



DRAFT FOR CONSULTATION Benalla Airport Master Plan 2025

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CONTENTS

INTRODUCTION	7	Stakeholder Consultation	39
Introduction	8	Overview of Consultation	39
Purpose and Objectives of Master Plan	8	Consultation Activities	39
Methodology and Strategic Approach	8	Summary of Consultation Outcomes	40
Report Structure	10	Forecast Aviation Demand	41
PART A: SITUATION ANALYSIS	11	Aviation Activity	41
Master Plan Context	12	Forecast of Future Operations	42
Historical Background	12	Design Aircraft	46
Regional Context	12	Current Situation	46
Socio-Economic Context	15	Forecasting, Stakeholder and Community Inputs	46
Regulatory Context	15	Design Aircraft Selection	46
Policy Context	22	Aerodrome Reference Code System	46
Previous Master Plans	24	Non-Aviation Demand	48
Current Situation	25	Population and Demographic Trends	48
Ownership and Management	25	Economic Performance and Industrial Potential	48
Site Description	25	Visitor Economy	48
Surrounding Land	25	Multi-Criteria Assessment (MCA) and Strategic Planning	48
Existing Activities/Operations	25	Gap Analysis	48
Existing Facilities	26	Conclusion	49
Ground Transport Access	31	Major Events	50
Services and Utilities	33	Potential Gliding Events	50
Environmental Values	33	Potential Ballooning Events	50
Heritage Values	33	Air Pageants / Airshows	50
SWOT Analysis	35	Strategic Vision and Objectives	51
Strengths and Advantages	35	Strategic Vision	51
Weaknesses and Constraints	35	Objectives	52
Opportunities and Prospects	35	Future Needs to Meet Forecast Demand	52
Threats and Risks	36	PART C: MASTER PLAN	54
Summary of SWOT Analysis	37	Airport Land Use Plan	55
PART B: FUTURE DIRECTION	38	Land Use Plan Overview	55
		Land Use Precincts	55
		General Land Guidelines	57

Facilities Development Plan	59
Movement Area	61
Passenger Facilities	65
Hangars	65
Air Traffic Management	67
Ground Access and Security	67
Environment and Heritage	67
Airport Safeguarding Plan	69
Managing Aircraft Noise	69
Protection of Airspace	72
Other NASF Matters	74
Planning Policies and Controls	75
Implementation Plan	76
Master Plan Recommendations	76
Development projects	79
Development Stages	80
Indicative Costings	81
Appendices	84
Appendix A – Stakeholder Consultation Table	85
Appendix B - NASF Guidelines B, C, E and I	87
Appendix D - Acronyms and Abbreviations	92

List of Figures

Figure 1: Master Plan Overarching Process	8	Figure 22: 2034 Australian Noise Exposure Concept	71
Figure 2: Regional airports around Benalla.....	14	Figure 23: Benalla Airport OLS	73
Figure 3: Benalla Aerodrome Environs Area Map.....	19	Figure 24: Guideline B Windshear Assessment Envelope.....	88
Figure 4: Land Use Zoning Plan	20	Figure 25: Guideline C Wildlife Buffer Zones.....	89
Figure 5: Land Subject to Inundation Overlay (LSIO).....	21	Figure 26: Guideline E Maximum Lighting Intensity Zones	90
Figure 6: Development and Design Overlay (DDO1).....	21	Figure 27: Guideline I Public Safety Areas.....	91
Figure 7: Benalla Airport Location.....	25		
Figure 8: Existing movement area facilities	27		
Figure 9: Apron at Benalla Airport	28		
Figure 10: Existing airport facilities.....	29		
Figure 11: Image of the Benalla Aero Club Hangar	30		
Figure 12: Benalla Airport Access	32		
Figure 13: BITRE Activity Forecast data 2014-2024 . Error! Bookmark not defined.			
Figure 14: Twenty-year Total Movement Forecast.... Error! Bookmark not defined.			
Figure 15: School Traffic Management Plan	56		
Figure 16: Land Use Precincts Plan.....	58		
Figure 17: Preliminary Concept Plan for Airside Infrastructure Development	60		
Figure 18: Movement Area Plan.....	63		
Figure 19: Fuel Facility at Benalla airport	64		
Figure 20: Balloon Fuel Facility location	64		
Figure 21: New Hangar Precinct Plan	66		

List of Tables

Table 1: Methodology Overview	9
Table 2: Grandfathered Facilities.....	16
Table 3: Runways and Glider strips details	26
Table 4: Taxiways details.....	26
Table 5: Future Forecast Annual Movements for 2044	41
Table 6: Aircraft specifications.....	46
Table 7: ARC values and OMGWs limits for runways.....	46
Table 8: Taxiway characteristics	46
Table 9: List of Recommendations	77
Table 10 - List of development projects	79
Table 11 - Cost Estimate for Precinct 1 Development	82

INTRODUCTION

Introduction

Benalla Airport is a key asset for the Benalla Rural City Council (Council) which provides vital economic and social services to the area.

The Council, in conjunction with the Gliding Club of Victoria and Gliding Australia, hosted the 34th World Air Sports Federation *World Gliding Championships (WGC)* in 2017, marking the airport as a world-class facility. Council intends to build on the success of the WGC by future proofing the development of the airport for future major events. This Master Plan will establish a 20-year planning horizon, to establish a strategic direction through to 2044.

As airports are essential public infrastructure assets, particularly within regional contexts, there is a significant reliance to ensure their ongoing protection, as well as safe and efficient operations. Council recognises that poor airport planning can result in significant disruption and economic loss for the City of Benalla if not conducted effectively.

The current Master Plan aims to:

Review recommendations offered in the previous Master Plan 2015

Review subsequent developments at the airport

Analyse forecasted future aviation activities and

Suggest ideal improvements to airport facilities that to both aviation and non-aviation activities at the airport, while meeting the council's vision & objectives for the airport.

Purpose and Objectives of Master Plan

The purpose or objectives behind each airport Master Plan will vary according to the particular location and circumstances. However, in general, master planning for airports can have several purposes which can be divided into on-airport and off-airport objectives. It is important to define the purpose or objectives of the Master Plan early in the process to set the scene for the project.

Whilst there are no legislative requirements to undertake an airport Master Plan for non-Commonwealth leased airports in Australia, Council recognises that is best practice to do so, ensuring there is a clear direction, strategy, land use planning and environmental commitment for the airport. This document also serves as a tool for Council to communicate the intentions regarding airport development to all stakeholders who have an interest in the operations.

Methodology and Strategic Approach

The overarching planning process and Master Plan component adopt the framework and template set out in the Australian Airports Association's Regional Airport Master Planning Guideline. The AAA guideline has been used as the basis of multiple airport Master Plans around Australia and has also been adapted by the NZ Airports Association for use in New Zealand. The high-level approach to addressing the requirements of the brief is summarised in Figure 1 below:

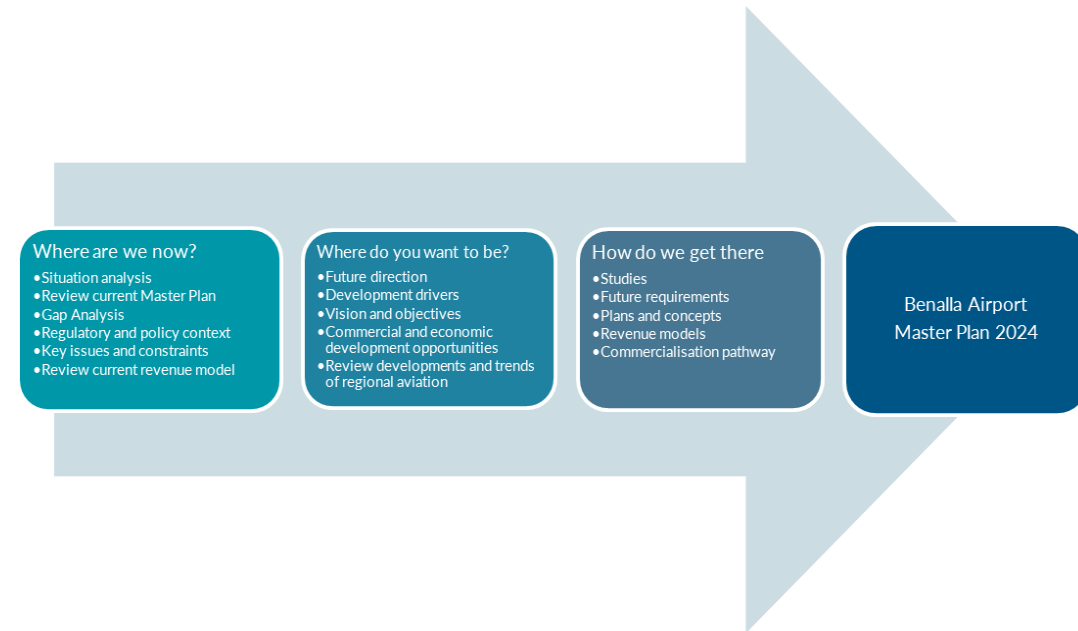


Figure 1: Master Plan Overarching Process

Using this overarching planning process, the project was undertaken in six stages, summarised below in Table 1.

Table 1: Methodology Overview

Stage 1: Project Inception
Project Inception Meeting
Site Inspection
Consultation Plan
Stage 2: Situation Analysis (updating Chapters 2-4 of current Master Plan)
Review Existing Conditions, Background and Context
Community and Stakeholder Consultation
SWOT Analysis
Situation Analysis Report
Stage 3: Future Direction (updating Chapters 5-9 of current Master Plan)
Community Vision and Guiding Principles
Forecast Demand - Aviation
Design Aircraft
Non-Aviation Demand and Development Opportunities

Stage 4: Master Plan Preparation (updating Chapters 10-13 of current Master Plan)
Principles and Objectives
Airport Land Use
Airport Safeguarding
Facilities Development Plan
Major Events
Airport Staged Developments
Implementation Plan
Indicative Costings
Stage 6: Draft Master Plan (updating Chapters 1 of current Master Plan)
Draft Master Plan Preparation
Council Review
Councillor Briefing
Public Exhibition of Draft Master Plan
Stage 7: Final Master Plan
Finalise Master Plan
Council Adoption

Stakeholder Consultation Process

The methodology has been based on significant individual and workshop consultations with industry and community stakeholders to understand the future aviation and non-aviation needs and obtain input on the emerging planning outcomes for Benalla Airport.

The consultation activities highlighted some key themes and outcomes from the various groups in Benalla. Industry and Airport users showed strong support for the Airport through the 'Have Your Say' surveys.

Strategic Approach

The considerations for the Benalla Airport Master Plan are to:

Establish strategic direction for the efficient and economic development of the airport over the planning horizon.

Provide for the development of the proposed uses of the airport site.

Consider inputs from stakeholders, including the broader Benalla community, on the intended uses of the airport site.

Reduce potential conflicts between uses of the airport and ensure that uses are compatible with surrounding areas.

Report Structure

The structure of this report is based on the AAA Regional Airport Master Planning Guideline.

Part A: Situation Analysis

A Situation Analysis report was prepared during Stage 2 of the Master Plan process to understand the current state of Benalla Airport. The report informed the decisions made in the later stages of the Master Plan process. The content of that report forms Part A and gives background and context surrounding the airport and its current state.

Part B: Future Direction

The Future Direction sets out the future direction for Benalla Airport based on Forecast Aviation, Design Aircraft and Non-Aviation demands and opportunities. It also includes the Community Vision and Guiding Principles for the airport.

Part C: Master Plan

The Master Plan sets out the future planning framework for Benalla Airport and highlights key development activities to enhance and safeguard the airport for the future. It includes a Land Use Plan, a Facilities Development Plan, an Airport Safeguarding Plan and an Implementation Plan.

PART A: SITUATION ANALYSIS

Master Plan Context

Historical Background

Benalla Airport is located adjacent to the township of Benalla in Victoria, Australia. Before its development by the Royal Australian Air Force (RAAF), the site was used as a landing ground and motor racing circuit from the late 1920s through the 1930s. In 1941, during World War II, the airfield was formally established as RAAF Station Benalla under the Empire Air Training Scheme (EATS), a Commonwealth initiative to train aircrew for the RAAF and other allied air forces. It became home to No.11 Empire Flying Training School and featured a range of facilities, including hangars, accommodation for personnel, and maintenance workshops.

After the war, RAAF Station Benalla was decommissioned, and the airport transitioned to civilian use. Only one of the original airside buildings, the Bellman hangar, is still located at the airport, and of the original 120 base structures, only nine P1 huts survive.

Regional Context

The region has been developed in agriculture, agricultural processing, and manufacturing. It has a strong service industry supporting tourism, business, and the community, as well as some unique tourism, sporting, and cultural attractions.

Local businesses are drivers of the region's character and provide vital community amenities. Large manufacturing and military-based companies also provide vital economic enhancements.

The Broken River flows through the region of Benalla making it diverse in agricultural activities. Hence, Benalla's predominant economy is its agricultural roots. The region is also home to farming which includes dairy production, cultivation of grains, and livestock because of its climate and fertile soil.

The weather is ideal for outdoor events and activities due to its clear, sunny skies during the summers and cool winters. Hence, makes Benalla an ideal location for aviation, particularly gliding.

Benalla's thriving tourism industry has expanded due to its heritage of culture, aviation events, and natural beauty. Along with this, the Benalla Art Gallery, the well-known art street, and the Benalla Festival attract more tourists to the region.

Regional Airport Competition

Benalla Airport's existing advantage is the resident Gliding Club of Victoria (GCV) operations, and the airport's airspace and capacity making it suitable for the development of other aviation activities. Thereby, making the airport a hub for gliding, despite having other airports with gliding activities in the region as shown in Figure 2.

The airport also has activities like ballooning, war birds, ultra-light, general aviation, and emergency and firefighting activities at the airport. The air ambulance and firefighting activities utilise Benalla only when required.

Other airports in the region that have permanent glider operations include:

Corowa Airport (YCOR)

Corowa Airport is a small regional airport primarily catering to general aviation and recreational flying, with 2 runways 14/32 and 05/23. It attracts European and Japanese visitors during the summer period by offering high-end glider package deals. The airport also provides both Avgas and Jet A1 turbine fuel facilities.

Mount Beauty Airport (YMBT)

Mount Beauty Airport is a small yet active airfield primarily serving general aviation and recreational flying. The airport features an asphalt, accommodating a variety of light aircraft and gliders which has limitations in certain crosswind conditions. The airport is used by members from GCV under certain weather conditions and to experience mountain flying. The airport offers aviation fuel, specifically Avgas, ensuring easy access for refuelling.

Tocumwal Airport (YTOC)

Tocumwal Airport features two paved runways and two parallel runways for glider operations, which accommodate a variety of aircraft, including larger general aviation planes and gliders. It is particularly famous for its gliding community, benefiting from the area's favourable weather conditions and wide-open spaces. The gliding centre has package deals including low budget

accommodation for full-time gliding training and flying Tocumwal Airport offers essential services, such as Avgas, making it convenient for pilots.

Wangaratta Airport (YWGT)

Wangaratta Airport, approximately 30 kilometres northeast of Benalla, is an important general aviation facility in the region. It has one paved runway, which supports various aviation operations, including charter flights and pilot training, and a grass runway. Wangaratta Airport also hosts several aviation-related businesses, contributing to the local economy and offering essential services for general aviation pilots. The airport offers aviation fuel services, providing both Avgas and Jet A1 fuel to meet the needs of visiting pilots.

Yarrowonga Aerodrome (YYWG)

Located around 60 kilometres north of Benalla, Yarrowonga Aerodrome is a well-regarded facility for general aviation. It features an asphalt runway, making it suitable for recreational flying and flight training, and a grass runway. Yarrowonga Aerodrome is a popular destination for weekend flyers and aviation enthusiasts, providing a relaxed atmosphere and excellent flying conditions. Yarrowonga Airport is equipped with basic aviation services, including Avgas fuel.

Other airports in the region that have General Aviation and RPT operations include:

Shepparton Airport (YSHT)

Shepparton Airport, situated about 70 kilometres west of Benalla, is a vital general aviation hub featuring an asphalt runway, designated 18/36, accommodating a variety of light to medium-sized aircraft and a grass runway 09/27. The airport supports a variety of aviation operations, such as charter services, flight training, agricultural aviation, and recreational flying. Shepparton Airport is equipped with Avgas fuel services but does not offer Jet A1 fuel.

Mangalore Airport (YMNG)

Mangalore Airport, about 50 kilometres southwest of Benalla, is a key general aviation facility in central Victoria. It features two asphalt runways, which supports a range of aviation operations, including pilot training, charter flights, and emergency services. The airport's strategic location along major transport routes enhance its accessibility and utility. Mangalore Airport offers both Avgas and Jet A1 fuel services, and its proximity to flight schools and aviation maintenance facilities makes it a key regional aviation hub.

Albury Airport (YMAY)

Albury Airport, located approximately 110 kilometres northeast of Benalla, is primarily known for its scheduled commercial services but also caters to general aviation. It has one asphalt runway. The airport supports general aviation, emergency services, and a variety of corporate and private flights, serving as an essential hub for regional air travel. Albury Airport's modern terminal and extensive facilities make it a crucial aviation hub in the region, accommodating both commercial and general aviation traffic effectively. Albury Airport offers both Jet A1 and Avgas fuel services.

Both Mangalore and Wangaratta are used by the Victorian Police Air Wing which includes the air ambulance helicopter for Jet A1 fuelling staging points. Another significant fact is that Benalla Airport provides an ideal environment for most boutique aviation flights because it is not served by Regular Public Transport (RPT) operations, which need high security requirements, such as Albury, or large numbers of powered recreational and training flights.

Benalla Airport is relatively close to Melbourne Airport. There is inadequate demand for airplane services from other regional or capital cities, and there are already RPT flights in Albury within the region. Therefore, Benalla Airport is unlikely to provide sustainable airline services in the foreseeable future.

BENALLA AIRPORT MASTER PLAN | REGIONAL CONTEXT PLAN

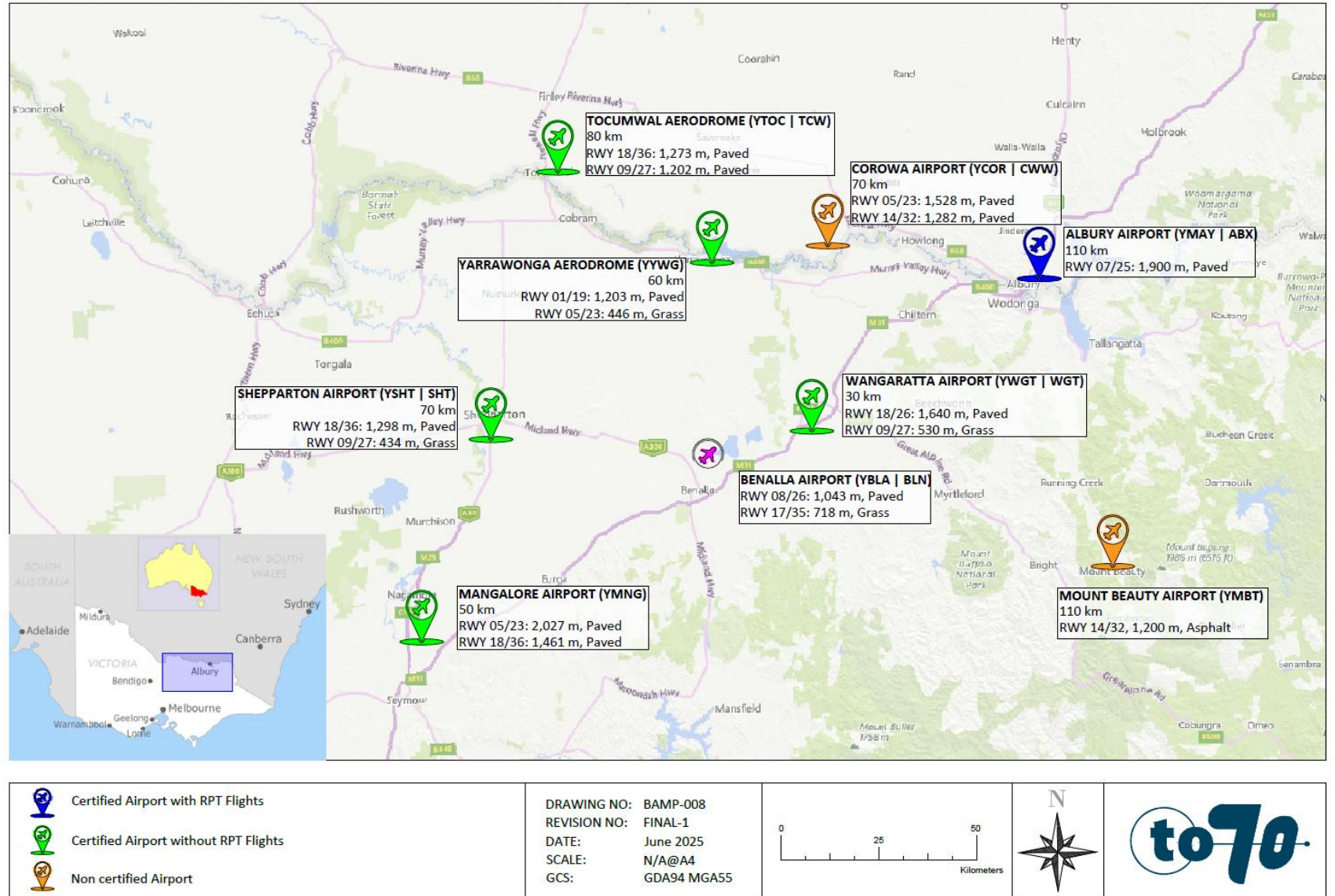


Figure 2: Regional airports around Benalla

Socio-Economic Context

Benalla has experienced steady population growth, from 13,807 in 2006 to 14,529 in 2023, with a projected increase to 15,110 by 2036, which indicates a growing demand for improved transportation infrastructure. This growth could drive increased passenger traffic and cargo needs.

The demographic profile reveals a lower percentage of younger residents (17.2%) and a higher proportion of senior residents (53.3%). Income levels in Benalla predominantly consist of lower to middle-income earners, with 24.3% of the population falling within the working-age category.

Economically, Benalla has shown consistent growth, particularly in construction, manufacturing, and agriculture, which are central to the local economy. The consistent economic growth in these sectors suggests significant opportunities for industrial development, particularly near the airport and the northern boundaries. Moreover, the growth in these industries indicates a need for improved logistics and transport links.

The visitor economy, driven by domestic tourism, also presents opportunities for development in tourism-related sectors. The significant increase in domestic tourism expenditure and visitor numbers highlights a strong potential for growth in the tourism sector. Domestic overnight expenditure in 2023 reached \$1,793 million, highlighting the importance of tourism to the regional economy.

Regulatory Context

This section discusses the regulatory framework Benalla must consider when planning for the future of the airport.

Commonwealth Government

Article 37 of the Chicago Convention provides for the International Civil Aviation Organization (ICAO) to make standards and recommended practices (SARPS) related to the safety, regularity and efficiency of air navigation. The current SARPS are published by ICAO as Annexes to the Chicago Convention. A multiagency Memorandum of Understanding (MoU) exists between several federal government agencies to show who is responsible for each annex, which includes the Department of Infrastructure, Transport, Regional Development Communications and the Arts (DITRDCA), Airservices Australia, Department of Home Affairs, Australian Transport Safety Authority, Australian Maritime Safety Authority, Australia Bureau of Meteorology, Department of Defence and the Department of Foreign Affairs and Trade.

Civil Aviation Safety Authority

CASA is the authority responsible for implementing and enforcing safety regulations for civil aviation operations in Australia. Its authority is derived under the Civil Aviation Act 1988 and promulgated through the Civil Aviation Safety Regulations 1988 (CASR).

Through Part 139 of the Civil Aviation Safety Regulations, CASA issues directives for aerodrome operators to ensure technical standards are met, and aircraft operations are undertaken safely at certified aerodromes. Benalla Airport has been a certified aerodrome under the CASR since 2005.

Further, the Part 139 Manual of Standards (Aerodromes), published by CASA, is made under Part 139 of the CASR and sets out detailed standards and operating procedures for certified aerodromes used in air transport. The manual provides rules, mandatory standards, and procedures for the planning, design, and operation of certified aerodromes (Part 139 MoS can be located here - MOS 139 Aerodromes). In addition, CASA develops and publishes advisory circulars that aid aerodrome operators in implementing specific standards/good practices to ensure safety in their aerodromes.

Benalla Airport Infrastructure - MoS Compliance

The current MOS 139 came into operation in 2020. As a result, some aspects of Benalla Airport's infrastructure were grandfathered under previous CASA provisions when the required standards were changed in the new MOS 139. Such facilities are listed in the Aerodrome Manual section 2.7 as follows:

Table 2: Grandfathered Facilities

Facility (grandfathered)	Description
Runway 08 / 26 lights	Runway threshold lights do not comply, and no turn pad lights exist.
Runway 08 / 26 surface	Does not meet Table 6.09(1)-1 of Part 139 of MOS.
Runway 26	No turn pad markings exist.
Runway holding position markings	As per figure 8.39(2) Pattern A do not comply
Glider strip 08/26 and 17/35	Markings are not located outside the glider strips and are not the correct dimensions.

