycle Forecast
		Budget	\$15,000	\$42,239
Disposal	Nil	N/A	N/A	N/A
		Budget	\$0	\$0

³ IPWEA, 2015, IIMM, p 2|28.

Note: * Current activities related to Planned Budget.

** Expected performance related to forecast lifecycle costs.

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.

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, 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.

4.3 Demand Impact and Demand Management Plan

The aerodrome is currently underutilised. Focus needs to be placed by Council on increasing the utilisation of the aerodrome so that Council can extract more value from these assets.

4.4 Asset Programs to meet Demand

The new assets required to meet demand may be acquired, donated or constructed. Additional assets are discussed in Section 5.4.

Acquiring new assets will commit the Liverpool Plains Shire 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 (Refer to Section 5).

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 impacts.⁴

As a minimum we consider how to manage our existing assets given potential climate change impacts for our region.

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
Temperature change	Increase in temperatures	Bitumen will reactivate and fail on sealed runway	Utilise a stiffer bitumen to increase its resilience to higher temperatures

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

⁴ IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

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

5.0 LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the Liverpool Plains Shire 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

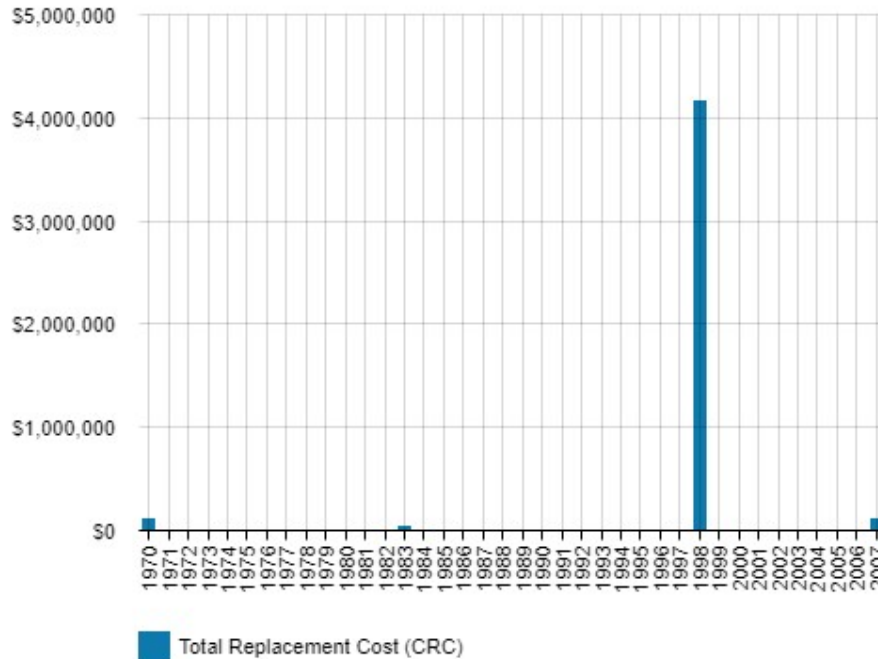
The assets covered by this AM Plan are shown in Table 5.1.1.

Council only operates a single aerodrome that has 2 runways and associated taxiways & buildings.

The age profile of the assets included in this AM Plan are shown in Figure 5.1.1.

Table 5.1.1: Assets covered by this Plan

Asset Category	Dimension	Replacement Value
Sealed Runway	19,908m ²	\$855,601
Unsealed Runway	56,640m ²	\$1,925,760
Taxiways	32,682m ²	\$1,260,906
Lighting	Multiple	\$150,000
Carparks	1	\$64,000
Terminal Building	1	\$100,633
Garage	1	\$39,034
TOTAL		\$4,395,934



All figure values are shown in current day dollars.

Add discussion about the age asset profile. Outline how past peaks of investment that may require peaks in renewals in the future. Comment on the overall age versus useful lives of the assets.

5.1.2 Asset capacity and performance

Assets are generally provided to meet design standards where these are available. However, there is insufficient resources to address all known deficiencies. Locations where deficiencies in service performance are known are detailed in Table 5.1.2.

Table 5.1.2: Known Service Performance Deficiencies

Location	Service Deficiency
Strip outside Runway 06/24	Not available for landing due to soil cracking
Strip outside Runway 14/32	Not available for landing due to soil cracking

The above service deficiencies were identified from Council records.

