



LOXTON AERODROME

MASTER PLAN

2015-2035



LOXTON MASTER PLAN

| | | |
|------|--|-------------------------------------|
| 1 | INTRODUCTION..... | 3 |
| 1.1 | Overview Of The Airport..... | 3 |
| 1.2 | Purpose And Objectives Of The Master Plan..... | 3 |
| 1.3 | Methodology And Consultation..... | 3 |
| 1.4 | Report Structure..... | 3 |
| 2 | MASTER PLAN CONTEXT..... | 4 |
| 2.1 | Historical Background..... | 4 |
| 2.2 | Regional Context..... | 4 |
| 2.3 | Socio-Economic Context..... | 4 |
| 2.4 | Regulatory Context..... | 4 |
| 2.5 | Policy Context..... | 4 |
| 2.6 | Previous and Current (Master) Plans..... | 4 |
| 2.7 | Key Stakeholders..... | 4 |
| 3 | CURRENT SITUATION..... | 5 |
| 3.1 | Ownership And Management..... | 5 |
| 3.2 | Site Description..... | 5 |
| 3.3 | Surrounding Land..... | 5 |
| 3.4 | Existing Activities..... | 6 |
| 3.5 | Existing Facilities..... | 6 |
| 3.6 | Ground Transport Access..... | 6 |
| 3.7 | Utility Services..... | 6 |
| 3.8 | Environmental Values..... | 6 |
| 3.9 | Heritage Values..... | 6 |
| 4 | STRATEGIC VISION AND OBJECTIVES..... | 6 |
| 4.1 | Strategic Vision..... | 6 |
| 4.2 | Objectives..... | 7 |
| 5 | CRITICAL AIRPORT PLANNING PARAMETERS..... | 8 |
| 5.1 | Forecast Of Future Operations..... | 8 |
| 5.2 | Aerodrome Reference Code System..... | 8 |
| 5.3 | Selected Design Aircraft..... | Error! Bookmark not defined. |
| 5.4 | Runway configuration..... | 9 |
| 5.5 | Obstacle Limitation Surface..... | 11 |
| 5.6 | Navigation Systems..... | 12 |
| 5.7 | Aviation Support and Landside Facilities..... | 12 |
| 5.8 | Airspace Protection Surfaces..... | 12 |
| 5.9 | Aircraft Noise..... | 12 |
| 5.10 | Environmental And Heritage Sites..... | 14 |
| 6 | LAND USE PLAN..... | 14 |
| 6.1 | Land Use Precincts..... | 14 |
| 6.2 | Land Use Precinct Guidelines..... | 14 |
| 7 | FACILITY DEVELOPMENT PLAN..... | 17 |
| 7.1 | Movement Area Facilities..... | 17 |
| 7.2 | Aviation Support Facilities..... | 17 |
| 7.3 | Other Facilities..... | 17 |
| 8 | GROUND TRANSPORT PLAN..... | 17 |
| 9 | ENVIRONMENTAL MANAGEMENT PLAN (EMP)..... | 18 |
| 10 | HERITAGE MANAGEMENT PLAN (HMP)..... | 18 |
| 11 | AIRPORT SAFEGUARDING PLAN..... | 18 |
| 11.1 | National Airports Safeguarding Framework (NASF)..... | 18 |
| 11.2 | Airspace Protection Surfaces..... | 20 |
| 11.3 | Aircraft Noise Contours..... | 20 |
| 11.4 | Planning Policies and Controls..... | 20 |
| 12 | IMPLEMENTATION PLAN..... | 20 |
| 13 | DRAWINGS..... | 21 |
| 13.1 | Existing Aerodrome..... | Error! Bookmark not defined. |
| 13.2 | OLS Existing And Planning..... | Error! Bookmark not defined. |
| 13.3 | Single Event Noise Contours..... | Error! Bookmark not defined. |
| 13.4 | 20 year Master Plan..... | Error! Bookmark not defined. |



1 INTRODUCTION

This Master Plan has been prepared in accordance with guidelines set by the Planning and Transport Policy section of the South Australian Department of Planning, Transport and Infrastructure.

1.1 Overview of the Airport

The town of Loxton is located 246 km east of Adelaide. The Airport is located 8km southeast of the Loxton, or 5.0 nautical miles on a magnetic bearing of 98 degrees from the Township of Loxton, situated on Part Section 12A, Hundred of Bookpurnong. The airport consists of a 2 runway layout, taxiways, clubrooms and various hangars for private use.