Potential infrastructure changes and the impacts of grandfathering provisions at Benalla Airport.

Airside infrastructure changes, including upgrades to existing facilities or development of new facilities, will require the aerodrome operator to bring those specific elements in compliance with the latest Part 139 MoS, while other facilities that are impacted by the changes continue to be grandfathered. CASA Advisory Circular AC 139.A-03 v1.1, dated August 2023, provides comprehensive insights on how future airside infrastructure changes could impact the airport's grandfathering status. Some of the changes that could impact the grandfathering status at Benalla Airport include:

Scenario 1: If the RWY length of the sealed RWY 08/26 is extended, the upgraded facility should then be compliant with the recent Part 139 MoS. Further, associated facilities, including RWY strips, RESAs, OLS surfaces for RWY 08/26, RWY surface conditions, RWY lighting, and markings, must also comply with the provisions of the latest Part 139 MoS in practice at the time of upgrading.

Scenario 2: If the taxiways leading to RWY 08/26 are upgraded or resurfaced. The upgraded facility should then be compliant with the recent Part 139 MoS.

Further, associated facilities, including TWY strips, TWY surface conditions, and TWY markings, including the RWY holding position markings, should be upgraded to comply with the latest Part 139 MoS.

In the current scenario, the RWY holding position marking does not comply with Pattern-A markings provided in the latest Part 139 MoS.

Further Technical Standards

In addition to MOS 139, other parts of CASR apply, and CASA conducts periodic inspections (surveillances) to ensure airport and aircraft operators meet their regulatory responsibilities under:

CASR Part 139 – Aerodromes

CASR Part 175 – Aeronautical information management

CASR Part 173 – Instrument flight procedure design

CASA also provides guidance to aerodrome operators to comply with regulations through many advisory circulars, including:

AC 139.A-03 Application of aerodrome standards

AC 139.A-02 Aerodrome and aircraft compatibility

AC 139.C-01 Aerodrome manual

AC 139.C-03 Serviceability inspections

AC 139.C-04 Aerodrome technical inspections and aerodrome manual validations

AC 139.C-07 Strength rating of aerodrome pavements

AC 139.C-09 Visual aids, markings, signals and signs

AC 139.C-11 Commissioning of aerodrome lighting systems

AC 139.C-13 Apron safety management

AC 139.C-14 Airside vehicle control

AC 139.C-16 Wildlife hazard management

AC 139.C-18 Aerodrome emergency planning

AC 139.C-22 Runway safety teams

AC 139.C-26 Safety management system for aerodromes – under development

AC 139.C-27 Risk management plans for aerodromes

AC 139-19 All-weather operations at aerodromes

Airservices Australia

Airservices Australia (Airservices) is responsible for managing airspace and air traffic and providing Australia's network of aviation users with facilities for aircraft navigation, communication, and surveillance. It provides Air Traffic Management (ATM) services for the safe and efficient management of Australia's skies, which comprise 11 per cent of the world's airspace.

In addition, Airservices is also responsible for Aeronautical Information Management (AIM) as per Part 175 of the CASR. As an aeronautical information service provider, they work collaboratively with industry to provide quality data and information for air navigation. Hence, aerodrome operators must constantly update Airservices with aerodrome-related information for publication in the Aeronautical Information Package (AIP).

An AIP consists of a package of documents that provides all operational information necessary for the safe and efficient conduct of air navigation. As part of the AIP, Airservices also maintain and publish Enroute Supplement Australia (ERSA), which contains vital aerodrome information necessary for planning and executing a flight. Further, Airservices also publish various charts including aerodrome and procedure charts, enroute charts, terminal area charts and visual navigation charts.

Local governments are encouraged to seek advice from Airservices on any development that can potentially impact an aviation facility's sensitive areas, such as landing and navigational areas.

Planning and Environment Act 1987 (Vic)

The Planning and Environment Act 1987 (PE Act) serves as the foundation for regulating land use, development, and land protection in Victoria.

The objectives of the planning framework established by this Act are:

to ensure sound, strategic planning and coordinated action at State, regional and municipal levels.

to establish a system of planning schemes based on municipal districts to be the principal way of setting out objectives, policies and controls for the use, development and protection of land.

to enable land use and development planning and policy to be easily integrated with environmental, social, economic, conservation, and resource management policies at the State, regional, and municipal levels.

to ensure that the environmental effects are considered and provide for explicit consideration of social and economic effects when decisions are made about the use and development of land.

to facilitate development that achieves the planning objectives in Victoria and the objectives set out in planning schemes.

to provide for a single authority to issue permits for land use or development and related matters and to coordinate the issue of permits with related approvals.

to encourage the achievement of planning objectives through positive actions by responsible authorities and planning authorities.

to establish a clear procedure for amending planning schemes, with appropriate public participation in decision-making.

to ensure that those affected by proposals for the use, development or protection of land or changes in planning policy or requirements receive appropriate notice.

to provide an accessible process for just and timely review of decisions without unnecessary formality.

to provide effective enforcement procedures to comply with planning schemes, permits and agreements.

to provide compensation when land is set aside for public purposes and in other circumstances.

The PE Act provides for a single instrument of planning control for each municipality, the planning scheme, which sets out how land may be used or developed. The planning scheme is a legal document prepared and approved under the PE Act. It contains state and local planning policies, zones, overlays, and other provisions that affect how land can be used and developed.

Planning schemes contain the policies and provisions that control land use and development and apply to all private and public land in Victoria.

As a council-owned and operated asset, Benalla Airport is subject to the Local Government Act 2020 requirements. This applies to the sale, lease, transfer exchange, and use of land. The Council must operate under the Local Government Act.

Adjacent buildings to the airport site are on the Victorian Heritage Register. All new buildings within the Heritage overlay will generally require a Heritage Permit from Heritage Victoria under Part 5 of the Heritage Act 2017.

Benalla Planning Scheme

The Benalla Planning Scheme encompasses policies and provisions designed to regulate land use and development in the Rural City of Benalla. The scheme consists of an ordinance, which comprises written policies and clauses and maps that illustrate the specific locations where zones and overlays are applicable within the designated planning scheme area.

Clause 18.02-7S: Airports and Airfields

Clause 18.02-7S sets out a state policy relating to airports and airfields. The objective of the policy is:

To strengthen the role of Victoria's airports and airfields within the state's economic and transport infrastructure, guide their siting and expansion, and safeguard their ongoing, safe and efficient operation.

The strategies of this policy include:

Protect airports and airfields from incompatible land use and development.

Prevent land use or development that poses risks to the safety or efficiency of an airport or airfield, including any of the following risks:

Building-generated wind shear and turbulence.

Increased risk of wildlife strike.

Pilot distraction from lighting.

Intrusion into protected airspace.

Interference with communication, navigation and surveillance facilities.

Increased risk to public safety at the end of runways.

Minimise the detrimental effects of aircraft noise when planning for areas around airports and airfields.

Limit the intensification of noise-sensitive land uses and avoid zoning or overlay changes that allow noise-sensitive land use and development where ultimate capacity, or long-range noise modelling indicates an area is within a 20 Australian Noise Exposure Forecast (ANEF) contour or higher.

Avoid zoning or overlay changes that allow noise-sensitive land uses outside the Urban Growth Boundary, and encourage measures to reduce the impact of aircraft noise in planning for areas within the Urban Growth Boundary, where ultimate capacity or long-range noise modelling indicates an area is within 'number above' contours (N Contours) representing:

20 or more daily events greater than 70 dB(A).

50 or more daily events of greater than 65 dB(A).

100 or more daily events greater than 60 dB(A).

6 events or more between the hours of 11 pm to 6 am greater than 60 dB(A).

Ensure land use and development at airports and airfields contribute to the state's aviation needs and the efficient and functional operation of the airport or airfield.

Plan for areas around airports and airfields so that land use or development does not prejudice future airport or airfield operations or expansions following an approved strategy or master plan for that airport or airfield.

Ensure that land use decisions are integrated into the planning of airports and airfields, appropriate land use buffers are in place, and provision is made for associated businesses that service airports.

The National Airports Safeguarding Framework (NASF) is referred to as a policy document that must be considered (as relevant) in association with this policy. NASF is discussed further in Section 2.5 of this report.

Clause 18.02-7L: Benalla Aerodrome

Clause 18.02-7L sets out a local policy relating to Benalla Airport. This policy applies to land shown within the 'policy area' in the Benalla Aerodrome Environs Area Map (Figure 3).

The strategies of this policy are:

Protect the Benalla Aerodrome from sensitive uses.

Encourage aviation-related commercial activities, particularly in the Benalla Aerodrome and within the Enterprise Park boundary, as bounded by development on both sides of Enterprise Drive and the south side of Irwin Road, Benalla.

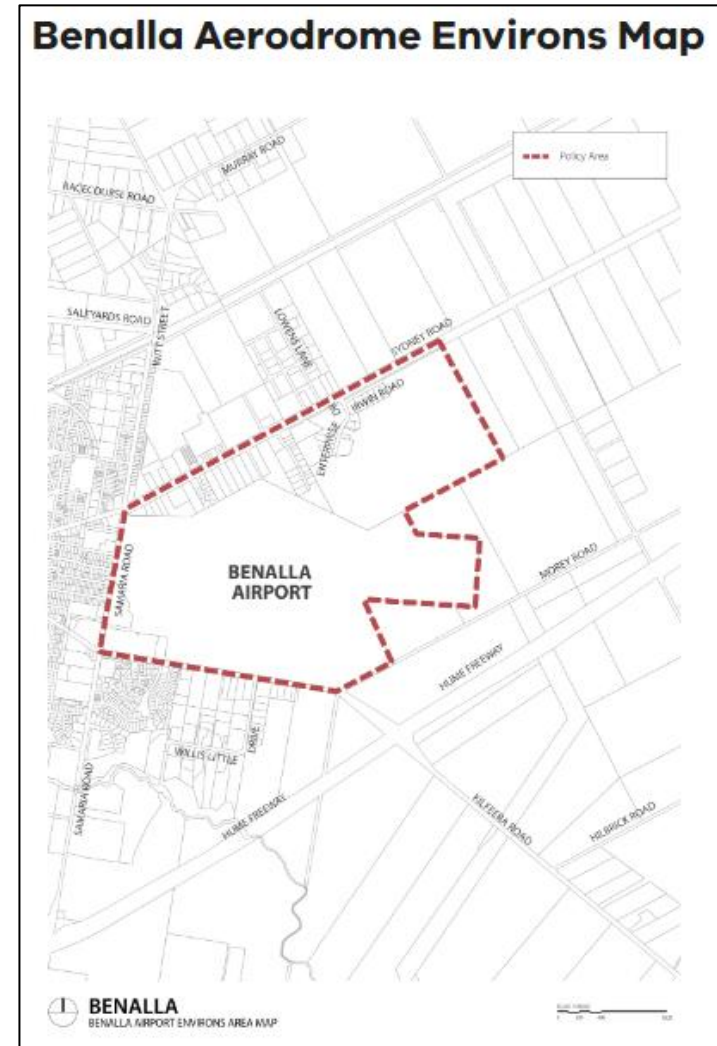


Figure 3: Benalla Aerodrome Environs Area Map

Land Use Zoning

Benalla Airport is zoned Transport Zone 4 (TRZ4) under the Benalla Planning Scheme (see Figure 4). The purpose of the zone is to:

To implement the Municipal Planning Strategy and the Planning Policy Framework.

To provide planning for an integrated and sustainable transport system.

To identify transport land use and land required for transport services and facilities.

To provide for the use and development of land that complements, or is consistent with, the transport system or public land reservation.

To ensure the efficient and safe use of transport infrastructure and land comprising the transport system.

Under the provisions of the TRZ4, 'Transport Terminal (other than Railway)', which includes 'Airport' and 'Heliport', is a section 1 (permit not required) to use subject to the condition that "The use must be carried out by or on behalf of a relevant transport manager". 'Any other use' is also in section 1 of the table of uses, subject to the condition that "The use must be for a transport purpose and carried out by or on behalf of a relevant transport manager". No section 2 (permit required) or 3 (prohibited) uses exist.

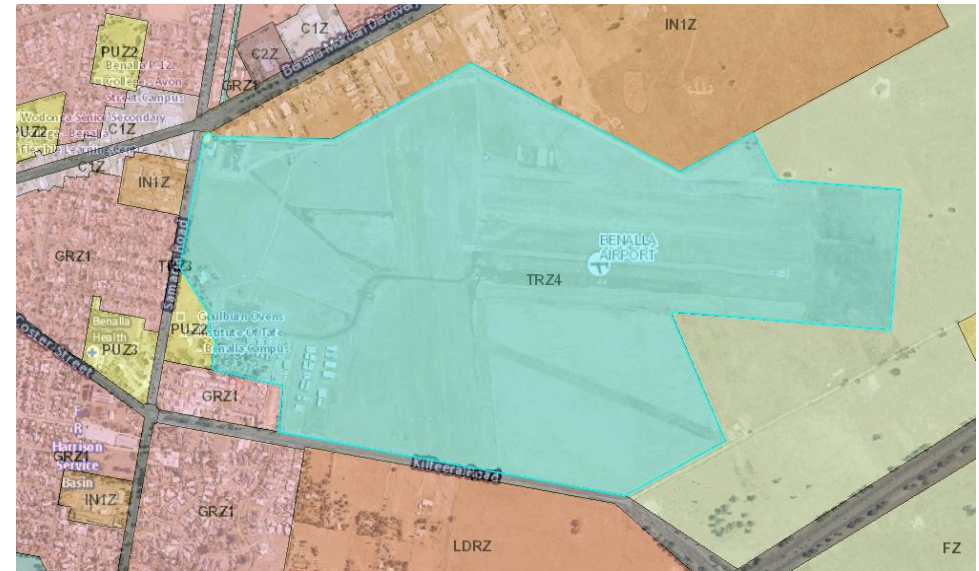


Figure 4: Land Use Zoning Plan

Land Subject to Inundation Overlay

The Land Subject to Inundation Overlay (LSIO) also applies to part of the airport site as shown in Figure 5. The purpose of this overlay is as follows:

To implement the Municipal Planning Strategy and the Planning Policy Framework.

To identify flood-prone land in a riverine or coastal area affected by the 1 in 100 (1 per cent Annual Exceedance Probability) year flood or any other area determined by the floodplain management authority.

To ensure that development maintains the free passage and temporary storage of floodwaters, minimises flood damage, responds to flood hazards and local drainage conditions and will not cause any significant rise in flood level or flow velocity.

To minimise the potential flood risk to life, health and safety associated with development.

To reflect a declaration under Division 4 of Part 10 of the Water Act, 1989.

To protect water quality and waterways as natural resources, urban stormwater management, protection of water supply catchment areas, and management of saline discharges are essential to minimise risks to the environmental quality of water and groundwater.

To ensure that development maintains or improves river, marine, coastal and wetland health, waterway protection and floodplain health.

Under the provisions of the Land Subject to Inundation Overlay, a permit is generally required to construct a building or to construct or carry out works (except there are some specified exclusions).



Figure 5: Land Subject to Inundation Overlay (LSIO)

Design and Development Overlay

Benalla Airport also has a Development and Design Overlay, DDO1: Aerodrome Environs Area Benalla, which applies to its approach and take-off flight paths (see Figure 6). This overlay has the following design objectives:

Protect Benalla Aerodrome, an important asset from development that may affect the safe flying environment of the aerodrome and approaches.

Protect the approaches to the Benalla Aerodrome by regulating the construction and height of buildings or works or natural vegetation.

Specify the height limitations that apply to the area around the Benalla Aerodrome and along the flight path approaches to the runways.

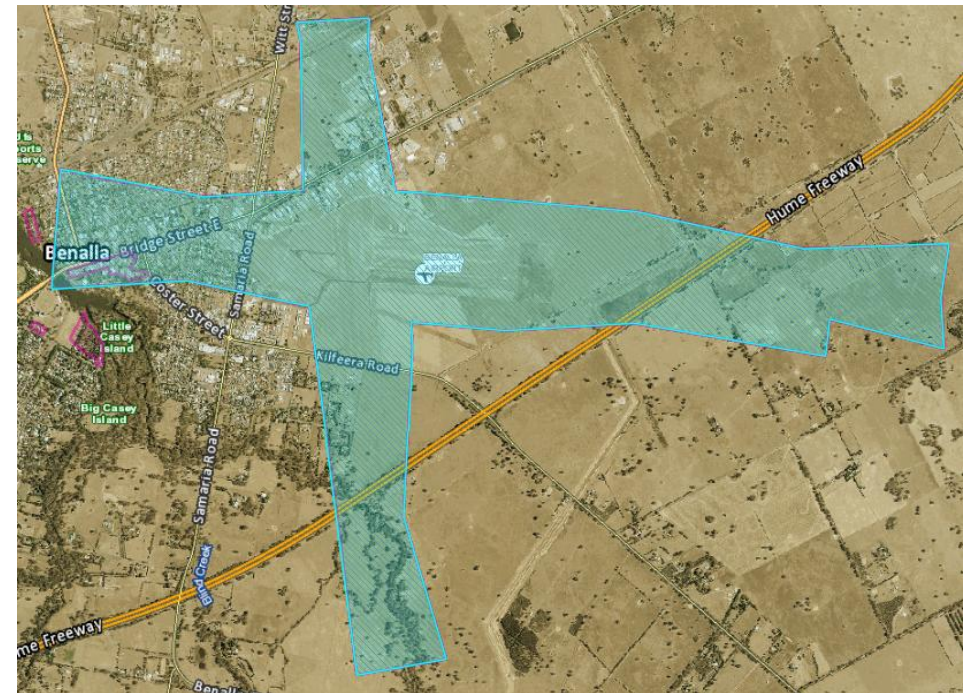


Figure 6: Development and Design Overlay (DDO1)

Under DDO1, a permit application must indicate that any proposed building or works within the areas described in Clause 2.1 of the schedule will not be constructed to a height greater than indicated on the drawings attached to the schedule. The responsible authority may require a property owner or occupier to reduce the height of any building or works, or natural vegetation to ensure that the specified height limitations are not exceeded.

Environment Protection and Biodiversity Conservation Act 1999 (Cth)

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) provides a legal framework to protect and manage nationally and internationally significant flora, fauna, ecological communities and heritage places. It is administered by the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW).

The EPBC Act aims to:

protect the environment, especially protected matters,
conserve our biodiversity - the variety of all life forms in Australia,
protect and manage our important natural and cultural places,
assess the environmental impact of projects and decide whether to approve them,
control how plants and animals, including specimens and products, move in and out of Australia,
promote ecologically sustainable development through careful use of our natural resources,
appreciate the role of Indigenous peoples in protecting and sustainably using the environment,
promote using Indigenous peoples' knowledge, with their permission and cooperation.

The EPBC Act refers to living things (including plants and animals), habitats, and places that need protection as 'matters of national environmental significance'. There are nine of these:

World Heritage areas
Commonwealth Heritage places
Wetlands of international importance (listed under the Ramsar Convention)
Listed threatened species and listed ecological communities

Listed migratory species (protected under international agreements)
Commonwealth marine areas
Great Barrier Reef Marine Park
Nuclear actions (including uranium mines)
Water resources (relating to coal seam gas development and large coal mining development).

A project (also called 'an action') that has an impact on protected matters, is a controlled action under the EPBC Act. The Act governs the referral and assessment process for controlled actions.

Heritage Act 2017 (Vic)

Adjacent buildings to the airport site are on the Victorian Heritage Register. All new buildings within the Heritage overlay will generally require a Heritage Permit from Heritage Victoria under Part 5 of the Heritage Act 2017.

Local Government Act 2020 (Vic)

As a council-owned and operated asset, Benalla Airport is subject to the Local Government Act 2020 requirements. This applies to the sale, lease, transfer exchange, and use of land. The Council must operate under the Local Government Act.

Policy Context

This section details the relevant policies that influence the future use and development of Benalla Airport. The Master Plan should be consistent with the existing planning policies, strategic objectives, and guidelines relevant to the airport.

National Airports Safeguarding Framework (NASF)

The NASF is a national land use planning framework that aims to:

Improve community amenities by minimising aircraft noise-sensitive developments near airports and
Improve safety outcomes by ensuring recognition of aviation safety requirements in land use planning decisions.

NASF was developed by the National Airports Safeguarding Advisory Group (NASAG), which comprises Commonwealth, State, and Territory Government

planning and transport officials, the Australian Government Department of Defence, the Civil Aviation Safety Authority, Airservices Australia, and the Australian Local Government Association.

NASF was convened by Commonwealth, State and Territory Ministers at the Standing Council on Transport and Infrastructure (SCOTI) meeting on 18 May 2012. The agreement represents a collective commitment from Governments to ensure that an appropriate balance is maintained between the community's social, economic, and environmental needs and the effective use of airport sites. The Framework applies at all airports in Australia and affects planning and development around airports, including development activity that might penetrate operational airspace and/or affect navigational procedures for aircraft. Pursuant to the SCOTI agreement, it is the responsibility of each jurisdiction to implement the Framework into their respective planning systems.

In October 2015, the Victorian Government approved Amendment VC128, which introduced the consideration of NASF into the Planning Policy Framework in Clause 18.02-7S: Airports and Airfields.

NASF consists of a set of seven principles and nine guidelines. The NASF principles are:

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.

The nine guidelines are:

Guideline A – Measures for Managing Impacts of Aircraft Noise

Guideline B – Managing the Risk of Building Generated Windshear and Turbulence at Airports

Guideline C – Managing the Risk of Wildlife Strikes in the Vicinity of Airports

Guideline D – Managing the Risk of Wind Turbine Farms as Physical Obstacles to Air Navigation

Guideline E – Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports

Guideline F – Managing the Risk of Intrusions into the Protected Airspace of Airports

Guideline G – Protecting Aviation Facilities – Communication, Navigation and Surveillance

Guideline H – Protecting Strategically Important Helicopter Landing Sites

Guideline I – Managing the Risk in Public Safety Zones at the Ends of Runways

Copies of the full set of current guidelines can be found on the Department of Infrastructure, Transport, Regional Development, Communications and the Arts' [website](#).

Aviation White Paper – Towards 2050

The Aviation White Paper, released on 26 August 2024, sets out the Australian Government's vision for Australia's aviation sector towards 2050 to ensure it remains safe, competitive, productive and sustainable.

The White Paper and the development of its 56 policy initiatives was informed by extensive consultation (on an initial Aviation Green Paper) with the aviation industry, state and territory governments, and the Australian community. These 56 policy initiatives cover 10 key areas including:

a better passenger experience

a competitive and efficient aviation sector

a skilled, secure and productive workforce

maximising aviation's contribution to net zero
connecting regional Australia
regenerating General Aviation
a balanced approach to airport planning and noise
world leading safety, security and airspace regulation
enabling new aviation technologies
connecting Australia to the world.

Through the Aviation White Paper, the government will strengthen regional and remote aviation through a range of initiatives including:

Extending the Remote Airstrip Upgrade Program
Extending the Regional Airports Program
Funding the Remote Aerodrome Inspection Program
Supporting Closing the Gap outcomes

Some of these topics directly relate to regional airports which will be vital to consider in the development of the Benalla Airport Master Plan. The AWP also acknowledges the importance of General Aviation (GA). GA covers a range of aviation operations that are not commercial air transport services. From the engineers who keep the aircraft flying, to the very remote regions of the country where GA delivers vital health services, food and emergency assistance during natural disasters, GA plays an essential role across Australia. Through the Aviation White Paper, the government has committed to a range of measures to support and regenerate GA.

Previous Master Plans

The most recent and current Master Plan, published in 2015, catered for growth in aviation activities at Benalla Airport over the 20 years to 2034. The Master Plan proposed the following developments to the airport infrastructure:

Extension of main Runway 08/26 in both east and west directions to an overall length of 1750m.
Provision of RESA (60 x 60 m) from the end of RWY strip.
Provision of parallel taxiway to the main RWY 08/26 capable of handling Code C aircraft.
Extending glider RWY 08L/26R in both east and west directions parallel to main RWY 08/26.

Pavement strength of main RWY 08/26 to be upgraded to suit design aircraft (F50) operations.
Provision of parallel taxiway (grass) to grass RWY 17/35 capable of handling Code A aircraft.
Extension of the apron towards east to accommodate the design aircraft.
Two purpose-built balloon launch areas for hot air balloons, one North and one South of the existing runway.
Helicopter parking area – north of main apron.
Improvised OLS surfaces for RWY 08/26 to suit Code C aircraft operations.
Introductions of PANS-OPS surfaces for RWY 26.
Provision for additional hangar space for the growth of the aviation museum and war bird adventure flights. And, the Eastern Hangar Park for additional hangars to be developed in line with the demand requirements, which includes an MRO hangar.
Fuel precinct to the north of Apron area.
Provision of an Automatic Weather Information Station (AWIS).

The current Master Plan aims to:

Review recommendations offered in the previous Master Plan 2015
Review subsequent developments at the airport
Analyse forecasted future aviation activities and
Suggest ideal improvements to airport facilities that to both aviation and non-aviation activities at the airport, while meeting the council's vision & objectives for the airport.

Current Situation

Ownership and Management

Benalla Airport has been a Council asset since a deed signed between the Commonwealth of Australia and the City of Benalla in July 1992. As per the deed signed, the Secretary of the responsible Commonwealth Department can sell, lease, or otherwise dispose of part or the entire airport.