5.1.3 Asset condition

Condition is currently monitored by routine weekly inspections.

Condition is measured using a 1 – 5 grading system⁵ 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.

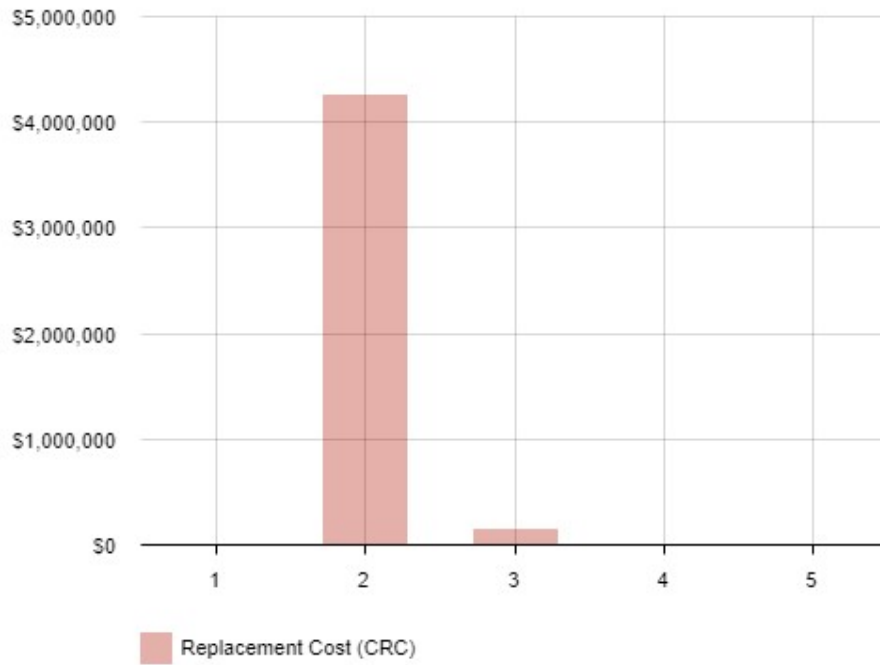
Table 5.1.3: Condition Grading System

⁵ IPWEA, 2015, IIMM, Sec 2.5.4, p 2 | 80.

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

The condition profile of our assets is shown in Figure 5.1.3.

Figure 5.1.3: Asset Condition Profile



Given the low usage of the aerodrome, the condition of the assets remains relatively stable.

All figure values are shown in current day dollars.

5.2 Operations and Maintenance Plan

Operations include regular activities to provide services. Examples of typical operational activities include cleaning, street sweeping, asset inspection, and utility costs.

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 repairs, asphalt patching, and equipment repairs.

The trend in maintenance budgets are shown in Table 5.2.1.

Table 5.2.1: Maintenance Budget Trends

Year	Maintenance Budget \$
2019/2020	\$67,140
2020/2021	\$67,140
2021/2022	\$67,140

Maintenance budget levels are considered to be adequate to meet projected service levels, which may be less than or equal to current service levels. Where maintenance budget allocations are such that they will result in a lesser level of service, the service consequences and service risks have been identified and are highlighted in this AM Plan and service risks considered in the Infrastructure Risk Management Plan.

Assessment and priority of reactive maintenance is undertaken by staff using experience and judgement.