1.2 Purpose and Objectives of the Master Plan

The key objectives of the Master Plan are:

- a) provide an easily understood planning framework to cover both the aviation and non-aviation development over the next 20 years;
- b) to ensure development is logical, cost effective and enhances aviation safety;
- c) to ensure future development has minimal adverse impact on the environment and the surrounding community;
- d) to encourage value adding development of facilities and business ventures on the airport.

1.3 Methodology and Consultation

This draft Master Plan has been prepared by the Aerodrome Manager in consultation with tenants and users of the aerodrome. The draft is intended for referral to Council and possible public display for consultation and feedback.

1.4 Report Structure

This master plan comprises 2 parts; - background information - Sections 1-3 and Master Planning - Sections 4 onwards.

2 MASTER PLAN CONTEXT

2.1 Historical Background

The Loxton Aerodrome was originally a Commonwealth Aerodrome later handed over to Council. The 08/26 runway, taxiway and apron was sheeted with gravel circa 1997 before amalgamation of the Loxton, Browns Well, and Waikerie Councils. Since that time the main pavement has been resheeted and maintained. There has also been ongoing devolvement of hangars and the construction of Clubrooms for the Aero Club.

There is an active Aero club group onsite holding regular “fly-ins” and other various events throughout the year. The Hangars are privately leased with plans to construct more. The Aerodrome is regularly used by the Flying Doctors Service, and provides a backup service to Renmark Aerodrome.

2.2 Regional Context

Loxton is a registered aerodrome located between Adelaide and Mildura. Currently the narrow rubble width and limited pavement strength limits the opportunity to fly larger aircraft into and out of Loxton. Upgrading the runway would open opportunities to a larger range of potential Regular Public Transport aircraft services and aircraft servicing the mining sector through fly in fly out arrangements.

Council wishes to explore possible upgrades and the subsequent opportunities the airport might bring in terms of accelerated skilling hubs, international tourism, the establishment of a flying schools and business opportunities.

2.3 Socio-Economic Context

The Loxton Town and Areas are located on the Southern bank of the Murray River in the Riverland region of South Australia. It has a population of approximately 4000 people and services as part of the Riverland network of towns and neighbouring districts.

2.4 Regulatory Context

Loxton is a registered aerodrome and therefore is required to comply with Civil Aviation Safety Authority regulations as delegated in their Manual of Standards Part 139 – Aerodromes. The site is specifically zoned as Community Land.

2.5 Policy Context

The continued ownership and development of the airport is supported by the Loxton Waikerie Council, and supports plans for strategic growth.

2.6 Previous and Current (Master) Plans

There have been no previous master planning studies completed for Loxton.

2.7 Key Stakeholders

Organisations and individuals with an interest in the airport include.

- Loxton Aero club
- Fixed based operators
- Tenants
- Loxton Waikerie Council
- Royal Flying Doctors Service

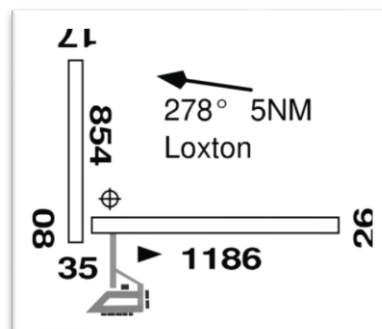
3 CURRENT SITUATION

3.1 Ownership and Management

The aerodrome is owned and operated by the District Council Loxton Waikerie. The aerodrome administration is under the direction of Director Infrastructure Services. There is no full time staff at the airport with however staff have been appointed to the role of Aerodrome Reporting Officer and day to day maintenance.

3.2 Site Description

The aerodrome comprises an east west rubble runway, a natural surface north - south runway, a main taxiway and apron, and a general aviation taxiway and apron as outlined in the diagram below.



3.3 Surrounding Land

The surrounding terrain is generally flat comprising of mostly dryland farming land with also a significant almond plantation to the immediate west. The adjoining road leading to the aerodrome has been sealed specifically for the purpose of the airfield.

According to the Loxton Waikerie Council Development Plan, The Loxton Aerodrome is based in a Primary Producing Zone, meaning no built up areas affect the Aerodrome for at least a 5km radius, for at least the period of the next 20 years. This includes provision for significant developments of Loxton which may occur in the 20 year time period.

3.4 Existing Activities

The airport is used primarily for the RFDS and private flying.

3.5 Existing Facilities

The airport features 2 runways:

- Runway 08/26 Length 1186 x 18m Gravel
- Runway 17/35 Length 854 x 30m Natural Surface

Runway 08/26 has solar emergency runway lighting and is only to be used by the RFDS

Runway 17/35 comprises of a grassed runway, maintained and mowed. Whilst trafficable in most conditions, this runway acts as a secondary runway.

