

YARRAWONGA AERODROME MASTER PLAN 2025



DOCUMENT CONTROL

Document Title: Yarrawonga Aerodrome Master Plan 2025

Activity ID: YYWG01

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Released by: Jason Rainbird

Revision History

Version	Description	Transmitted	Reviewed by	Date
0.1	Working draft	28 January 2025	Moirá Shire Council	10 March 2025
0.2	Final draft	26 May 2025	Moirá Shire Council	7 July 2025
1.0	Final	23 July 2025	Moirá Shire Council	19 August 2025
1.1	Final for exhibition	19 August 2025	Moirá Shire Council	21 August 2025
1.2	Revised Final	21 August 2025		

ACKNOWLEDGEMENT OF COUNTRY

Moirá Shire Council acknowledges the Yorta Yorta Nation as the Traditional Owners of this land. We recognise the deep spiritual connection to land, waterways and community of the eight clan groups of Yorta Yorta Nation. We pay our respects to Elders past and present and extend that respect to all Aboriginal and Torres Strait Islander Peoples.

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EXECUTIVE SUMMARY

Yarrawonga Aerodrome (YYWG) is an important community asset owned and operated by Moira Shire Council. As a certified aerodrome, the Aerodrome is required to be maintained by Council in compliance with the Civil Aviation Safety Authority (CASA) Part 139 (Aerodromes) Manual of Standards 2019 (Part 139 MOS 2019) and other relevant standards.

Moirā Shire is strategically positioned on the iconic Murray River, two and a half hours north of Melbourne and close to major regional centres. Yarrawonga Aerodrome is located approximately 3 km to the south-east of the Yarrawonga town centre. The Aerodrome hosts several commercial businesses with a focus on aviation training and agriculture industries and supports a range of local and itinerant recreational and general aviation aircraft activities along with aeromedical services operated by Air Ambulance Victoria. There is no scheduled air transport (RPT) service.

Yarrawonga Aerodrome consists of a bitumen sealed Code 2B main Runway 01/19 1203 m long (RWY 01 1143 m long) x 18 m wide suitable for Code 2B aircraft up to 5,700 kg MTOW. Runway 19 operates as an instrument non precision approach runway. Runway 01/19 has pilot activated low intensity runway edge lighting to support night operations. The aerodrome also has an unsealed unrated natural surface cross strip Runway 05/23 446 m long x 18 m wide suitable for up to 3,000 kg MTOW Code 1A aircraft only. Runway 05/23 operates as a non-instrument runway.

It is noted that the existing airside infrastructure is subject to 'grandfathering provisions' permitted by CASA in accordance with regulatory standards applicable at the time of construction. Accordingly, Code 2B aircraft have been determined as the critical aircraft type for master planning purposes.

The Master Plan 2025 provides a framework for the continued operation and future development of Yarrawonga Aerodrome and seeks to address the following priority objectives:

- Provide appropriate airside infrastructure and facilities to cater for future growth in general aviation activities including new hangar development

- Continue to cater for critical aeromedical and other emergency service operations
- Provide for future commercial / light industrial development opportunities to maximise utilisation of the Aerodrome.

The Master Plan has been prepared in the context of the following vision statement:

"Yarrawonga Aerodrome is a vibrant, welcoming and sustainable general aviation community which supports a range of aviation related business activities, emergency service operations and recreational aviation that contribute to the economic development, tourism and wellbeing of the Moira Shire."

The Master Plan provides an overarching vision to guide the development of the Airport over the next 20-years including short, medium and long-term development scenarios. The Master Plan is intended to establish the basis for more detailed studies, with delivery of any individual component of the Master Plan being dependent on the availability of funding, market demand / business case assessment, and the undertaking of a full detailed design process. As such the timing of development may be delayed or accelerated by Moira Shire Council in consideration of these factors.

The Master Plan identifies three (3) principal development stages / scenarios:

- Short Term Development Strategy
- Medium Term Development Strategy
- Long Term Development Strategy.

Short Term Development Strategy 0 – 5 years

The short-term development strategy focusses on addressing feedback received from stakeholders and providing for additional general aviation hangar development sites to be made available.

Subject to funding, the scenario involves:

- The minor reconfiguration of Runway 01/19 and associated declared distances to provide for a 140 m wide Code 2 instrument non-precision runway strip (80 m min. graded) and 60 m long x 46 m wide runway end safety areas (RESA) at each end of the runway, along with the associated obstacle limitation surfaces in accordance with Part 139 MOS 2019
- Subject to Australian Government grant funding (Regional Airports Program), undertake resealing of Runway 01/19 to extend the life of the runway asset
- Retention of the existing Code 1 natural surface cross-wind Runway 05/23
- Implementation of the proposed taxiway widening project to Taxiways F, G and H to provide the full Code A taxiway strip width in accordance with Part 139 MOS 2019 and allow for operations of Code A aircraft up to but not including 15 m max. wingspan
- Realignment of the Code B Taxiway E on the alignment of Taxiway A, to allow for parking of general aviation aircraft on the sealed apron pavement in front of the adjacent hangar sites, subject to Code B taxilane minimum separation distances
- Provision of an additional sealed aircraft parking area along the eastern side of Taxiway E for local and itinerant (visiting) Code B aircraft
- Subject to Australian Government grant funding (Regional Airports Program), upgrade the existing grass long-term aircraft parking area to improve safety and usage year round in any weather conditions
- Subject to demand and business case assessment, provision of a new Code B taxiway to facilitate development of a potential 12-lot residential / hangar airpark village to the west of John Duigan Drive subject to a new entrance and

access road off Cahills Road along the western boundary of the vacant land to facilitate vehicle access to Yarrawonga Aerodrome and the closure of John Duigan Drive at the existing intersection with Cahills Road

- Upgrade of the utilities / services as necessary to support the short-term development strategy and potential new development areas.

Medium Term Development Strategy 5 – 10 years

The medium-term development strategy involves:

- Modification of the existing taxiways in front of the terminal building to provide a new aircraft parking apron with space for the parking of up to 2 Code B (King Air 350 or similar) aircraft, with apron flood lighting at the terminal and aircraft refuelling facility subject to obstacle limitation surface (OLS) assessment
- Subject to demand, the provision of a new Code B taxiway connection to the Runway 19 threshold to provide direct access to / from the Yarrawonga Terminal building and aircraft refuelling apron (including for emergency aeromedical helicopter operations)
- Subject to demand, the provision of an additional sealed aircraft parking area along the southern side of Taxiway F for Code A aircraft
- Subject to demand and business case assessment, undertake further land use planning investigations for the potential establishment of a light industrial / commercial development precinct to the east of Runway 01/19 with access from Botts Road
- In conjunction with the above, investigate the provision of improved sealed road access on Botts Road / Cahills Road
- Further upgrade of the utilities / services as necessary to support the medium-term development strategy and potential new development areas.



Long Term Development Strategy 10 – 20 years

The long-term development / aerodrome safeguarding scenario involves:

- Subject to demand and business case assessment, continue development of the light industrial / commercial development precinct to the east of Runway 01/19 with access from Botts Road
- Safeguard (reserve) land for a potential future Code B parallel taxiway extending from the Runway 01 threshold to the existing Taxiway C, with a 40 m wide taxiway strip (20 m on each side of the centreline of the taxiway) offset 82 m from the centreline of the taxiway strip to the centreline of the instrument non-precision Runway 01/19
- Safeguard (reserve) land – 140 m wide runway strip – for a potential future extension (up to approx. 350 m) of Runway 01/19 (subject to demand) to the south of the existing RWY 01 end should there be demand in the future for aircraft requiring an extended runway length
- If required by CASA, provision of an aircraft bypass bay off Taxiway G as part of a long term safety case / risk mitigation strategy associated with the existing taxiway sight distance non-compliance.

Funding for major capital works at Yarrawonga Aerodrome is sourced through a combination of funding from Moira Shire Council and external financing (such as loan borrowings and Government grants).

It is noted that Council currently does not levy fees and charges for use of Yarrawonga Aerodrome. It is recommended that Council consider alternative operating models and new funding sources including the introduction of appropriate user fees and charges (e.g. aerodrome access fees, aircraft weight based landing fees, aircraft parking charges etc) benchmarked against similar regional aerodromes in order to support the ongoing operation, future development and long term financial sustainability of Yarrawonga Aerodrome.

1. PLANNING CONTEXT

1.1. Introduction

Moirā Shire is strategically positioned on the iconic Murray River, two and a half hours north of Melbourne and close to major regional centres as shown in Figure 1 (source: Google Maps).

The Shire covers an area of 4,045 square kilometres and is bounded by the Murray, Goulburn and Ovens rivers.

Moirā Shire comprises the four main centres of Cobram, Nathalia, Numurkah and Yarrawonga, as well as 18 smaller towns and communities.

Moirā Shire has several significant environmental assets such as the three river systems as well as the Barmah National Park.

Irrigated agriculture is the Shire's economic engine and is inextricably linked to the region's waterways and secure supply of high-quality water. The Shire is home to a variety of agricultural industries including horticulture, cereal, oilseed, livestock, and dairy production.

Yarrawonga Aerodrome (YYWG) is owned and operated by Moirā Shire Council. The Aerodrome is in the northeast of the Shire and plays an important role in Moirā's local economy. As a certified aerodrome, the Aerodrome is required to be maintained by Council in compliance with the Civil Aviation Safety Authority (CASA) Part 139 (Aerodromes) Manual of Standards 2019 (Part 139 MOS 2019) and other relevant standards.

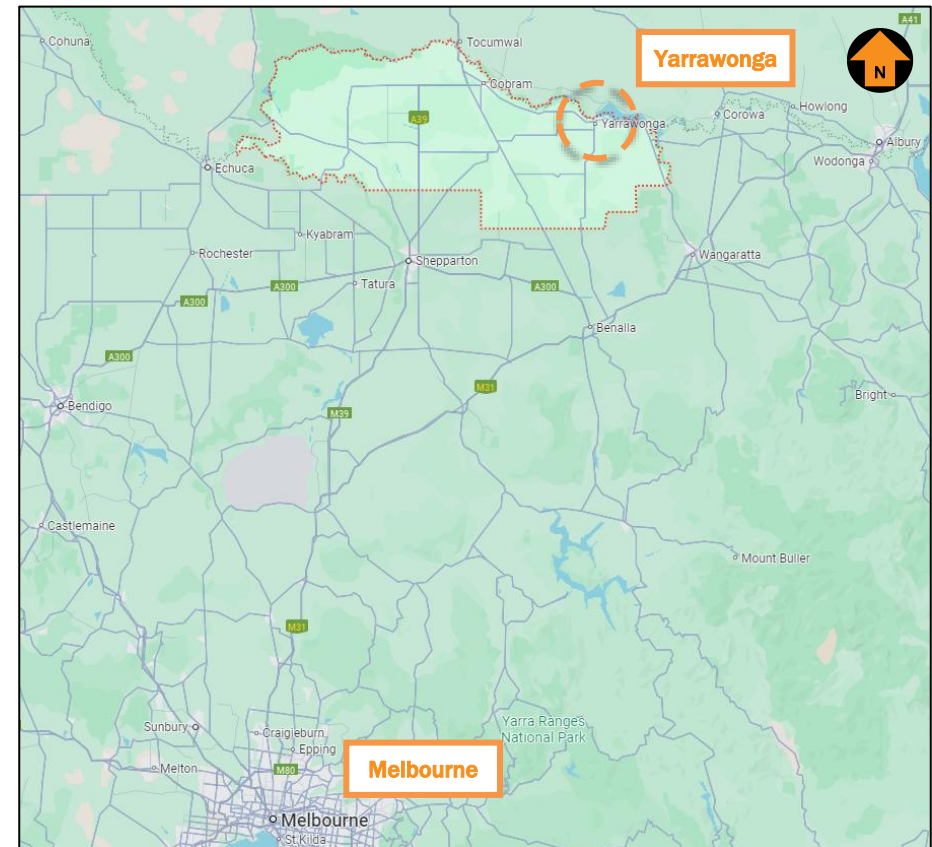


Figure 1 Moirā Shire location

Yarrawonga Aerodrome is located approximately 3 km to the south-east of the Yarrawonga town centre as shown in Figure 2 (source: Google Earth, imagery 3/2024).



Figure 2 Yarrawonga Aerodrome location

The Aerodrome hosts several commercial businesses with a focus on aviation training and agriculture industries and supports a range of local and itinerant recreational and general aviation aircraft activities along with aeromedical services operated by Air Ambulance Victoria. There is no scheduled air transport (RPT) service.

1.2. Site description

Yarrawonga Aerodrome is a certified aerodrome with a main sealed runway 01/19, unsealed cross strip 05/23, associated taxiways and 24-hour fuel supply.