The Airport Manager is responsible for operating and maintaining the airport as per the Benalla Aerodrome Manual dated July 2020 which is still under review. The Airport Manager is currently the Manager Facilities, and this position is supported by the aerodrome reporting officers, the Facilities & Development Administration Officer, and the Benalla Airport Advisory Committee.

Site Description

Benalla is a town located in northeastern Victoria, Australia, approximately 212 kilometres northeast of Melbourne. The airport is well located immediately adjacent to Benalla city centre (as shown in Figure 7) and between the city and the Hume Freeway. It is situated approximately 3 kilometres west of the town centre of Benalla, along Samaria Road.

The airport is located on very flat land with minimal fall and suffers from severe flooding during heavy rain falls as does most of the township of Benalla and surrounding areas. The airport has an elevation of 569 feet (173 metres) Above Mean Sea Level (AMSL).



Figure 7: Benalla Airport Location

The primary activities on the airport site currently include:

The State Gliding Centre

The Aviation Museum

Larger hangars for the storage and maintenance of light aircraft

A number of historic huts (BARC huts) which are used by the community for a variety of community and recreational activities

A number of privately leased aircraft hangars

Low cost accommodation (the 'Aeropark') comprising huts, demountable cabins, caravans and powered sites

An area used for the storage of glider trailers.

Until recently, unused areas of the airport provided revenue to Council through annual cropping leases.

Surrounding Land

The airport is located very close to the Benalla main street and a range of existing community facilities. The airport adjoins the Benalla hospital and a large retirement village, and it is within walking distance to the river, regional art gallery and a number of accommodation facilities. The Goulburn Ovens TAFE facility (GoTAFE) and Benalla Performing Arts Centre (BPAC) are located on the Samaria Road frontage. Whilst these facilities are not located on the airport land holding, they functionally form part of the airport precinct.

The adjacent land uses are a mixture of:

Residential

Commercial

Industrial, and

Farming

Existing Activities/Operations

Benalla Airport experiences high gliding activity, primarily from September to March, with peak operations occurring between December and January. Most gliders use tow launches, with limited self-launched glider operations.

In addition to gliding, Benalla Airport hosts general aviation operations, including both Jet and Non-Jet powered aircraft, as well as Balloon flights. Although these operations are less frequent compared to gliding, their numbers have remained

steady in recent years. The airport also supports emergency services such as Air Ambulance and Aerial Fire Fighting operations as needed.

Benalla Airport does not have Regular Public Transport (RPT) flights, and its current infrastructure is not equipped to support such operations. The airport employs a contra circuit system on all runways, enabling powered aircraft to operate in one direction while gliders operate in the opposite direction.

Existing Facilities

Movement Area

According to CASA, movement area means that part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the aprons. The existing movement area facilities at Benalla airport are shown in Figure 8.

Runways

Benalla Airport has one sealed runway and one grass runway. Apart from the RWYs, the airport comprises two glider strips that are parallel to the sealed and grass RWYs. Table 3 shows the runways, glider strips and their primary use.

Table 3: Runways and Glider strips details

Runway	Length	Surface	Use
RWY 08/26	1043 m	Sealed Bitumen	All aircraft operations including gliders
Glider Strip 08/26	1320 m	Grass & marked by orange gables	Gliders and Tow launches

RWY 17/35	718 m	Other – Grass slit clay & marked by white gables	Non-Jet aircraft & gliders
Glider Strip 17/35	718 m	Grass & marked by orange gables	Gliders and Tow launches

Taxiways

Benalla Airport has two taxiways that connect RWY 08/26 with hangars and the apron. The taxiways suit existing aircraft operations. Table 4 below shows Taxiway details:

Table 4: Taxiways details

Taxiway	Taxiway width	Surface	Connects
Taxiway A	11m	Sealed Bitumen	Hangars to RWY 08 threshold
Taxiway B	7.5m	Sealed Bitumen	Apron to RWY 08 threshold

BENALLA AIRPORT MASTER PLAN | EXISTING CONDITIONS PLAN



<p>RUNWAY 08/26 1043 m x 18 m, PCN 10 /F /B /450 (65 PSI) /U, Sealed, Code 1A RUNWAY 17/35 718 m x 30 m, 5700/450 (65 PSI), Grass slit clay, Code 1A ARP 36° 33' 15" S 146° 00' 33" E (WGS84) Two additional glider strips, one parallel to RWY 08/26, and one parallel to RWY 17/35</p>	<p>DRAWING NO: BAMP-002 REVISION NO: FINAL-2 DATE: July 2025 SCALE: 1:10,000@A4 GCS: GDA94 MGA55</p>			
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Figure 8: Existing movement area facilities

Aprons

Benalla Airport comprises a sealed (Bitumen surface) apron that has the capability to host aircraft that currently operate to/from the airport. While the apron surface and the existing airside operating procedures safe and efficient aircraft movement on the apron, there are no designated parking positions marked owing to no RPT/international operations at the airport as seen in Figure 9.



Figure 9: Apron at Benalla Airport

Gliding Club Operations

Gliding Club House

The gliding club building comprises a two level facility. Internally the building has the following facilities:

- Large general area with tables and chairs
- Commercial and general kitchen areas
- Training room

- Flight simulator room
- Offices and storage areas
- Toilets and shower areas
- External to the club room is a covered BBQ and seating areas

Airfield Gliding Facilities and Operation

The gliders operate from the end and to the side of the operating duty glider runway/strip. The area is used for glider marshalling and gridding of the gliders prior to launch. Glider tugs operate within the glider strip. Glider club members park their cars adjacent to the launch area and outside the runway strip. The glider club operates air experience flights for the general public, and they are required to navigate themselves out along the airside perimeter road to the glider launch area. The only public viewing area within line of sight of the glider launch area is airside. There is one toilet facility provided near the western end of the glider runway/strip RWY 08L/26R.

The pavement used for glider launch is highlighted in Figure 10 for reference.

Aircraft Refuelling

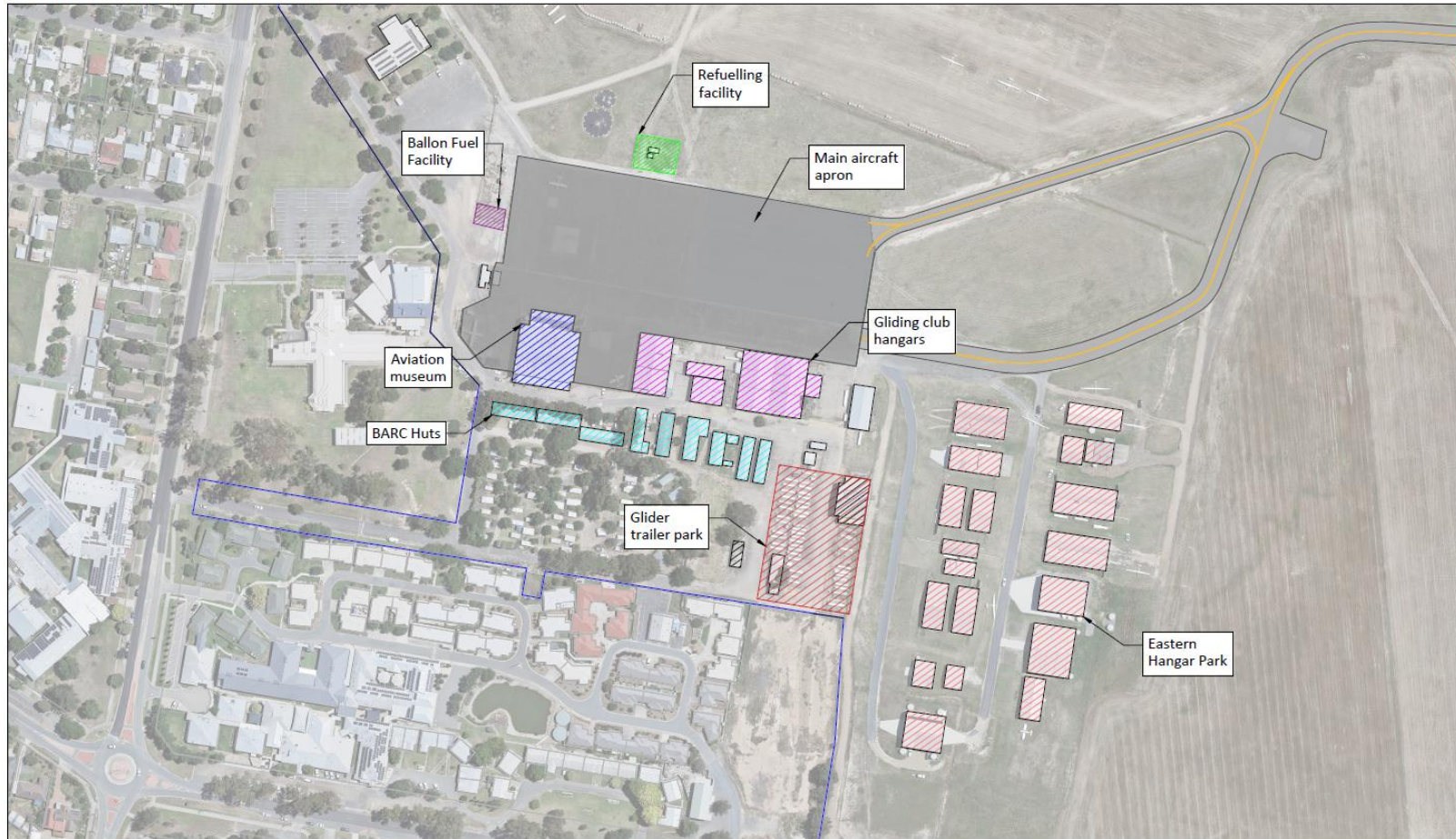
The current fuel facility is located airside, just north of the apron. Aero refuellers provide both AVGAS and Jet A1 fuel for aircraft operators, with details available in the ERSA for aviation community awareness. Its location allows visiting charter aircraft to refuel directly from the apron, following standard safety procedures. The facility is well-equipped to meet both present and future aircraft fuel demands.

Jet A1 fuel meets the requirements of turbine-powered aircraft, including Police Air Wing helicopters, air ambulance fixed and helicopters and firefighting helicopters. There is no Mogas fuel provided at Benalla which is required for most light sport aircraft. A gas refilling facility for Balloon operations is currently under construction.

Aircraft Hangars

The airport has numerous hangars for both powered aircraft and gliders (Figure 10). They are located in two respective precincts: the Heritage/Glider Precinct and the Eastern Hangar Park.

BENALLA AIRPORT MASTER PLAN



<p>EXISTING CONDITIONS PLAN - BUILDINGS</p>	<p>DRAWING NO: BAMP-003 REVISION NO: FINAL-1 DATE: June 2025 SCALE: 1:10,000@A4 GCS: GDA94 MGA55</p>			
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Figure 10: Existing airport facilities

Large Hangars Precinct

The large hangar precinct (comprising heritage/glider hangars) comprises four hangars with direct access to the sealed apron areas. Three of the hangars front directly onto the sealed taxiway and in some circumstances infringe the taxiway clearance line.

Figure 11 shows the hanger facility for Benalla Aero Club at the airport.

Small Hangars Precinct/Eastern Hangar Park

The small hangar precinct comprises twenty-four smaller hangars that are accessed via unsealed (gravel) taxilanes. The apron area for each of these is between the taxilanes and the respective hangar and is unsealed (grass and/or gravel). The area varies with differing floor levels, apron grades and is subject to flooding from heavy rain which severely affects access to the hangars.



Figure 11: Image of the Benalla Aviation Museum Hangar

Air Traffic Control

There is no air traffic control tower provided at the airport due to the very low number of aircraft movements. Aircraft separation is maintained by pilots (operating both powered and glider aircraft) through the Common Traffic Advisory Frequency (CTAF), and the carriage of radio is not mandatory. The CTAF frequency for Benalla Airport is 125.6 MHz and covers a 10 NM radius from the aerodrome reference point. Due to prevailing operating environment and demand, the airport is also not equipped with an automated Aerodrome Frequency Response Unit (AFRU).

Navigation, Landing Aids and Lighting

Benalla Airport does not feature any navigational or landing aids, and hence does not support low-visibility aircraft operations. However, the airport supports night operations through provisioning of aerodrome ground lights (AGL).

To better suit round-the-clock aircraft operations, the airport has implemented Pilot Activated Lighting (PAL) at the airport. The PAL functions on the frequency 123.4 MHz. The aerodrome lighting provided include:

- Runway threshold lighting (both ends of RWY 08/26)
- RWY edge lights (RWY 08/26)
- RWY end lights (RWY 08/26)
- Taxiway edge lights on TWY A
- RWY holding position lights (inset yellow lights) on TWY A.
- A light at the Benalla Airport fuel facility, adjacent to the apron.

While the airport's AGL infrastructure are provided to support safe and efficient night operations, some of these facilities comply with previous CASA standards/regulations only and are therefore declared as grandfathered facilities.

Rescue and Fire Fighting Services

There is no Aviation Rescue and Fire Fighting Service (ARFFS) based at Benalla. The Benalla Rural City Council, as the airport owner, is responsible for establishing emergency procedures at the airport. These procedures are detailed in the Benalla Aerodrome Manual. Emergency procedures are coordinated by Victoria Police with support from the Country Fire Authority (CFA), Victoria Ambulance and the State Emergency Services (SES) as required. All the emergency services are located within the Benalla township.

Ground Transport Access

Primary access to the airport is via Samaria Road, through Ed McKeough Drive. As shown in Figure 12, Ed McKeough Drive provides access to the Gliding Clubhouse car park and the western entry point for the airfield. Through this entry point, airside facilities including apron, runways and hangars can be accessed. Besides providing access to the Gliding club house and airside, the drive extends further to the lane that connects Aviation Museum, BARC/Community Huts, temporary Accommodation (Aeropark) and Glider storage.

The Ed McKeough Drive is supplemented by a secondary access via the intersection of Samaria Road and the lane beside Coinda Hub. This lane offers additional access to Aviation Museum, BARC/Community Huts, Temporary Accommodation (Aeropark), and Glider storage, which in future will improve access to new aviation facilities.

Internal and External Road Network

The road network that falls within the perimeter of Benalla Airport is considered internal road network, while the ones outside are considered external. The internal road network includes Ed McKeough Drive and the lanes that provide access to Aviation Museum, hangars, BARC Huts and BARC Avenue. The lanes are partially paved, with a section (adjacent to the existing glider trailer parking area) remaining unpaved.

The external road that primarily connects Benalla Airport with the city is the Samaria Road. Samaria road runs on the western side of the airport and serves as a crucial link connecting rest of the city with the airport. The area to the west of the airport is the most populous region, and this region is connected to the airport through the city streets that intersect with the Samaria Road. Further, the localities to the northern and the southern sides of the airport are connected through Sydney Road and Kilfeera Road. Both these roads intersect with Samaria Road that connects to the airport.

Car Parking

Two large open car parks are available at the western end of the airport. The Ed McKeough Drive offers access to these car parks. A large open asphalt car park approximately 2,000 square metres (that can approximately accommodate 65 cars) is available adjacent to the Gliding Clubhouse. And to the south of this car park is another large open gravel car park approximately 1,300 square metres (that can house 40 cars approximately). Generally, the car park locations lack signages or markings, however, they are clearly delineated from the airside facilities by a perimeter fencing.

BENALLA AIRPORT MASTER PLAN | AERODROME ACCESS PLAN



Sealed Airport Access Road, Internal	Airport Perimeter	DRAWING NO: BAMP-007 REVISION NO: FINAL-1 DATE: June 2025 SCALE: 1:10,000@A4 GCS: GDA94 MGA55	
Sealed Airport Access Road, External	Airport Fence		
Unsealed Airport Access Road, Internal	Buildings		
Other Roads			

Figure 12: Benalla Airport Access

Sustainable Transport

Public Bus

The nearest public bus stop is located on Samaria Road, just north of Perth Street, with an additional stop beside Cooina Lane. Bus Route 2 (Benalla East) travels south along Samaria Road, serving both stops. This route connects Benalla Airport to the Town Centre and railway station, with further access to the wider Benalla area via a transfer to Bus Route 3. Both stops are serviced hourly, with the first bus arriving at 9:47 a.m. and the last at 2:47 p.m., Monday to Friday.

Train

The nearest railway station is Benalla Station, located northwest of the site. It is a 1.8-kilometre drive, taking approximately 4 minutes via Perth and Smythe Streets.

Bicycle Facilities

The airport is also accessible by bike, with racks available adjacent to the clubhouse, offering parking for up to eight bicycles near the asphalt car park. However, there are no on-road or off-road bike lanes within the site, or along Samaria or Kilfeera Roads. The nearest bike lanes are located on Sydney Road (local route) and Salisbury Street (Priority Route).

Services and Utilities

Power, Sewer and water reticulation is available to the western and south western sectors of the airport. No information is available on the capacity to accept increased demand over the forecasted period.

Environmental Values

According to mapping provided by the Department of Environment and Primary Industries, Ecological Vegetation Class 55: Plains Grassy Woodland historically supported in the region. However, the site assessment verified that the research area still contains minimal remaining vegetative evidence. The extant vegetation has significant changes due to a history of clearing for the airport, development, and cropping.

The northwestern section of the study area contains a small remaining patch of natural vegetation. It has an overstorey of native wallaby grasses *Austrodanthonia* sp., shrubs such as Silver Wattle *Acacia dealbata* and Narrow-leaved Wattle *Acacia mucronata*, and an overstorey of River Red-gums *Eucalyptus camaldulensis* and Red Box *Eucalyptus polyanthemus*. Two more scattered River red gums are found in the northern part of the study area. Exotic species, particularly wheat

crops, and environmental weeds dominated the remaining study area's vegetation.

As recommended in the previous Master Plan 2015, the residual patch of natural vegetation inside the research area is unlikely to require removal. If it must be removed for future airport expansion, a biodiversity offset will be required.

No endangered flora or fauna species were found during the assessment conducted for the previous master plan 2015. Since the region has extensive vegetation change, more species are not expected to develop.

As suggested, in the previous master plan 2015, it is advised that trees, especially planted trees, be kept whenever safe and practical. These trees provide habitat for local birds, as well as possible arboreal mammals and bats. Additional plants might help to improve the surrounding area's amenity and biodiversity. Wherever possible, these plants should come from local sources. Development that supports large flocks of birds, such as on-site garbage or large bodies of water, should be resisted in order to reduce the risk of bird strikes by planes.

Heritage Values

Aboriginal Heritage

Based on the previous Master Plan 2015, the study area is not in an area of cultural heritage sensitivity, and no evidence of Aboriginal cultural heritage material was discovered throughout the information collection and processing stages of the assessment. The evaluation did not identify any national or state-significant cultural heritage sites (Aboriginal or historical).

Post Contact Building Heritage

There have been two culturally significant stages of development:

WW II Empire Air Training Scheme

Post-war reuse as a migrant centre

The fabric and place of the two stages is of cultural heritage significance. The Bellman hangar and P-type huts meet the threshold for local significance.

The Benalla Migrant Centre is a local cultural heritage site for the City of Benalla. It exemplifies a lot of values that helped shape the city both physically and culturally. Cultural values continue to resonate within the community.

The Benalla Migrant Camp operated from September 1949 to December 8, 1967. The Department of Immigration believes that roughly 60,000 migrants passed through its gates over these years, with many of them making Benalla their first

Australian home after leaving the camp. In contrast to the Bonegilla Migrant Reception Centre, which offered shelter and assisted in the processing of migrants from 1947 until 1971, the Benalla Migrant Camp was a temporary holding facility.

The post-war migrant camps as a whole reflect the effect and scope of postwar migration. This has been acknowledged by the listing of Bonegilla Migrant Reception Centre on the National Heritage List and the Victorian Heritage Register.

The Benalla Migrant Camp is a valuable resource and an integral part of the migration story. It is certainly of local cultural heritage significance and maybe of cultural heritage significance to the State of Victoria.

SWOT Analysis

Based on stakeholder feedback, To70 conducted a comprehensive SWOT Analysis to evaluate the strengths, weaknesses, opportunities, and threats for Benalla Airport. This analysis, which took into account the outcomes of the stakeholder consultation and feedback process, as well as the overall airport characteristics and operating environment, is instrumental in shaping a practical strategy for the airport. The results from this SWOT analysis activity are detailed in the sections below.

Strengths and Advantages

Location & access	Proximity to the town centre for Benalla residents and visiting aircraft. Control of airport airside activities is actively maintained and enforced by the Council. Regional liveability and affordability, only two hours from Melbourne.
Airport infrastructure	Land available for development to suit the current demand. Airside infrastructure sufficient for current uses. Flooding has been mitigated by Council investment in infrastructure.
Aero community & Aviation business potential	Largest gliding club in Australia. Prominent ballooning activity. Aeropark is an attractive feature for flying enthusiasts. The Council has generally positive relationships with airport stakeholders and works with operators to find solutions.
Regional development / economic outlook	Australian Government investment in local munitions manufacturing for Defence. Benalla Enterprise Park's future use planning and interest in the airport.

Weaknesses and Constraints

Airport facilities & management	Taxiway and runway infrastructure will likely require resurfacing and lighting upgrades in the coming years. Flooding remains an issue, and further investment in drainage facilities is a common theme among stakeholders. Security and privacy concerns expressed regarding bathroom facilities. Lack of utilities may prevent the development of businesses wishing to acquire hangarage. Limited amenities for visiting pilots. Limited aeronautical revenue. No onsite airport specialist personnel from the Council permanently based at the airport to monitor activities. Some aviation businesses may seek to commence operations near/similar airports if they feel their needs aren't met.
Heritage buildings & Flora and Fauna	Heritage overlay creates some confusion for tenants' ability to upgrade facilities.
Aerodrome surrounding environment	Future nearby residential developments may be subject to noise sensitivity.
Community	Limited awareness of airport activities from Benalla residents, according to stakeholders.

Opportunities and Prospects

Location & region's affluence	A commercial balloon operator is seeking to develop their business at the airport. Enterprise Park presents opportunities for future airport use, including private airport hangarage and fixed base operators.
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Further collaboration and development of the Aviation Museum.

Unequivocal support for the airport to remain and continue providing benefits to the community.

Benalla's economic outlook	Engage with local businesses and industries to investigate infrastructure investment further. Businesses are eager to use Benalla Airport and contribute to its continued growth.
Aviation outlook	The gliding community are eager to introduce the next generation of flyers to maintain its position as Australia's leading airport. Global aviation growth includes maintenance, training, tourism, and storage.
Aero community	Establish a dedicated viewing area for members of the public to experience the significant aviation events hosted by the airport.
Infrastructure	Development of strategic plans to handle heritage structures.

Developments bordering / adjacent airport area	Ensuring land use under the runway approaches remains compatible with aviation operations
Economic Feasibility	Competition for aviation-based businesses with other airports. Continued decline in domestic fixed-wing GA. High asset upgrade and maintenance costs.
Aviation safety	Some reports of fixed wing and gliding operations occurring on areas temporarily closed for safety reasons, such as inundation or wet surfaces. Some damaged fencing and occasional trespass and pilferage. Some private vehicle use on the main apron is non-compliant with MOS 139 regulations.

Threats and Risks

Community concerns	Balancing the priorities of all stakeholders at Benalla Airport, who each value the site for the amenities it provides for different activities and interests.
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Summary of SWOT Analysis

Benalla Airport enjoys a strategic location, conveniently close to the town centre, with airside operations actively managed by the Council. The region's affordability and quality of life make it appealing to both residents and visiting aircraft. Current infrastructure adequately supports operations, with available land for future development and council investments addressing flooding issues. As home to Australia's largest gliding club and significant ballooning activities, the airport attracts aviation enthusiasts and maintains strong, cooperative relationships with stakeholders. However, infrastructure enhancements—such as runway resurfacing and improved drainage—are necessary. Economic prospects are bolstered by local industries and potential aviation developments, though the airport faces challenges from competing facilities and high maintenance costs. While there are some community concerns around noise and limited public awareness of airport activities, there is widespread support for the airport's continued growth and contribution to regional development.

PART B: FUTURE DIRECTION

Stakeholder Consultation

Overview of Consultation

The stakeholder consultation for the Benalla Airport Master Plan Review is a critical part for ensuring both aviation and non-aviation interests are fully considered in shaping the airport's future. The primary objective was to gather comprehensive feedback from key stakeholders to address current infrastructure concerns, enhance airport facilities, and align the master plan with community needs. The consultation sought to improve operational efficiency, promote tourism, and preserve the airport's cultural significance, particularly its historical links to the migrant community in Benalla.

The consultation process was underpinned by the following strategic objectives:

Maximise stakeholder engagement and gather comprehensive feedback from both aviation and non-aviation stakeholders to inform the development of the Benalla Airport Master Plan.

Identify key infrastructure needs and improvements required to support future airport growth and operations.

Ensure alignment between the airport's development and community expectations, particularly regarding tourism, safety, and cultural heritage.

Promote transparent communication between the Council, airport operators, and the broader community to address concerns and foster collaboration.

Integrate stakeholder insights into strategic decision-making, ensuring the Master Plan reflects the diverse needs of all parties involved.