Asset hierarchy

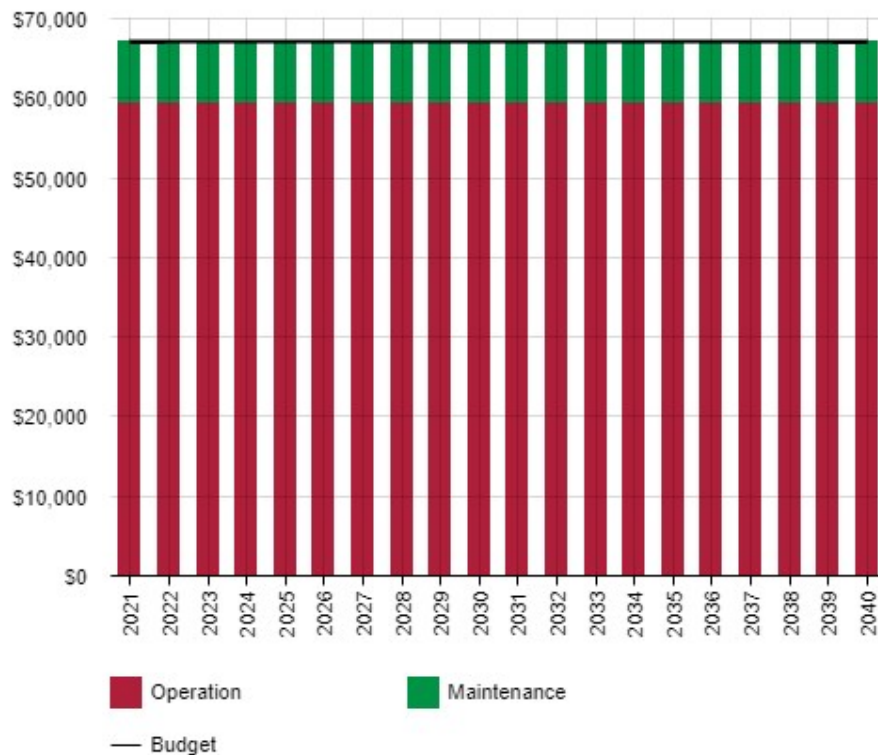
An asset hierarchy provides a framework for structuring data in an information system to assist in collection of data, reporting information and making decisions. The hierarchy includes the asset class and component used for asset planning and financial reporting and service level hierarchy used for service planning and delivery.

As this AM Plan only covers one aerodrome, there is no hierarchy for this asset class.

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 are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease. Figure 5.2 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance Planned Budget.

Figure 5.2: Operations and Maintenance Summary



All figure values are shown in current day dollars.

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

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. Asset useful lives were last reviewed on November 2020.

Table 5.3: Useful Lives of Assets

Asset (Sub)Category	Useful life
Runway seal	15 years
Runway pavement	40 years
Taxiways	40 years
Lighting	30 years
Terminal building	60 years
Garage	45 years

The estimates for renewals in this AM Plan were based on the Asset register method

5.3.1 Renewal ranking criteria

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. replacing a bridge that has a 5-t load limit), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. condition of a playground).⁶

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

- 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.⁷

The ranking criteria used to determine priority of identified renewal proposals is detailed in Table 5.3.1.

⁶ IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

⁷ Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

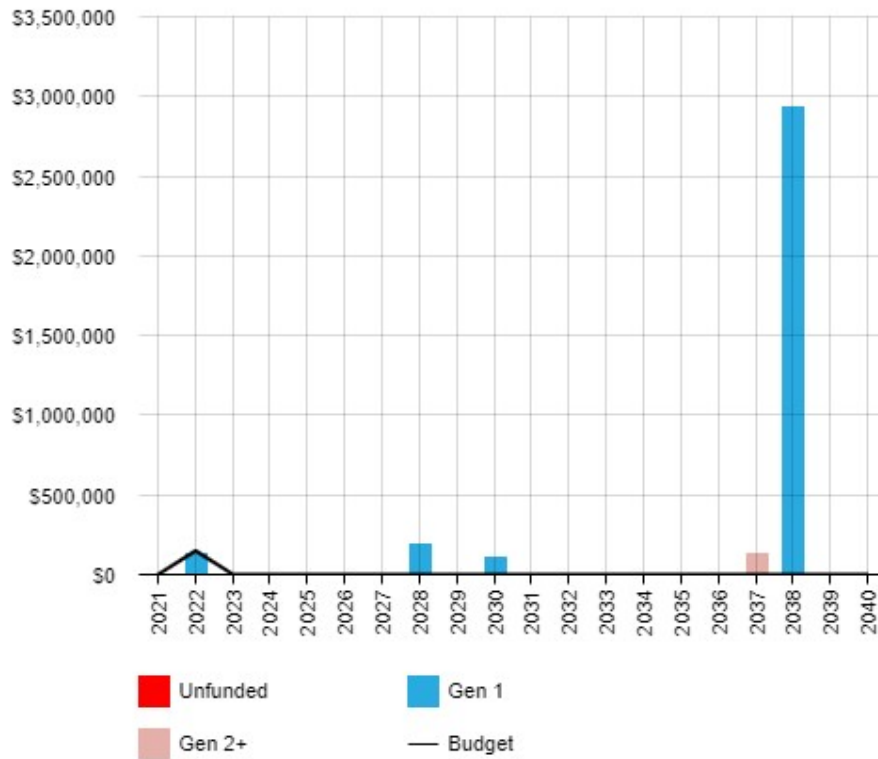
Table 5.3.1: Renewal Priority Ranking Criteria

Criteria	Weighting
Condition	40%
Maintenance history	20%
Funding availability	20%
Community Strategic Plan linkage	15%
Customer Complaints	5%
Total	100%

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 5.4.1. A detailed summary of the forecast renewal costs is shown in Appendix D.