Runway 01/19 is a bitumen sealed Code 2B runway 1203 m long (RWY 01 1143 m long) and 18 m wide suitable for Code 2B aircraft up to 5,700 kg MTOW. Runway 19 operates as an instrument non precision approach runway. Runway 01/19 has pilot activated low intensity runway edge lighting to support night operations.

Runway 05/23 is a Code 1A non instrument runway with an unrated natural surface 446 m long and 18 m wide suitable for up to 3,000 kg MTOW aircraft only.

A taxiway system provides access from the main runway to the terminal building and general aviation hangar precinct. Taxiways A, B and C are bitumen sealed taxiways 10.5 m wide suitable for up to Code B aircraft. Taxiways within the general aviation hangar precinct are generally restricted to Code A aircraft up to 12 m maximum wingspan.

An overview of the Aerodrome is shown at Figure 3 (source: Google Earth, imagery 3/2024).

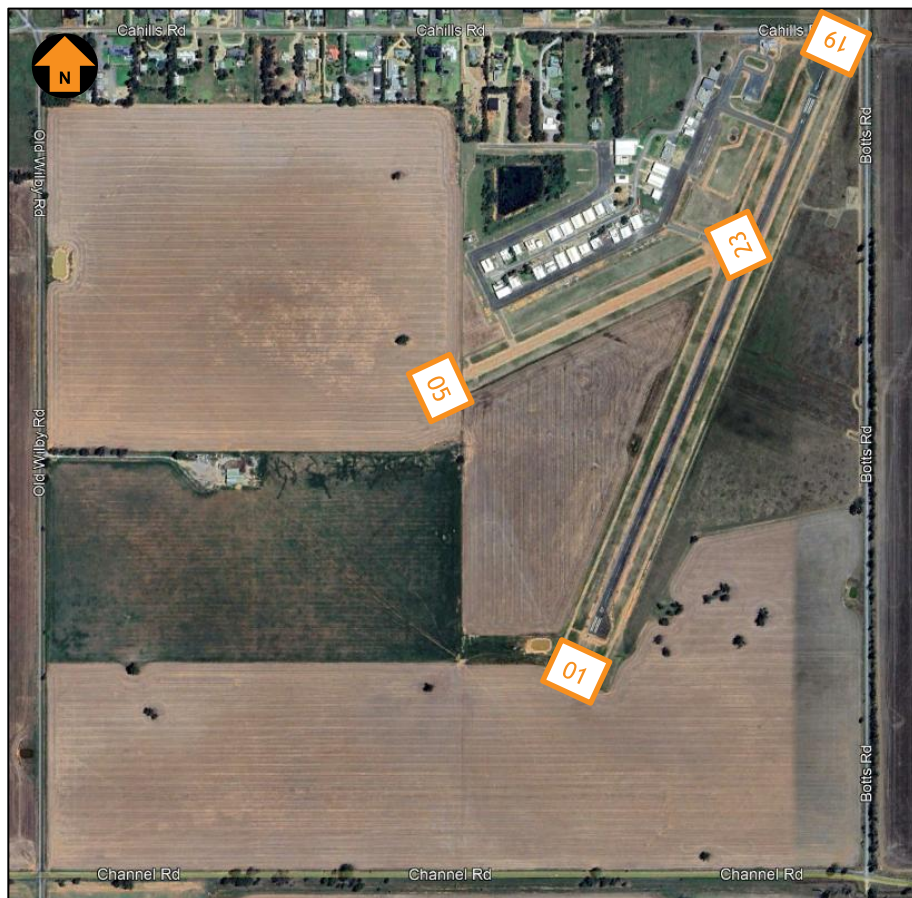


Figure 3 Site overview

1.3. Regional characteristics

Population

The Moira Shire has a population of 30,522 people (source: Australian Bureau of Statistics 2021 Census of Population and Housing). The Shire's population has increased by 4.8% since the 2016 Census (source: Australian Bureau of Statistics).

The Shire comprises four main centres: Cobram (6,465 people), Nathalia and Numurkah (12,555) and Yarrawonga (8,661). Yarrawonga has the strongest growth rate of all Moira's centres, with residential and retirement living expanding rapidly on the eastern side of the town (source: Moira Planning Scheme).

In 2021 the median age in Moira was 48 years. The percentage of the community 60 years or older was 34.9% (source: REMPLAN / Australian Bureau of Statistics 2021 Census of Population and Housing).

Economy (source: Moira Shire Council Economic Development Strategy 2019 – 2023)

The economic strengths of Moira Shire are agricultural production, including intensive irrigation and broadacre cropping, associated food processing industries, horticulture, health, education, business services and tourism. Irrigated agriculture is the Shire's main economic driver and is inextricably linked to the region's modern irrigation network and secure high-quality surface and groundwater.

Agricultural land use accounts for approximately 71 percent of the total land area, currently divided equally between irrigated and dry-land production. The Shire is one of the largest milk-producing areas in Australia.

Moira Shire has an excellent opportunity to build on its competitive advantages, continue to diversify its economy, increase its resilience and attract families to the area. In addition to supporting its dairy and horticulture sectors, Moira's economy needs to transition to employment sectors that are less sensitive to water prices. The Shire has strong growth prospects for its retail trade, health and education sectors, specialised and high value-added tourism and new and emerging industries, including renewable energy generation.

Tourism (source: Moira Shire Council Economic Development Strategy 2019 – 2023)

Tourism is an important sector to Moira Shire in terms of economic output and job creation. It generates \$101 million of economic output (3.7 per cent of Moira Shire’s total of \$2.7 billion) and employs 623 people or 5.7 percent of Moira Shire workforce.

Tourism and recreation are largely generated by visitors’ attraction to the Shire’s significant environmental assets such as the Murray, Goulburn and Ovens River systems, national parks and Ramsar listed wetlands. These natural assets are complemented by outstanding golf courses, quality accommodation and the many water based recreational activities available.

Visiting Friends & Relatives (VFR) is the region’s largest visitor market (source: Moira Shire Council Tourism Plan 2022 – 2026).

Climate and meteorology

The Moira Shire enjoys a temperate climate with generous annual rainfall.

Yarrawonga has a mean maximum temperature of 23.0°C and mean minimum temperature of 9.0°C. Mean annual rainfall is 479.3 mm (source: Australian Bureau of Meteorology).

Prevailing wind direction at 9 am is from the east / north-east, and at 3 pm from the west / south-west, as shown in Figure 4 (source: Australian Bureau of Meteorology).

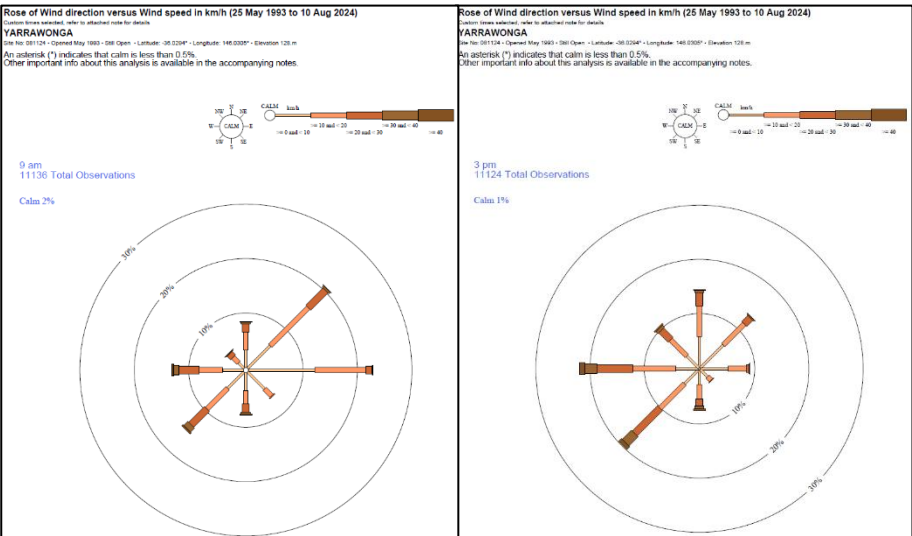


Figure 4 9 am and 3 pm wind roses

1.4. Role and history

Yarrawonga Aerodrome (YYWG) is an important community asset owned and operated by the Moira Shire Council.

The Aerodrome hosts several commercial businesses with a focus on aviation training and agriculture industries and supports a range of local and itinerant recreational and general aviation aircraft activities along with aeromedical services operated by Air Ambulance Victoria. There is no scheduled air transport (RPT) service.

The site of Yarrawonga Aerodrome has a long history dating back to the 1930's when the land was used for an aviation event.

The site continued to be used for aviation activity through to the 1960s when the land was developed by the then Yarrawonga Council.

In 2006 Moira Shire Council subdivided the land and sold approximately 20 hangar allotments as part of the current freehold airpark development.

In 2012 Council completed a significant upgrade of the Aerodrome including construction of a new taxiway (Taxiway Charlie), additional aircraft parking facilities, widening of the aircraft refuelling apron and construction of the Terminal building.

1.5. Current operations

Current aircraft operations include:

- Local and itinerant general aviation aircraft activities including charter operations
- Aeromedical flights operated by (or on behalf of) Air Ambulance Victoria
- Seasonal emergency aerial fire-fighting services.

1.6. Regional aviation

Yarrawonga Aerodrome (YYWG) is located 114 nautical miles north-east of Melbourne, and 45 nautical miles west of Albury. Its location in relation to other regional airports is shown in Figure 5 (source: OzRunways).

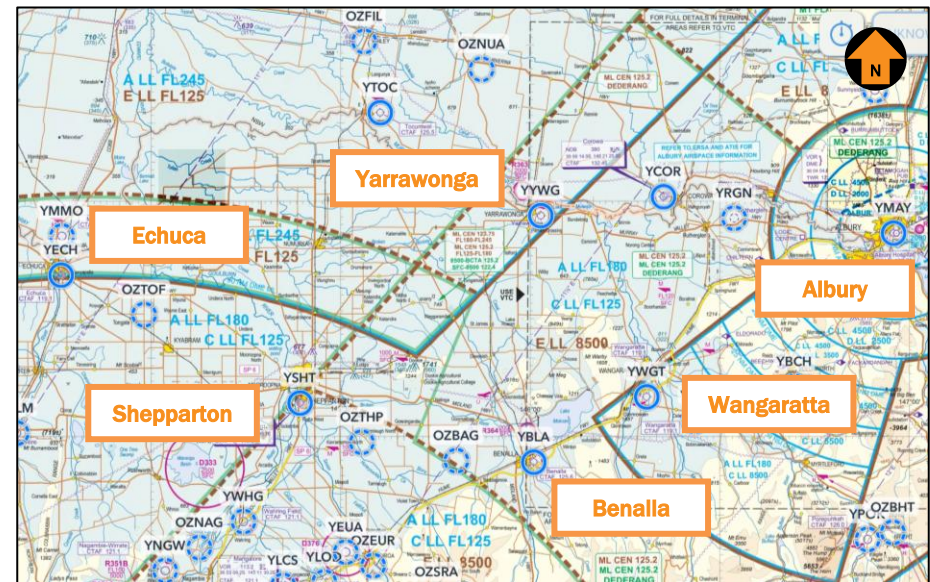


Figure 5 Yarrawonga Aerodrome in relation to other regional airports

1.7. Strategic intent

The operational management of Yarrawonga Aerodrome is a key service provided by Moira Shire Council. The Moira Shire Council Plan 2021 – 2025 acknowledges the service as:

“Operational management of the Yarrawonga Aerodrome used by the general aviation industry.”

“Operate the Yarrawonga Aerodrome which provides privately owned hangar sites and residential allotments with direct access to taxiways.”

To ensure that the Moira Shire achieves its strategic objectives and capitalises on the aviation and commercial opportunities presented by the Aerodrome, it is vital that the Master Plan provides a framework for the future development of Yarrawonga Aerodrome to cater for future growth over the years to come.

This includes planning for the airside infrastructure and landside facilities required to cater for future growth in general aviation activities including new hangar development, ensuring that the aerodrome continues to cater for critical aeromedical and other emergency service operations, and providing for future commercial / light industrial property development opportunities to maximise utilisation of the Aerodrome.

Future development as outlined in the Master Plan is guided by the planning principles set out in Table 1.

Table 1 Master planning principles

<i>Principle</i>	<i>Description</i>
Aviation safety, security & legislative compliance	Promoting a safe and secure environment for all users of the aerodrome in compliance with applicable civil aviation safety regulations and standards.
Capacity & operational efficiency	Providing appropriate (fit for purpose) infrastructure and facilities future proofed to meet the forecast demand for future aerodrome operations.
Customer experience & community & stakeholder relationships	Providing a high level of service / customer experience and establishing and maintaining strong partnerships with the local community and key stakeholders.
Environmental responsibility & compliance	Minimising the impact of aerodrome development and operations on the local environment.
Financial viability & sustainability	Ensuring the viability and sustainability of the aerodrome through the application of sound financial, asset and resource management principles.