Encourage ongoing engagement throughout the master planning process, allowing stakeholders to contribute meaningfully at each stage of development.

Consultation Activities

Engaging stakeholders early and throughout the planning process ensures transparency and informed decision-making, particularly given the airport's role as a regional asset. The consultation activities were designed to be inclusive and broad reaching. Aviation stakeholders, including 33 individuals or groups, were directly contacted to provide feedback, as well as 6 non-aviation stakeholders who have an interest in the airport's cultural and community impact.

Key consultation methods included:

Direct meetings

"Have Your Say" portal

Virtual conversations (both telephonic & online meetings), and

Ongoing communications with airport users and other stakeholders.

Consultation activities were initiated during the early phases of the Master Plan review process, that enabled to grasp crucial stakeholder inputs and elevate their awareness about Council's initiatives to develop the airport. Direct meetings were organised with majority of the known aviation stakeholders at the city council's office between 29th April – 01st May 2024. Representatives from Benalla Aeroclub, Gliding Club of Victoria, Ballooning association and other key stakeholders participated in the personal engagements organised during these dates. This was followed by few virtual meetings via telephonic conversations and online meetings to enable stakeholders, who were unable to participate in the direct meetings, to offer their inputs for the master plan review.

Additionally, the Council published a 'Have your say' online survey for the industry and community's feedback on the 2024 Master Plan review. A total of 39 responses were received of which 33 respondents had aviation background and 06 were non-aviation people. This approach facilitated open feedback from stakeholders, enabling aviation and non-aviation groups to voice their concerns and provide suggestions for improvements.

Stakeholders consulted as part of the process include:

Aero Refuellers

Balloon Association of Victoria

Benalla Aeroclub

Benalla Aeropark

Benalla Aviation Museum

Benalla Enterprise Park

Benalla Migrant Camp

Benalla Rural City Council

Gliding Club of Victoria

Goldrush Ballooning

NIOA Group
Paxton Air Helicopters
Private Hangar Lessees

Appendix A includes a register of key stakeholders consulted during the process.

All stakeholder comments were considered in the development of the SWOT Analysis in Section 4. Benalla Rural City Council and To70 Aviation extend our thanks to all stakeholders for their contributions.

Summary of Consultation Outcomes

The consultation revealed several significant insights from both aviation and non-aviation stakeholders. Aviation stakeholders emphasized the need for infrastructure upgrades, such as improved drainage on the airside to prevent disruption of glider operations, and more hangar facilities to meet growing demand. Safety concerns, particularly regarding ground vehicle movement on the apron, were also highlighted. Additionally, improvements to the grass runway surfaces and the introduction of bitumen surfaces for glider take-offs were suggested to enhance operations.

Non-aviation stakeholders focused on the preservation of Benalla's cultural heritage, advocating for the establishment of a permanent museum to celebrate the region's migrant history. Emphasis was laid for the Council to prioritise the maintenance of the historic migrant camp huts, ensuring they do not fall into disrepair, and to develop the surrounding area as a cultural precinct for events and tourism.

Overall, the consultation highlighted a clear need for an integrated approach that balances operational enhancements with community and cultural considerations. The feedback gathered will inform the development of the master plan, ensuring that it reflects both the airport's operational needs and its importance as a regional and cultural asset.

Forecast Aviation Demand

Airport Master Plans include an aviation activity forecast to determine future infrastructure requirements. This analysis of the airport against relevant airport planning criteria will help guide the Master Plan and achieve the strategic vision and objectives.

Aviation Activity

Benalla is a unique airport that has a high level of gliding activity when compared to powered aircraft. Benalla Airport has no historical statistical data recorded for its operations.

According to the Bureau of Infrastructure and Transport Research Economics (BITRE), regional aviation grows between 1-2% annually, creating the forecast's basis.

To develop the 2044 forecast, we have used the previous Master Plan 2015 movement per annum as the baseline since no data recordings were available, as shown in Table 5.

Table 5: 2015 Master Plan (baseline)

Activity	2015 Master Plan (baseline)
Gliders (includes tows)	7,286
General Aviation	1,040
Light Sport Aviation	2,080
Charter	416
Balloons	216
Helicopters (non-firefighting)	104
War Birds	208
Air Ambulance	520
Fire Bombers (Helicopters)	100
TOTAL	11,970

The BITRE average percentage for each category was applied, and the final forecast numbers for 2044 were developed as shown in Table 6, with a visual summary provided in Figure 13. A comparative visual of baseline, 2024, and 2044 movements is presented in Figure 14. The Twenty-Year Total Movements Forecast can be seen in Figure 15. For clarity in the visual presentation of forecast

data, aviation activities have been grouped into five categories for the charts included in this chapter: Gliding (including tows), General Aviation (including War Birds), Light Sport Aviation, Emergency Services (Air Ambulance and Fire Bombers, including helicopters), and Other (Charter, non-firefighting helicopters, and Balloons). These groupings are used exclusively in the figures to simplify comparison and highlight operational trends.

Table 6: Future Forecast Annual Movements for 2044

Activity	BITRE Growth Rate	Movements per annum (2044)
Gliders (includes tows)	1.0%	9,723
General Aviation	1.0%	1,388
Light Sport Aviation	2.0%	3,694
Charter	1.5%	641
Balloons	1.0%	288
Helicopters (non-firefighting)	1.5%	160
War Birds	0.5%	240
Air Ambulance	2.0%	923
Fire Bombers (Helicopters)	1.8%	168
TOTAL		17,225

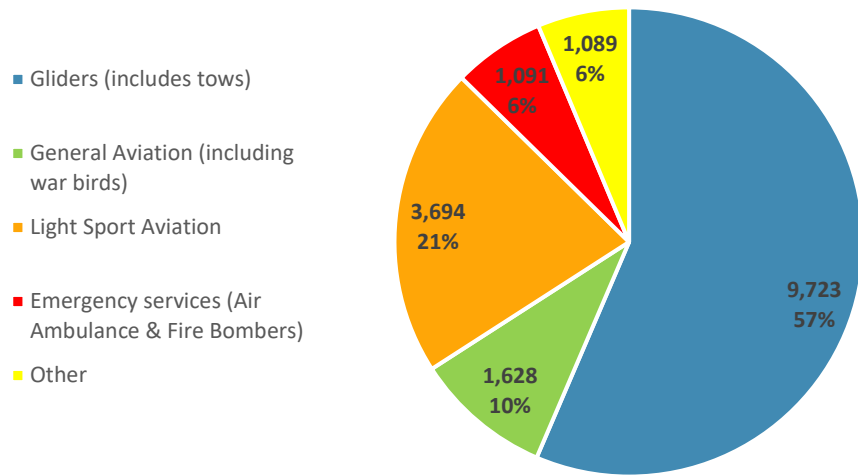


Figure 13: Forecast movements for 2044

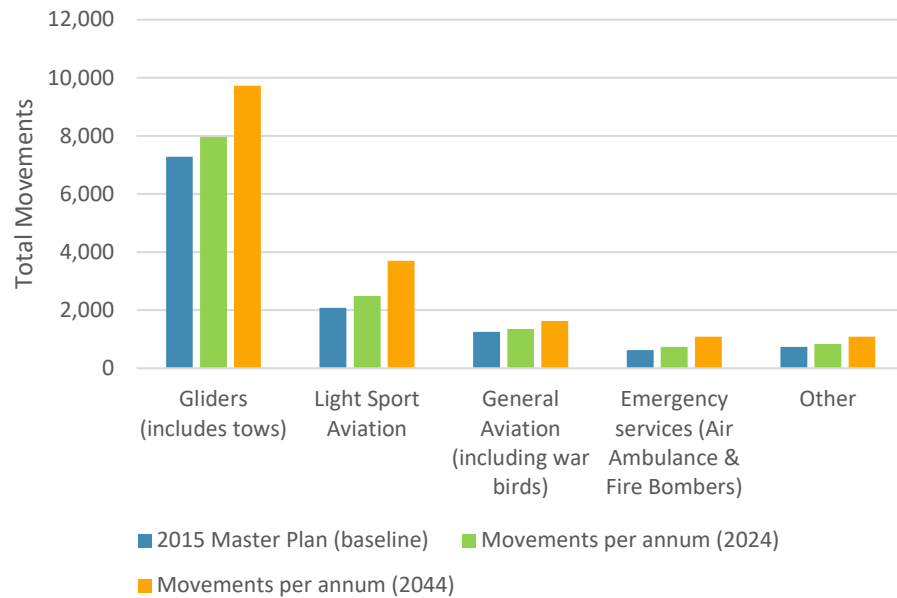


Figure 14: 2015 Baseline, 2024 Estimate, and 2044 Forecast Comparison

Forecast of Future Operations

Regional Air Transport Services

Benalla has a relatively low population and alternative transport modes such as train services that influence the demand for RPT at Benalla Airport. Also, Benalla has a travel time of 2 – 2.5 hours to Melbourne Airport on a good freeway, and with alternative lower-cost public transport options, thus impacting the interest in the air transport sector of the aviation market. Other airports around Benalla also have RPT services currently, making it less viable for Benalla to support RPT services.

Nevertheless, this Master Plan safeguards the airfield for regional RPT aircraft if that were to occur in the future (see Sections 7.3 and 12.1).

General Aviation

General aviation (GA) for the private sector experienced a growth of 1% nationally during the reported period. With the low number of GA aircraft based at Benalla and given that most are hangered (only one aircraft was observed tied

down outside), it would be fair to assume that until more hangar spaces are made available, growth for GA aircraft will be low, certainly in the short term. For future growth, we have assumed a continued growth of 1.0% for the planning horizon as shown in Table 6 .

Charter

We have considered an overall growth of 1.5%. The graph in Figure 15 **Error! Reference source not found.** shows the growth of Charter activity from 2014 to 2024 which has a constant line indicating a stagnant growth of less than 2% after 2020 and almost aligning with the pre-Covid activity numbers.

Gliding

Gliding is one of the key activities at Benalla Airport. Benalla has previously hosted the World Gliding Championships in 2017 and the National Gliding Championship in January 2024, proving to be one of the favourite destinations for these competitions. State competitions take place in Victoria each summer, with the 2022 Victoria State Gliding Championship being hosted at Benalla. The airport has demonstrated its ability to host such events and remains well-positioned to host the State Championships in the future. A typical glider operation under a tug launch is calculated as one movement for take-off (tug and glider launch together) and two movements for landing (tug lands before the glider).

Based on the constant growth in the movements post Covid, we have assumed a growth rate of 1% overall.

Light Sport Aviation

Light Sport Aviation (LSA) formerly Recreational Aviation is a sector within the aviation industry that provides low-cost entry, owner maintenance in some cases, and lower medical standards compared to the private pilot requirements. LSA covers both owner-builder kit-type construction and factory-manufactured aircraft. LSA is the second key activity for Benalla after Gliding. Based on the BITRE data, the LSA movements have decreased over the years from 2014 to 2022 but are rising to pre-covid levels. Hence, we have assumed a growth rate of 2%, since it's a strong growing sector.

Ballooning

Statistically, ballooning has a very flat growth rate and of all the aviation sectors it is highly reliant on very light winds, which severely restricts their operation. Typically balloons fly in the cooler months and generally in the mornings and late afternoon in the colder temperatures of the day. As shown in Figure 15, the

growth of ballooning activities has been almost a flat line. Hence, we have assumed an overall growth rate of 1.0%.

Helicopters

Rotorcrafts and Gyrocopters are another form of recreational flying. Helicopter operations are increasing for both private flying and charter operations. Range and endurance are the limiting factors for most helicopters. Fuel supply and type of fuel typically dictate where they fly. Hence, we have assumed a growth rate of 1.8% if Avtur (jet A1) is provided.

Parachuting

Parachuting is not compatible with the operations at Benalla Airport and therefore no forecasts have been prepared.

Emergency Services

Air Ambulance

Both routine and emergency operations are carried out by the fixed-wing air ambulance into Benalla. Because of the time it takes to return to Melbourne, the range, and the fuel requirements, Benalla is just about at capacity for rotary-wing air ambulance services; hence, fixed-wing operations are preferable. The growth

rate is estimated to be 2% annually, based on factors such as population growth and increased traffic on the highways, which would inevitably lead to a rise in the number of motor vehicle accidents needing air ambulance services. Growth is expected to remain relatively stable.

Police Air Wing

Benalla is the preferred location of operation due to the Avtur (Jet A1) fuel required for the turbine helicopters operated by the Police Air Wing. Hence, we have considered some increase in Police Air Wing Traffic following the installation of Avtur (Jet A1) fuel.

Fire Fighting

During the bushfire season, Department of Energy, Environment and Climate Action (DEECA) base firefighting helicopters operate on an as-needed basis. Based on BITRE firefighting activity from 2014 to 2021,, we have forecasted a growth rate of 1.8%.

Recommendation: To improve accuracy and planning confidence, it is recommended that Benalla Airport conduct a one-month audit of actual aircraft movements. This would provide updated empirical data, especially since the last recorded movements date back to 2015.

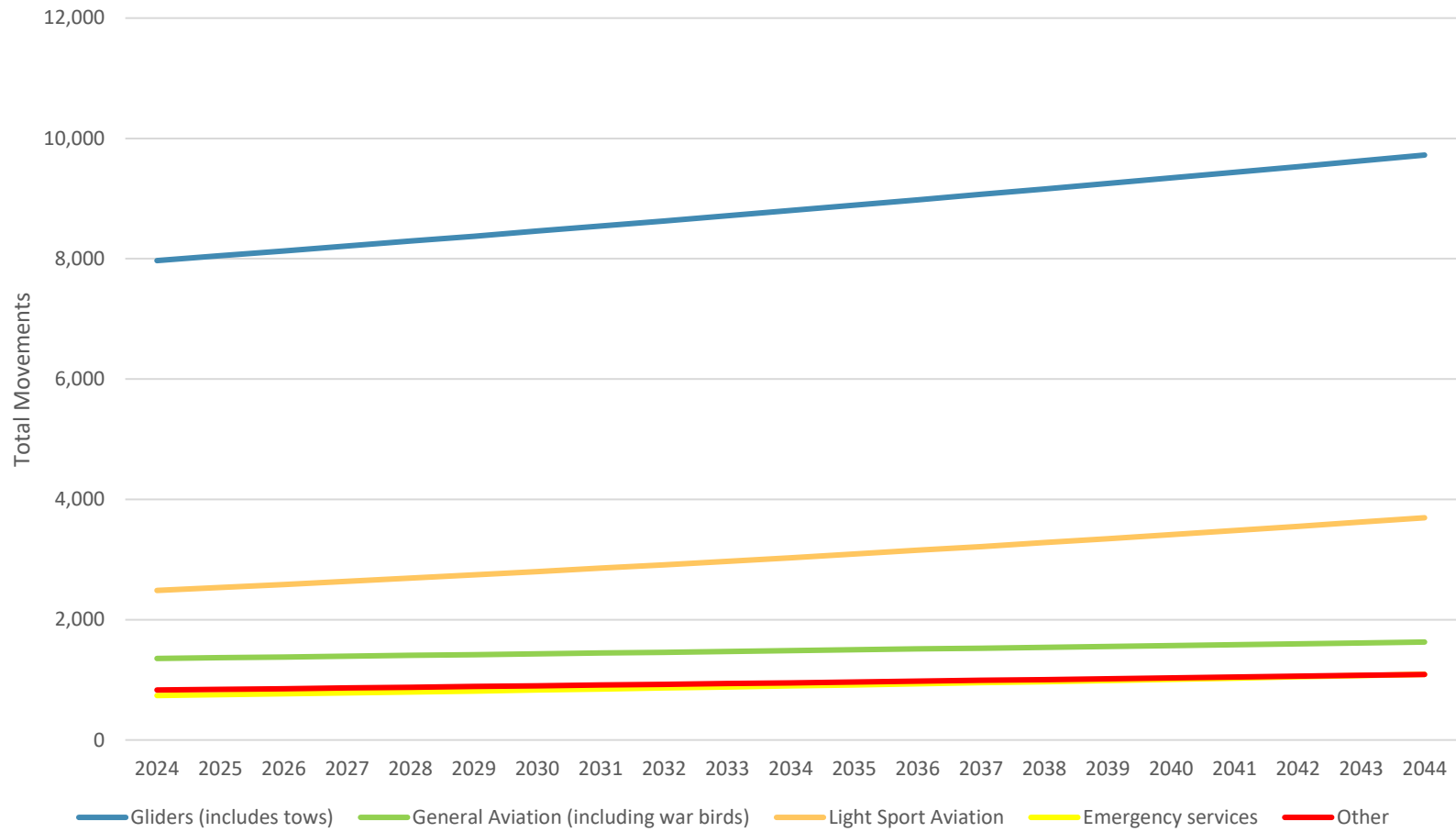


Figure 15: Twenty-Year Total Movements Forecast

Design Aircraft

Current Situation

The largest aircraft type used at Benalla Airport is the Air Ambulance King Air 350, which is a Code 2B aircraft type. The existing infrastructure prevents larger aircraft from using Benalla.

Forecasting, Stakeholder and Community Inputs

The future forecast discussed in Section 6 shows growth in charter aircraft, firefighting personnel transfers and larger visiting warbirds other than glider activity at Benalla Airport.

Based on the current fleet types and the potential introduction of larger aircraft types, it is identified that the long-term plan should adopt the capability of accepting the Dash 8 Q400 (Code 3C) as the design aircraft.

Design Aircraft Selection

Based on Table 7, taking the Dash 8 Q400 as the design aircraft type, will allow the airport to be capable of handling SAAB SF340, ATR 72 and a range of corporate jets. The Dash 8's and SAAB SF340 aircraft are the typical aircraft being chartered during the fire season for the replenishment of firefighting resources and selecting a larger design aircraft type will also allow a much larger selection of war birds and visiting aircraft to visit the air museum on selected event days. They are also commonly used for regional RPT services.

Table 7: Aircraft specifications

Aircraft Specification	ATR 72-500	ATR 72-600	SAAB 340B	Dash 8-Q400
Max Take-off length	1289m-1333m	1140m	1286 m	1600m
Max Take-off weight	22800 kg	23000kg	13155kg	29257 kg
Number of Passengers	68	78	34	74

Aerodrome Reference Code System

An Aerodrome Reference Code (ARC) determines the standard which an aerodrome facility must meet to be suitable for use by aeroplanes, chosen by the aerodrome operator, with a particular range of performance and size.

An ARC is an alpha-numeric code, which is determined based on 3 elements:

The code number is determined based on the aeroplane reference field length of an aircraft type selected by the aerodrome operator.

The code letter determined by the aircraft wingspan, and

The outer main gear wheel span (OMGWS).

The current ARC of Benalla Airport is 1A for both RWYs 08/26 and 17/35, with an OMGWS up to but not including 4.5m. The following Table 8 summarises the ARC values, as well as the OMGWS limits for the two existing runways at Benalla Airport.

Table 8: ARC values and OMGWs limits for runways

Runway	ARC number	ARC letter	OMGWS
08 / 26	Code 1	A	Up to but not including 4.5 m
17 / 35	Code 1	A	Up to but not including 4.5 m

Similarly, the following Table 9 summarises the characteristics of the two taxiways (TWY A and B).

Table 9: Taxiway characteristics

Taxiway name	Taxiway designation	ARC letter	Taxiway width (m)	Taxiway surface type
Taxiway	A	A	11 m	Bitumen seal
Parallel	B	A	7.5 m	Bitumen seal

The prevailing aerodrome facilities do meet the standards for some existing aircraft operations at Benalla Airport (i.e. aircraft larger than Code 1A). Nonetheless, future 'design aircraft' operations may demand upgrades to airport infrastructure that will lead to a new Aerodrome Reference Code for Benalla Airport (Code 3C).

Recommendations:

To achieve a runway that can handle aircraft up to the Dash 8 Q400, the existing runway will need to undergo civil engineering works to extend its length, increase its width and renovate its surface to increase its load-bearing strength:
Extend runway 08/26 towards the east and west - to a total RWY length of 1,750 metres.

Widening runway 08/26 from the current 18 metres to 30 metres.

Strengthen the surface of runway 08/26 to accommodate anticipated larger aircraft.

Widen the runway strip for runway 08/26 to 280 metres i.e., 140 metres on each side of the runway centreline, for the proposed runway length.

Upgrade RESA characteristics: Length - 90 metres (minimum) and width - 60 metres (RESA width twice the width of the proposed runway width).

Identify and develop aircraft parking positions and apron markings, with parking position/s for the design aircraft with at least 4.5 metres spacing from the surrounding object/structure/aircraft.

Ascertain load bearing capacity of the apron surface, and upgrade if the surface is not suitable for operating the identified design aircraft.

Non-Aviation Demand

Benalla Rural City, situated in north-eastern Victoria, is navigating a significant economic transition as it adapts to changing demographic dynamics, policy shifts, and the evolving needs of its community. Historically reliant on key industries such as agriculture, manufacturing, and community services, Benalla now faces the dual challenge of sustaining these traditional sectors while diversifying its economic base in response to emerging trends and opportunities.

Population and Demographic Trends

From 2006 to 2023, Benalla's population increased steadily from 13,807 to 14,529, albeit at a more modest rate compared to the rest of regional Victoria. A surge in population between 2018 and 2020, followed by stabilisation, reflects a consistent yet slower growth pattern. This stability is crucial for future residential and commercial planning, as it provides a reliable foundation for strategic development. Notably, Benalla's demographic profile is characterised by an ageing population, with a significant proportion of residents aged 50 and over—a trend that is expected to continue. This shift will drive increased demand for healthcare, aged care, and related services, necessitating the expansion of facilities and infrastructure to meet the needs of an older population. Additionally, the declining youth demographic poses challenges for local educational institutions and youth services, highlighting the need for targeted strategies to attract and retain younger residents.

Economic Performance and Industrial Potential

Benalla's economic performance from 2018 to 2023 was marked by consistent growth, particularly in key sectors such as construction, manufacturing, and agriculture. Manufacturing remains a cornerstone of the local economy, with the Thales munitions factory contributing approximately \$457 million in economic output in 2021. Meanwhile, the construction sector has seen substantial growth, driven by ongoing infrastructure projects that have expanded the workforce and reinforced Benalla's economic resilience. Agriculture continues to play a vital role, although it faces significant challenges due to the Victorian Forestry Plan, which mandates the cessation of commercial harvesting of native forests by 2030. This policy shift necessitates a move towards more sustainable practices and diversification within the sector.

Visitor Economy

The visitor economy in Benalla, as part of the broader Victoria High Country tourism region, presents significant opportunities for growth. The region has demonstrated strong resilience in domestic tourism, particularly within the intrastate market. From 2018 to 2023, tourism expenditure and visitor numbers increased, with domestic overnight stays and day trips being key drivers. In 2023, domestic overnight spending reached \$1,793 million, accounting for 84.3% of the region's tourism expenditure. However, the data also indicates a preference for affordable and flexible accommodation options, such as camping and staying with friends or relatives. This trend suggests that while there is demand for accommodation, it is primarily for lower-cost options, rather than traditional hotels or higher-end accommodations. Additionally, the food and beverage sector is poised for growth, given the strong demand for dining experiences among visitors. To fully capitalise on these trends, further research into tourism segmentation, occupancy rates, and competitor analysis is essential. Enhancing Benalla's appeal as a destination through improved accommodation, culinary experiences, and outdoor activities could significantly boost the local economy.

Multi-Criteria Assessment (MCA) and Strategic Planning

A systematic and rigorous Multi-Criteria Assessment (MCA) was employed to evaluate the potential commercialisation opportunities at Benalla Airport. This assessment considered a range of critical success factors, including economic and financial viability, strategic alignment, infrastructure compatibility, community impact, tourism impact, and development risk. The MCA revealed several promising opportunities, with industrial expansion, and food and beverage outlets emerging as strong candidates for further investigation. These opportunities align well with Benalla's strategic objectives and offer significant potential for financial success and positive community impact. However, other opportunities, such as retail, education and training, and conference facilities, face significant challenges due to the airport's low activity level and potentially limited demand. The master plan should prioritise high-impact opportunities while exercising caution in areas with uncertain returns.

Gap Analysis

The gap analysis identified critical areas where further research and data collection are needed to support informed decision-making and strategic planning for Benalla Airport and the wider region. For the accommodation sector, there is a

lack of detailed data on tourism segmentation, occupancy rates, and competitor analysis. Understanding consumer preferences and the existing accommodation landscape is crucial for tailoring offerings to meet demand. In the industrial sector, there is a need for more detailed data on emerging sectors, workforce requirements, and industrial space demand. Additionally, the food and beverage sector requires further research to understand dining preferences and assess the competitiveness of existing establishments. Finally, with Benalla's ageing population expected to grow significantly, more detailed demographic projections, health and wellbeing needs assessments, and competitor analysis are necessary for the development of retirement and aged care facilities.

Conclusion

The analysis of Benalla Rural City's demographic and economic landscape, coupled with the multi-criteria assessment and gap analysis, underscores both the challenges and opportunities facing the region. Benalla is at a critical juncture, where strategic planning and targeted interventions will be essential to harness its strengths and address existing gaps, ensuring sustainable growth and prosperity. The ageing population, while presenting challenges, also offers opportunities in healthcare, aged care, and community services. The steady economic growth in key sectors such as construction, manufacturing, and agriculture indicates strong potential for industrial expansion, particularly near the airport. Meanwhile, the visitor economy presents opportunities for growth in tourism, accommodation, and food and beverage sectors. By focusing on these areas and addressing the identified gaps, Benalla can achieve a balanced and sustainable future, benefiting both its residents and the broader community. Strategic development, informed by robust research and targeted planning, will ensure that Benalla Rural City continues to grow and thrive in the years to come.