The aerodrome also has a rubble taxiway and main apron plus a sealed pad for the exclusive use of the RFDS.

A privately used storage facility for fuel is available to leases of the aerodrome hangars.

Buildings comprise the aero club rooms with ablution facilities, connected to solar power, as well as 7 privately leased hangars, with the intention to build more.

3.6 Ground Transport Access

The airport is connected via Mel Schultz Road and Crase road the road network leading up to Mel Schultz Road is sealed and suitable for all vehicles requiring access to the airport.

3.7 Utility Services

Water, ablution and rest services are available at the aero club rooms. Privately stored fuel facilities and hangar facilities are available as part of lease arrangements only.

3.8 Environmental Values

There are no areas of known environmental significance on Loxton Aerodrome.

3.9 Heritage Values

There are no areas of known heritage significance on Loxton Aerodrome.

4 STRATEGIC VISION AND OBJECTIVES

4.1 Strategic Vision

The strategic vision for Loxton aerodrome is to develop into a significant a hub for the Riverland and surrounding regions providing for an expanding interest in flying and aero club activities, including functions, storage of private planes, and a base point for possible

business opportunities. It is also prepared for expansion as a (a) fly in fly out operations to the mining sector and (b) passenger services to Adelaide, given possible growths in population in the area, as well as mining assets recently found within the area surrounding the aerodrome.

4.2 Objectives

The key objectives for the airport are:

1. Develop an efficient and safe airport that meets community and industry needs and expectations.
2. Encourage aviation business development particularly in regards to the possible introduction of Regular Public Transport, fly in fly out services, flying training and aircraft charters.

5 CRITICAL AIRPORT PLANNING PARAMETERS

5.1 Forecast of Future Operations

Currently there are no Regular Public Transport, or fly in fly out (FIFO) services at Loxton. The majority of flying is recreational and aerial work (e.g. RFDS) Statistics of aircraft movements are not available.

In the longer term it is hoped the aerodrome will be able to service the mining sector as well as increased recreational flying.

5.2 Aerodrome Reference Code System

The Airport Reference Code is described by International Civil Aviation Organisation (ICAO) as a system that relates the characteristics of Airports to specifications that are suitable for the aeroplanes that are intended to operate from these Airports. The code number relates to the aeroplane reference field length, the code letter is based on the aeroplane wingspan and outer main gear wheel span. Note that determination of the aeroplane reference field length is solely for the selection of the code number and is not intended to influence the actual runway length provided.

The table below indicates the aircraft characteristics that determine the Aerodrome Reference Code.

Table 1 - Aerodrome Reference Code extracted from MOS Part 139 - Aerodromes

| Aerodrome Reference Code | | | | |
|--------------------------|--|----------------|---------------------------------|---------------------------------|
| Code Element 1 | | Code Element 2 | | |
| Code number | Aircraft reference field length (ARFL) | Code letter | Wing span | Outer main gear wheel span |
| 1 | Less than 800m | A | Up to but not including 15m | Up to but not including 4.5m |
| 2 | 800m up to but not including 1200m | B | 15m up to but not including 24m | 4.5m up to but not including 6m |
| 3 | 1200m up to but not including 1800m | C | 24m up to but not including 36m | 6m up to but not including 9m |
| 4 | 1800m and over | D | 36m up to but not including 52m | 9m up to but not including 14m |
| | | E | 52m up to but not including 65m | 9m up to but not including 14m |
| | | F | 65m up to but not including 80m | 14m up to but not including 16m |

5.3 Selected Design Aircraft

Planning allowance has been made to accommodate aircraft size up to and including the Code 2 regional turbo prop such as the ATR 42/72, and Dash 8 300 etc. These aircraft are classified as Reference Code 2C which comprises aeroplanes with an ARFL up to 1200m and wingspans up to 24m.

Typical Aircraft Characteristics

| Aircraft | Seats | ARFL (m) ² | MTOW (kg) ³ | ACN ⁴ | Ref code |
|--------------|-------|-----------------------|------------------------|------------------|----------|
| Beech 1900D* | 19 | 1098 | 7530 | 4 | 2B |
| Metro III | 19 | 991 | 6577 | 4 | 2B |
| ATR 42 | 50 | 1165** | 18560 | 10 | 2C |
| Dash 8-300 | 50 | 1122 | 18642 | 10 | 2C |
| Metro 23 | 19 | 1341 | 7484 | 4 | 3B |
| Hawker 900 | 8 | 1513 | 12700 | 7 | 3B |
| Jetstream 31 | 18 | 1440 | 6950 | 4.4 | 3C |

Note 1: For indicative purposes only. Specific values for particular aircraft should be obtained from the aircraft operator or the aircraft manufacturer.