Figure 5.4.1: Forecast Renewal Costs



All figure values are shown in current day dollars.

It is anticipated that the life of the pavement, buildings, and taxiways will be able to be extended due to the low consumption of the asset from the low usage, pushing out the renewal expenditure.

5.5 Acquisition Plan

Acquisition reflects 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, social or environmental needs. Assets may also be donated to the Liverpool Plains Shire 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 upgrade and new works should be reviewed to verify that they are essential to the Entities needs. 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. The priority ranking criteria is detailed in Table 5.4.1.

Table 5.5.1: Acquired Assets Priority Ranking Criteria

Criteria	Weighting
Condition	40%
Maintenance history	20%
Funding availability	20%
Community Strategic Plan linkage	15%
Customer Complaints	5%
Total	100%

Summary of future asset acquisition costs

There are no forecast acquisitions for the aerodrome.

When an Entity commits to new assets, they must be prepared to fund future operations, maintenance and renewal costs. They must also account for future depreciation when reviewing long term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by the Entity.

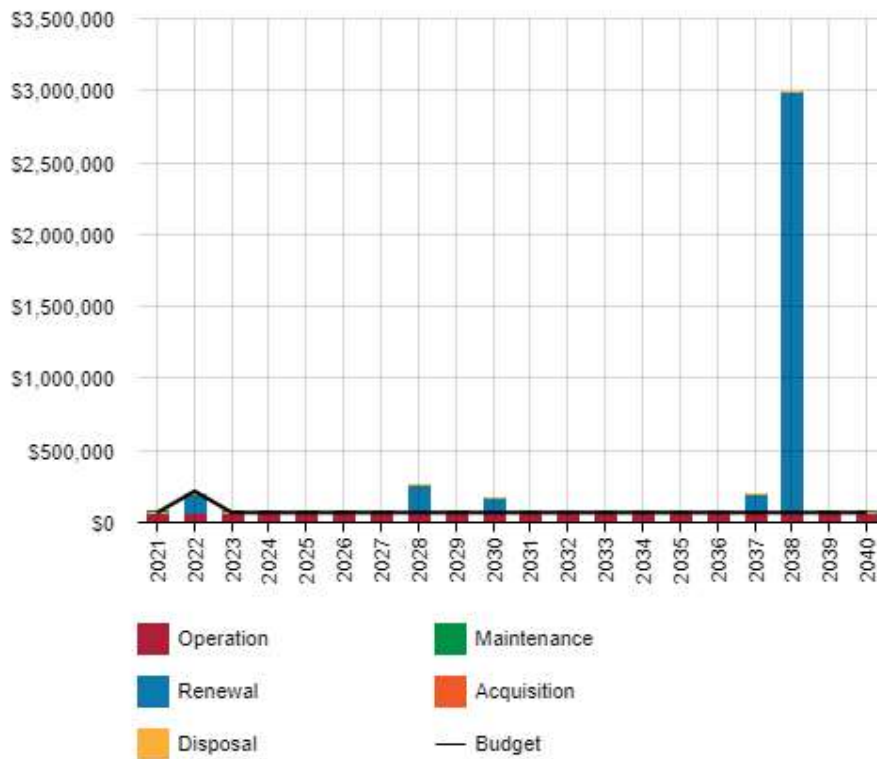
Expenditure on new assets and services in the capital works program will be accommodated in the long-term financial plan, but only to the extent that there is available funding.

Summary of asset forecast costs

The financial projections from this asset plan are shown in Figure 5.4.3. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. 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 balance between costs, levels of service and risk to achieve the best value outcome.

Figure 5.5.3: Lifecycle Summary



All figure values are shown in current day dollars.

It is anticipated that the life of the pavement, buildings, and taxiways will be able to be extended due to the low consumption of the asset from the low usage, pushing out the renewal expenditure.

5.6 Disposal Plan

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition or relocation. There are no plans for disposal included in this AM Plan, this will be an item for review in future iterations, and should be considered if the utilisation of the aerodrome stays at low levels.

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.

Risk Management is defined in ISO 31000:2018 as: ‘coordinated activities to direct and control with regard to risk’⁸.