1.9. Scope and limitations

The scope of work for the master planning study involved the following requirements:

- Situation Analysis – which assesses the aerodrome’s current facilities, land use and operations including both aviation and non-aviation usage; trends affecting the present and future use of the aerodrome with consideration to the social, demographic, and economic opportunities; and the current regulatory requirements and their implications on future operations, land use and development
- Future Direction – working with Council and key stakeholders to establish the strategic vision and objectives for the aerodrome and identify priorities to ascertain future needs
- Strategy Development – identifying critical airport planning parameters and providing clear direction on how Council will achieve its strategic vision and objectives
- Implementation – providing a schedule of recommended actions and plans to best achieve the desired objectives, including prioritising short, medium, and long term projects and cost estimates / ranges for each.

1.10. Methodology

The master planning study was conducted generally in accordance with the Australian Airports Association Airport Practice Note 4 – Regional Airport Master Planning Guideline and modified according to the Scope of Work.

The following key activities were conducted during the study:

- Inception meeting and site orientation
- Stakeholder engagement activities including site visit
- Consolidation of stakeholder feedback
- Preparation of concept plans for Council endorsement

- Preparation of draft Master Plan including drawings and aerodrome safeguarding plans
- Final stakeholder consultation including review of draft Master Plan
- Preparation of final Master Plan for Council acceptance.

1.11. Purpose of master planning study

The purpose of the Master Plan is to:

- Establish a framework for the future planning and development of Yarrawonga Aerodrome
- Ensure the Moira Shire achieves its strategic objectives and capitalises on the aviation and commercial opportunities provided
- Include stakeholder engagement and interactions with the project team to ensure an understanding of the situation and to validate Council’s vision for the future
- Identify future hangar development and commercial / light industrial property development opportunities to maximise utilisation of the site.

The Master Plan is intended to establish the basis for more detailed studies of design, infrastructure planning, and land use planning required to achieve the strategic direction.

The Master Plan provides an overarching vision that is expected to guide the overall development of the aerodrome over the next 20-years; identify key issues facing the aerodrome; and provide concepts or options for addressing these issues.

1.13. Planning horizons

The Master Plan nominally considers a planning horizon of 20 years, comprised of short, medium and longer-term timeframes.

The short term is typically defined as 0 – 5 years, medium 5 – 10 years, and longer term as 10+ years through to the end of the 20-year master planning horizon.

Delivery of any individual component within the Master Plan is dependent on the availability of funding, market demand and the undertaking of a full detailed design process, and the timing of development may be delayed or accelerated in consideration of these factors.

The Master Plan identifies three (3) principal development stages / scenarios:

- Short Term Development Strategy
- Medium Term Development Strategy
- Long Term Development Strategy.

1.14. Aviation legislative framework

As a certified aerodrome, Moira Shire Council is required to maintain the aerodrome in compliance with the following requirements:

- Civil Aviation Safety Regulations 1998

Civil Aviation Safety Regulation 1998 (CASR) Part 139 – *Aerodromes* describes the requirements for aerodromes used in air transport operations.
- Part 139 (Aerodromes) Manual of Standards 2019

Part 139 (Aerodromes) Manual of Standards 2019 (Part 139 MOS 2019) sets out the standards and operating procedures for certified and certain other aerodromes used in air transport operations.

- Aviation Transport Security Act 2004

The Aviation Transport Security Act 2004 (amended and in force on 23 June 2021) sets out the statutory framework that safeguards Australia's essential aviation services.

- Aviation Transport Security Regulations 2005

The Aviation Transport Security Regulations 2005 put into effect the requirements set out in the Act.

- International Civil Aviation Organisation (ICAO) Annex 14 - Aerodromes, Volume 1 Aerodrome Design and Operations

This Annex contains Standards and Recommended Practices (specifications) that prescribe the physical characteristics and obstacle limitation surfaces to be provided for at aerodromes, and certain facilities and technical services normally provided at an aerodrome. It also contains specifications dealing with obstacles outside those limitation surfaces.

1.15. National Airports Safeguarding Framework (NASF)

The Australian Government has an interest in better planning and integrated development on and around airports and to lessen the adverse effects of aviation activity on the environment and communities. While not a planning authority, it provides guidance on broader issues such as noise around airports that can be used by statutory authorities to achieve the stated objectives. The National Airports Safeguarding Advisory Group (NASAG) has produced National Airports Safeguarding Framework (NASF) to advance this agenda. The Framework should also be taken into consideration when designing development on and in the vicinity of the aerodrome.

Further detail is provided in section 11.



1.16. Strategic alignment

The following planning documents define Council's strategic planning context for the Yarrawonga Aerodrome Master Plan.

Moirā 2045 Community Vision

The *Moirā2045* Community Vision describes the priorities and aspirations for the Shire as:

"By 2045 we will be: A thriving, connected regional community."

The Vision identifies 4 key themes / pillars:

- Community
Welcoming, connected, informed and engaged communities; A growing and supported population of residents, workers and visitors; Inclusive, safe and sustainable spaces; A strong and proud connection to place, culture and history.
- Environment
Sustainable agriculture and well-managed water entitlements; Healthy, accessible waterways and natural environments that protect and increase local flora and fauna; An urban forestry system that increases liveability of communities; A progressive local circular economy with renewable energy sources and minimal emissions.
- Liveability
Digitally connected and capable communities; Safe and accessible transport and roads that connect the region; Access for all to services that support healthy living; Community facilities and assets that enable community activity, the arts and recreation.
- Prosperity
Strong and innovative agricultural, commercial and manufacturing enterprises; Sustainable year-round visitor experiences that embrace Moirā's diversity and

assets; Growing education opportunities and local employment pathways; A growing, productive and forward-thinking economy.

Moirā Shire Council Plan 2025–29

The Council Plan identifies a Mission of:

"We will be a leading Council, taking intentional action to support the realisation of the Moirā2045 Community Vision. We will embrace new ways of thinking, demonstrate financial responsibility, cultivate strong partnerships and seek external investment to strengthen our region."

The Plan centres around five key Strategic Pillars:

- 1 Community: Healthy, safe, well serviced and connected communities.
- 2 Environment: Enhanced natural environments.
- 3 Liveability: Well planned and maintained places and spaces.
- 4 Prosperity: A strong and diversified regional economy.
- 5 Leading Organisation: A community-centered organisation focused on best practice.

Moirā Shire Economic Development Strategy 2019 – 2023

Council's Economic Development Strategy articulates a vision of:

"Working together to be a vibrant and prosperous rural community."

The Strategy includes five priorities including: 1: Enhancing infrastructure and land use; 2: Providing information, learning and networking; 3: Encouraging growth, innovation and diversification; 4: Fostering the visitor economy; 5: Making great places for people.

Moirā Shire Tourism Plan 2022 – 2026

The Tourism Plan identifies a range of visitor pillars which are groups of features and activities that draw people to the region. The aviation market is identified as a visitor pillar with visiting friends and relatives (VFR) being the Shire's largest visitor market.

1.17. Planning requirements

Victoria Planning Provisions - 18.02-7S Airports and airfields dated May 2022

The Victorian Government's Planning Provision 18.02-7S sets out the objective:

"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 Planning Provision aims to:

- Protect airports and airfields from incompatible land use and development that poses risks to the safety or efficiency of an airport or airfield
- Minimise the detrimental effects of aircraft noise when planning for areas around airports and airfields
- Ensure land use and development at airports and airfields contributes to the aviation needs of the state and the efficient and functional operation of the airport or airfield, and complements the role of the airport.

Moirá Planning Scheme dated October 2024

The Moirá Planning Scheme builds on the Victorian Government's Planning Provision 18.02-7S with the following provision:

18.02-7L Yarrawonga Aerodrome

Objective

To facilitate the development of the Yarrawonga Aerodrome to promote the commercial sustainability of the facility as a regionally significant transport link and leisure facility.

Strategies

Encourage business and tourist development at the Yarrawonga Aerodrome that are in aviation-related industries or use the Aerodrome as part of their operations.

Protect the existing use and future development of the Yarrawonga Aerodrome from the urban encroachment of Yarrawonga.

Land comprising the Yarrawonga Aerodrome (122 – 140 Cahills Road Yarrawonga 3730) is zoned Transport – TRZ4 Other Transport Use, with the purpose of the zone:

- To provide 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.

The Planning Scheme includes provision 45.02 Airport Environs Overlay which applies to areas affected by the Yarrawonga Aerodrome. The purpose of the overlay is:

- To identify areas which are or will be subject to high levels of aircraft noise, including areas where the use of land for uses sensitive to aircraft noise will need to be restricted
- To ensure that land use and development are compatible with the operation of airports in accordance with the appropriate airport strategy or master plan and with safe air navigation for aircraft approaching and departing the airfield
- To assist in shielding people from the impact of aircraft noise by requiring appropriate noise attenuation measures in new dwellings and other noise sensitive buildings
- To limit the number of people residing in the area or likely to be subject to significant levels of aircraft noise.

Provision 45.02-2 requires any new building to be constructed so as to comply with any noise attenuation measures required by Section 3 of Australian Standard AS 2021-2015, *Acoustics - Aircraft Noise Intrusion – Building Siting and Construction*, issued by Standards Australia Limited.

An overview of the Planning Scheme map for Yarrawonga Aerodrome showing the land use zone (TRZ4) and areas affected by the Airport Environs Overlay (AE01) and Land Subject to Inundation Overlay (LSIO) is provided at Figure 6 (source: VicPlan map viewer).



Figure 6 Yarrawonga Aerodrome – Moira Planning Scheme provision

1.18. Cultural heritage

Part of the Yarrawonga Aerodrome site is identified as an 'area of cultural heritage sensitivity' as defined under the *Aboriginal Heritage Regulations 2018* as shown in Figure 7 (source: VicPlan Planning Property Report).

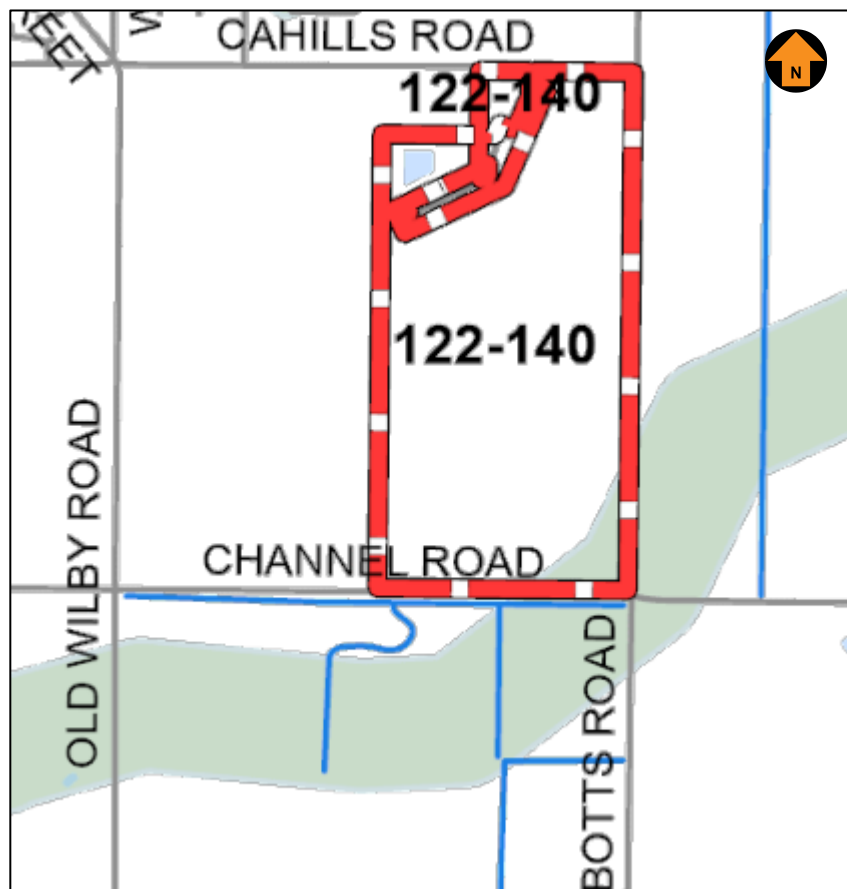


Figure 7 Planning Property Report - Areas of Aboriginal Cultural Heritage Sensitivity

1.19. Native vegetation

A check using NationalMap has not identified native vegetation in the vicinity of the aerodrome site. It is recommended however that specialist environmental assessment is undertaken prior to undertaking any development works at Yarrawonga Aerodrome.