Note 2: ARFL = Aircraft reference field length.

Note 3: MTOW = Maximum take-off weight.

Note 4: ACN = Aircraft Classification Number. The ACN is based on the aircraft's maximum take-off weight on a flexible pavement; the values listed are for medium a sub- grade rating of "B".

*Some models of the Beech 1900 are Code 3

**Basic MTOW ISA-SL http://www.atraircraft.com/products_app/media/pdf/Fiche-42-600-juin-2014-.pdf

5.4 Runway configuration

a) Runway Layout and Orientation

Data from the Bureau of Meteorology shows wind to be not overly strong compared to coastal zones. The annual average wind direction in the morning on average tends to from all point on the compass with a slight increase from the southwest in comparison to other directions. Afternoon winds are stronger and are generally from the western sector primarily from the southwest. This tends to support the retention of east west main runway with a north south secondary runway as a suitable layout that requires no modification.

b) Runway Length

The runway length required depends on aircraft type and model, flying stage route length and subsequent fuel load including holding requirement, passenger and freight payload, atmospheric temperature and pressure, wind speed and direction, and obstacle clearance¹.

¹Regular Public Transport / air transport aircraft are required under Civil Aviation Order CAO 20.7.1.b to maintain 35ft terrain clearance throughout the various phases of climb with one engine inoperative.;

Examination of the available space within the airport boundary shows it is not possible to develop additional runway length to the 08/26 strip without land acquisition could extend approx 100m to the east.

The 17/35 strip has an available 250m of unused space for the extension of the runway if necessary. Within the time frame of this master plan the existing runway lengths will probably remain unchanged. For the purpose of OLS protection it is assumed runway 0/86

will extend 100m to the east, and runway 17/35 will extend 200m to the south for planning purposes.

b) Pavement Strength

The existing runway pavements at Loxton are unrated.

Runway 08/26 is gravelled and constructed to a depth of 150mm. It has been maintained regularly including a cyclic resheeting subject to inspections. The runway is envisaged to remain a Code 2 runway.

The gravelled taxiways are also regularly maintained on an inspection basis.

5.5 Obstacle Limitation Surface

The following table details **current** Airport Obstacle Limitation Surface clearance criteria.

The following table details the **Existing and Planning** Airport Obstacle Limitation Surface clearance criteria.

NOTE All dimensions in metres

| RUNWAY | RWY 08/26 | RWY 17/35 |
|--|-----------------------------------|-----------------------------------|
| Classification | Code 2 Non-instrument approach | Code 2 Non-instrument approach |
| RWY DESIGN LENGTH | 1290 | 1050 |
| INNER HORIZONTAL | | |
| Conical | | |
| Slope % | 5% | 5% |
| Height above inner horizontal | 55 | 55 |
| Inner Horizontal | | |
| Height above ARP | 45 | 45 |
| Radius from RWS end | 2500 | 2500 |
| APPROACH SURFACE | | |
| Width of inner edge | 80 | 80 |
| Distance from threshold | 60 | 60 |
| Divergence % | 10% | 10% |
| First Section Length | 2500 | 2500 |
| Slope % | 4.0% | 4.0% |
| 2nd Section Length | | |
| Slope % | | |
| Horizontal Section | | |
| Total Length | 3000 | 3000 |
| Transitional | | |
| Slope % | 20% | 20% |
| TAKE OFF SURFACE | | |
| Length of Inner Edge | 80 | 80 |
| Distance of Inner Edge from runway end | 60 | 60 |
| Rate of Divergence % | 10% | 10% |
| Final Width | 580 | 580 |
| Overall Length | 2500 | 2500 |
| Slope % | 4% | 4% |

Allowance to extend both runways as achievable within the aerodrome boundaries is included in the OLS parameters.

5.6 Navigation Systems

There are no ground based navigational aids or Navigation Satellite System approaches at the Loxton Aerodrome. The current and predicted level of traffic does not support provision of an instrument approach procedure to the aerodrome.

5.7 Aviation Support and Landside Facilities

a) Passenger Terminal

There are no passenger terminals located at the Loxton Aerodrome. Subject to the introduction of FIFO services, a new terminal may be needed. The logical location is abeam to the southern end of runway 08/26 where possible future hangars could be placed. This location allows direct taxiway access to a future sealed runway without having to negotiate through light aircraft areas. A possible layout is shown on the plans at the end of this document.

b) Security Requirements

Current security regulations do not require specific passenger or baggage screening for closed charter aircraft operations. Where charters are open to the public and involve aircraft with a maximum weight in excess of 20 tonnes, dedicated screening areas are mandatory.