Major Events

Potential Gliding Events

Benalla has previously hosted the World Gliding Championships in 1987 and 2017. The next World Gliding Championships will be held in Uvalde (USA) in 2024, in Tabor (Czech Republic) in 2025, and in Czestochowa (Poland) in 2026. It highlights Benalla's proven ability to successfully host major events, demonstrating the airport's existing infrastructure and operational capacity to accommodate large-scale activities.

At the national level, there are four annual gliding competitions in Australia for different categories. Benalla held the National Gliding Championship in January 2024 and has proven to be one of the favourite destinations for these competitions. The 2025 National championship will take place in Temora (NSW). Benalla has a track record of successfully hosting national championships and is prepared to hold them again.

State competitions take place in Victoria each summer, with the 2022 Victoria State Gliding Championship being hosted at Benalla. The airport has demonstrated its ability to host such events and remains well-positioned to host the State Championships in the future.

Potential Ballooning Events

There is opportunity for future events, such as the Australian National Championship, which are conducted yearly, according to the Australian Balloon Federation (ABF) policy. Timelines are established to call for expressions of interest from regional/State clubs to host the Nationals, EOIs then progress to bid stage and from bids to the chosen venue having the maximum possible time to organise an event.

Air Pageants / Airshows

Benalla is ideally situated with its existing and planned airport infrastructure and excellent local facilities, making it an ideal location for hosting air events.

Warbirds

Warbirds are increasingly popular as standalone attractions or as part of larger airshows. With classic Australian RAAF trainers and a rich history of WWII pilot training, Benalla should promote these features to the warbird community to draw in fly-ins.

Airshow

Benalla held its first airshow on 17 January, 1987 and in 2023, the tradition continued with another airshow event. Thousands of spectators gathered at Benalla Airport to take in the remarkable visuals and thrilling sounds of a dynamic airshow, featuring aerobatic aircraft like the Wolf Pitts Pro and Edge 540, as well as historic warbirds such as the Mustang, Kittyhawk, Grumman Avenger, CAC Wirraway, and Trojan.

General and Light Sport Aviation

The General Aviation community frequently seeks new destinations and events to visit. Organisations like the Antique Aeroplane Association, Women Pilots Association, and the Bonanza Society should be informed about the facilities available in Benalla. Additionally, with Light Sport Aviation's successful annual Nat Fly event rotating locations, Benalla would be an excellent choice for hosting such a gathering.

Strategic Vision and Objectives

Based on the findings of the situation analysis, stakeholder consultation, market analysis and trend evaluation, commercial opportunities analysis and multi-criteria assessment, the following vision and objectives have been developed for the airport.

Strategic Vision

Benalla Airport is a vibrant recreational aviation and historic site that honours its heritage while fostering strong connections with both locals and visitors. The vision for the airport includes:

Self-supporting and well-maintained facilities: Ensuring sustainability and upkeep.

Attractive year-round tourism destination: Promoting aviation, gliding, and ballooning, while preserving Benalla's rich aviation and immigration history.

Welcoming atmosphere: Creating an inviting space for locals and regional, national, and international visitors, encouraging them to return time and again.

During the consultation, the following principles were established to guide decisions for the Master Plan:

Preserve current operations: Ensure existing operations are not compromised.

Enhance capacity and safety: Enable improved capacity and safe activities.

Facilitate future development: Avoid limiting opportunities for short-term options.

Ensure safety compliance: Prioritise adherence to safety regulations.

Consider commercial viability: Address the financial aspects of development.

Respect site history: Use the site's history as a foundation for enhancing visitor experiences and opportunities.

Drive opportunity and innovation: Encourage creative and forward-thinking solutions.

Benalla Airport Community Insights

There is a strong sense of pride in Benalla Airport as a vital piece of infrastructure close to town, offering meeting spaces for locals and attracting regional, state, national, and international visitors. Stakeholders believe the World Gliding Championships serve as a catalyst for future aviation and non-aviation opportunities. To maintain and enhance this amenity, the community would like to see:

Increased compatible aviation use: Promotion of recreational and sports aviation, including gliding and ballooning.

Improved linkages: Better connections between the airport and other facilities in Benalla, such as BPACC and the CBD.

Welcoming entrance: A clearly marked and inviting entryway, providing clear directions to activities, facilities, and services.

Planned layout: A well-organised design that ensures safe pedestrian and vehicle movement.

Good neighbour relations: Planning and zoning that promotes compatibility with surrounding areas.

Opportunities for investment: Enabling further compatible investment on-site through effective planning and investment attraction.

Community engagement highlighted several current issues that the Master Plan can address:

Drainage: This was the most frequently identified issue, affecting all users due to problems like airfield drainage, impeded access to hangars, and muddy conditions for community members accessing BARC huts and the Aeropark accommodation area.

Site layout: Participants felt that the current layout, developed over time, could benefit from better delineation of specific use areas, improved pedestrian flow, enhanced viewing of gliding and ballooning activities, and clearer entries and traffic flow, including restricted access to airside areas.

Runway extension: There is a desire for an all-weather runway, with aviation users specifically requesting no reduction in the number and orientation of runways, but advocating for extensions.

Facilities upgrades: Feedback regarding runway design and facilities upgrades has been incorporated into the Master Plan, with the Dash 8 Q400 suggested (and agreed upon) as the design aircraft.

Objectives

The implementation of the following objectives will assist in achieving the vision:

The purpose of an airport master plan is to document the anticipated development of the airport, transitioning from its current configuration to its optimal future state. This plan aims to make information accessible to all stakeholders and interested parties. Essentially, the master plan serves as a site reservation strategy that optimises the long-term layout of facilities to meet the strategic, operational, and functional needs of the airport while minimising its impact on the local environment.

As a management tool, the master plan facilitates the rational, logical, and economical planning and development of airport facilities without compromising existing operations. It operates on a long-term planning horizon of 20 years, extending to 2044, while also considering the staged development of various facilities over the airport's lifespan.

The principal objectives of the master planning process include:

Realistic future layout: Providing a representation of the future airport layout that maximises site capacity while remaining compatible with the environment and the local community.

Flexibility: Maintaining adaptability to accommodate future changes in the dynamic aviation industry.

To achieve these objectives, the following principles have been established:

Forecasting demand: Adequately and economically catering to forecasted and potential volumes of aviation traffic and associated ground traffic throughout the airport's life.

Maximising site use: Utilising the airport site in an economical and effective manner.

Balanced design: Ensuring that each airport element has a capacity that aligns with the capacities of other elements.

Operational efficiency: Facilitating the effective and efficient operation of each facility within an overall optimal design framework.

Progressive development: Allowing for the gradual development of airport facilities to meet demand with minimal disruption to existing operations.

Flexibility for future needs: Retaining flexibility to adapt to unforeseen demand or changes in anticipated demand.

Community compatibility: Striving for compatibility with the surrounding community and development.

System integration: Providing for the integration of the airport system with other airports and the surface transport network.

The detailed description that follows will provide information on the facilities included in the master plan, which are informed by:

Consideration of the guiding principles and objectives

Stakeholder consultations

Future forecast demand

The associated needs to meet this forecast demand

Future Needs to Meet Forecast Demand

Based on the future direction outcomes, a number of specific airport infrastructure upgrade projects have been identified as beneficial to facilitate future growth and development of the airport over the 20-year Master Plan period, in accordance with the vision and objectives outlined above. The projects are:

Upgrading RWY 08/26 to accommodate 3C aircraft operations, including extension, widening, and resurfacing.

Establishing a 280m RWY strip for RWY 08/26, and reinstating Runway End Safety Areas (RESAs) at the end of the RWY strip.

Develop taxiway(s) to suit aircraft operations.

Refurbishment of Existing Apron to suit aircraft types.

Airside drainage.

New hangar precinct.

These projects form an essential part of this Master Plan and are discussed in detail in Part C of this report.

The actual implementation and timing of proposed developments and upgrades will depend on demand triggers, an assessment of forecast market conditions, commercial discussions, and approval processes. The council should liaise closely with aviation operators and other key stakeholders to discuss the timing and priority of investments. Commercial developments will be aligned with market demand and opportunities which may arise and would generally be the subject of a detailed business case.

PART C: MASTER PLAN

Airport Land Use Plan

This section discusses the land use plan for the airport including the precincts and guidelines to be considered.

Land Use Plan Overview

The land use plan forms the basis of the Master Plan for future uses and outlines the precincts and development objectives within those precincts. The land use plan assists in planning for the future use of the airport and is based on the previous Master Plan, stakeholder consultation and further analysis. There are eight (8) precincts identified for Benalla Airport for future planning purposes:

Precinct 1 - Airport Core and Runways Precinct

Precinct 2 - Recreational Hangars

Precinct 3 - Recreation & Events/Hangar & Passenger Terminal Precinct

Precinct 4 - Glider Staging & Airfield Access

Precinct 5 - Gliding Club Facilities and General Aviation Development and Support

Precinct 6 - Mixed Uses

Precinct 7 - Open Space & Passive Recreation

The Land Use Precincts Plan is shown in Figure 17.

Land Use Precincts

Precinct 1 - Airport Core & Runways Precinct

The aviation precincts include existing facilities such as runways (08/26 and 17/35), 2 taxiways, a main apron, navigational aids, hangars, as well as maintenance and passenger areas. It is essential to preserve and safeguard these precincts to ensure they support future airport operations and developments.

Within Precinct 1, a gas station for hot air balloons is currently under construction. This facility is designed to support the growing popularity of ballooning activities in the region, providing essential fuelling services to enhance the operational efficiency and safety of balloon operations. Parking facilities for the hot air balloon gas station will be located in Precinct 5, ensuring smooth operations and appropriate separation of the fuel facility and parking areas.

Precinct 2 - Recreational Hangars

This precinct is currently occupied by several recreational aircraft hangars and provides direct access to the runway and taxiways. Its strategic location is well-suited for future expansion and upgrading of hangar facilities. This precinct offers the potential for expanding recreational hangars based on demand and funding availability.

Additionally, the precinct will benefit from a new airport entrance located on the boundary line between Precinct 2 and Precinct 6. The new airport entrance will be equipped with fencing, access gates, signage, and landscaping. Meanwhile, the tarmac providing access to the existing hangars requires upgrades to improve drainage and to reconfigure its width and camber. These changes will facilitate the safe manoeuvring of light recreational aircraft in and out of the hangars.

Furthermore, expanding the fence line on the west boundary of the precinct could provide additional access to the taxiway, further enhancing operational efficiency and accessibility. This expansion of the fence line would also create valuable space for additional hangars in Precinct 2, enabling the accommodation of more aircraft and facilitating increased operational capacity within the precinct.

OLS and wind shear requirements must be met for future hangar developments. This is discussed further in section 12.3.

Precinct 3 - Recreation & Events/Hangar & Passenger Terminal Precinct

This precinct is currently inactive for aviation purposes and has been utilised for cropping over the years. The eastern half of this precinct will be designated for various aviation-related activities, including:

Major ballooning events, serving as both a launch point and viewing area.

Other significant aviation events, providing a viewing point, overflow parking, and camping facilities.

Informal passive recreation and community events.

Additionally, the western half of Precinct 3 presents significant potential for future aviation development, including the establishment of a new hangar precinct, which could serve as a dedicated area for aircraft storage, maintenance, and support services. This development would be key in accommodating an increase in aviation activity and supporting the growth of airport operations.

The western half of Precinct 3 also has the potential to be developed into a passenger terminal if there is sufficient demand for RPT services. Should Benalla Airport decide to introduce RPT services, this future use would accommodate the

needs of passengers and enhance the airport's capability to support scheduled commercial flights.

Precinct 4 – Glider Staging & Airfield Access

This precinct is designated primarily for the staging and launching of gliders, as well as the storage of glider trailers. The area is strategically designed to facilitate efficient event management for glider activities, ensuring that both participants and spectators can access the necessary facilities with ease. In the event of future glider championships, Precinct 4 will serve as a vital hub for event operations, accommodating the increased demand for space and resources, and enhancing the overall experience for all involved.

Precinct 5 – Gliding Club Facilities and General Aviation Development and Support

Precinct 5 contains the Gliding Club of Victoria and should continue to be used for these purposes. There is also existing accommodation in the precinct, with bunk-style accommodation still active on the Samaria Road side of the Glider Clubhouse. This accommodation may continue to serve the needs of the Gliding Club. If the Gliding Club of Victoria requires additional space to expand their facilities, they should be given priority for development opportunities within this precinct.

Nonetheless, there is potential for further development in the remaining space in this precinct for additional aviation-related uses. This precinct has been designated for possible future, longer term aviation development or complementary uses requiring airside access and should be reserved for this purpose. If there is demand for additional land with airside access, this precinct may be suitable and should be the primary area for future general aviation development.

Additionally, parking facilities for the LPG station will be located within this precinct. The LPG tank itself is situated in Precinct 1, located along the fence line between Precincts 1 and 5. The parking area dedicated to the LPG station will be sited in Precinct 5, ensuring operational efficiency while maintaining the separation of the tank and access point.

To alleviate congestion at the border between Precinct 5 and the Australian Christian College and the Benalla Performing Arts Centre, the existing entrance point will be improved to ensure smoother traffic flow as shown in Figure 16. Enhancing this access point will help streamline traffic movement and improve the overall efficiency of the precinct.

BENALLA AIRPORT MASTER PLAN | SCHOOL TRAFFIC MANAGEMENT PLAN

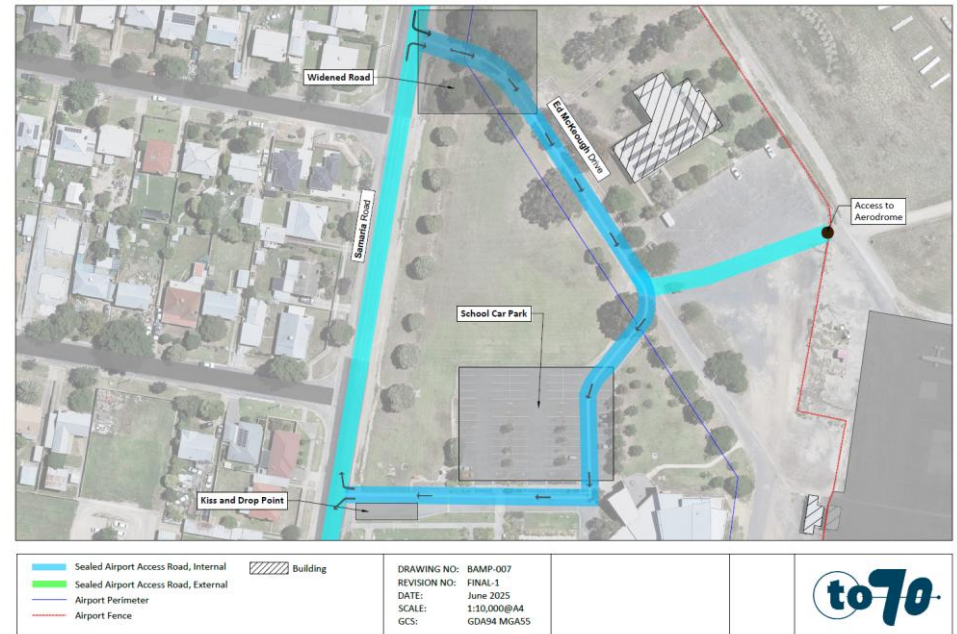


Figure 16: School Traffic Management Plan

An Outline Development Plan (ODP) should be prepared and approved for the precinct prior to any further development, taking into account issues such as the existing native grass, Obstacle Limitation Surfaces, runway sightlines and separation of aircraft from vehicles.

Precinct 6 – Mixed Uses

Area 6A – Heritage/Community/Arts:

This area is currently used for heritage, community and arts purposes. The airport has a fascinating history both as an airfield and as a migrant camp. Enthusiastic heritage groups within the community are committed to enhancing how these histories are presented to visitors. Several active arts, cultural, and community organisations are eager to engage in their activities within this precinct. These areas are identified as historically significant and are subject to specific heritage rules and guidelines to maintain their historical value and architectural integrity.

Area 6B – Visitor Accommodation:

This precinct is designated to provide affordable temporary accommodation for airport visitors and other users. This precinct is currently used as accommodation for the gliding association. Access to low-cost accommodation for glider users and other aviation groups is an important offering that must be maintained at the airport.

In the long term, additional accommodation could be provided on-site by constructing more cabins. These new cabins should be designed in a style that complements the existing BARC hut architecture, ensuring they blend harmoniously with the current structures.

Area 6C – New Entrance Point to the Airport:

A new entrance point will be established in Area C of Precinct 6. The development of a new entrance point will streamline access to the airport, improving traffic flow and enhancing the overall visitor experience. This strategic upgrade will integrate seamlessly with existing facilities, ensuring that both ballooning enthusiasts and airport users benefit from improved services and accessibility.

Precinct 7 - Open Space & Passive Recreation

This precinct will be designated as passive open space, featuring picnic areas, a new children's playground, and walking and cycling trails. It will also include aircraft viewing decks on the north and south edges. The northern viewing platform will be accessible from Samaria Road.

The eastern boundary of Precinct 7, adjacent to Precinct 1, will need to be shifted westward to provide adequate space for the runway extension in Precinct 1. To ensure public safety and proper separation from airside operations, a new fence will be installed along the boundary of the precinct. This fence will delineate the public area from the operational airside and will be complemented by an additional fence line around the perimeter outside the precinct to further secure the area.

A large portion of the precinct will be reserved for stormwater management during major storm events. The retarding basin planned for this area will be designed to accommodate passive and informal recreational activities, with its contours and overall shape blending into the surrounding landscape. It will be landscaped with vegetation that helps manage stormwater. To prevent permanent water accumulation, the basin will be designed for quick drainage to minimise the risk of attracting water birds.

The walking trail will incorporate water-sensitive urban design features, such as dry creek beds, to add visual interest without drawing waterfowl. Trees and shrubs will be selectively planted on the north and south sides of the precinct to frame views of the airfield. However, to avoid potential obstacles for flight operations, trees will be kept at a height that does not interfere with air traffic. The central area beneath the flight path will remain clear of trees to maintain a safe and unobstructed airspace. Care will also be taken to ensure that the precinct does not attract wildlife, which could pose risks to aviation safety.

General Land Guidelines

The use and development of the precincts should comply with the general land use guidelines which are below:

Future use and development must comply with the Master Plan and be compatible with ongoing airport operations.

Land should be reserved for its designated use in accordance with the Land Use Precincts Plan and associated guidelines.

A detailed precinct development plan should be prepared prior to development in any individual precinct.

Environmental and heritage constraints need to be confirmed and managed.

Ensure that appropriate utility services are provided for new development.

Ensure that industrial activities do not produce air emissions that are likely to impact on aviation activities.

Ensure that building lighting does not impact on aviation operations.

Ensure that landscaping is not bird-attracting.

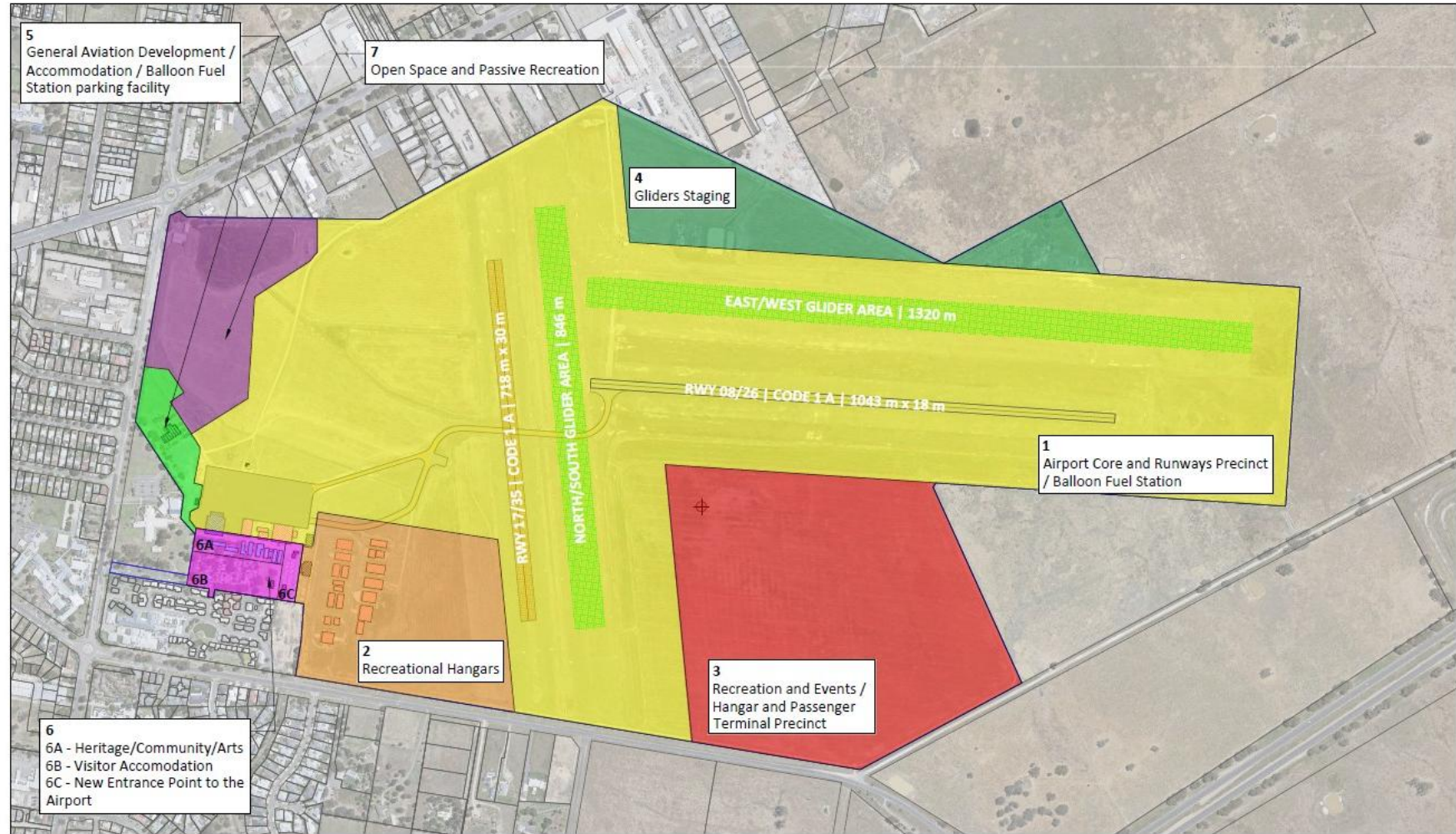
Ensure that buildings do not exceed the heights specified in the Obstacle Limitation Surfaces (OLS) chart that will impact on flight paths or airport operations.

Ensure that land uses are not sensitive to aircraft noise having regard to the ANEF contours.

Ensure that convenient, safe and efficient vehicle access is provided within and to the site.

All future land use and development proposals need to consider the NASF guidelines.

BENALLA AIRPORT MASTER PLAN



<p>PRELIMINARY LAND USE PRECINCT MAP</p>	<p>DRAWING NO: BAMP-001 REVISION NO: FINAL-2 DATE: July 2025 SCALE: 1:10,000@A4 GCS: GDA94 MGA55</p>			
	<p>0 200 400 Meters</p>			

Figure 17: Land Use Precincts Plan

Facilities Development Plan

This section describes the new facilities, both landside and airside, which are planned for Benalla Airport over the 20-year Master Plan period. It describes the required upgrades to the existing infrastructure which are needed to facilitate the future growth and development of the airport.

The main developments and upgrades proposed through this Master Plan are:

Movement area upgrades:

Upgrading RWY 08/26 to suit Code 3C aircraft operations, including RWY extension, widening and RWY resurfacing.

Establishing a 280m RWY strip for RWY 08/26, and reinstating Runway End Safety Areas (RESAs) at the end of the RWY strip.

Develop taxiway(s) to suit aircraft operations.

Refurbishment of Existing Apron to suit aircraft types.

Fuel facilities

Airside drainage

Passenger facilities

Passenger terminal & other facilities

Patient transfer

Hangars

New Hangar precinct.

Aircraft maintenance.