An assessment of risks⁹ 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 Asset(s)	Failure Mode	Impact
Pilot activated lighting	Radio failure, lights failure	Inability to land in adverse weather conditions / night

By identifying critical assets and failure modes an organisation can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

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.

⁸ ISO 31000:2009, p 2

⁹ REPLACE with Reference to the Corporate or Infrastructure Risk Management Plan as the footnote

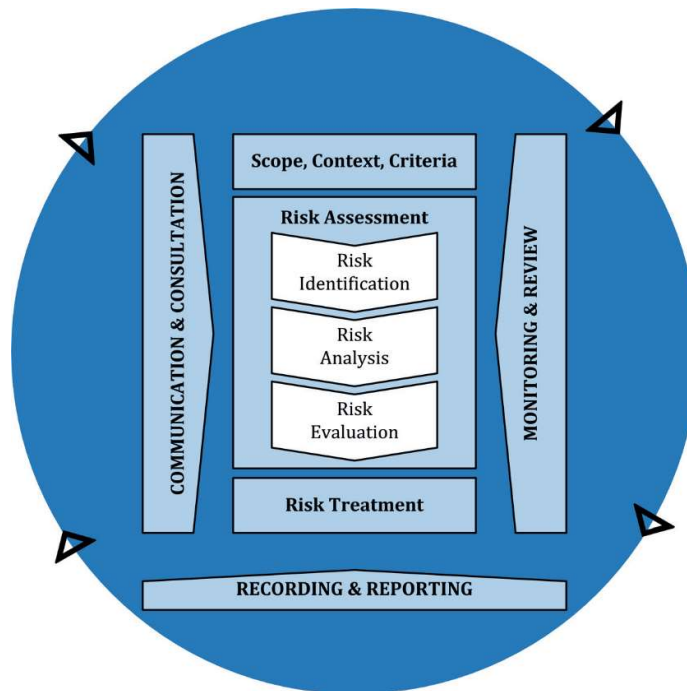


Fig 6.2 Risk Management Process – Abridged
 Source: ISO 31000:2018, Figure 1, p9

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 risks¹⁰ 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 Plan. 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.

Table 6.2: Risks and Treatment Plans

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Pilot activated lights	Failure of system leading to lights not activating	H	Ongoing maintenance and inspections of lights	M	Unknown, currently undertaken within Operations budget

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

¹⁰ REPLACE with Reference to the Corporate or Infrastructure Risk Management Plan as the footnote

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.

We do not currently measure our resilience in service delivery. This will be included in future iterations of the AM Plan.

6.4 Service and Risk Trade-Offs

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

6.4.1 What we cannot do

There are some operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years. These include:

- Pavement renewals without specific grant funding
- Sealing of runway 14/32

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:

- More NOTAM's relating to inability to utilise aerodrome facilities

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:

- Reputational risk due to lower functionality of the aerodrome
- Exposure to claims and litigation against Council for public liability breaches
- Lower performance on asset and financial indicators

These actions and expenditures are considered and included in the forecast costs, and where developed, the Risk Management Plan.

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

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio¹¹ 35.51%

The Asset Renewal Funding Ratio is an important indicator and illustrates that over the next 10 years we expect to have 35.51% of the funds required for the optimal renewal of assets.

The forecast renewal work along with the proposed renewal budget, and the cumulative shortfall, is illustrated in Appendix D.

Medium term – 10-year financial planning period

This AM Plan 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 \$109,379 average per year.

The proposed (budget) operations, maintenance and renewal funding is \$82,140 on average per year giving a 10 year funding shortfall of \$27,239 per year. This indicates that 75.1% of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget. Note, these calculations exclude acquired assets.

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 AM Plan and ideally over the 10 year life of the Long-Term Financial Plan.

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

Table 7.1.3 shows the forecast costs (outlays) required for consideration in the 10 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.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan (including possibly revising the long-term financial plan).

¹¹ AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

We will manage the ‘gap’ by developing this AM Plan to provide guidance on future service levels and resources required to provide these services in consultation with the community.

Forecast costs are shown in 2020/2021 dollar values.