Within the next 20 years, there is a possibility security requirements may become more demanding, for example a requirement to screen passenger and baggage on closed charter flights. While there is no evidence this will occur it would be prudent to ensure any development of the terminal and car park allow for possible introduction of security facilities.

c) Refuelling facilities

The location of the existing refuelling facilities is considered consistent with current planning objectives. Fuel is privately owned within leases of hangars and is not available to the public. Long term storage of fuel will mean strategically moving the facility to a place further from its current position to allow better traffic flow, if the facility is to be upgraded.

d) Aircraft hangars

The number of hangars (now 7) accommodates private aircraft used for business and recreation. There are currently no commercial maintenance activities from the existing facilities. The current hangar locations are positioned for the allowance of additional structures to be built, adjacent to current hangars.

5.8 Airspace Protection Surfaces

Protection of airspace involves the provision of an obstacle limitation surface (OLS) plan and protections of Procedures of Air Navigation Operations PANS-OPS surfaces.

Forming part of this master plan is the preparation of plans showing OLS and PANS ops protection for the 08/26 and 17/35 runways

5.9 Aircraft Noise

a) Australian Noise Exposure Forecasts

At capital city and major centres, information on aircraft noise at airports has been provided using Australian Noise Exposure Forecasts (ANEF). Modelling of aircraft activity is used to

produce ANEF noise contours which identify restriction of land uses in certain ANEF zones, according to the sensitivity of the nominated land use.

The Australian Standard AS 2021 *Acoustics-Aircraft Noise Intrusion-Building Siting and Construction* lists various land uses (e.g. houses through to heavy industrial areas) considered acceptable/unacceptable within the various ANEF contours. The recommended ANEF zones for residential development are shown in the following table extracted from AS 2021.

Building Site Acceptability Based On ANEF Zones

| Building type | ANEF zone of site | | |
|--------------------------------------|----------------------------|--------------------------|----------------------|
| | Acceptable | Conditionally acceptable | Unacceptable |
| House, home unit, flat, caravan park | Less than 20 ANEF (Note 1) | 20 to 25 ANEF (Note 2) | Greater than 25 ANEF |

NOTES:

1. The actual location of the 20 ANEF contour is difficult to define accurately, mainly because of variation in aircraft flight paths.
2. Within the 20 ANEF to 25 ANEF, some people may find that the land is not compatible with residential or educational uses. Land use authorities may consider that the incorporation of noise control features in the construction of residences or schools is appropriate. *Ref AS 2021-2000*

b) Single Event Contours

Because the ANEF is a summation of the total noise over an average day, when applied at aerodromes with small numbers of aircraft movements the results are less than satisfactory, in that the ANEF contours barely go beyond the extent of the airport, whereas it is known aircraft noise will be heard over a far greater area and will, in some situations, be considered intrusive.

Even with higher rates than expected it is unlikely Loxton would receive more than 4 flights per day. This low level of activity would be insufficient to push the area covered by the ANEF contours to effectively describe the areas subject to potential noise intrusion. This would still be the case even if the number of predicted movements were increased well above the likely growth rate.

An alternative is to plot the aircraft noise as a single noise level event contour, superimposed on the aircraft flight paths. Typically the 70 dB(A) contour is the benchmark used in studies undertaken by Commonwealth Department of Transport and Infrastructure, as it is equivalent to a single event level of 60dB(A) specified in the Australian Standard 2021, as the accepted indoor design sound level for normal domestic dwellings. (An external single noise event will be attenuated by approximately 10 dB(A) by the fabric of a house with open windows) An internal noise level above 60 dB(A) is likely to interfere with conversation or listening to the television.

The following assumptions have been made in selection of aircraft for the noise study:

- The maximum size aircraft will be the EMB 120 / F50 Saab 340 Q300/400 or equivalent.
- Regular operations will continue with general aviation single engined and twin engined aircraft.