2. STAKEHOLDER CONSULTATION

A stakeholder engagement plan was developed in consultation with Council to provide key stakeholders with the opportunity to provide input into the development of the Master Plan.

2.1. Stakeholder engagement program

A Yarrawonga Aerodrome Survey was coordinated through Council's online Moira Matters community engagement hub over a 3-week period from 17 July to 7 August 2024. In addition to the online survey a number of telephone interviews were also conducted by Aviation Projects.

2.2. Results of stakeholder engagement

21 responses were received from stakeholders (predominantly resident hangar owners) during the survey period.

Initial feedback from the stakeholder engagement identified:

- In general, the existing aerodrome facilities were rated as 'adequate / good' although several responses identified the need for improved sealed aircraft parking areas along taxiways, including improved aircraft parking at the terminal
- Desire to see better utilisation of the terminal building with improved access for visiting pilots and passengers
- Need for improved lighting at the terminal building and fuel facility for pilots at night, including emergency services (air ambulance) aircraft
- Support for further development including expansion of hangar sites (cnr Cahills Road and John Duigan Drive) and commercial / light industrial (agricultural) development area off Botts Road

- General amenity of the landside areas could be improved e.g. entrance to John Duigan Drive, provision of community use / recreational park area on vacant land
- Need to encourage greater use of the aerodrome e.g. charter operations, flight (pilot) training, aircraft maintenance etc and promotion via aviation events e.g. airshows
- Desire to see the aerodrome remain as a Council-owned general aviation aerodrome
- Lack of support for introduction of landing fees, although some support for an infrastructure charge / aircraft parking fee
- Desire for better communication between Council and stakeholders / aerodrome users.

3. SWOT ANALYSIS

A Strengths Weaknesses Opportunities and Threats (SWOT) analysis was undertaken as part of the stakeholder engagement process to identify significant areas for consideration in relation to the ongoing management, operation and future development of Yarrawonga Aerodrome. Feedback received from stakeholders is detailed in the following tables.

Table 2 Yarrawonga Aerodrome SWOT analysis – Strengths

Strengths	
• Location: to Yarrawonga town centre, to major tourist area and golf clubs, on the Murray, very easy to find and access • Location, destination, population, large number of Tourists visits, great weather • Close to township, freehold land, multiple businesses operating from a country airport is a big positive • Gateway for alternative travel – Tourist attraction for luxury hotel and 2 popular golf courses, hot rods - Red Bull aerobatics, boat races etc., combining water events with aircraft displays • Contribution to local economy, businesses in maintenance and repairs, flight schools and joy flights, high interest in tourism, bringing visitors to the region, good mix of businesses at the airfield from training facility to maintenance to paint shop and trim services, to canopy covers • Resident-aviation-community, support visitors, on-site engineer (LAME) • Growing community • Important community asset, air ambulance, maintenance facilities, flight training, other business, destination for private operators to visit, close proximity to township, suitable for commercial operations to Moria Shire and surroundings, well maintained • Important facility for emergency services – facilities for air ambulance, police	• Certified aerodrome with a lot of aviation-interested members, tourist attraction, access for aviation enthusiasts, VIPs, increase in high-end visitors in the last couple of years • Well set up airfield and has many good things about it • Sealed main runway of good size and length, PAL lighting system, RNP approach • Sealed Parking/Tie Down Areas • 24hr AvGas and Jet A1 fuel facility • Weather station (AWIS) • Excellent terminal building, access to toilets, meeting venue for communication (could have a small business i.e. Coffee shop / tourist business of some sort operating from it) • Good flying weather and terrain, Class G airspace (outside CTA) • No landing fees • Unrestricted day / night flight operations • The airport is ideal for future development, potential for growth

Table 3 Yarrawonga Aerodrome SWOT analysis – Weaknesses

<i>Weaknesses</i>	
• Access to and under-utilisation of the terminal building – should be readily accessible by visiting pilots, passengers • Lack of aircraft parking near terminal • Locked airside access gates • Security • Non-aerodrome related use of hangars • Short crosswind runway 05/23, often closed in wet weather • No taxiway exit for the southernmost end of RWY 01/19 meaning that back tracking aircraft can delay the use of the runway in busy times • Lack of use – need to encourage greater utilisation / visitation to fulfil potential • No development in recent years (last 20 years)	• Aircraft parking facilities along the taxiway are inadequate – need to be sealed • Aircraft parking should be charged • Development encroaching on Airport e.g. housing • Lack of communication (between Council and stakeholders) and marketing = mixed reputation • Community lack of awareness • Lack of consultation (and no S86 Committee of Management) and perceived uncertain support from Council • Less signage regarding rules to visitors entering airport. Old signage should be removed making airport more attractive to visit

Table 4 Yarrawonga Aerodrome SWOT analysis – Opportunities

<i>Opportunities</i>	
- Marketing, tourism opportunities, for golfing, wineries, lake activities, dining, vacations, etc., café or restaurant at the aerodrome - Encourage greater usage, charter ops from Melbourne and Sydney, commercial flight (pilot) training, aircraft maintenance, emergency services fixed base, helicopter scenic flights, skydiving, charter operators, agricultural operators - Development, expansion of hangar sites (cnr Cahills Road and John Duigan Drive), centre for agricultural aviation, on the eastern side (Botts Road) – additional hangar sites or light industrial / Council depot / airpark (subject to services) - Re-establishment of Aero Club and foster aviation community, welcoming environment - Promote aerodrome events (e.g., airshow, joyflights, fly-ins, air safaris, open days etc)	- Extend 01/19 runway (by as much as 400m) for larger charter (or even RPT) aircraft - Free aerodrome bicycle hire (to encourage people to visit the town) - Taxi Service Depot / Mini Bus depot / Car Hire / Bicycle hire - Advertising / signage at the terminal for businesses operating at the aerodrome – promote awareness – business directory on the website - Education Alliance with Yarrawonga College P12/University (Aviation Studies) - Dedicated Helicopter Pad

Table 5 Yarrawonga Aerodrome SWOT analysis – Threats

<i>Threats</i>	
- Restricted access to the terminal building - Encroachment of development (housing) on the Airport and flight paths - Landing fees – drive down usage (movement estimates overstated) - Competition from other aerodromes - Security and locked airside gates - Allowing development for non-aviation use - Proposal to sell created uncertainty	- More visitor parking space on the sealed apron - Selling property instead of leasing - Not creating opportunities for more business - Not keeping up with repairs / postponing the resurfacing of runway and taxiways - Overspending on the operation of the aerodrome - Not listening to the Aviation community - Lack of communication with stakeholders

4. EXISTING AERODROME FACILITIES

4.1. Aeronautical infrastructure

Yarrowonga Aerodrome is equipped with the following aeronautical infrastructure.

Runway 01/19 Code 2B 1203 m x 18 m bitumen sealed, 90 m runway strip – RWY 19 instrument non precision, RWY 01 non-instrument – displaced threshold on RWY 19

- RWY PCN 9/F/B/0.70 MPa (102PSI) / T Sealed (5,700 kg MTOW)

Runway 05/23 Code 1A 446 m x 18 m natural surface, 60 m runway strip – non instrument

- RWY PCN Unrated. Natural surface (3,000 kg MTOW)

Note: the pavement classification number (PCN) is expressed as a five-part code, separated by forward-slashes, describing the relevant pavement.

Declared distances are provided in Table 6 (source: Airservices Australia, Runway Distance Supplement (RDS), effective 4 September 2025).

Table 6 Runway declared distances

Runway	TORA	TODA	ASDA	LDA
01	1143 m	1203 m (2.55%)	1143 m	1143 m
19	1203 m	1263 m (3.22%)	1203 m	1125 m
05	446 m	476 m (4.36%)	446 m	446 m
23	446 m	476 m (6.33%)	446 m	446 m

Note the acronyms used are defined as: take-off run available (TORA), take-off distance available (TODA), accelerate-stop distance available (ASDA) and landing distance available (LDA).

Figure 8 shows the Yarrowonga Aerodrome Chart (source: Airservices Australia, dated 13 June 2024).

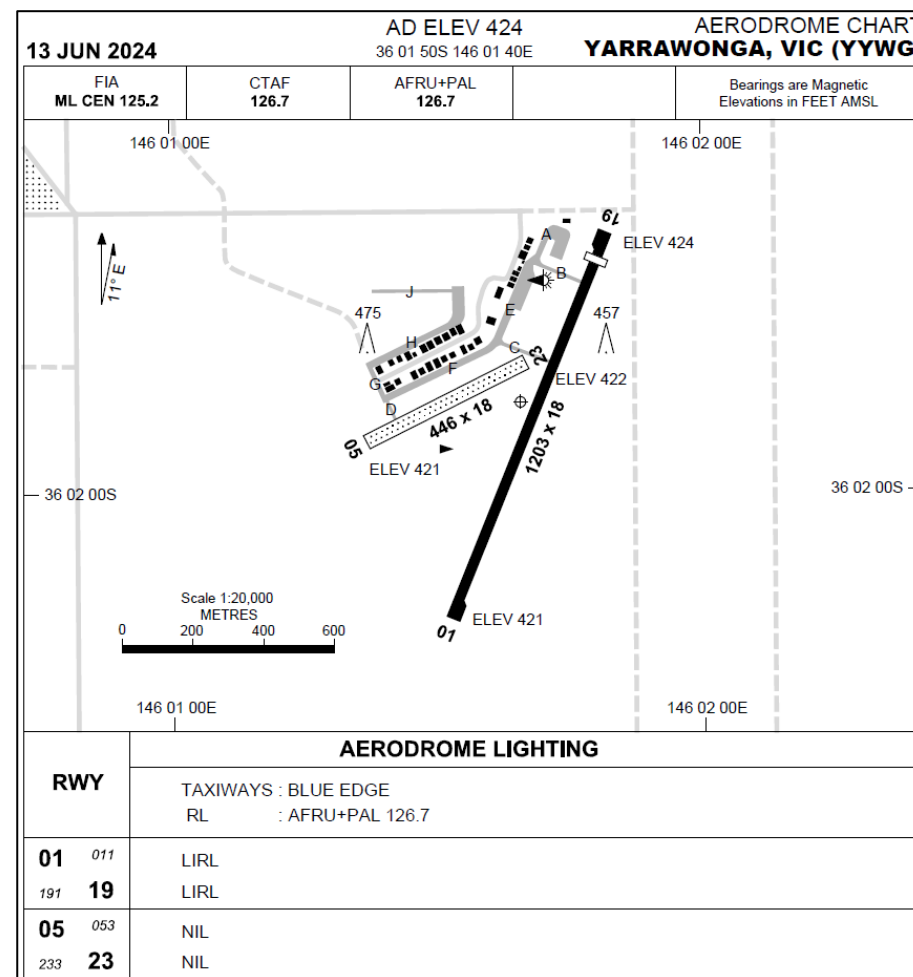


Figure 8 Yarrowonga Aerodrome Chart

An image of runway 19, looking south from the take-off position, is provided at Figure 9.



Figure 9 Runway 19

An image of runway 01, looking north from the take-off position, is provided at Figure 10.



Figure 10 Runway 01

An image of runway 05, looking north-east from the take-off position, is provided at Figure 11.



Figure 11 Runway 05

An image of runway 23, looking south-west from the take-off position, is provided at Figure 12.



Figure 12 Runway 23

A taxiway system provides access from the main runway to the terminal building and general aviation hangar precinct. Taxiways A, B and C are bitumen sealed taxiways 10.5 m wide suitable for up to Code B aircraft. Taxiways within the general aviation hangar precinct are generally restricted to Code A aircraft up to 12 m maximum wingspan.

Images of the taxiway system are shown in Figure 13, Figure 14, Figure 15 and Figure 16.



Figure 13 Taxiway A



Figure 14 Taxiway B



Figure 15 Taxiway E



Figure 16 Taxiway F

4.2. Aerodrome lighting

A Pilot Activated Lighting (PAL) System is available on runway 01/19. The system includes runway end / threshold and low intensity runway edge lights (LIRL).

An illuminated wind direction indicator is installed adjacent to Taxiway B.

There is no lighting on runway 05/23.

Blue taxiway edge lights are provided on Taxiways B, C and E. Other taxiways are provided with retroreflective blue taxiway edge markers.

There is no apron floodlighting provided on the aerodrome.

The aeronautical ground lighting facilities are generally considered satisfactory for the intended operations, noting however stakeholder feedback requesting consideration of the provision of apron floodlighting to the terminal and aircraft refuelling apron areas.

4.3. Support facilities

There are no navigation facilities provided at the aerodrome.

The aerodrome is equipped with Bureau of Meteorology facilities including an Aerodrome Weather Information Service (AWIS) located to the east of Runway 01/19, and the Yarrowonga Weather Radar facility located adjacent to the corner of Taxiways G and H in the general aviation hangar precinct.