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

Year	Acquisition	Operation	Maintenance	Renewal	Disposal
2021	0	59,640	7,500	0	0
2022	0	59,640	7,500	132,720	0
2023	0	59,640	7,500	0	0
2024	0	59,640	7,500	0	0
2025	0	59,640	7,500	0	0
2026	0	59,640	7,500	0	0
2027	0	59,640	7,500	0	0
2028	0	59,640	7,500	189,034	0
2029	0	59,640	7,500	0	0
2030	0	59,640	7,500	100,633	0
2031	0	59,640	7,500	0	0
2032	0	59,640	7,500	0	0
2033	0	59,640	7,500	0	0
2034	0	59,640	7,500	0	0
2035	0	59,640	7,500	0	0
2036	0	59,640	7,500	0	0
2037	0	59,640	7,500	132,720	0
2038	0	59,640	7,500	2,928,086	0
2039	0	59,640	7,500	0	0
2040	0	59,640	7,500	0	0

7.2 Funding Strategy

The proposed funding for assets is outlined in the Entity’s budget and Long-Term financial plan.

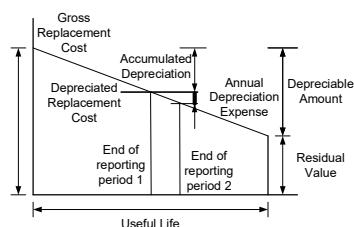
The financial strategy of the entity determines how funding will be provided, whereas the AM Plan communicates how and when this will be spent, along with the service and risk consequences of various service alternatives.

7.3 Valuation Forecasts

7.3.1 Asset valuations

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

Replacement Cost (Current/Gross)	\$4,395,934
Depreciable Amount	\$3,350,473
Depreciated Replacement Cost ¹²	\$1,764,235
Depreciation	\$114,514



¹² Also reported as Written Down Value, Carrying or Net Book Value.

7.3.2 Valuation forecast

Asset values are forecast to remain stable through the life of this AM Plan.

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 AM Plan, it was necessary to make some assumptions. This section details the key 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 assumptions made in this AM Plan are:

- Council's current asset register is complete
- That Council will be able to undertake the renewals 'in house'
- That Council will receive approval for the SRV

7.5 Forecast Reliability and Confidence

The forecast costs, proposed budgets, and valuation projections in this AM Plan 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 a A - E level scale¹³ 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 AM Plan is shown in Table 7.5.2.

¹³ IPWEA, 2015, IIMM, Table 2.4.6, p 2 | 71.

Table 7.5.2: Data Confidence Assessment for Data used in AM Plan

Data	Confidence Assessment	Comment
Demand drivers	C	Based on looking at historical drivers and the current forecasts
Growth projections	B	Data from NSW Planning
Acquisition forecast	A	Nil acquisitions planned
Operation forecast	E	Not currently tracked, expenditure is rolled up into maintenance
Maintenance forecast	A	Based on historic expenditure
Renewal forecast		Asset values based on asset register and realistic unit rates
- Asset values	B	
- Asset useful lives	B	Based on engineering design lives, and those experienced by Council
- Condition modelling	E	Not currently provided
Disposal forecast	A	No disposals expected

The estimated confidence level for and reliability of data used in this AM Plan is considered to be High

8.0 PLAN IMPROVEMENT AND MONITORING

8.1 Status of Asset Management Practices¹⁴

8.1.1 Accounting and financial data sources

This AM Plan utilises accounting and financial data. The source of the data is Authority.

8.1.2 Asset management data sources

This AM Plan also utilises asset management data. The source of the data is Assetic.

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	Responsibility	Resources Required	Timeline
1	Undertake ground truthing of asset register to confirm assets owned by Council	DES	Internal allocations	2022
2	Investigate feasibility of the aerodrome	DES/Council	\$10,000	2022
3	Investigate options to increase revenue from aerodrome	DES	Internal allocations	2022
4	Undertake community satisfaction survey	DES	\$15,000	2022
5	Incorporate asset financial data into Long Term Financial Plan	DES/EMF	Internal allocations	2022

8.3 Monitoring and Review Procedures

This AM Plan 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 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 are incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan once completed.

The AM Plan has a maximum life of 4 years and is due for complete revision and updating within 12 months of each Council election.

8.4 Performance Measures

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

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan,
- The degree to which the 1-5 year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AM Plan,

¹⁴ ISO 55000 Refers to this as the Asset Management System

- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans,
- The Asset Renewal Funding Ratio achieving the Organisational target (this target is often 90 – 100%).