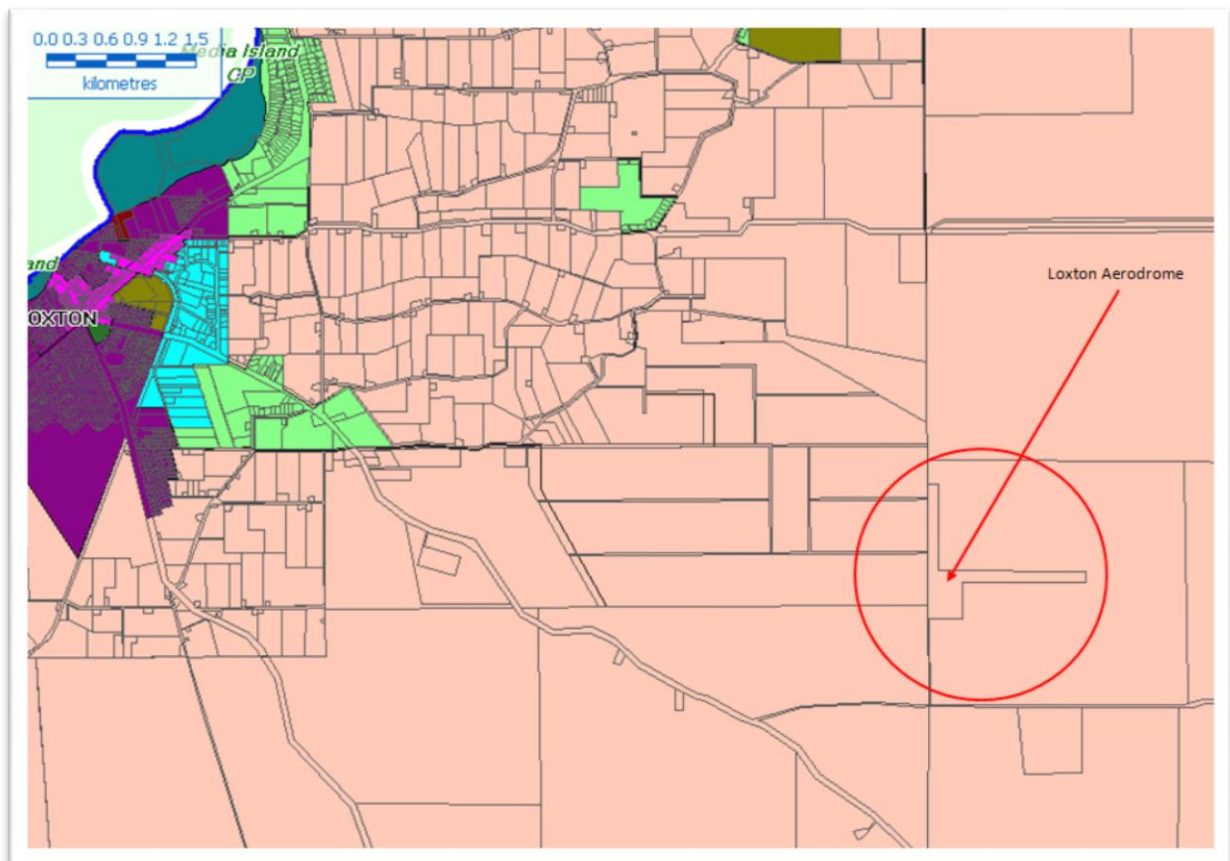
5.10 Environmental And Heritage Sites

There are no known sites of environmental or heritage significance located on the aerodrome

6 LAND USE PLAN

6.1 Land Use Precincts

All land surrounding the Loxton Aerodrome is Primary Production land.



6.2 Land Use Precinct Guidelines

AIRFIELD ZONE

The following land use principles are from the Renmark Council Development Plan July 2013

a) Objectives of the Airfield Zone

1. A zone primarily accommodating aircraft operations, passenger terminals, airport and aviation-related light industrial, service industrial, warehouse and storage purposes.
2. Development that contributes to the desired character of the zone.

b) Principles Of Development Control - Airfield Zone

1. The following forms of development are envisaged in the zone:
 - air passenger or air freight terminal
 - aircraft related facility
 - airport
 - fuel depot
 - light industry ancillary to and in association with aviation activities
 - service industry ancillary to and in association with aviation activities
 - shop within the terminal building
 - warehouse ancillary to and in association with aviation activities.
2. Development listed as non-complying is generally inappropriate.
3. Development should not impede the use of the zone for aviation purposes.
4. Development that would be adversely affected by noise and other hazards caused by airport activities should not be undertaken in the zone.
5. Development should not be undertaken unless it is consistent with the desired character for the zone.
6. Commercial and light industrial development located on the airport site should:
 - (a) facilitate the more efficient operation of the airport
 - (b) be sited in defined clusters
 - (c) not adversely affect the amenity of surrounding land uses.
7. Land should not be divided unless it is required to facilitate the more efficient operation of the Renmark Aerodrome.

BUILDING NEAR AIRFIELDS

Objectives

1. Development that ensures the long-term operational, safety and commercial aviation requirements of airfields (airports, airstrips and helicopter landing sites) continue to be met.