Air Traffic Management

Air Traffic Control

Navigation aids

Meteorology

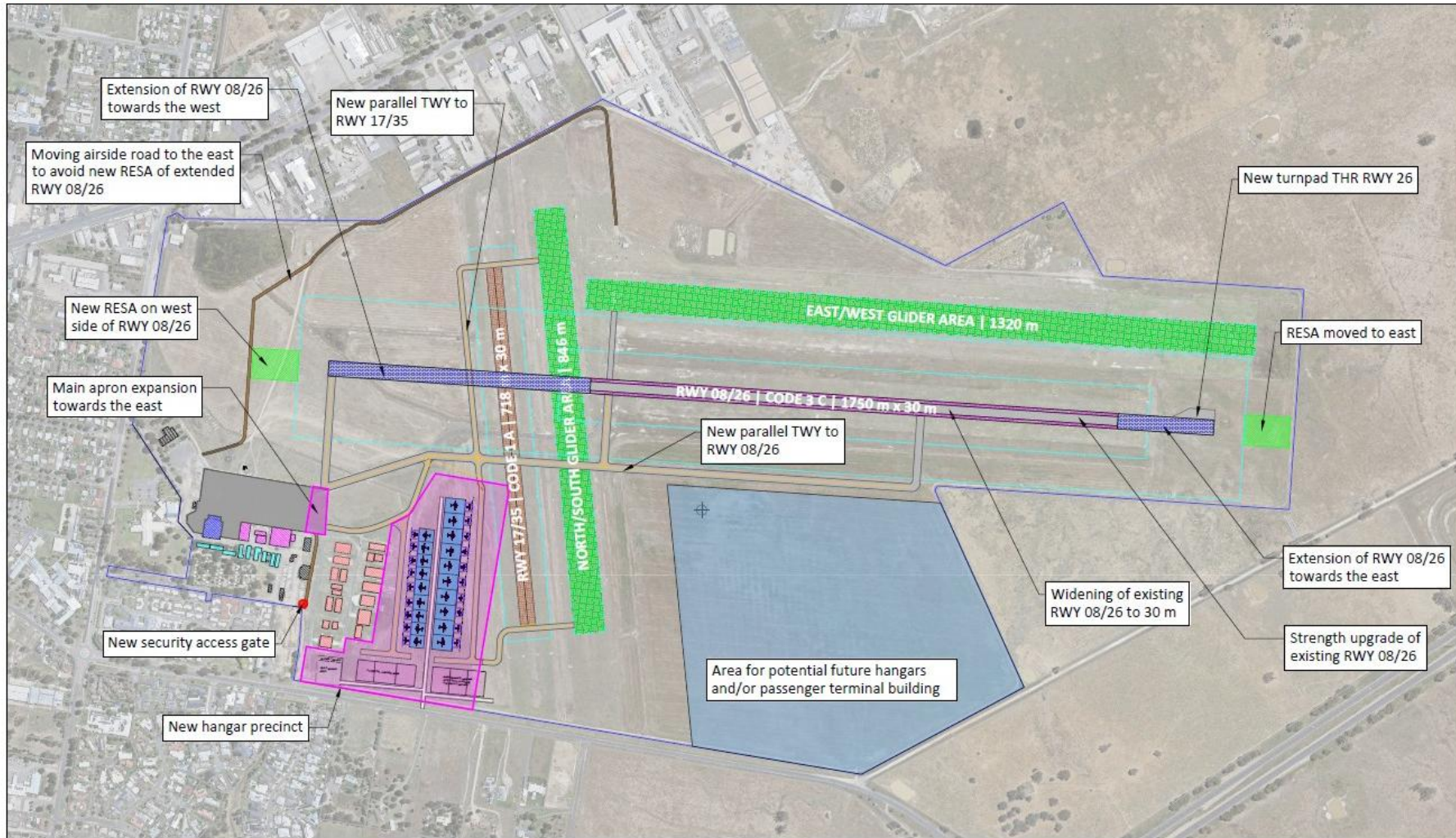
Ground Access and Security

Environment and Heritage

As previously stated, the actual implementation and timing of proposed developments and upgrades will depend on demand triggers, an assessment of forecast market conditions, commercial discussions, and approval processes. Council should liaise closely with aviation operators and other key stakeholders to discuss the timing and priority of investments. Commercial developments will be aligned with market demand and opportunities which may arise and would generally be the subject of a detailed business case.

The review of the Master Plan every five years will enable Council to periodically reassess project priorities and timeframes, thereby validating forecasts and development requirement. Figure 18: Preliminary Concept Plan for Airside Infrastructure Development contains the Preliminary Concept Plan for Airside Infrastructure Development

BENALLA AIRPORT MASTER PLAN



DIMENSIONS SUBJECT TO SURVEY AND DETAILED DESIGN

**PRELIMINARY CONCEPT PLAN FOR
AIRSIDE INFRASTRUCTURE DEVELOPMENT**

DRAWING NO: BAMP-004
 REVISION NO: FINAL-2
 DATE: July 2025
 SCALE: 1:10,000@A4
 GCS: GDA94 MGA55

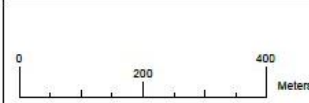


Figure 18: Preliminary Concept Plan for Airside Infrastructure Development

Movement Area

Upgrading RWY 08/26

The existing 1,000 metre RWY 08/26 at the airport is only suitable for the prevailing Code 1 aircraft operations, although certain RWY features were grandfathered against the new CASA MoS 139 standards. However, the runway will not be capable of handling future aircraft operations (that are highlighted in earlier chapters of this plan) and requires upgrades.

Rationale

The current RWY 08/26 characteristics including length, width and the surface strength are insufficient to accommodate future aircraft operations (identified in the Design aircraft chapter of this document). Consequent to the anticipated future operations and developments at the airport, an extended RWY 08/26 to 1,750 metres will accommodate aircraft up to Code 3C aircraft such as the Dash-8 Q400.

Recommendations:

In order to achieve a runway that can handle aircraft up to the Dash 8 Q400, the existing runway needs to undergo civil engineering works to extend its length, widen further and renovate its surface to increase its load bearing strength:

Extend RWY 08/26 towards the west and east - to a total runway length of 1,750 metres.

Widening RWY 08/26 from the current 18 metres to 30 metres.

Strengthen the surface of RWY 08/26 to accommodate anticipated larger aircraft.

RWY 08/26 Strip Width and RESAs

The existing runway strip provided for RWY 08/26 is 90 metres wide. While this is suitable for the prevailing aircraft operations, the runway strip will have to be further widened to 280 metres to enable Code 3C aircraft operations under instrument-non-precision approach conditions, as per the current CASA Part 139 MoS.

RESAs are currently 60 metres in length; however, their lengths and widths are required to be increased to 90 metres and 60 metres (RESA width twice the width of the proposed runway width) to suit future aircraft operations.

Rationale

Runway strips are a mandatory requirement as per CASA Part 139 MoS, that extend laterally to a specified distance from the runway centre line. The distance to which these strips extend are guided by factors such as aircraft code and type of approach. At Benalla, RWY 26 has an instrument-non-precision approach, and with the anticipated Code 3C aircraft operations, the runway strip needs to be 280 metres wide.

Similarly, RESAs are a mandatory requirement as per the current MoS, and their features (Lengths & widths) are guided by code of aircraft operations. In view of the anticipated Code 3C aircraft operations the RESAs should at least be 90 metres in length and 60 metres in width.

Recommendations:

Widen the runway strip for RWY 08/26 to 280 metres i.e., 140 metres on each side of the runway centreline, for the proposed runway length.

Upgrade RESA characteristics: Length – 90 metres (minimum) and width – 60 metres (RESA width twice the width of the proposed runway width).

Develop Taxiways

The two existing taxiways TWY A and B can only accommodate aircraft with outer main gear wheel span (OMGWS) less than 6 metres. Although the existing taxiways suit current operations, they will not be capable of handling Code 3C aircraft. Owing to the design aircraft identified through this master plan – Dash-8 Q400, which has an OMGWS of 8.8 metres, the taxiway(s) must be at least 15 metres wide.

Subsequent to this, the TWY strips need to be increased to at least 26 metres on each side of the TWY centreline.

Rationale

Taxiways provide the crucial link between runways and the different parts of the airside like, aprons. CASA's Part 139 MoS has standardised the minimum taxiway width (along the straight portions), and this is guided by the OMGWS of the most demanding aircraft currently operating/expected to operate aircraft. Anticipating Dash-8 Q400 aircraft operations at Benalla Airport due to potential RPT operations, the taxiways should at least be 15 metres wide. Further, taxiway edge clearances (at least 3 metres on straight & 4 metres on curved portions) needs to be provided for future taxiway developments.

Recommendations:

While incorporating the above developments, the council will have to consider following recommendations:

For existing TWY A & B:

Increase taxiway width to at least 15 metres

Ensure taxiway edge clearances on straight and curved portions w.r.to wheelbase of the design aircraft, which is upwards of 18 metres.

Ensure overall width including TWY and TWY shoulders meet MoS requirements.

Increase TWY strip width to 26 metres on each side of the TWY centreline.

In view of the forecasted or possible future aircraft operations and proposed airside developments, the future taxiway network is envisaged as follows (

Figure 19):

Taxiway network associated with RWY 08/26:

TWY A (that currently connects the apron to RWY 08 threshold) is required to be relocated outside the proposed new runway strip width of 280 metres.

In addition, TWY A may also be extended to run parallel to RWY 08/26, and connect to the mid-point of the runway. This would help reduce aircraft runway occupancy time at the airport.

Finally, a new taxiway connecting apron with the new (extended) RWY 08 threshold is proposed.

Taxiway network associated with RWY 17/35:

A parallel taxiway, extending from the proposed Eastern Hangar Precinct TWY, to grass RWY 17/35, is proposed.

Also, a taxiway connecting grass RWY 35 threshold with the new Eastern Hangar Precinct is included.

The grass runway can also be accessed at its mid-point through the adjusted TWY A (discussed above).

Easter Hangar Precinct:

As part of the Eastern hangar precinct development, two taxiways are proposed, one at the far east of the precinct and the other at the west (between new and the existing hangars). This way access to all hangars through taxiways is ensured.

Refurbish Existing Apron

In order to allow for the provisioning of larger aircraft and Regular Public Transport (RPT) flights, the need may arise for the refurbishment of existing aircraft apron. While the existing apron (paved with Bitumen seal) offers sufficient spacing for current aircraft operations and parking, they don't have aircraft parking positions marked to offer guidance for aircraft ground movement/parking. For future aircraft operations, the apron size may still meet operating requirements, however, it needs to be refurbished with appropriate markings and surface strength.

Rationale

Aprons must be provided at an airport to allow aircraft parking in an area that prevents parked aeroplanes infringe an obstacle limitation surface. These aprons need to have sufficient room to accommodate aircraft/s of size and type. Also, apron surface must be capable of withstanding aircraft loads during ground movements and while stationary.

The existing aircraft apron does not currently allow for safe RPT parking, with the required clearances from CASA, nor the servicing of Code C aircraft. Hence, appropriate apron markings to support safe aircraft ground operations and ground vehicle movements needs to be provided. Further, apron surface load bearing capacity needs to be ascertained for the existing apron and upgraded if the surface strength is determined to be low to accommodate the design aircraft.

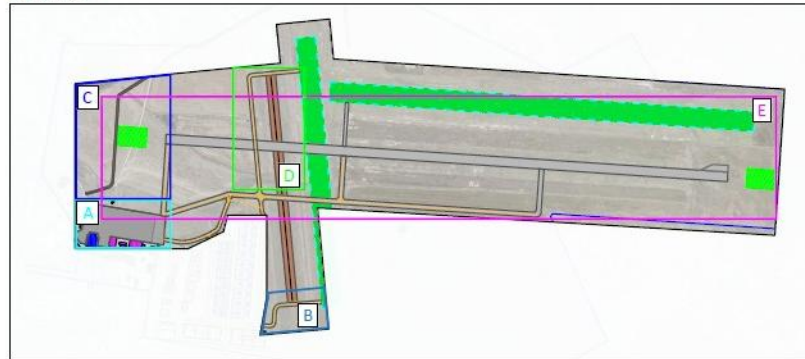
Recommendations:

Identify and develop aircraft parking positions and apron markings, with parking position/s for the design aircraft with at least 4.5 metres spacing from the surrounding object/structure/aircraft.

Ascertain load bearing capacity of the apron surface, and upgrade if the surface is not suitable for operating identified design aircraft.

BENALLA AIRPORT MASTER PLAN

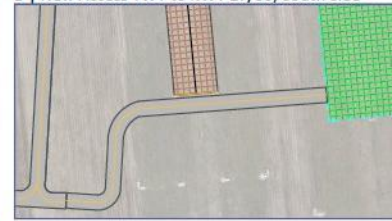
OVERVIEW



A | Main Apron Expansion



B | New Access TWY to RWY 17/35, South Side



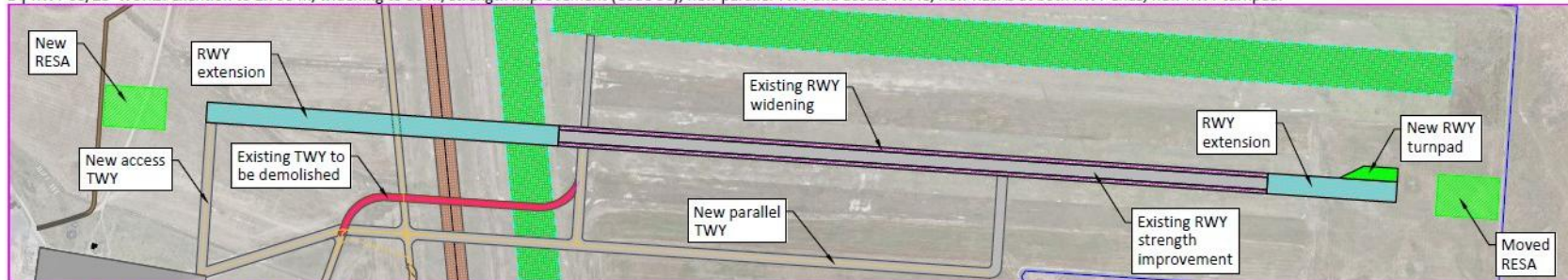
C | Relocation of Airside Road, West Side



D | New Parallel Taxiway to RWY 17/35



E | RWY 08/28 Works: extension to 1.750 m, widening to 30 m, strength improvement (Code 3C); new parallel TWY and access TWYs; new RESAs at both RWY ends; new RWY turnpad.



DIMENSIONS SUBJECT TO SURVEY AND DETAILED DESIGN

PRELIMINARY CONCEPT PLAN FOR AIRSIDE INFRASTRUCTURE DEVELOPMENT

DRAWING NO: BAMP-005
 REVISION NO: FINAL-2
 DATE: July 2025
 SCALE: Various@A4
 GCS: GDA94 MGA55



Figure 19: Movement Area Plan

Fuel Facilities

The existing fuel facility is situated on the airside, adjacent to (north of) the apron as shown in Figure 20. Aero refuellers supply (both AVGAS and Jet A1) fuel for aircraft operators, and this information is included in the ERSA for aviation community's awareness. The fuel facility's location allows visiting charter aircraft to refuel from the apron area by themselves, following established safety precautions. This fuel facility is capable to suffice requirements for current and future aircraft operations.

There are ongoing works to establish an LPG refuelling facility at the airport to support air balloon operations. A site in Precinct 1, adjacent to the border of Precinct 5, is identified to develop an LPG fuel facility to support this cause (Figure 21). LPG fuel suppliers will be identified and operations of this facility including a 3-Phase power supply are to be developed through the future airport development plans.



Figure 20: Fuel Facility at Benalla airport



Figure 21: Balloon Fuel Facility location

Airside Drainage

Significant drainage works will be required as a prerequisite for many developments, including:

- Runway extension
- New taxiways
- Hangar expansion
- Accommodation development
- Upgrading of aprons
- New and upgraded internal roads, and
- Pedestrian and Cycle pathways.

The existing airside open unlined drains will require rejuvenation to improve flows.

Recommendation:

Undertake civil works to improve drainage facilities to avoid water stagnation along airside infrastructure.

Passenger Facilities

Passenger Terminal and Other Facilities

Benalla Airport is currently used by general aviation operators such as, private flying, flying training organisations, gliders, etc. Owing to nil RPT operations in the current scenario and in the immediate future, this master plan does not propose a passenger terminal, that facilitates airline passenger traffic, to be developed at the airport.

However, depending on the growth in aircraft traffic and the type of operations, the airport management may seek to develop a charter terminal and then a passenger terminal commensurate to perceived future demands/benefits at the time.

Recommendation:

Charter terminal and Passenger terminal to be developed commensurate prospective aircraft operations.

Patient Transfer

The current patient transfer facility, although upgraded with a carport, is located near the main apron, which may become less optimal as the airport expands. Given that patient transfers primarily occur via ambulance directly to the aircraft, a dedicated lounge or facility for patient transfer is not required. However, as traffic increases, it may be necessary to adjust the layout to ensure efficient and safe access for ambulances to the aircraft.

Recommendation:

As traffic increases, it is recommended to consider adjusting the ambulance access route to ensure that it remains efficient and separate from other airport traffic, while maintaining privacy and safety for patients during transfer.

Hangars

Benalla Airport comprises hangars that are currently being used by various aviation stakeholders according to their business needs. As detailed in the earlier sections of this master plan, the existing hangars vary in size and access to airside infrastructures like sealed apron or taxiways. While the hangar infrastructure supports the existence and thriving of the aviation activities at

the airport, the need for improvised/enhanced facilities has been identified and being discussed among the aviation stakeholders and the airport management.

New Hangar Precinct

Owing to the growing demand for additional hangarage, the council had identified a land parcel to the east of existing hangars parallel to grass RWY 17/35 for future hangar development. The council has developed initial drawing for the new hangar precinct to accommodate the current and future demands for additional hangar space as shown in Figure 20. It is recommended that the council undertakes a detailed design exercise prior to any development in this location. Some of the aspects to be considered prior to any development in this precinct include:

MOS requirements relating to OLS, taxiway separation and vehicle access. Also, windshear requirements (NASF Guideline B) must be met for future hangar developments.

Regarding NASF B guidelines, this precinct is entirely within the windshear assessment envelope, and all the building will exceed the 1:35. Therefore a windshear assessment may be undertaken in accordance with the guideline.

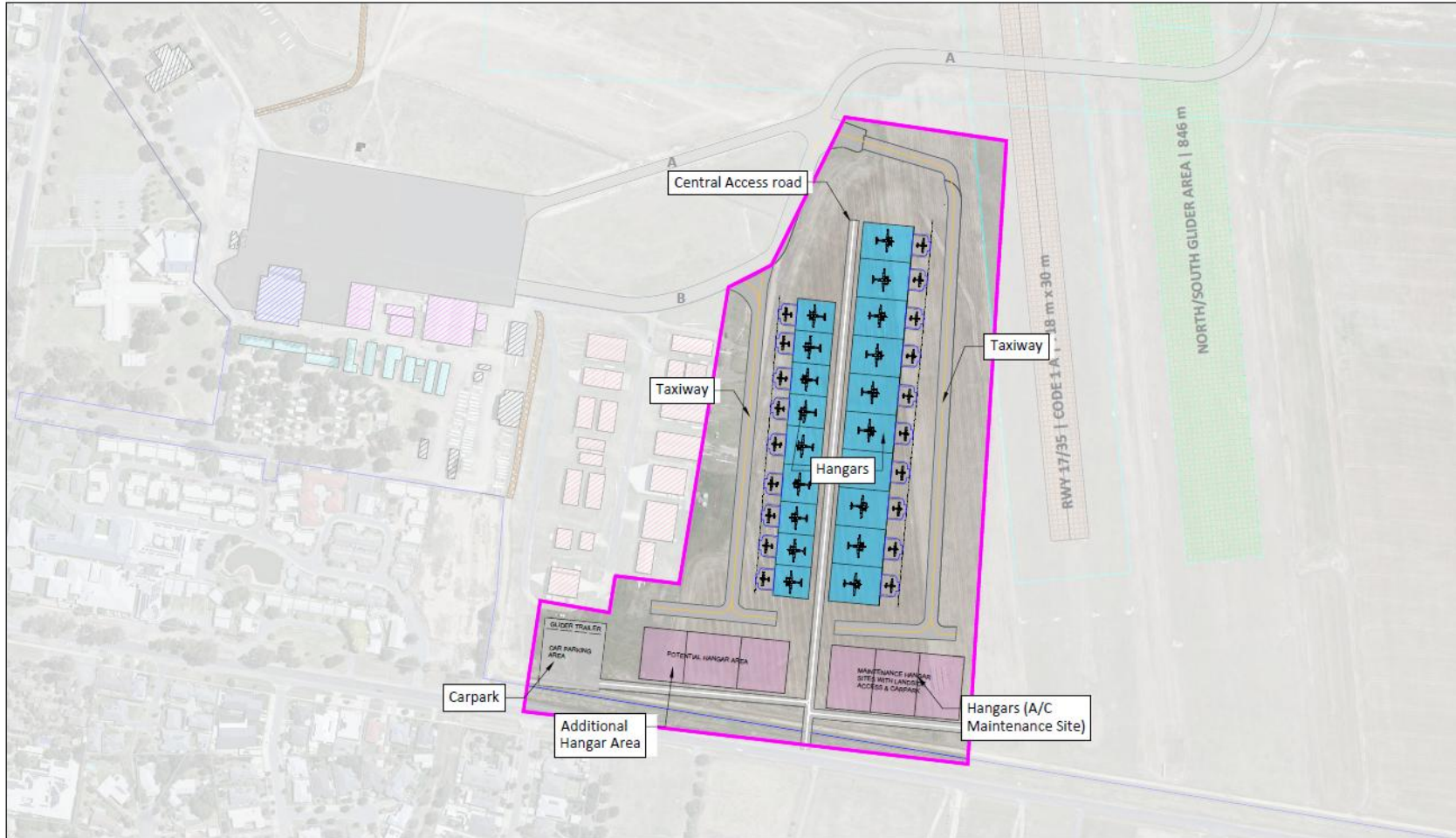
Recommendation:

A detailed assessment against MOS and NASF guidelines is required prior to any development in the new hangar precinct.

Aircraft Maintenance

As the number of aircraft based at Benalla increases, there is an opportunity to develop a maintenance, repair, and overhaul (MRO) facility. Generally, 30 aircraft can provide sufficient work for a Licenced Aircraft Maintenance Engineer (LAME). It's also worth noting that many MROs serve customers who are not based at the airport.

BENALLA AIRPORT MASTER PLAN



DIMENSIONS SUBJECT TO SURVEY AND DETAILED DESIGN

<p>PRELIMINARY CONCEPT PLAN FOR HANGAR EXPANSION DEVELOPMENT</p>	<p>DRAWING NO: BAMP-006 REVISION NO: FINAL-1 DATE: August 2025 SCALE: 1:4,000@A4 GCS: GDA94 MGA55</p>			
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Figure 22: New Hangar Precinct Plan

Air Traffic Management

Air Traffic Control

As indicated in previous sections, the nature and frequency of future aircraft activity at Benalla Airport does not trigger the requirement for air traffic control and therefore the master plan does not provide any site for this.

Navigational Aids

With the advent of GPS and the ongoing development of this technology, along with the increasing number of aircraft equipped with on-board GPS, there are no plans for any ground-based navigational aids.

Meteorology

Aerodrome weather information systems are currently not available at the airport, and this information has been included in the aerodrome manual. To enhance operational safety and support all types of aircraft activity, including emergency services, general aviation, and potential future RPT operations, it is strongly recommended that a ground-based Automatic Weather Information Station (AWIS) be installed at Benalla.

AWIS provides real-time, location-specific weather data that significantly improves situational awareness for pilots. Nearby non-RPT airports such as Shepparton, Wangaratta, and Mangalore have long benefited from AWIS installations, underscoring its value beyond scheduled passenger services.

Recommendation:

Initially, it is recommended that a suitable location for the AWIS be identified and safeguarded in consultation with the Bureau of Meteorology.

It is recommended that a ground-based Automatic Weather Information Station (AWIS) be installed at Benalla Airport to provide real-time weather information to pilots.

Ground Access and Security

Creating a memorable visitor experience through the airport's expansion involves several key elements: providing efficient access, clearly marked viewing points, and attractive connections between different areas.

The hangar precinct will benefit from a new security-controlled airport entrance located on the boundary line between Precinct 2 and Precinct 6. The new airport entrance will be equipped with fencing, access gates, signage, and landscaping. A new entry point is also proposed off Kilfeerra Road to provide access to the hangars.

To enhance mobility, new major and minor roads, as well as footpaths, will be designed with various cross sections. Some pathways will use pavers in key locations, while others will be surfaced with gravel.

Additionally, new fencing and public signage will be installed to clearly separate public areas from airside movement zones, ensuring safety and security.

Recommendation:

A new security-controlled airport entrance located on the boundary line between Precinct 2 and Precinct 6.

A new fencing and public signage to clearly separate public areas from airside movement zones, such as:

Signages to locate the airport

Unpaved lanes along BARC huts/hangars to be paved

Lane besides Coinda Village to be paved (to support locating LPG facility).

Environment and Heritage

Flora and Fauna

No threatened flora or fauna species were identified on the airport site during the assessment conducted for the 2015 Master Plan and it is unlikely that any exist in the area due to the significant vegetation modification that has taken place throughout the study site.

It is advisable to retain trees, including planted ones, wherever safe and feasible. These trees serve as vital habitats for local birds, arboreal mammals, and bats. Enhancing the amenity and biodiversity of the area can be achieved through additional native plantings, ideally using local species. Furthermore, development that attracts large flocks of birds—such as through on-site refuse or extensive water bodies—should be avoided to reduce the risk of bird strikes with aircraft (refer NASF Guideline C: Managing the Risk of Wildlife Strikes in the Vicinity of Airports discussed in Section 13).