The aerodrome is in Class G airspace (outside controlled airspace) and has a common traffic advisory frequency (CTAF) which extends 10 nm from the aerodrome.

Onsite fuel (Jet A1 and Avgas) is located off the aircraft refuelling apron as shown in Figure 17.



Figure 17 Aircraft refuelling facility

A stock-proof perimeter fence encloses the airside area of the aerodrome.

4.4. Landside development

Landside facilities include:

- Terminal building and car parking area
- General aviation hangars.

Images of the terminal building are shown at Figure 18 and Figure 19.



Figure 18 Yarrowonga Terminal building (landside)



Figure 19 Yarrowonga Terminal building (airside)

The terminal building includes a meeting room with kitchen facilities and toilet amenities for visiting pilots and passengers, along with an aerodrome operations / management office and equipment storage area. The building also incorporates a covered area for aeromedical patient transfers.

4.5. Ground transport

Yarrawonga Aerodrome is located approximately 3 km to the south-east of the Yarrawonga town centre and is accessed via Cahills Road and John Duigan Drive as shown in Figure 20 and Figure 21.



Figure 20 Cahills Road



Figure 21 John Duigan Drive

Botts Road to the east of the aerodrome is an unsealed gravel road.

The existing terminal car park provides parking for up to 13 vehicles as shown in Figure 22.



Figure 22 Terminal car park

4.6. Utilities and civil infrastructure

Water

A reticulated potable (drinking) water supply is available to the aerodrome and residential hangar sites on John Duigan Drive.

Electricity

The aerodrome is connected to the main power grid. Emergency standby power is not available.

Sewer

The aerodrome is connected to an on-site wastewater management / treatment system.

Communication

Telephone, mobile and internet services are available at the aerodrome.

Stormwater

Stormwater run-off is managed onsite via a series of open unlined drainage swales.

4.7. Grandfathered facilities

CASA allows certain airport facilities that have been previously constructed in compliance with regulatory standards that have since been amended, to be maintained in accordance with the requirements of the previous standard, even though they are not compliant with the new standard. These facilities are referred to as being “grandfathered facilities” and are noted in the aerodrome manual.

The following Yarrawonga Aerodrome facilities rely on grandfathered provisions.

Table 7 Yarrawonga Aerodrome Grandfathered provisions

<i>Existing Facility</i>	<i>Part 139 MOS 2019 Standard</i>	<i>Description of non-compliance</i>
Code 2 RWY 01/19	CH 6.02 and Table 6.02 (1) Minimum runway width	Minimum runway width for Code 2 is 23 m for OMGWS 4.5 m up to but not including 6 m YYWG RWY 01/19 has a width of 18 m
OLS RWY 19	CH 7.15 and Table 7.15 (1) – Physical dimensions of the OLS for an approach runway	Mobile agriculture irrigator may be in vicinity of approach to RWY 19 NOTAM will be activated for the time of operation
OLS RWY 05	CH 7.15 and Table 7.15 (1) – Physical dimensions of the OLS for an approach runway (incl. transitional surface)	Fence infringes RWY 05 transitional surface by 0.66 ft (0.2 m)

<i>Existing Facility</i>	<i>Part 139 MOS 2019 Standard</i>	<i>Description of non-compliance</i>
RESA RWY 19	CH 6.26 and Table 6.26 (4) – 60 m min. length of RESA for ARC Code 1 or 2 instrument non-precision runway	Runway end allows only 30 m instead of 60 m due to fencing
Apron TWY / TXL	CH 6.48 Width of taxiway strip	The width of taxiway strip from centreline of TWY Echo, Foxtrot, Golf, Hotel, Juliet, is only 14 m and does not meet the minimum separation distance of 15.5 m for a Code A taxiway strip, and therefore declared as taxilane (TXL) / restricted to 12 m max wingspan
TWY/TXL Edge Markers	CH 9.95 (2) (a) Characteristics of taxiway edge markers	Characteristics of taxiway edge markers must be rectangular. YYWG taxiway edge markers are round with the same characteristics.

5. VISION

Yarrawonga Aerodrome is an important community asset which supports Moira's local economy, hosting several commercial businesses with a focus on aviation training and agriculture industries. The Aerodrome caters for a range of local and itinerant recreational and general aviation aircraft activities along with aeromedical services operated by Air Ambulance Victoria.

The Master Plan aims to identify the most appropriate land-use at the Aerodrome including opportunities for future development in the context of existing and forecast future operations, and seeks to address the following priority objectives:

- Provide appropriate airside infrastructure and facilities to cater for future growth in general aviation activities including new hangar development
- Continue to cater for critical aeromedical and other emergency service operations
- Provide for future commercial / light industrial development opportunities to maximise utilisation of the Aerodrome.

The Master Plan has been prepared in the context of the following vision statement:

"Yarrawonga Aerodrome is a vibrant, welcoming and sustainable general aviation community which supports a range of aviation related business activities, emergency service operations and recreational aviation that contribute to the economic development, tourism and wellbeing of the Moira Shire."

6. DEMAND

The existing aerodrome infrastructure and facilities support existing operations of local and itinerant general aviation aircraft and aeromedical services up to Code 2B aircraft.

Code 2B aircraft are characterised in Part 139 MOS 2019 as having a wingspan of 15 m up to but not including 24 m (ARC Code letter B) and an outer main gear wheel spacing (OMGWS) of 4.5 m up to but not including 6 m. Code 2 aircraft require a runway length of not less than 800 m (ARC Code number 2).

Typical aircraft using and forecast to use Yarrawonga Aerodrome are shown in Table 8.

Table 8 Critical aircraft types and reference code numbers

<i>Aircraft</i>	<i>ARFL (m) ¹</i>	<i>ARC (Code) number</i>	<i>Wingspan (m) ²</i>	<i>ARC (Code) letter</i>	<i>OMGWS (m) ²</i>	<i>MTOW (kg) ²</i>
Embraer 300	1,130	2	15.91	B	3.05	8,100
Cessna C550	990	2	15.90	B	5.59	6,940
Pilatus PC-24	940	2	17.00	B	3.60	8,500
Pilatus PC-12	760	1	16.28	B	4.74	4,740
Beech King Air B300C (B350C)	1,000	2	17.65	B	5.67	7,000
Beech King Air B200C	1,000	2	16.61	B	5.67	5,600
Air Tractor AT-802A	610	1	18.06	B	3.36	7,257

Source: ¹ Various web sources – indicative only to determine ARC (Code) number

² Transoft Aircraft Data Viewer v3.5

Limited aircraft movement data is available for Yarrawonga Aerodrome, however stakeholder feedback and available data sources suggest that there are currently less than 5,000 aircraft movements per annum at the aerodrome.

Aircraft movements are not forecast to increase significantly in future years subject to the establishment of significant flight (pilot) training activities at the aerodrome.

Irrespective of a future increase in aircraft movements, the existing aerodrome infrastructure is generally considered satisfactory for future operations, other than noting stakeholder feedback and the desire for improved / increased sealed aircraft parking areas.

It is also noted that land is available to the south of the existing Runway 01/19 (RWY 01 end) within the aerodrome site for an extension of the main runway should there be demand in the future for larger (Code 2B) aircraft requiring an extended runway length.

7. DEVELOPMENT CONSTRAINTS

7.1. Planning

As outlined in section 1.17, Yarrawonga Aerodrome is subject to planning controls under the Moira Planning Scheme dated October 2024.

The land comprising Yarrawonga Aerodrome is zoned TRZ4 Other Transport Use. Development on the land must be for a transport purpose and carried out by or on behalf of a relevant transport manager (e.g. public authority).

7.2. Civil Aviation Safety Regulations

Current and future operations at Yarrawonga Aerodrome are regulated according to the requirements set out in the section below.

- Civil Aviation Safety Regulation 1998 (CASR) Part 139 – *Aerodromes* describes the requirements for aerodromes used in air transport operations.
- Part 139 (Aerodromes) Manual of Standards 2019 (Part 139 MOS 2019) sets out the standards and operating procedures for certified aerodromes used in air transport operations.

The current Part 139 MOS 2019 came into effect on 12 June 2025.

7.3. Aerodrome Reference Code

The standards which an aerodrome facility must meet to be suitable for use by aeroplanes within a particular range of performance and size are determined by the aerodrome reference code (ARC) chosen by the aerodrome operator.

The ARC is made up of 3 elements:

- a code number determined by the aeroplane reference field length (code number or runway code number); and

- a code letter determined by the aeroplane wingspan (code letter); and
- the outer main gear wheel span (OMGWS).

As the main runway 01/19 at Yarrawonga Aerodrome is nominated as a Code 2 (runway length not less than 800 m) and the relevant wingspan of aircraft using the airport is a code letter B (wingspan 15 m up to but not including 24 m), the aerodrome is considered a Code 2B with an instrument non-precision approach on RWY 19, and has a reference OMGWS of 4.5 m up to but not including 6 m.

7.4. Grandfathering

A key consideration regarding the planning of future infrastructure requirements is the status of facilities at the airport in respect of previous and current standards set out in Part 139 MOS 2019.

A facility that was designed to a previous standard but does not conform to the new standards can be “grandfathered” until such time as it is substantially changed or upgraded.

The definition of “grandfathered facility” in Part 139 MOS 2019 is copied for ease of reference:

A grandfathered facility means an existing aerodrome facility (the facility) and the obstacle limitation surfaces associated with an existing runway that is part of the existing aerodrome facility (the OLS) that, on and after the commencement of this MOS, do not comply with the standards in this MOS, provided that:

- the facility and the OLS complies, and continues to comply, with the standards which applied to the facility and the OLS immediately before the commencement of this MOS; and*
- the aerodrome operator’s aerodrome manual:*
 - identifies the facility and the OLS; and*
 - sets out in detail how the facility and the OLS do not comply with this MOS.*

The definition of “upgrade” in Part 139 MOS 2019 follows:

upgrade, for an existing aerodrome facility, means any change to the facility which, for the first time after the commencement of this MOS, enables any of the following changes to aircraft operations using the facility, namely, a change:

- (a) from day VFR operations, to night VFR operations;*
- (b) from non-instrument approaches, to non-precision instrument approaches;*
- (c) from non-precision instrument approaches, to precision instrument approaches;*
- (d) from precision CAT I approaches, to precision CAT II or CAT III approaches;*
- (e) which enables aircraft take-offs and aerodrome surface movements in runway visibility or RVR conditions of less than 550 m;*
- (f) which enables the aerodrome to accommodate aircraft of a higher category specified in the ARC under section 4.01 of this MOS than was the case before the change;*
- (g) which enables the aerodrome to accommodate aircraft on scheduled international operations.*

Note The upgrade of a particular aerodrome facility that previously was not compliant with the relevant standards in the MOS is the trigger for the particular facility to be brought into compliance with the MOS. Since the timing and budgeting of an upgrade is under the aerodrome operator’s control, so too is the timing of works necessary to bring the non-compliant facility into compliance with this MOS.

8. DEVELOPMENT OPTIONS

8.1. Aircraft movement areas

Runway 01/19

The existing main Runway 01/19 is a Code 2B runway, with a published length of 1203 m width of 18 m, and a 90 m wide runway strip. Runway 01 has a take off length of 1143 m. Runway 19 has an 18 m displaced threshold due to obstacle clearances within the approach surface, providing a landing distance on Runway 19 of 1125 m.

Part 139 (Aerodromes) Manual of Standards 2019 (dated 13 March 2024), section 6.02 Table 6.02 (1), specifies the minimum runway width for Code 2B aircraft with an OMGWS 4.5 m up to but not including 6 m as 23 m. The current 18 m width is noted in the Yarrawonga Aerodrome Manual as a grandfathered facility.

Part 139 (Aerodromes) Manual of Standards 2019 (dated 13 March 2024), section 6.17 Table 6.17 (4), specifies the minimum runway strip width, including the fly-over area for a Code 2 instrument non-precision runway as 140 m, with an 80 m wide graded portion. While the current runway strip width is published as 90 m it is recommended that the Moira Shire safeguard the full 140 m runway strip width as part of its future operation of Yarrawonga Aerodrome. It is also recommended that Moira Shire protect (safeguard) the associated obstacle limitation surfaces in accordance with Part 139 MOS 2019 to future proof the future operation of the Aerodrome.

Part 139 (Aerodromes) Manual of Standards 2019 (dated 13 March 2024), section 6.26 Table 6.26 (4) specifies the minimum length of the runway end safety area (RESA) for a Code 2 instrument non-precision runway as 60 m with a minimum width of twice the width of the associated runway. The Yarrawonga Aerodrome Manual notes the current Runway 19 RESA as a grandfathered facility with a 30 m length due to the location of existing fencing.