Principles of Development Control

1. The height and location of buildings and structures should not adversely affect the long-term operational, safety and commercial aviation requirements of airfields.
2. Buildings and structures should not be developed unless a safety analysis determines that the building/structure does not pose a hazard to aircraft operations.
3. Development in the vicinity of airfields should not create a risk to public safety, in particular through any of the following:
 - (a) lighting glare
 - (b) smoke
 - (c) air turbulence
 - (d) storage of flammable liquids
 - (e) attraction of birds
 - (f) materials that affect aircraft navigational aids.
4. Lighting within 6 kilometres of an airport should be designed so that it does not pose a hazard to aircraft operations.
5. Development that is likely to increase the attraction of birds should not be located within 3 kilometres of an airport used by commercial aircraft. If located closer than 3

kilometres the facility should incorporate bird control measures to minimise the risk of bird strikes to aircraft.

6. Dwellings should not be located within areas affected by airport noise.
7. Development within areas affected by aircraft noise should be consistent with Australian Standard AS2021 - Acoustics - Aircraft Noise Intrusion - Building Siting and Construction.

7 FACILITY DEVELOPMENT PLAN

7.1 Movement Area Facilities

a) Runways and runway strips

The existing 08/26 gravel runway is 1186m long 18m wide. There are no considerations within the scope of this master plan to lengthen this facility

The existing 17/35 natural surface runway is 854m long. There are no considerations within the scope of this master plan to lengthen this facility.

b) Taxiways, taxilanes

The main taxiway running north/south from 08/26 runway to the Aero Club and hangars connects with the East/West shorter taxiway which services 17/35 strip. Directional Signage at the Aero Club directs traffic to either the hangars, parking and tie down areas, or the opposite direction to the RFDS load/unload pad.

The anticipated levels of aircraft activity do not support consideration for any future extensions of taxiways. The current network of taxiways will support any future plans of the Aerodrome, provided there are no changes to the runways.

Aprons, aircraft parking areas

The existing apron is of sufficient space to cater for any likely increase in aircraft size and or numbers. Adjacent areas to the northwest and southwest should be preserved for future apron expansion,

c) Lighting

The only existing lighting is on runway 08/26 and is for emergency use only. The taxiway lighting also has emergency powered lighting. All lights are solar powered. Any considerations for electrical powered lighting would only occur if power can be brought to the Aerodrome area. Closest location of power is 1km away.

7.2 Aviation Support Facilities

This Master Plan has included provision for the following aviation related facilities:

1. Aircraft hangars
2. Aeroclub

7.3 Other Facilities

This Master Plan has included provision for the following non-aviation related facilities:

1. Access roads
2. Car parking

8 GROUND TRANSPORT PLAN

The current road network to the airport is consistent with the long term development and required no major upgrade or change.

Internal road arrangements will require development to facilitate new terminal, hangars, support facilities etc.

The airport configuration allows access to all buildings via existing external roads. No additional roadworks are considered necessary within the next 20 years.

9 ENVIRONMENTAL MANAGEMENT PLAN (EMP)

There are no known sites of environmental significance within the aerodrome boundary. It follows that development of an EMP would be to ensure activities on airport e.g. storage handling and use of aviation fuels, aircraft maintenance etc must be undertaken in a manner that does not adversely impact on air, soil or water (surface and ground water).

10 HERITAGE MANAGEMENT PLAN (HMP)

At this stage a HMP has not been prepared on the basis that there are no known sites of archaeological or heritage significance within the aerodrome boundary.

11 AIRPORT SAFEGUARDING PLAN

11.1 National Airports Safeguarding Framework (NASF)

The National Airports Safeguarding Framework is a national land use planning framework that aims to:

- improve community amenity by minimising aircraft noise-sensitive developments near airports; and
- Improve safety outcomes by ensuring aviation safety requirements are recognised in land use planning decisions through guidelines being adopted by jurisdictions on various safety-related issues.

The National Airports Safeguarding Advisory Group (NASAG), comprising of Commonwealth, State and Territory Government planning and transport officials, the Australian Government Department of Defence, the Civil Aviation Safety Authority (CASA), Air services Australia and the Australian Local Government Association (ALGA), has developed the National Airports Safeguarding Framework (the Framework).

The Framework is to enhance the current and future safety, viability and growth of aviation operations at Australian airports, by supporting and enabling:

- the implementation of best practice in relation to land use assessment and decision making in the vicinity of airports;
- assurance of community safety and amenity near airports;
- better understanding and recognition of aviation safety requirements and aircraft noise impacts in land use and related planning decisions;
- the provision of greater certainty and clarity for developers and land owners;
- improvements to regulatory certainty and efficiency; and
- the publication and dissemination of information on best practice in land use and related planning that supports the safe and efficient operation of airports.