Retardation Basin

The proposed retardation basin will be located in the open area on the northwest side of Precinct 7. Its primary purpose is to reduce flooding in the adjacent residential areas, and as such, it will not be funded by the airport.

Aboriginal Heritage

No actions are required to facilitate the master plan proposed developments.

Post Contact Heritage Management

The Council will need to consider an application to place a heritage overlay over the nominated buildings and airport areas of significant interest. A local heritage overlay is recommended for the huts and Bellman hangar.

Recommendation:

Local heritage overlay covering BARC huts may be developed and included in the Conservation Plan.

Airport Safeguarding Plan

The challenge of finding suitable sites for airports is exacerbated by the scarcity of appropriate land and the difficulty of replacing or expanding existing facilities. Many airports were established long before surrounding urban or township development, and as cities expand and become denser, conflicts between residential and industrial zones and airport operations intensify.

The ability of an airport to function effectively is closely tied to the land use surrounding it. Structures encroaching into flight paths can severely restrict airport operations and impact safety. However other developments also impact an airport's operation and safety. For instance, residential areas near airports often result in noise complaints, potentially leading to curfews or even closures. Similarly, industrial activities producing smoke or other hazards can impede airport use, as can agricultural or wetland developments that attract wildlife, posing a threat to aviation safety. Balancing these competing interests is a complex task for airport planners and policymakers.

As previously outlined in Section 2.5.1 the National Airports Safeguarding Framework (NASF) highlights the principles and guidelines to protect airport operations in Australia. This is further supported by the Australian Airports Association's (AAA) Planning Around Airports – Safeguarding into the Future which aids airport operators and planning authorities on how to implement the NASF guidelines.

For Benalla Airport the key requirement for airport protection is to ensure any development or land use surrounding the airport does not adversely impact the operation of the airport. This is critical concerning the following issues:

Changes of land use near the airport and under flight paths are not for land uses that may be sensitive to aircraft noise in areas defined by the applicable aircraft noise contours (NASF Guideline A)

Development proposals near the airport and under flight paths do not conflict with the airport's airspace protection surfaces (NASF Guideline F).

The following sections will discuss these issues in further detail.

Managing Aircraft Noise

The assessment of aircraft noise impacts is a critical aspect of airport safeguarding, as highlighted in NASF Guideline A: Measures for Managing

Impacts of Aircraft Noise. This component of the safeguarding framework is designed to ensure that:

Land is appropriately zoned by the Benalla Rural City Council

Sensitive land uses are not located in areas of unacceptable aircraft noise

The amenity of surrounding developments is not adversely affected by aircraft noise

Airport operations are protected long-term from conflicts due to the encroachment of inappropriate development into noise-affected areas.

Australian Noise Exposure Forecast (ANEF)

An integral part of managing aircraft noise is the preparation of an Australian Noise Exposure Forecast (ANEF). An ANEF is a contour map showing the forecast of aircraft noise levels that are expected to exist around an airport in the future. An ANEF chart, once endorsed by Airservices, is the official forecast of future noise exposure around an airport. It constitutes the contours on which planning authorities base their land use controls and is the approved metric across all Australian jurisdictions for statutory land use planning in noise-affected areas around airports.

Recommendations relating to land use within the ANEF contours are contained in Australian Standard AS2021-2015: Acoustics – Aircraft Noise Intrusion – Building Siting and Construction. The Airport Environs Overlay (AEO) can be applied in planning schemes to give force and effect to these recommendations.

Number Above Contours (N-contours)

NASF Guideline A contains further information and recommendations regarding aircraft noise contours which should be considered by airport operators. This includes the use of the 'Number Above' noise metric (commonly referred to as 'N-contours') to supplement the ANEF.

One of the principles of NASF is:

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

The N-contour system is a complementary aircraft noise metric that shows the potential number of aircraft noise events above 60dB(A), 65dB(A) or 70dB(A) per day. It has some advantages over the ANEF system because it shows noise

in a way that a person perceives it – as a number of single events per day above a certain decibel level.

NASF Guideline A recommends the use of N-contours for strategic planning purposes. This is particularly important for the consideration of any proposals for zoning changes for residential purposes near the airport and its flight corridors.

In relation to N contours, Clause 18.02-7S: Airports and Airfields states:

“Avoid zoning or overlay changes that allow noise-sensitive land uses outside the Urban Growth Boundary, and encourage measures to reduce the impact of aircraft noise in planning for areas within the Urban Growth Boundary, where ultimate capacity or long-range noise modelling indicates an area is within ‘number above’ contours (N Contours) representing:

20 or more daily events greater than 70 dB(A).

50 or more daily events of greater than 65 dB(A).

100 or more daily events greater than 60 dB(A).

6 events or more between the hours of 11pm to 6am greater than 60 dB(A).”

Benalla Airport Noise Contours

An Australian Noise Exposure Concept (ANEC) study was completed for the Airport in 2014 by Ambidji. The study was a 20-year forecast (2034) of aircraft movements which included a runway extension. The model forecast is based on 44,000 annual aircraft movements. Based on the forecast traffic activity for the 20-year planning horizon (2014-2034), a contour map was prepared which included the proposed runway extension to both the east and west directions for Runway 08/26. The results from the 2014 ANEC are shown in Figure 23.

Given that the ANEC was created a decade ago, a new version should be developed along with updated N Contours. This is particularly relevant as we approach the end of the 2014-2034 planning horizon. Once a new ANEC is produced, the Council can seek formal endorsement from Airservices Australia. Formal endorsement is not a legal requirement for non-commonwealth owned/leased airports, but is recommended when the contours are to be used for statutory planning purposes (i.e. the basis of an AEO). Note, an endorsed ANEC is known as Australian Noise Exposure Forecasts (ANEF).

Recommendation:

Prepare a new 20-year ANEC/ANEF for endorsement by Airservices, as well as N contours in accordance with NASF Guideline A and Clause 18.02-7S. The Airport Environs Overlay (AEO) should be applied in the planning scheme based on the new (endorsed) ANEF contours.

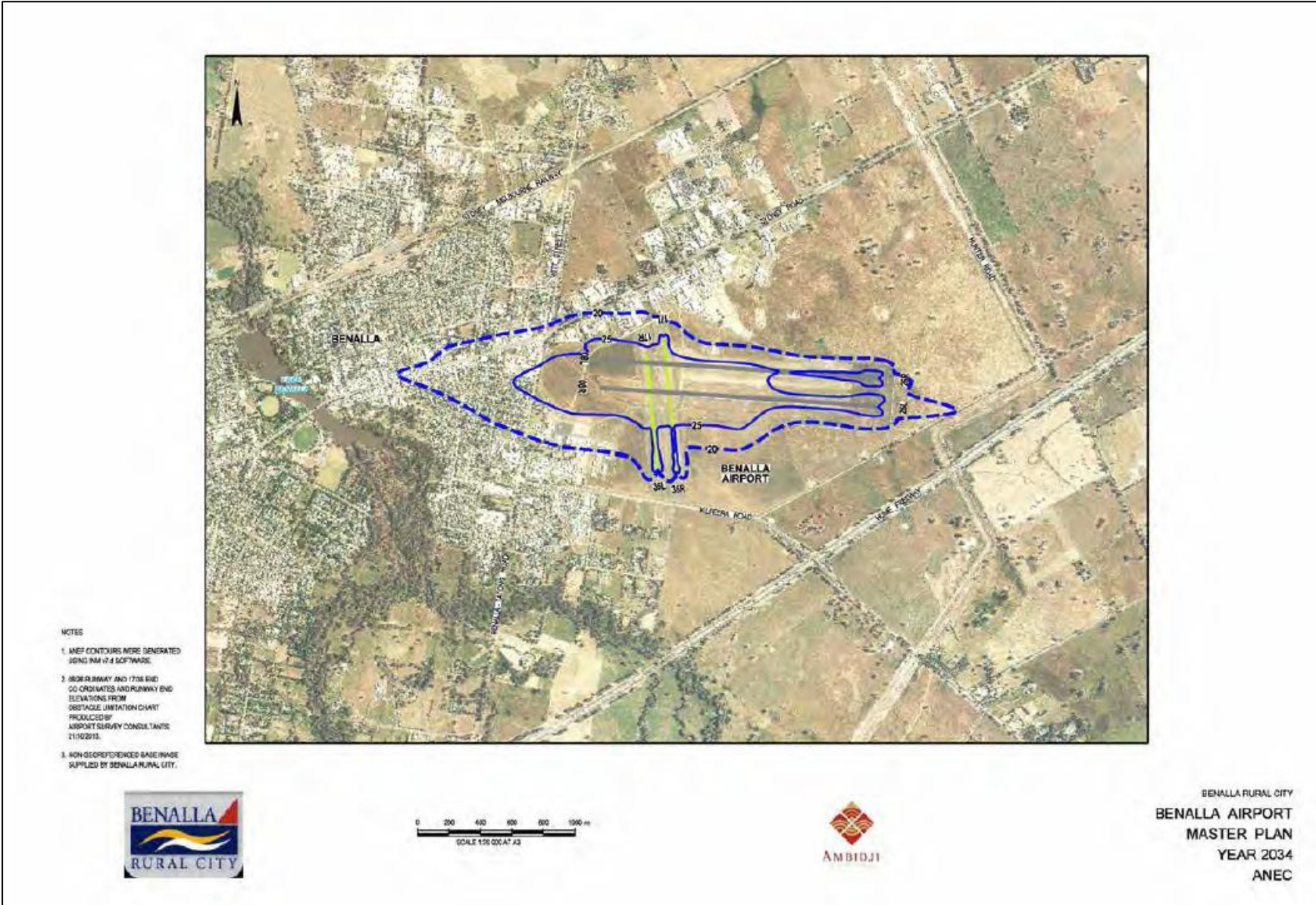


Figure 23: 2034 Australian Noise Exposure Concept

Protection of Airspace

Airspace Protection Surfaces are critical for safeguarding airports and involves the Obstacle Limitation Surfaces (OLS) and the Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS) surfaces. This is another critical safeguarding matter which is outlined in NASF Guideline F: Managing the Risk of Intrusions into the Protected Airspace of Airports.

Obstacle Limitation Surfaces

The CASA Manual of Standards Part 139 - Aerodromes defines Obstacle Limitation Surfaces (OLS) as:

“A series of planes associated with each runway at an aerodrome that defines the desirable limits to which objects may project into the airspace around the aerodrome so that aircraft operations at the aerodrome may be conducted safely.”

Protecting the airspace around Benalla Airport is crucial for ensuring the safety of aircraft and the surrounding community by preventing obstacles that could pose hazards to airborne aircraft. The existing obstacle limitation surfaces (OLS) for the airport are designed for different runway classifications: Code 2 for Runway 08/26 and Code 1 for Runway 17/35. Specifically, the OLS for Runway 26 supports a non-precision instrument approach, whereas the OLS for the other runways caters to non-instrument approach operations. The current OLS applies to the powered runways and the glider runway strips. The Benalla Airport DDO1 overlay provides height protection for takeoff and approach surfaces. Figure 24 shows the Benalla Airport OLS.

To safeguard aerospace operations, enhance airport safety, and accommodate future developments, a new OLS should be created based on the proposed 08/26 runway strip width (Code 3C) outlined in this Master Plan.

Recommendation:

To develop a new OLS, based on the proposed 08/26 runway strip width (Code 3C).

Procedures for Air Navigation Services – Aircraft Operations

PANS-OPS surfaces are critical for defining the operational airspace necessary for pilots flying under instrument flight rules. Any development must prioritise the avoidance of permanent encroachments into both current and anticipated PANS-OPS airspace.

Benalla Airport currently utilises a GPS-based non-precision approach for RWY 26L. However, there is no existing PANS-OPS surface drawing to safeguard this approach from obstacles. PANS-OPS surfaces, similar to OLS, define areas that must remain clear of obstacles to ensure safe aircraft operations.

Recommendation:

It is recommended that the council prepare a PANS-OPS surfaces chart to protect the instrument approach, which should be incorporated into the airport’s DDO overlay.

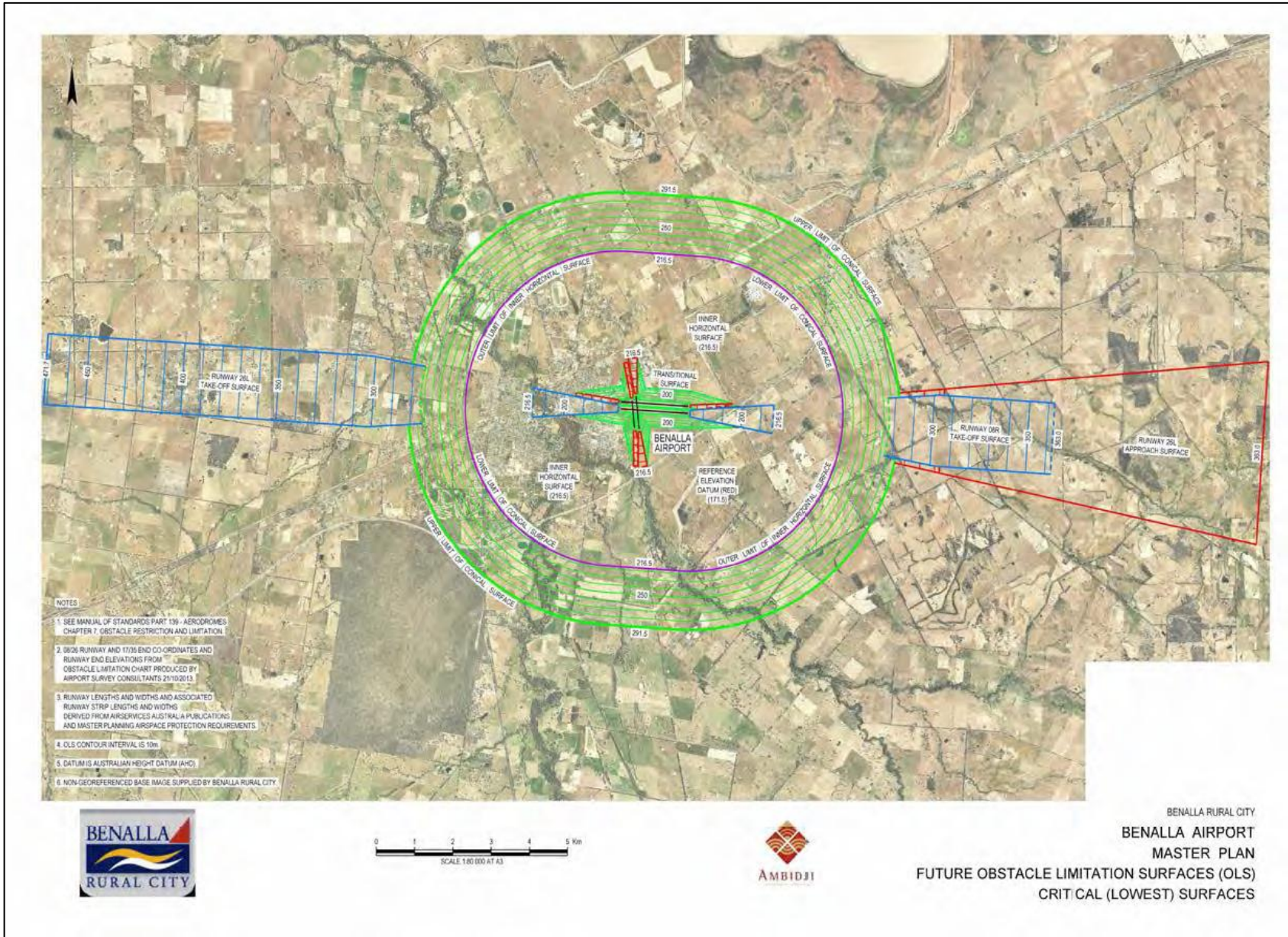


Figure 24: Benalla Airport OLS

Other NASF Matters

Whilst aircraft noise and airspace protection are the two most critical airport safeguarding matters, as outlined above, the assessment of land use and development proposals around Benalla Airport must consider all of the NASF guideline matters, in accordance with Clause 18.02-7S: Airports and Airfields of the Benalla Planning Scheme.

The following guidelines (in addition to Guidelines A and F discussed above) are considered particularly relevant:

Guideline B: Managing the Risk of Building Generated Windshear and Turbulence at Airports
(

Figure 25)

Guideline C: Managing the Risk of Wildlife Strikes in the Vicinity of Airports

(Figure 26)

Guideline E: Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports (

Figure 27)

Figure 28)

To assist consideration of these guidelines in future planning, diagrams showing the different assessment areas to which these guidelines apply are provided in Appendix C. Details of the parameters and restrictions for development within these areas are contained within the relevant NASF guidelines.

Planning Policies and Controls

Current Policies and Controls

As outlined in Section 2.4.5 there are existing planning policies and controls in the Benalla Planning Scheme relevant to Benalla Airport. These are all measures that assist in safeguarding the future of the airport and include:

Clause 18.02-7S: Airports and Airfields

Clause 18.02-7L: Benalla Aerodrome

Land Use Zoning: TRZ4

Land Subject to Inundation Overlay: LSIO

Design and Development Overlay: DDO1

These policies and controls should be reviewed and updated to ensure optimal protection for the long-term operation of the airport having regard to NASF and Clause 18.02-7S, as outlined below.

Planning Scheme Amendment

Following the adoption of this Master Plan, a Planning Scheme Amendment is recommended to:

Introduce the Airport Environs Overlay having regard to the new ANEF (when developed).

Update the Design and Development Overlay (DDO1) to reflect the updated OLS chart.

Recommendation:

A Planning Scheme Amendment should be implemented to introduce the AEO based on the new ANEF and update the DDO1 based on the new OLS.

Implementation Plan

In this task we will produce an Implementation Plan to inform amendments to Chapter 14, detailing key actions that are required to implement the Master Plan. This will include matters such as further studies, key projects, infrastructure upgrades, planning scheme amendment recommendations, and other necessary actions.

The Implementation Plan will also provide a logical staging for development actions including trigger points when major capital works are likely to be required. Actions will be categorised as immediate, short-term, medium-term, or long-term.

Current Benalla MP sections 12 and 13:

- Airport Staged Development
- Development Priorities
- Development Stages
- Implementation
- Grants
- Airport Management
- Airport Precinct Development
- Airport Revenue and Costs
- Master Plan Cycle
- Master Plan Adoption

Master Plan Recommendations

The list of recommendations from within the Master Plan are listed below in Table 10.

Table 10: List of Recommendations

No.	Recommendations	MP Section
1	<p>To achieve a runway that can handle aircraft up to Code 3C, the existing runway will need to undergo civil engineering works to extend its length, increase its width and renovate its surface to increase its load-bearing strength:</p> <p>Extend runway 08/26 towards the east and west - to a total RWY length of 1,750 metres. Widening runway 08/26 from the current 18 metres to 30 metres. Strengthen the surface of runway 08/26 to accommodate anticipated larger aircraft.</p>	7 - Design Aircraft / 12.1.1 Upgrading RWY 08/26
2	Widen the runway strip for runway 08/26 to 280 metres i.e., 140 metres on each side of the runway centreline, for the proposed runway length.	7 - Design Aircraft / 12.1.2 RWY 08/26 Strip Width and RESAs
3	Upgrade RESA characteristics: Length – 90 metres (minimum) and width – 60 metres (RESA width twice the width of the proposed runway width).	7 - Design Aircraft / 12.1.2 RWY 08/26 Strip Width and RESAs
4	Identify and develop aircraft parking positions and apron markings, with parking position/s for the design aircraft with at least 4.5 metres spacing from the surrounding object/structure/aircraft.	7 - Design Aircraft / 12.1.4 Refurbish Existing Apron
5	Determine the load-bearing capacity of the apron surface, and upgrade if the surface is not suitable for operating the identified design aircraft	7 - Design Aircraft / 12.1.4 Refurbish Existing Apron
6	<p>For Existing TWY A & B:</p> <p>Increase taxiway width to at least 15 metres Ensure taxiway edge clearances on straight and curved portions w.r.to wheelbase of the design aircraft, which is upwards of 18 metres. Ensure overall width including TWY and TWY shoulders meet MoS requirements. Increase TWY strip width to 26 metres on each side of the TWY centreline.</p>	12.1.3 Develop Taxiways
7	<p>Taxiway network associated with RWY 08/26:</p> <p>TWY A (that currently connects the apron to RWY 08 threshold) is required to be relocated outside the proposed new runway strip width of 280 metres. In addition, TWY A may also be extended to run parallel to RWY 08/26 and connect to the mid-point of the runway. This would help reduce aircraft runway occupancy time at the airport. Finally, a new taxiway connecting the apron with the new (extended) RWY 08 threshold is proposed</p>	12.1.3 Develop Taxiways

8	<p>Taxiway network associated with RWY 17/35:</p> <p>A parallel taxiway, extending from the proposed Eastern Hangar Precinct TWY, to grass RWY 17/35, is proposed. Also, a taxiway connecting grass RWY 35 thresholds with the new Eastern Hangar Precinct is included. The grass runway can also be accessed at its mid-point through the adjusted TWY A (discussed above).</p>	12.1.3 Develop Taxiways
9	<p>Easter Hangar Precinct:</p> <p>As part of the Eastern hangar precinct development, two taxiways are proposed, one at the far east of the precinct and the other at the west (between the new and the existing hangars). This way access to all hangars through taxiways is ensured</p>	12.1.3 Develop Taxiways
10	Undertake civil works to improve drainage facilities to avoid water stagnation along airside infrastructure.	12.1.6 Airside Drainage
11	Charter terminal and Passenger terminal to be developed commensurate prospective aircraft operations.	12.2.1 Passenger Terminal and Other Facilities
12	A detailed assessment against MOS and NASF guidelines is required prior to any development in the new hangar precinct.	12.3.1 New Hanger Precinct
13	A ground-based Automatic Weather Information Station (AWIS) be installed at Benalla Airport to provide real-time weather information to pilots.	12.4.3 Meteorology
14	A new security-controlled airport entrance is located on the boundary line between Precinct 2 and Precinct 6.	
15	<p>New fencing and public signage to separate public areas from airside movement zones, such as:</p> <p>Signages to locate the airport Unpaved lanes along BARC huts/hangars to be paved</p>	12.5 Ground Access and Security
16	Local heritage overlay covering BARC huts may be developed and included in the Conservation Plan.	12.6.4 Post-Contact Heritage Management
17	Prepare a new 20-year ANEC/ANEF for endorsement by Airservices, as well as N contours in accordance with NASF Guideline A and Clause 18.02-75.	13.1.3 Benalla Airport Noise Contours
18	The Airport Environs Overlay (AEO) should be applied in the planning scheme based on the new (endorsed) ANEF contours.	13.1.3 Benalla Airport Noise Contours
19	To develop a new OLS, based on the proposed 08/26 runway strip width (Code 3C).	13.2.1 Obstacle Limitation Surfaces
20	It is recommended that the council prepare a PANS-OPS surfaces chart to protect the instrument approach, which should be incorporated into the airport's DDO overlay.	13.2.2 Procedures for Air Navigation Services - Aircraft Operations
21	A Planning Scheme Amendment should be implemented to introduce the AEO based on the new ANEF and update the DDO1 based on the new OLS.	13.4.2 Planning Scheme Amendment

Development projects

The list of development projects proposed are listed below in Table 11.

Table 11 - List of development projects

No.	Action	MP Section	Trigger	Timing	Priority
1	New hangar precinct development	12.3.1 New Hangar Precinct	Immediate need	Short-term	High
2	Improve entrance point from Samaria Road in the South-West corner of Precinct 5 (border between Precinct 5 and Arts Centre)	11.2.5 Precinct 5	Immediate need	Short-term	High
3	New entrance point in Precinct 6C	11.2.6 Precinct 6- Mixed uses	Immediate need	Short-term	High
4	Visitor accommodation expansion in Precinct 6B	11.2.6 Precinct 6 - Mixed uses	Demand for additional accommodation	Short-term	Medium
5	Construction of an MRO facility	12.3.2 Aircraft Maintenance	Increase in the number of aircraft	Short-term	Low
6	Retardation Basin	12.6.2 Retardation Basin	Immediate need	Short-term	High
7	Civil works to improve drainage facilities to avoid water stagnation along airside infrastructure	12.1.6 Airside Drainage	Part of any new development	Medium	Medium
8	Dash-8 Q400 as design aircraft (Code 3C)	12.1.1 Upgrading TWY 08/26	Forecast demand for Code 3C aircraft	Medium to long-term	Low
9	Existing TWY upgrades	12.1.2 RWY 08/26 Strip Width and RESAs	Forecast demand for Code 3C aircraft	Medium to long-term	Low
10	Apron Expansion	12.1.4 Refurbish Existing Apron	Larger aircraft (Code C) and/or RPT flights	Medium to long-term	Low
11	Passenger terminal facilities	12.2.1 Passenger Terminal and other facilities	Introduction of passenger services	Medium to long-term	Low

12	New parallel taxiways (TWY to RWY 17/35 and TWY to RWY 08/26)	12.1.3 Develop Taxiways	Forecast demand for Code 3C aircraft and increasing aircraft movements	Long-term	Medium
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Development Stages

The development of Benalla Airport is structured into three distinct stages to meet both immediate and future needs. These stages take into account aviation and non-aviation growth, infrastructure needs, and the projected demand for airport facilities. The stages are defined as follows: short-term (0-5 years), medium-term (5-10 years), and long-term (10+ years). The proposed stages are outlined below:

Short-term

In the short term, development efforts are primarily focused on addressing immediate infrastructure needs, alleviating congestion at the airport entrance, and accommodating existing growth pressures. Key priorities include improving access to the airport, supporting increased aircraft movements, expanding hangar facilities, and enhancing visitor accommodations. Critical infrastructure improvements are planned to address immediate challenges such as drainage and airside facilities, as well as the growing demand for services. The following actions are prioritised during this stage:

New Hangar Precinct Development (high priority): A new hangar precinct will be established to accommodate the demand for additional hangars, supporting both aviation businesses and private aircraft owners.