It is recommended that Moira Shire plan for the provision of 60 m long x 46 m wide runway end safety areas (RESA) at each end of Runway 01/19 to comply with the Part 139 MOS 2019 requirements for a Code 2 instrument non-precision runway. This may

assist in obtaining an instrument approach on Runway 01 to supplement the existing instrument approach on Runway 19.

At the Runway 01 threshold / runway end, provision of a 60 m long x 46 m wide RESA will require relocation of the existing fence line delineating the current boundary between the aerodrome operational area and the farming lease area to the south of the aerodrome site.

At the Runway 19 threshold / runway end, provision of a 60 m long x 46 m wide RESA adjacent to the Cahills Road property boundary / fence line, will require a minor reconfiguration of the runway end and amendment to the declared runway distances published by Airservices Australia in the Runway Distance Supplement (RDS), as shown in Table 9.

Table 9 Revised Runway 01/19 declared distances with RWY01 RESA

Runway	TORA	TODA	ASDA	LDA
01	1123 (- 20 m)	1183 (- 20 m)	1123 (- 20 m)	1123 (- 20 m)
19	1203 (no change* * noting runway end starter ext.)	1263 (no change*)	1203 (no change*)	1123 (- 2 m)

The reduced distances associated with Runway 01 are not expected to have a significant impact on the performance / capability of the runway for existing aircraft operations. Should Moira Shire wish to improve the capability of Runway 01 an 80 m long runway starter extension could be added at the Runway 01 threshold / runway end to replicate the arrangement at the Runway 19 threshold and the associated declared distances.

It is noted that land is available to the south of the existing Runway 01/19 (RWY 01 end) within the aerodrome site for an extension (up to approx. 350 m) of the main runway should there be demand in the future for aircraft requiring an extended runway length. A significant upgrade / extension of Runway 01/19 may trigger the requirement for

widening the runway to 23 m in accordance with Part 139 MOS 2019 requirements for Code 2B aircraft. It is recommended that Moira Shire protect (safeguard) the full 140 m runway strip width associated with the possible future extension of Runway 01/19 as part of its future operation / management of Yarrawonga Aerodrome.

Runway 01/19 has a published PCN of 9/F/B/700 (102PSI) / T Sealed with typical aircraft operations up to 5,700 kg MTOW (source: Yarrawonga Aerodrome Manual). The existing pavement strength is considered satisfactory for most aircraft operations at the Aerodrome subject to technical pavement concession (and tyre pressure) assessment for limited aircraft movements exceeding this MTOW.

Subject to technical engineering pavement strength and condition assessment, future upgrades of Runway 01/19 may also seek to increase the strength of the existing runway pavement to cater for aircraft up to 7,500 kg MTOW (and corresponding tyre pressure) if demand requires.

It is noted that subject to Australian Government grant funding (Regional Airports Program), Moira Shire is planning to undertake resealing of Runway 01/19 to extend the life of the runway asset.

Runway 05/23

The existing unsealed natural surface Runway 05/23 is a Code 1A non-instrument runway 446 m long x 18 m wide with an unrated PCN suitable for light general aviation aircraft up to 3,000 kg MTOW. The runway has a 60 m wide runway strip.

The runway is considered satisfactory for the current and expected scope of aircraft operations, noting that the natural surface results in the runway being closed (unserviceable) for aircraft operations during periods of wet weather.

Taxiways

The existing taxiway system provides access from the main runway 01/19 to the terminal building and general aviation hangar precinct.

Taxiways A, B and C are bitumen sealed taxiways 10.5 m wide suitable for up to Code B aircraft. These taxiways are considered satisfactory for the current and expected scope of aircraft operations.

Taxiway D is a short natural surface stub taxiway connection to Runway 05/23 from the end of Taxiways F and G. No change is proposed to this arrangement.

Taxiway E is a bitumen sealed taxiway 10.5 m wide suitable for up to Code B aircraft, providing a connection between Taxiways B and C and access to the adjacent hangar sites. It is proposed to realign Taxiway E on the alignment / offset of Taxiway A to allow for parking of general aviation aircraft on the sealed apron pavement in front of the adjacent hangar sites, subject to Code B taxiway minimum separation distances. It is also proposed to add an additional sealed aircraft parking area along the eastern side of Taxiway E for local and itinerant (visiting) Code B aircraft.

Taxiways F, G and H within the general aviation hangar precinct are sealed 10.5 m wide taxiways restricted to Code A aircraft up to 12 m maximum wingspan due to restricted taxiway strip width (14 m on each side of the taxiway centreline). Moira Shire Council is currently progressing the design of a taxiway widening project to achieve a Code A taxiway strip width (31 m, 15.5 m on each side of the taxiway centreline) in accordance with Part 139 MOS 2019. The taxiways are also subject to ongoing assessment and engagement with CASA regarding an existing taxiway sight distance non-compliance. If required by CASA, the master plan provides for the addition of an aircraft bypass bay off Taxiway G as part of a long term safety case / risk mitigation strategy.

Subject to demand, the Master Plan proposes an additional sealed aircraft parking area along the southern side of Taxiway F for local and itinerant (visiting) Code A aircraft.

Taxiway J is a sealed taxiway providing access to residential lots on Cahills Road.



In addition to the proposed improvements to the existing taxiways, a new 10.5 m wide Code B taxiway is proposed in the Master Plan associated with a proposal to provide new hangar sites to the west of John Duigan Drive.

It is also proposed to provide a new 10.5 m wide Code B taxiway connection to the Runway 19 threshold to provide direct access to / from the Yarrawonga Terminal building and aircraft refuelling apron (including for emergency aeromedical helicopter operations).

While the current and forecast future number of aircraft movements is unlikely to warrant the provision of a parallel taxiway at Yarrawonga Aerodrome, for master planning purposes it is proposed to safeguard / protect a Code B parallel taxiway corridor extending from the Runway 01 threshold to the existing Taxiway C. The taxiway corridor / strip has a Code B width of 40 m (20 m on each side of the centreline of the taxiway) and is located at a distance of 82 m from the centreline of the taxiway strip to the centreline of the instrument non-precision Runway 01/19.

Aircraft aprons

Stakeholder feedback has suggested that improvements are required to the aircraft parking arrangements at the Yarrawonga Terminal coupled with the provision of apron flood lighting at the terminal and aircraft refuelling facility for pilots at night, including emergency services (air ambulance) aircraft.

In response, the Master Plan proposes a new aircraft parking apron in front of the terminal with space for the parking of up to 2 Code B (King Air 350 or similar) aircraft. The apron is proposed as an infill pavement connecting the two existing taxiways in front of the terminal building.

Apron flood lighting is proposed at the terminal and aircraft refuelling facility subject to obstacle limitation surface (OLS) assessment.

It is noted that subject to Australian Government grant funding (Regional Airports Program), Moira Shire is planning to upgrade the existing grass long-term aircraft parking area (accessed off Taxiway B) to improve safety and usage year round in any weather conditions.

Helicopter Parking

A dedicated helicopter parking area (grassed) is proposed adjacent to Taxiway C, Taxiway E and the long-term fixed wing aircraft parking area.

8.2. Land use development

Potential hangar / airpark development

The previous Master Plan 2011 and subsequent Strategic Development Plan 2013 identified a vacant area of land to the west of John Duigan Drive for potential development of a 12-lot residential / hangar airpark village.

The proposal is reflected also in this Master Plan as shown in Figure 23, noting that the final development layout would be subject to further land use planning and detailed design considerations.

The potential development area is proposed to be connected to the existing airside infrastructure via a new Code B taxiway at Taxiway A near the terminal building. It is noted that the location of the new taxiway crosses John Duigan Drive at the intersection with Cahills Road which will require John Duigan Drive to be closed at this location.

To facilitate vehicle access to Yarrawonga Aerodrome a new entrance and access road off Cahills Road will be required along the western boundary of the vacant land connecting to John Duigan Drive near Lot 48 (10 John Duigan Drive).

It is proposed to maintain the closed section of John Duigan Drive as an emergency access / egress path across the new taxiway to Cahills Road as a secondary emergency egress point. The path would be controlled via locked access gates at the edge of the taxiway strip fence line and would only be activated by designated airport personnel under aerodrome emergency procedures.

Development of the site would be subject to a range of considerations including though not limited to public road authority approvals for the revised road access arrangements, further detailed investigations with utilities / services providers and service diversions as necessary, and sewer diversions / easements as necessary for existing sewerage infrastructure located within the site.



Figure 23 Potential hangar / airpark development

Subject to further consideration by Council and subsequent land use planning investigations and service diversions, there is also the potential for a reconfigured Lot 1 hangar site, 517 sq. m (shown blue) adjacent to the existing Lot 5 hangar as shown in Figure 24.

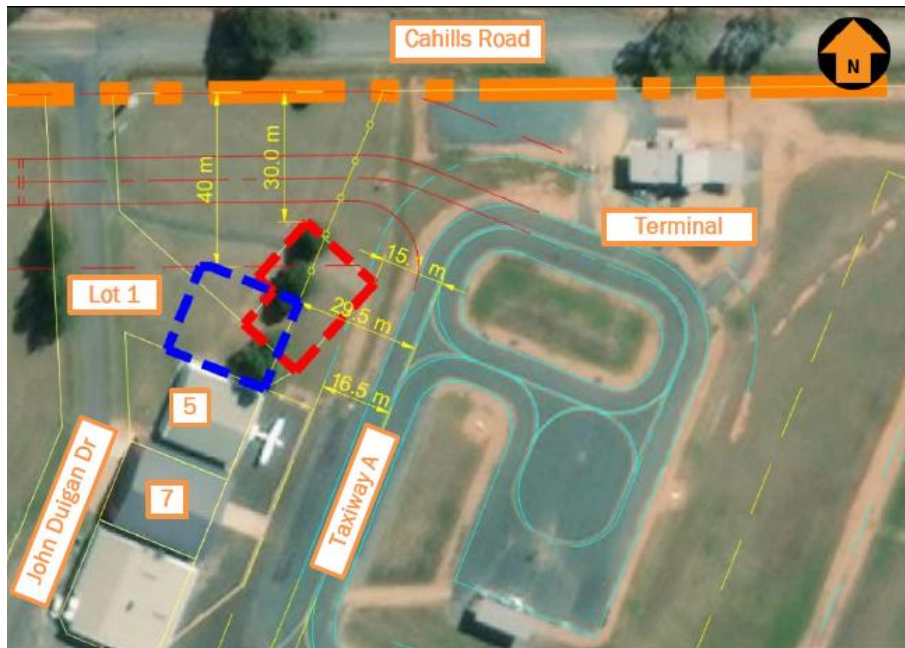


Figure 24 Potential reconfigured Lot 1 hangar site

Potential light industrial / commercial precinct

A 14.5 ha area of land has been identified to the east of Runway 01/19 fronting Botts Road for the potential establishment of a light industrial / commercial precinct, subject to further statutory land use planning processes.

The area may be provided with or without airside access to Runway 01/19 depending on the desired end use.

It is noted that Botts Road is currently an unsealed gravel road and improvements are likely to be required to provide sealed road access to the development area. It is also understood that there are no existing services along Botts Road and significant service upgrades / extensions will be required to facilitate development.

The area identified for development is impacted in part by the Airport Environs planning overlay which will need further consideration regarding acceptable land uses within this area.

The area identified for potential development is defined by:

- A 100 m radius clearance zone associated with the existing Bureau of Meteorology automatic weather station (AWS)
- A 175 m offset to the centreline of Runway 01/19 to allow for runway strip and associated obstacle limitation surface (OLS) clearance
- The location of the 'Land Subject to Inundation' and 'Aboriginal Cultural Heritage' planning overlays.

8.3. Ground transport

As noted in the preceding sections, the potential hangar / airpark development will require the closure of John Duigan Drive at the intersection with Cahills Road and require a new entrance and access road off Cahills Road along the western boundary of the vacant land to facilitate vehicle access to Yarrawonga Aerodrome.

It is proposed to maintain the closed section of John Duigan Drive as an emergency access / egress path across the new taxiway to Cahills Road as a secondary emergency egress point. The path would be controlled via locked access gates at the edge of the taxiway strip fence line and would only be activated by designated airport personnel under aerodrome emergency procedures.

The potential light industrial / commercial development will require improvements to Botts Road to provide sealed road access to the development area.

8.4. Utilities and civil infrastructure

Details of existing utilities / services at the Aerodrome are provided at section 4.6.

Further land-use development at the Aerodrome will require significant service upgrades / extensions to facilitate appropriate development outcomes.

9. MASTER PLAN

This section sets out the progressive development of Yarrawonga Aerodrome over a nominal planning horizon of 20 years, comprised of short, medium and longer-term timeframes.