NASF PRINCIPLES

Principle 1. The safety, efficiency and operational integrity of airports should be protected by all governments, recognising their economic, defence and social significance.

Principle 2. Airports, governments and local communities should share responsibility to ensure that airport planning is integrated with local and regional planning.

Principle 3. Governments at all levels should align land use planning and building requirements in the vicinity of airports.

Principle 4. Land use planning processes should balance and protect both airport/aviation operations and community safety and amenity expectations.

Principle 5. Governments will protect operational airspace around airports in the interests of both aviation and community safety.

Principle 6. Strategic and statutory planning frameworks should address aircraft noise by applying a comprehensive suite of noise measures.

Principle 7. Airports should work with governments to provide comprehensive and understandable information to local communities on their operations concerning noise impacts and airspace requirements.

NASF GUIDELINES

Over the long term, inappropriate development around airports can result in unnecessary constraints on airport operations and negative impacts on community amenity due to the effects of aircraft noise. These impacts need to be managed in a balanced and transparent way.

Guideline A provides advice on the use of a complementary suite of noise metrics, to inform planners and provide communities with comprehensive and understandable information about aircraft noise.

Guideline B presents a layered risk approach to the siting and design of buildings near airport runways to assist land use planners and airport operators to reduce the risk of building - generated windshear and turbulence. It also provides options to modify existing buildings.

Guideline C provides advice to help protect against wildlife hazards originating off-airport through appropriate land use planning decisions and the way in which existing land use is managed in the vicinity of airports.

Guideline D

Guideline D provides advice on the location and safety management of wind turbines and other similar structures which can constitute a risk to low-flying aviation operations and can also affect the performance of Communications, Navigation equipment operated by Airservices Australia.

Guideline E

Guideline E provides advice on ensuring lighting in the vicinity of airports is not configured so as to cause distraction or confusion to pilots

Guideline F provides advice for planners and decision makers about working within and around protected airspace, including obstacle limitation surface (OLS) and Procedures for Air Navigation Services (PANS-OPS) intrusions, and how these can be better integrated into local planning processes.

11.2 Airspace Protection Surfaces

Obstacle Limitation Surface Plan.

An airport OLS has been developed for Loxton for the protection of the 2 runways. The OLS plans are in 2 forms Existing and Future to cover both the existing and long term.

PANS OPS

Loxton has no Navigation Satellite systems.

There has been no inclusion of GPS approaches for the 08/26 or 17/35 runways.

11.3 Aircraft Noise Contours

Australian Noise Exposure Forecasts have not been prepared for Loxton on the basis that the frequency of aircraft movements and the type of aircraft flying are not sufficient to generate a meaningful ANEF even using the most optimistic forecasts. Instead single event noise contours have been generated using modelling data for aircraft types typically using Loxton Aerodrome.

11.4 Planning Policies and Controls

At the time of writing there are no additional planning policies and controls relating to safeguarding of the airport than those covered in the Loxton Waikerie development Plan 2013. As part of this master plan process, OLS plans are to be prepared which can be incorporated into the Council development assessment and approval process.

12 IMPLEMENTATION PLAN

| Action | Trigger Point | Cost | Indicative Timing |
|--|--|-----------|-------------------|
| Draft Master Plan | Council endorsement | - | July 2015 |
| Draft Master Plan | Public Consultation | - | August 2015 |
| Discussion of strategic developments of Aerodrome infrastructure with Aero Club and hangar lessees | Applications from companies | - | 3 months |
| Construction of runway extensions including new seal | FIFO Contract | \$200,000 | 1 year |
| Reticulated Mains Power supply to Aerodrome | FIFO Contract | \$100,000 | 2 year |
| Construction of Air Terminal | FIFO Contract | \$150,000 | 3 years |
| Review Master Plan | Significant change in circumstances or after 5 years | - | 5 years |

13 DRAWINGS

13.1 OLS

The Obstacle Limitation Surface plans are to be produced as part of future updates of this document.

13.2 Single Event Noise Contours

Single event Noise contour plans are to be produced as part of future updates of this document.

13.3 20 year Master Plan

The future of Infrastructure Construction at the Loxton Aerodrome is subject to financial sustainability provided by community intensions and supported with councils levels of service.

The decision of the infrastructure placement and extensions or removals is to be a matter of public consultation with strategic goals for the benefit of the community in mind.

Below is a plan of possible future extensions, and locations of infrastructure, should the Loxton Airport progress with the need to expand.

This includes extensions of a sealed runway, the placement of future hangars and Terminal, in the example of a FIFO contracted deal in Waikerie.