Improved Entrance Point in Precinct 5 (high priority): To alleviate congestion at the border between Precinct 5 and the Australian Christian College and the Benalla Performing Arts Centre, the entrance point will be improved to ensure smoother traffic flow.

New Entrance Point in Precinct 6C (high priority): This will address the imminent need for better access and circulation at the airport.

Construction of a MRO Facility (low priority): This facility will support the growing number of aircraft based at Benalla Airport.

Visitor Accommodation Expansion in Precinct 6B (medium priority): The expansion is driven by the growing demand for additional accommodation options.

Retardation Basin: This infrastructure is crucial to manage stormwater runoff and mitigate the risk of flooding, addressing an immediate need.

Civil Works to Improve Drainage (medium priority): Improvements to drainage facilities will be made to prevent water stagnation along airside infrastructure, ensuring a safer environment for aircraft and ground operations.

Medium-term

The medium-term development focuses on enhancing the airport's capacity to handle increased aircraft operations and improving the functionality of its infrastructure. This period sees continued growth, particularly with an expected rise in aircraft movements and the demand for more advanced facilities. The key projects proposed for this stage include:

Upgrading TWY 08/26 - Code 3C Aircraft (low priority): This will ensure the airport can accommodate forecasted demand for larger aircraft, specifically the Dash-8 Q400.

Upgrades to Existing TWY and RESA Areas (low priority): Expanding and improving the existing taxiways and runway strip widths will support the forecasted increase in aircraft types and movements.

Apron Expansion (low priority): The apron will be expanded to accommodate larger aircraft and possible RPT flights.

Passenger Terminal Facilities (low priority): The introduction of passenger services will require the development of appropriate terminal facilities.

Long-term

The long-term stage focuses on larger infrastructure investments aimed at future-proofing the airport. This development will be driven by the continued growth of air traffic and the need to support larger aircraft movements. As the airport expands, this project will enhance operational efficiency and safety. The notable action in this stage includes:

New Parallel Taxiways (low priority): The construction of new taxiways connecting Runway 17/35 and Runway 08/26 will support the forecasted demand for Code 3C aircraft and increasing aircraft movements.

Indicative Costings

As part of the Master Plan, RPS has developed indicative order of magnitude costs based on previous drawings to ascertain a more accurate cost base. This will provide a better level of certainty against the costs within the business case.

In addition, RPS has also provided indicative costings for the key development projects outlined in Section 14.2.

The preliminary cost estimates presented in this master plan are indicative and based on current concept designs and assumptions. A number of items have been excluded from the cost calculations, including works outside Precinct 1, outside of rock excavation, allowances for taxiway strip construction, civil works related to drainage improvements, and any heritage or archaeological investigations. Additionally, costs associated with contamination removal, escalation, client fees, finance costs, and GST have not been included. These considerations are critical for future detailed planning. An overview of estimated costs for the proposed developments within Precinct 1 is provided in Table 12 on the following page.

A detailed costings report prepared by RPS has been included as an addendum to this Master Plan for reference.

Table 12 - Cost Estimate for Precinct 1 Development

Item	Description	Quantity	Unit	Rate	Total (AUD)
1	Existing Runway 08/26 - Surface Strengthening, Extension and Widening (proposed 1,750m L x 30m W)		Item		\$ 17,240,445
2	Provisional allowance for widening the runway strip for Runway 08/26 to 280 metres (no details provided)		Psum		\$ 4,111,890
3	Refurbish Existing Main Apron – Upgrading Apron Surface and New Line Marking for Aircraft Parking Positions (allowance only)		Item		\$ 3,436,970
4	Main Apron Expansion		Item		\$ 520,128
5	Existing Taxiway A & B - Widening (proposed 15m W)		Item		\$ 2,504,388
6	New Taxiway Network Associated with Runway 08/26 (assumed 15m W)		Item		\$ 6,653,694
7	New Taxiway Network Associated with Runway 17/35 (assumed 15m W)		Item		\$ 5,080,169
8	Allowance for taxiway strip width to 26 metres on each side of the TWY centreline.		Item		Excluded
9	Moving airside road to the east to avoid new RESA of extended RWY 98/26		Item		\$ 1,629,125
10	Provisional allowance for new Security Access Gate and fencing on the boundary line between Precinct 2 and Precinct 6 (no details provided)		Psum		\$ 500,000
11	Net Construction Cost		Item		\$ 41,676,809
12	Contractor Preliminaries	12	%	\$ 41,676,809	\$ 5,001,217
13	Contractor Profit & Overheads	5	%	\$ 46,678,026	\$ 2,333,901
14	Escalation				Excluded

15	Total Construction Cost		Item		\$ 49,011,927
16	Professional Fees	12	%	\$ 49,011,927	\$ 5,881,431
17	Authority Fees	1.5	%	\$49,011,927	\$735,179
18	Client fees				Excluded
19	Total Project Cost (excl.escalation, excl. contingency)		Item		\$ 55,628,538
20	Contingencies	30	%	\$ 55,628,538	\$ 16,688,561
21	Total Project Cost (excl. escalation, incl. contingency)		Item		\$ 72,317,099

Appendices

Appendix A – Stakeholder Consultation Table

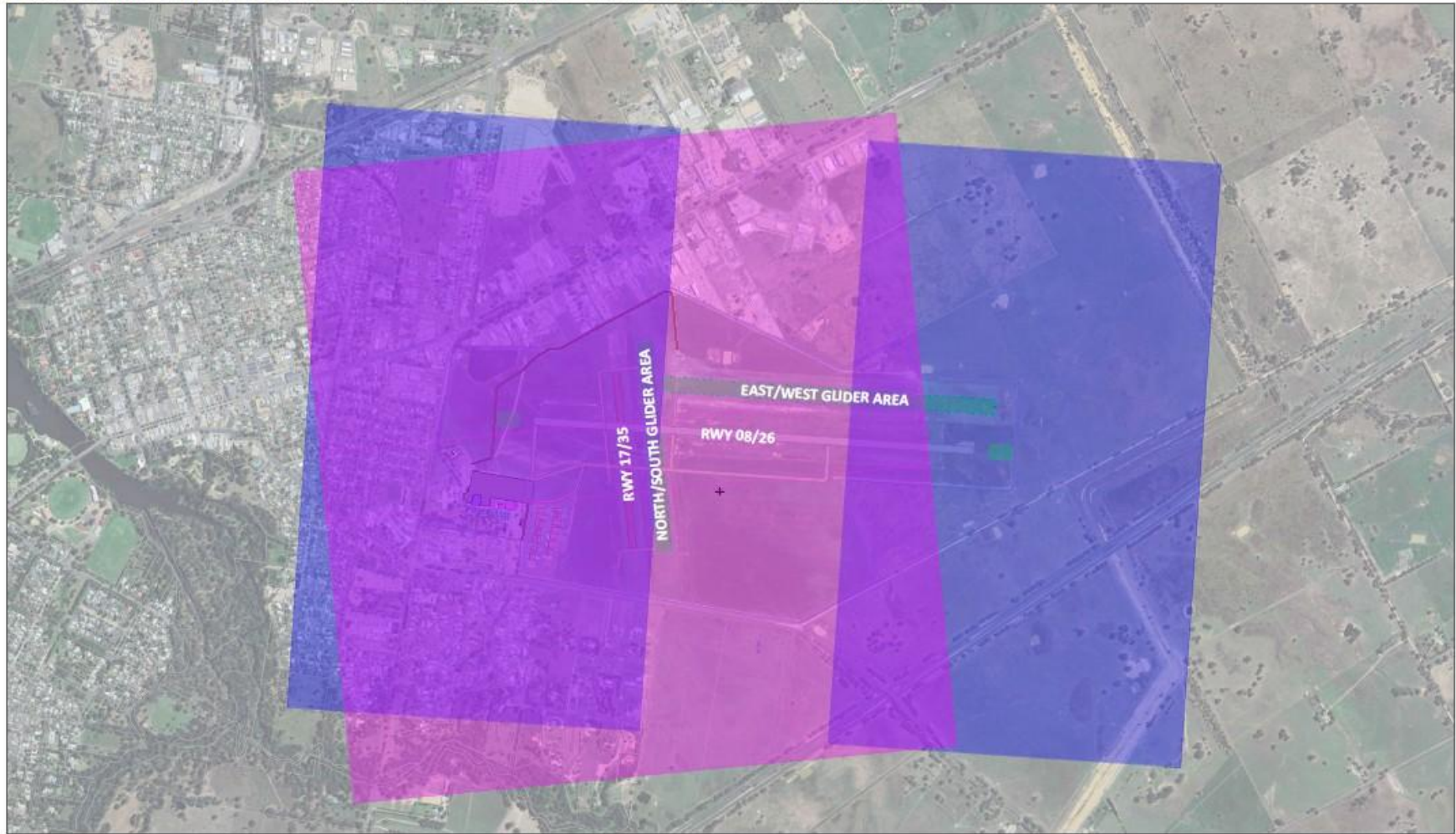
Stakeholders	Consultation Method	Representative	Key Concerns	Requirements/Expectations
Aero Refuellers	Phone Call	Paul	-	-
Balloon Association of Victoria	Direct Meeting	Jonie, Francoise (President), Martin (Committee)	Hangars - amenities & drainage Fuel Facilities for ballooning operations Beyond airport perimeter (but within airport precincts) Airport management	Hangarage LPG facility Weather report
Benalla Aeroclub	Direct Meeting	Rob Evans, Tony	RWY visibility on approach:	Primarily: 1. Another TWY 2. Wider RWY Additionally: 1. Improve surface conditions: 2. Apron facilities: 3. Outside the airport perimeter: 4. Miscellaneous:
Benalla Aviation Museum	Have Your Say	John Currie, Secretary Mark Carr, Vice President	Airfield drainage facilities and water stagnation Non-availability of the full area of the historic Bellman Hangar Lack of proper airside toilets	Expansion of museum Regular maintenance of toilet block Improvements to grass RWY conditions Acquisition of a nearby ex-RAAF building to be restored as a combined Migrant Camp/wartime RAAF barracks exhibition
Benalla Migrant Camp	Have Your Say	Staphanie Merrie, Sonya Casey, Sabyne Smith (Volunteers)		Maintenance of huts. Landscaping around the huts Establishment of a permanent museum
Benalla Rural City Council	Phone Call	Nathan Gasperoni, Environment Sustainability Coordinator	Emergency management plan to be added. Environment strategy more Planning	-

			Biodiversity survey of the site not done	
Cropping lessee	Phone Call	Antony Hill	-	-
Enterprise Park Benalla	Phone Call	Tim van Dreven and Graeme McCinn		Investing in infrastructure - would be happy to sell titles for private hangarage Access to airport is a factor to get ball rolling Interest in buying an airport.
Gliding Club of Victoria	Direct Meeting	Tim & Terry	Glider operation disruptions due water stagnation on RWYs/strips Location for glider storage Ground vehicle movement on apron area	Part RWY operations Secure location for glider storage More Hangar facilities Accommodation for gliders Extending the Bitumen strip for glider take-off
Goldrush Ballooning	Direct Meeting	Paul	Fuel Facilities for ballooning operations Hangar facilities	Facility requirements Fuel Facilities for ballooning operations
NIOA Group	Phone Call	Nigel Everingham	Concerns reg aircraft operations	Facilities that suit future operations
Paxton Air Helicopters	Direct Meeting	Leah Colbert - Operations Manager / Line Pilot	Security concerns	Hangar requirement

In addition to the above, several individual general aviation pilots participated in the 'Have Your Say' survey to offer their inputs.

Appendix B - NASF Guidelines B, C, E and I

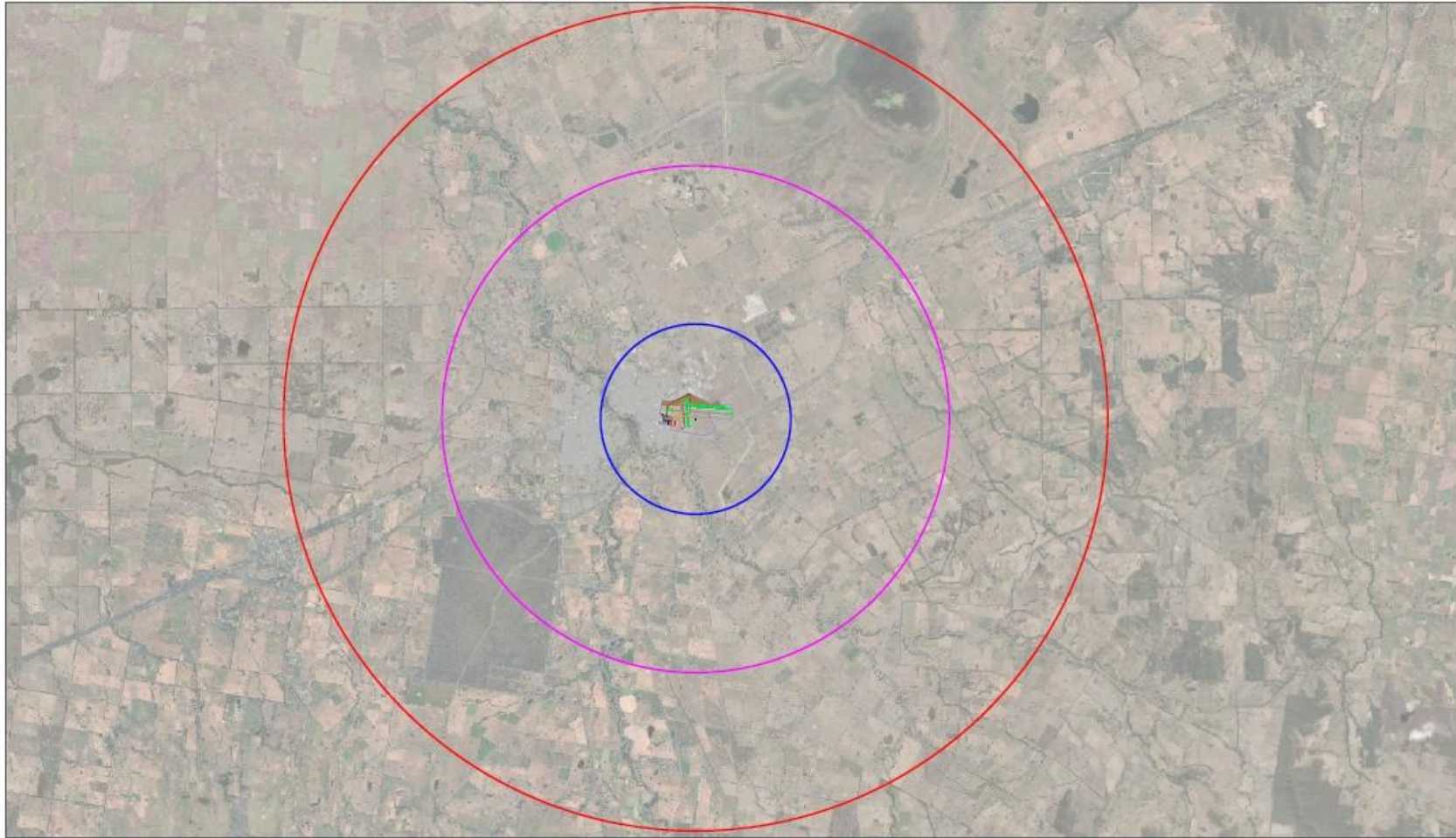
BENALLA AIRPORT MASTER PLAN | NASF SAFEGUARDING - WINDSHEAR ASSESSMENT ENVELOPE



<ul style="list-style-type: none"> WINDSHEAR ASSESSMENT ENVELOPES RWY 08/26 WINDSHEAR ASSESSMENT ENVELOPES RWY 17/35 	<p>DRAWING NO: BAMP-009 REVISION NO: FINAL-2 DATE: July 2025 SCALE: 1:20,000@A4 GCS: GDA94 MGA55</p>			
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Figure 25: Guideline B Windshear Assessment Envelope

BENALLA AIRPORT MASTER PLAN | NASF SAFEGUARDING - WILDLIFE BUFFER ZONES



 3 KM WILDLIFE BUFFER ZONE

 13 KM WILDLIFE BUFFER ZONE

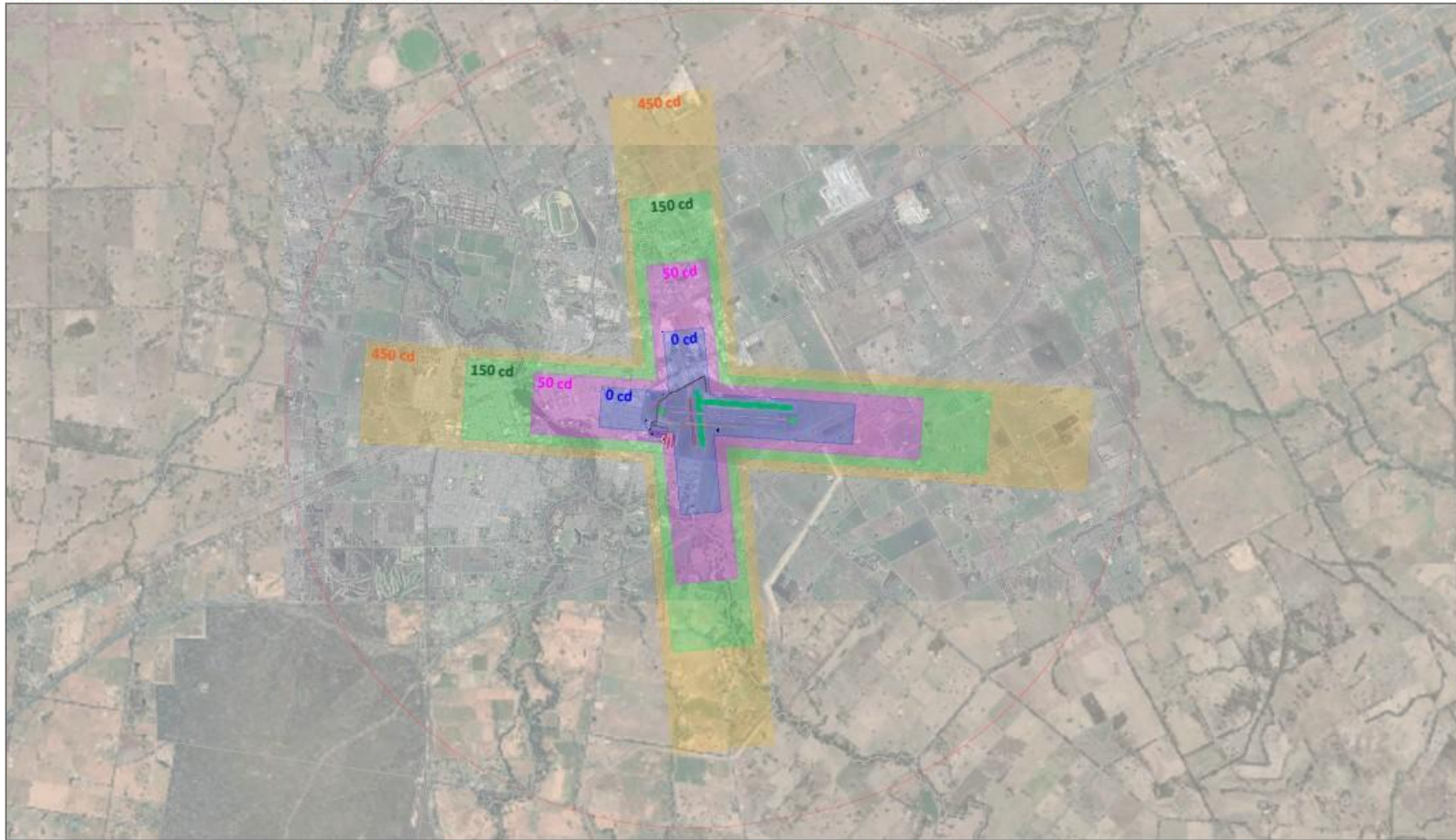
 8 KM WILDLIFE BUFFER ZONE

DRAWING NO: BAMP-010
REVISION NO: FINAL-2
DATE: July 2025
SCALE: 1:160,000@A4
GCS: GDA94 MGA55



Figure 26: Guideline C Wildlife Buffer Zones

BENALLA AIRPORT MASTER PLAN | NASF SAFEGUARDING - MAXIMUM LIGHTING INTENSITY ZONES




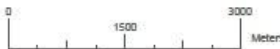


<ul style="list-style-type: none"> ZONE A 0 cd ZONE B 50 cd ZONE C 150 cd ZONE D 450 cd 	 <p>6 KM POSSIBLE ASSESSMENT RADIUS CIRCLE</p>	<p>DRAWING NO: BAMP-011 REVISION NO: FINAL-2 DATE: July 2025 SCALE: 1:75,000@A4 GCS: GDA94 MGA55</p>			
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Figure 27: Guideline E Maximum Lighting Intensity Zones

BENALLA AIRPORT MASTER PLAN | NASF SAFEGUARDING - PUBLIC SAFETY AREAS



PUBLIC SAFETY AREA RWY 08/26	DRAWING NO: BAMP-012 REVISION NO: FINAL-2 DATE: July 2025 SCALE: 1:20,000@A4 GCS: GDA94 MGA55			
PUBLIC SAFETY AREA RWY 17/35				

Figure 28: Guideline I Public Safety Areas

Appendix D - Acronyms and Abbreviations

AAA – Australian Airports Association

ABF - Australian Balloon Federation

AFRU - Aerodrome Frequency Response Unit

AGL - aerodrome ground lights

AIM - Aeronautical Information Management

AIP - Aeronautical Information Package

AMSL - Above Mean Sea Level

ANEC - Australian Noise Exposure Concept

ANEF - Australian Noise Exposure Forecast

ANEI - Australian Noise Exposure Index

ARFFS - Aviation Rescue and Fire Fighting Service

ATIS - Automatic Terminal Information Service

AWIS - Automatic Weather Information Station

BARC - Benalla Accommodation and Recreational Centre

BITRE - Bureau of Infrastructure, Transport and Regional Economics

BPAC - Benalla Performing Arts Centre

CASA - Civil Aviation Safety Authority

CASR - Civil Aviation Safety Regulations

CBD - Central Business District

CFA - Country Fire Authority

CTAF - Common Traffic Advisory Frequency

DCCEEW - Department of Climate Change, Energy, the Environment and Water

DDO - Development and Design Overlay

DITRDCA - Department of Infrastructure, Transport, Regional Development Communications and the Arts

EATS - Empire Air Training Scheme

EBPC Act - Environment Protection and Biodiversity Conservation Act

ERSA - En-Route Supplement of Australia

FAA - Federal Aviation Administration

GA - General Aviation

GCV - Gliding Club of Victoria

GPS - Global Positioning System

ICAO - International Civil Aviation Organisation

INM - Integrated Noise Model

IWDI - Illuminated Wind Direction Indicator

LAME - Licenced Aircraft Maintenance Engineer

LPG - Liquefied Petroleum Gas

LSA - Light Sport Aviation

LSIO - Land Subject to Inundation Overlay

MCA - Multi-Criteria Assessment

MOS - Manual of Standards

MP - Master Plan

MRO - Maintenance Repair and Overhaul

NASAG - National Airports Safeguarding Advisory Group

NASF - National Airports Safeguarding Framework

OLS - Obstacle Limitation Surface

OMGWS - outer main gear wheel span

PAL - Pilot Activated Lighting

PANS-Ops - Procedures for Air Navigation Services – Operations

PE Act - Planning and Environment Act

RAAF - Royal Australian Air Force

RAF - Regional Airport Funds

RESA – Runway End Safety Areas

RPT - Regular Public Transport

RWY - Runway

SARPS - Standards And Recommended Practices

SES - State Emergency Services

TRZ – Transport Zone

TWY - Taxiway

B	302	LUXEMBURG	930
AZ	419	TURIN	935
LH	1122	NEAPEL	935
LH	1906	MADRID	935
LH	1022	STUTTGART HBF	935
AF	1701	LYON	940
AY	822	HELSINKI	940
AA	071	SAN FRANCISCO-DALLAS	945
AF	743	PARIS	945
LH	1416	VENEDIG	945
DL	823	DALLAS	945
AA	892	AMSTERDAM	945

to70

- Brisbane* 
- Melbourne* 
- Bangkok* 
- Bengaluru* 
- Shanghai* 
- Singapore* 
- Brussels* 
- Frankfurt* 
- Geneva* 
- London* 
- The Hague* 
- Montréal* 
- São Paulo* 
- Bogotá* 