The short term is typically defined as 0 – 5 years, medium 5 – 10 years, and longer term as 10+ years through to the end of the 20-year master planning horizon. Overall master plan stage drawings are provided in **Annexure 1**. In this section individual elements are described for each development scenario.

Delivery of any individual component within the Master Plan is dependent on the availability of funding, market demand and the undertaking of a full detailed design process, and the timing of development may be delayed or accelerated in consideration of these factors.

The Master Plan identifies three (3) principal development stages / scenarios:

- Short Term Development Strategy
- Medium Term Development Strategy
- Long Term Development Strategy.

These scenarios show a logical progression in development that could take place for planning purposes. Actual development and time frame is dependent on demand and the policies the Moira Shire Council adopts to promote growth at Yarrawonga Aerodrome.

9.1. Short Term Development Strategy 0 – 5 years

The short-term development strategy focusses on addressing feedback received from stakeholders and providing for additional general aviation hangar development sites to be made available.

Subject to funding, the scenario involves:

- The minor reconfiguration of Runway 01/19 and associated declared distances to provide for a 140 m wide Code 2 instrument non-precision runway strip (80 m min. graded) and 60 m long x 46 m wide runway end safety areas (RESA) at each end of the runway, along with the associated obstacle limitation surfaces in accordance with Part 139 MOS 2019
- Subject to Australian Government grant funding (Regional Airports Program), undertake resealing of Runway 01/19 to extend the life of the runway asset
- Retention of the existing Code 1 natural surface cross-wind Runway 05/23
- Implementation of the proposed taxiway widening project to Taxiways F, G and H to provide the full Code A taxiway strip width in accordance with Part 139 MOS 2019 and allow for operations of Code A aircraft up to but not including 15 m max. wingspan
- Realignment of the Code B Taxiway E on the alignment of Taxiway A, to allow for parking of general aviation aircraft on the sealed apron pavement in front of the adjacent hangar sites, subject to Code B taxiway minimum separation distances
- Provision of an additional sealed aircraft parking area along the eastern side of Taxiway E for local and itinerant (visiting) Code B aircraft
- Subject to Australian Government grant funding (Regional Airports Program), upgrade the existing grass long-term aircraft parking area to improve safety and usage year round in any weather conditions
- Subject to demand and business case assessment, provision of a new Code B taxiway to facilitate development of a potential 12-lot residential / hangar airpark village to the west of John Duigan Drive subject to a new entrance and

access road off Cahills Road along the western boundary of the vacant land to facilitate vehicle access to Yarrawonga Aerodrome and the closure of John Duigan Drive at the existing intersection with Cahills Road

- Upgrade of the utilities / services as necessary to support the short-term development strategy and potential new development areas.

9.2. Medium Term Development Strategy 5 – 10 years

The medium-term development strategy involves:

- Modification of the existing taxiways in front of the terminal building to provide a new aircraft parking apron with space for the parking of up to 2 Code B (King Air 350 or similar) aircraft, with apron flood lighting at the terminal and aircraft refuelling facility subject to obstacle limitation surface (OLS) assessment
- Subject to demand, the provision of a new Code B taxiway connection to the Runway 19 threshold to provide direct access to / from the Yarrawonga Terminal building and aircraft refuelling apron (including for emergency aeromedical helicopter operations)
- Subject to demand, the provision of an additional sealed aircraft parking area along the southern side of Taxiway F for Code A aircraft
- Subject to demand and business case assessment, undertake further land use planning investigations for the potential establishment of a light industrial / commercial development precinct to the east of Runway 01/19 with access from Botts Road
- In conjunction with the above, investigate the provision of improved sealed road access on Botts Road / Cahills Road
- Further upgrade of the utilities / services as necessary to support the medium-term development strategy and potential new development areas.

9.3. Long Term Development Strategy 10 – 20 years

The long-term development / aerodrome safeguarding scenario involves:

- Subject to demand and business case assessment, continue development of the light industrial / commercial development precinct to the east of Runway 01/19 with access from Botts Road
- Safeguard (reserve) land for a potential future Code B parallel taxiway extending from the Runway 01 threshold to the existing Taxiway C, with a 40 m wide taxiway strip (20 m on each side of the centreline of the taxiway) offset 82 m from the centreline of the taxiway strip to the centreline of the instrument non-precision Runway 01/19
- Safeguard (reserve) land – 140 m wide runway strip – for a potential future extension (up to approx. 350 m) of Runway 01/19 (subject to demand) to the south of the existing RWY 01 end should there be demand in the future for aircraft requiring an extended runway length
- If required by CASA, provision of an aircraft bypass bay off Taxiway G as part of a long term safety case / risk mitigation strategy associated with the existing taxiway sight distance non-compliance.

10. FUNDING STRATEGY

Funding for major capital works at Yarrawonga Aerodrome is sourced through a combination of funding from Moira Shire Council and external financing (such as loan borrowings and Government grants).

It is noted that Council currently does not levy fees and charges for use of Yarrawonga Aerodrome. It is recommended that Council consider alternative operating models and new funding sources including the introduction of appropriate user fees and charges (e.g. aerodrome access fees, aircraft weight based landing fees, aircraft parking charges etc) benchmarked against similar regional aerodromes in order to support the ongoing operation, future development and long term financial sustainability of Yarrawonga Aerodrome.

Indicative cost estimates in 2025 \$ excluding GST for the principal airside infrastructure works outlined in the Master Plan are shown in Table 10.

The costs exclude potential future land-use development opportunities which should be subject to separate investigations and robust business case assessments to confirm the commercial feasibility and cost – benefit of the development proposals.

The cost estimates provided are indicative only and subject to further detail design and technical investigations to adequately scope and specify the work required to deliver the various aspects of the overall plan.

Table 10 Indicative Master Plan Cost Estimates (Airside Infrastructure)

<i>Item</i>	<i>Cost (2025 \$ excl GST)</i>
<u>Short Term Development Strategy</u>	
Resealing of Runway 01/19 *	\$0.25 million *
Taxiway widening to Taxiways F, G and H	\$0.5 million
Realignment of Taxiway E	\$0.5 million
Sealed aircraft parking area eastern side of Taxiway E	\$1.0 million
Upgrade the existing grass long-term aircraft parking area to improve safety and usage year round *	\$0.5 million *
Subject to development planning, new Code B taxiway to potential future hangar / airpark development area	\$1.5 million
<u>Medium Term Development Strategy</u>	
New aircraft parking apron at the terminal	\$0.5 million
Subject to demand, new Code B taxiway connection to the Runway 19 threshold	\$0.5 million
Subject to demand, additional sealed aircraft parking area southern side of Taxiway F	\$1.5 million
<u>Long Term Development Strategy</u>	
New aircraft bypass bay off Taxiway G (if required by CASA)	\$0.25 million

* Moira Shire Council estimate

11. AERODROME SAFEGUARDING

In addition to state requirements, the Australian Government has an interest in better planning and integrated development on and around airports and to lessen the adverse effects of aviation activity on the environment and communities. While not a planning authority, it provides guidance on broader issues such as noise around airports that can be used by statutory authorities to achieve the stated objectives. The National Airports Safeguarding Advisory Group (NASAG) has produced the National Airports Safeguarding Framework (NASF) to advance this agenda. The Framework should also be taken into consideration when designing development on and in the vicinity of the airport.

11.1. Aircraft noise

Aircraft noise can affect the allocation of appropriate uses on and external to the airport site.

Australian Noise Exposure Forecast (ANEF) contours provide a scientific measure of the aircraft noise exposure levels around airports considering the frequency, intensity, time and duration of aircraft operations. Standard methodology for evaluating the noise climate around airports is defined in AS 2021-2015 Acoustics – Aircraft Noise Intrusion – Building Siting and Construction, which recognises the ANEF contour charts as the primary method for long-term noise impact assessment.

Further information can be found in NASF Guideline A: *Measures for Managing Impacts of Aircraft Noise*.

It is recommended that the current Yarrawonga Aerodrome / aircraft noise modelling and Australian Noise Exposure Forecast (ANEF) be reviewed and updated in conjunction with this master plan.

11.2. Building generated windshear and turbulence

Building generated windshear / turbulence becomes safety critical when a significant obstacle, such as a building, is in the path of a crosswind to an operational runway. The wind flow will be diverted around and over the buildings causing the crosswind speed to vary along the runway.

NASF Guideline B sets out an assessment methodology to follow in assessing this risk.

Further information can be found in NASF Guideline B: *Managing the Risk of Building Generated Windshear and Turbulence at Airports*.

11.3. Wildlife hazard buffer zone

All wildlife on or around an airport should be regarded as a potential hazard to aircraft safety. Most wildlife strikes occur on and in the vicinity of airports, where aircraft fly at lower elevations. Flying vertebrates (e.g., birds or bats) mainly use airspace within 300 metres of the ground so are likely to conflict with aircraft when they are at their most vulnerable, i.e., immediately after take-off and during landing approaches or other low flying manoeuvres. Development should seek to avoid creating wildlife attracting land uses both on and within the vicinity of the airport.

Further information can be found in NASF Guideline C: *Managing the Risk of Wildlife Strikes in the Vicinity of Airports*.

11.4. Lighting restriction zone

Manual of Standards Part 139 - Aerodromes establishes a restriction to lighting within the vicinity of an airport which, by reason of its intensity, configuration or colour, might endanger the safety of an aircraft. The vicinity of the airport can be taken to be within a 6km radius of the airport.

Further information can be found in NASF Guideline E: *Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports*.

11.5. Operational airspace

Obstacle limitation surfaces

An airport's obstacle limitation surfaces (OLS) define the operational airspace that should be kept free of obstacles for aircraft operations being conducted under the visual flight rules. Both current and future OLS should be considered in the design of developments on and within the vicinity of the airport.

Manual of Standards Part 139 Chapter 7 provides relevant parameters for the design of the OLS.

PANS-OPS surfaces

PANS-OPS surfaces define the operational airspace a pilot is required to use when flying an aircraft under the instrument flight rules—that is, when relying on instruments for navigation. Development should seek to avoid any permanent encroachments into current and future PANS-OPS airspace.

Detailed information about the PANS-OPS surfaces is provided by Airservices Australia in documentation held by the Airport Manager.

Further information can be found in NASF Guideline F: *Managing the Risk of Intrusions into the Protected Airspace of Airports*.

11.6. Building restricted areas for aviation facilities

The Building Restricted Area (BRA) is defined as a volume where buildings and other objects have the potential to cause unacceptable interference to the signal-in-space transmitted by the radio navigation facility. All radio navigation facilities have a BRA defined which may extend to a significant distance from the facility. The purpose of the Building Restricted Area is not intended to prohibit development but rather to trigger an assessment of a proposed building or development for its impact on the radio navigation facility. The BRA is primarily intended to be used by Aerodrome Operators and Local Planning Authorities but is also required to be used by the systems engineer when selecting a new site for a radio navigation facility. All development applications near a radio navigation facility shall be assessed to determine if the facility BRA is infringed. If

there is no infringement the assessment process may be terminated, and the application approved.

Further information can be found in NASF Guideline G: *Protecting Aviation Facilities — Communications, Navigation and Surveillance (CNS)*.

11.7. Public safety areas

A public safety area (PSA) is a defined area at the end of an airport's runway where there is potentially an increased risk of an aircraft accident occurring.

When imposed by a planning instrument, the public safety area defines the area in which specified development is restricted to protect the safety of both aircraft passengers, property and people on the ground in the event of an aircraft accident during landing or take-off.

NASF Guideline I: *Managing the Risk in Public Safety Areas at the Ends of Runways* provides guidance to states and local governments on the assessment and treatment of potential increases in risk to public safety which could result from an aircraft incident or development proposal in areas near the end of an airport runway.

There is no consistent approach to the implementation of public safety areas within Australia, and Victoria does not currently have any planning controls in place regarding public safety areas at airports or aerodromes within the state.

The International Civil Aviation Organization (ICAO) has not developed standards and recommended practices regarding PSAs, and CASA's aviation safety regulations and standards do not provide for their establishment.

Since there is no formal requirement to implement public safety zones, and because of the uncertainty about specific design parameters, this concept has not been incorporated in the Master Plan.

Further information can be found in NASF Guideline I: *Managing the Risk in Public Safety Areas at the Ends of Runways*.