9.0 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
- 'Community Strategic Plan 2017 – 2027',
- Long Term Financial Plan
- Delivery Plan
- Operational Plan

10.0 APPENDICES

Appendix A Acquisition Forecast

N/A

Appendix B Operation Forecast

B.1 – Operation Forecast Assumptions and Source

It is assumed that the same level of service will be provided, and that on average the operations costs will remain constant. Given the majority of the costs are slashing/mowing the grounds, expenditure will shift with the season.

B.2 – Operation Forecast Summary

Table B2 - Operation Forecast Summary

Year	Operation Forecast	Additional Operation Forecast	Total Operation Forecast
2021	59,640	0	59,640
2022	59,640	0	59,640
2023	59,640	0	59,640
2024	59,640	0	59,640
2025	59,640	0	59,640
2026	59,640	0	59,640
2027	59,640	0	59,640
2028	59,640	0	59,640
2029	59,640	0	59,640
2030	59,640	0	59,640
2031	59,640	0	59,640
2032	59,640	0	59,640
2033	59,640	0	59,640
2034	59,640	0	59,640
2035	59,640	0	59,640
2036	59,640	0	59,640
2037	59,640	0	59,640
2038	59,640	0	59,640
2039	59,640	0	59,640
2040	59,640	0	59,640

Appendix C Maintenance Forecast

C.1 – Maintenance Forecast Assumptions and Source

It is assumed that grading of the unsealed runway will continue at its current rate.

C.2 – Maintenance Forecast Summary

Table C2 - Maintenance Forecast Summary

Year	Maintenance Forecast	Additional Maintenance Forecast	Total Maintenance Forecast
2021	7,500	0	7,500
2022	7,500	0	7,500
2023	7,500	0	7,500
2024	7,500	0	7,500
2025	7,500	0	7,500
2026	7,500	0	7,500
2027	7,500	0	7,500
2028	7,500	0	7,500
2029	7,500	0	7,500
2030	7,500	0	7,500
2031	7,500	0	7,500
2032	7,500	0	7,500
2033	7,500	0	7,500
2034	7,500	0	7,500
2035	7,500	0	7,500
2036	7,500	0	7,500
2037	7,500	0	7,500
2038	7,500	0	7,500
2039	7,500	0	7,500
2040	7,500	0	7,500

Appendix D Renewal Forecast Summary

D.1 – Renewal Forecast Assumptions and Source

The renewals are based on age data available for these assets, and when they would fall due. Future iterations of this AM Plan will consider condition based renewals which may result in savings due to the low usage of the aerodrome.

D.2 – Renewal Forecast Summary

Table D2 - Renewal Forecast Summary

Year	Renewal Forecast	Renewal Budget
2021	0	0
2022	132,720	150,000
2023	0	0
2024	0	0
2025	0	0
2026	0	0
2027	0	0
2028	189,034	0
2029	0	0
2030	100,633	0
2031	0	0
2032	0	0
2033	0	0
2034	0	0
2035	0	0
2036	0	0
2037	132,720	0
2038	2,928,086	0
2039	0	0
2040	0	0

Appendix E Disposal Summary

E.1 – Disposal Forecast Assumptions and Source

There are nil disposals proposed under this AM Plan

Appendix F Budget Summary by Lifecycle Activity

The budget is based on known approved grants, and that the proposed SRV is successful.

Table F1 – Budget Summary by Lifecycle Activity

Year	Acquisition	Operation	Maintenance	Renewal	Disposal	Total
2021	0	59,640	7,500	0	0	67,140
2022	0	59,640	7,500	150,000	0	217,140
2023	0	59,640	7,500	0	0	67,140
2024	0	59,640	7,500	0	0	67,140
2025	0	59,640	7,500	0	0	67,140
2026	0	59,640	7,500	0	0	67,140
2027	0	59,640	7,500	0	0	67,140
2028	0	59,640	7,500	0	0	67,140
2029	0	59,640	7,500	0	0	67,140
2030	0	59,640	7,500	0	0	67,140
2031	0	59,640	7,500	0	0	67,140
2032	0	59,640	7,500	0	0	67,140
2033	0	59,640	7,500	0	0	67,140
2034	0	59,640	7,500	0	0	67,140
2035	0	59,640	7,500	0	0	67,140
2036	0	59,640	7,500	0	0	67,140
2037	0	59,640	7,500	0	0	67,140
2038	0	59,640	7,500	0	0	67,140
2039	0	59,640	7,500	0	0	67,140
2040	0	59,640	7,500	0	0	67,140