12. GLOSSARY

AAGR	average annual growth rate	GSE	ground support equipment
AIP	Aeronautical Information Package	HLS	helicopter landing site
AMSL	above mean sea level	ICAO	International Civil Aviation Organization
ANEF	Australian Noise Exposure Forecast	INP	instrument non-precision
ARFFS	aerodrome rescue and firefighting service	IWDI	illuminated wind direction indicator
AsA	Airservices Australia	LDA	landing distance available
ASDA	accelerate-stop distance available	LGA	local government authority
ATC	air traffic control	LIRL	low intensity runway lights
BRA	building restricted area	MOS	Manual of Standards
CAAP	Civil Aviation Advisory Publication	MTOW	maximum take-off weight
CAR	Civil Aviation Regulation 1988	NASF	National Airports Safeguarding Framework
CASA	Civil Aviation Safety Authority	NDB	Non-Directional Beacon
CASR	Civil Aviation Safety Regulation 1998	OLS	obstacle limitation surfaces
CTAF	Common Traffic Advisory Frequency	PANS-OPS	Procedures for Air Navigation Services – Aircraft Operations
DME	Distance Measuring Equipment	PAL	pilot activated lighting
ERSA	En Route Supplement Australia	PAPI	Precision Approach Path Indicator
FIFO	fly-in / fly-out	RFDS	Royal Flying Doctor Service
GA	general aviation	RNAV-GNSS	Area Navigation – Global Navigation Satellite System
GNSS	Global Navigation Satellite System	RPT	regular public transport
GPS	Global Positioning System	TODA	take-off distance available
		TORA	take-off run available

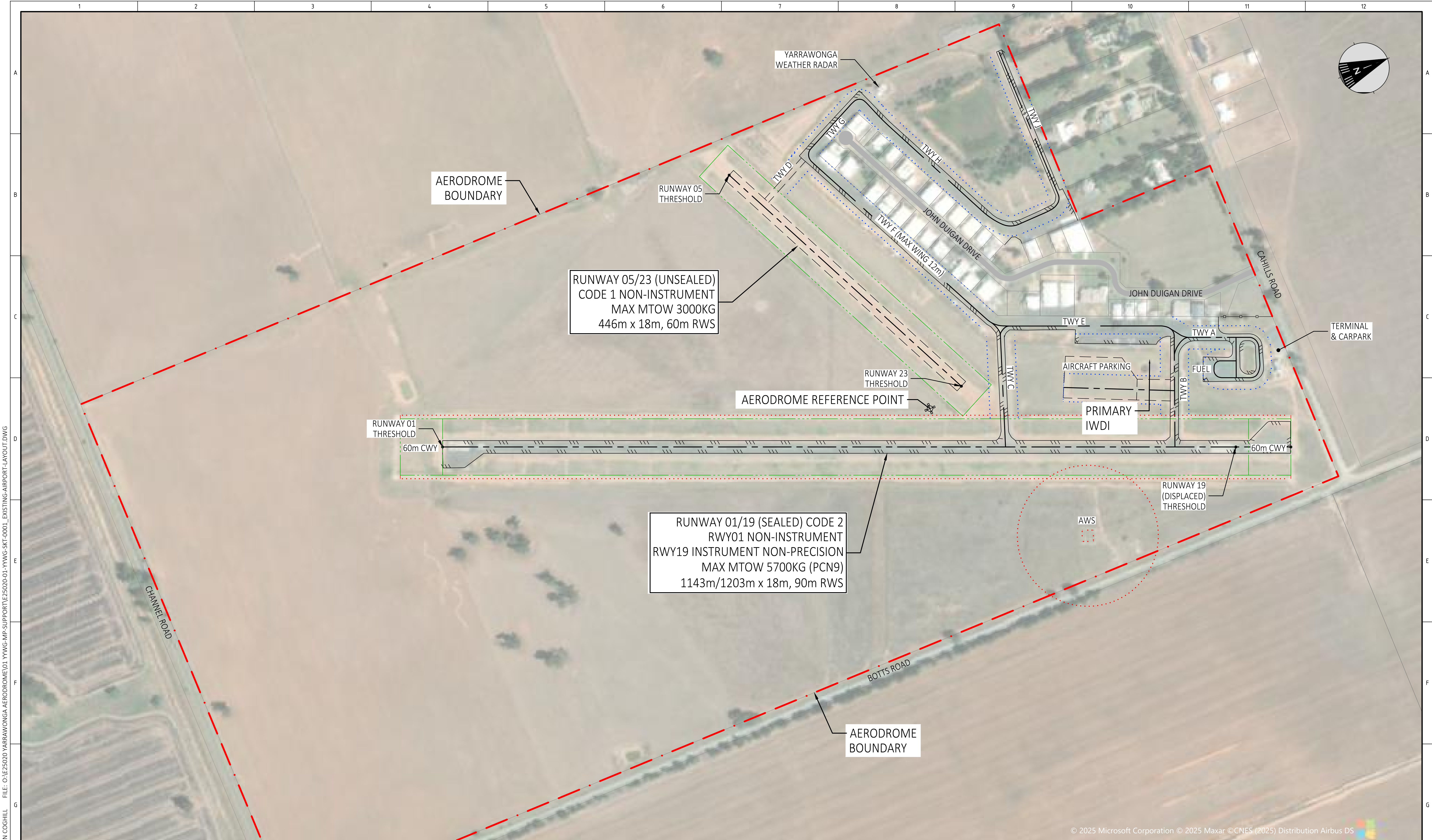
13. REFERENCES

- Airservices Australia, Aeronautical Information Package; including En Route Supplement Australia (ERSA, RDS, DAP) effective 4 September 2025
- Australian Airports Association, Regional Airport Master Planning Guideline, Airport Practice Note 4 dated September 2024
- Australian Standard AS 2021:2015 *Acoustics – Aircraft Noise Intrusion – Building Siting and Construction*, dated March 2015
- Civil Aviation Safety Authority, Civil Aviation Safety Regulations 1998
- Civil Aviation Safety Authority, *Part 139 (Aerodromes) Manual of Standards* 2019, dated 12 June 2025
- International Civil Aviation Organization, International Standards and Recommended Practices (SARPS) Annex 14 Aerodromes, Volume 1 *Aerodrome Design and Operations* and Volume II *Heliports*
- National Airports Safeguarding Framework, Guideline A: *Measures for Managing Impacts of Aircraft Noise*, version 1.2, dated November 2016
- National Airports Safeguarding Framework, Guideline B: *Managing the Risk of Building Generated Windshear and Turbulence at Airports*, version 2.2.5, dated May 2018
- National Airports Safeguarding Framework, Guideline C: *Managing the Risk of Wildlife Strikes in the Vicinity of Airports*, version 4.0, dated November 2023
- National Airports Safeguarding Framework, Guideline E: *Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports*, version 5.1.4, dated October 2014
- National Airports Safeguarding Framework, Guideline F: *Managing the Risk of Intrusions into the Protected Airspace of Airports*, version 5.1.3, dated July 2012
- National Airports Safeguarding Framework, Guideline G: *Protecting Aviation Facilities - Communications, Navigation and Surveillance (CNS)*, version 1, dated November 2016
- National Airports Safeguarding Framework, Guideline I: *Managing the Risk in Public Safety Areas at the Ends of Runways*, version 1, dated November 2018.

ANNEXURES

Annexures contain the following Yarrawonga Aerodrome Master Plan Drawings:

1. Existing Aerodrome Layout Plan [YYWG-DRG-0001 A]
2. Short Term Development Strategy [YYWG-DRG-0002 A]
3. Medium Term Development Strategy [YYWG-DRG-0003 A]
4. Long Term Development Strategy [YYWG-DRG-0004 A]
5. Airport Safeguarding – Windshear Protection Runway 01/19 [YYWG-DRG-0005 A]
6. Airport Safeguarding – Windshear Protection Runway 05/23 [YYWG-DRG-0006 A]
7. Airport Safeguarding – Wildlife Hazard Zones [YYWG-DRG-0007 A]
8. Airport Safeguarding – Lighting in the Vicinity of Aerodrome [YYWG-DRG-0008 A]
9. Airport Safeguarding – Proposed Obstacle Limitation Surfaces – Regional Plan [YYWG-DRG-0009 A]
10. Airport Safeguarding – Proposed Obstacle Limitation Surfaces – Airport Surrounds [YYWG-DRG-0010 A]
11. Airport Safeguarding – Building Restricted Areas for Aviation Facilities [YYWG-DRG-0011 A]



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LAYOUT PLAN
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SCALE 1:2500 (A1)
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REV	DESCRIPTION	DATE	DESIGN	VERIFIED	APPROVED
A	ORIGINAL ISSUE	22.05.2025	APC	PJO	



CLIENT
MOIRA SHIRE COUNCIL
PROJECT
YARRAWONGA AERODROME MASTER PLAN
130 CAHILLS ROAD, YARRAWONGA 3730



DRAWN	APC	22.05.2025
DRAFTING CHECK	PJO	22.05.2025
DESIGNED	APC	22.05.2025
DESIGN CHECK	PJO	22.05.2025
VERIFIED	PJO	22.05.2025

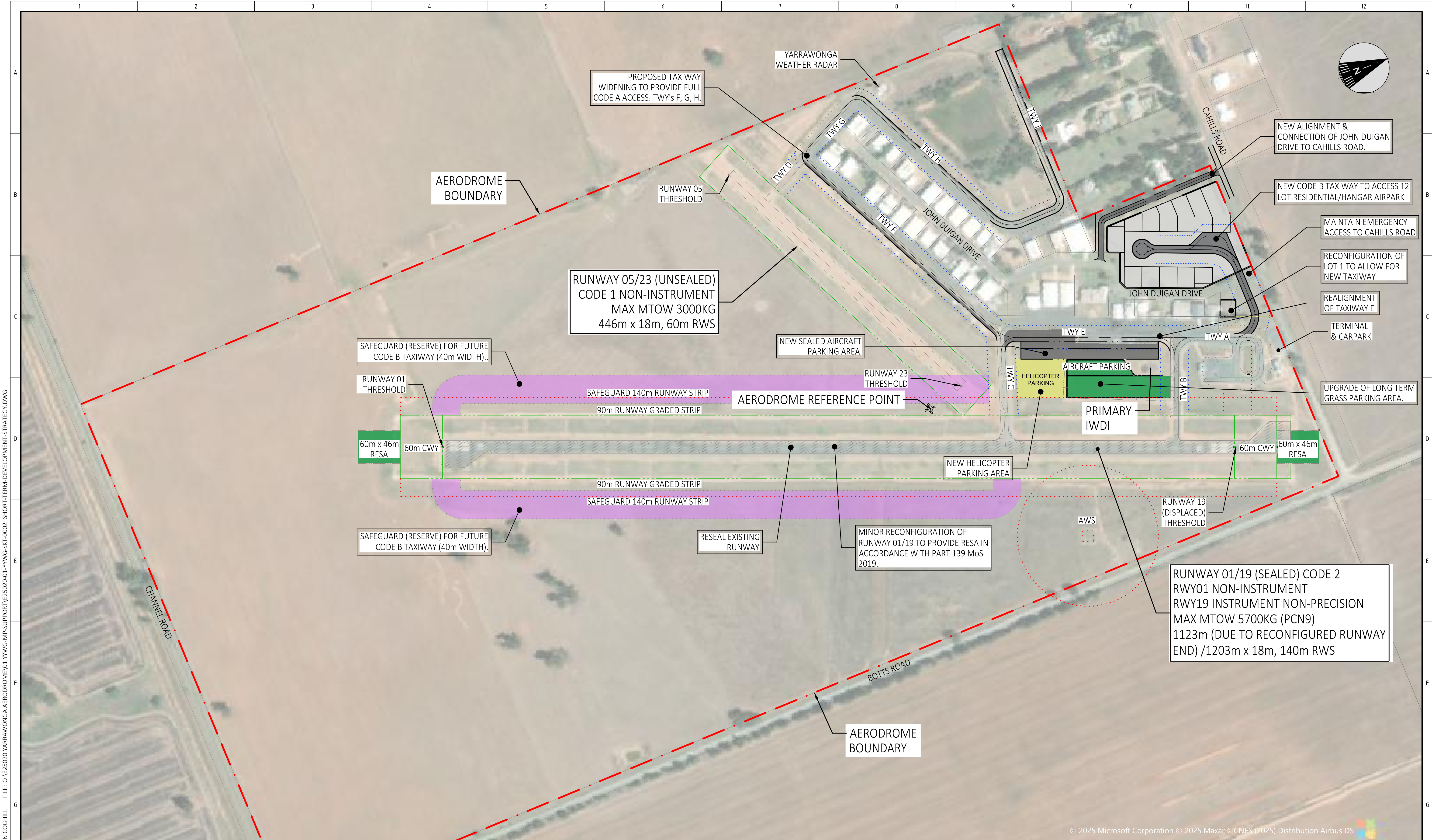


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STATUS
FOR INFORMATION
MASTER PLAN
EXISTING AERODROME LAYOUT PLAN

DRAWING No.
E25020-01-YYWG-DRG-0001

REVISION
A



LAYOUT PLAN
SCALE 1:2500

SCALE 1:2500 (A1)
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REV	DESCRIPTION	DATE	DESIGN	VERIFIED	APPROVED
A	ORIGINAL ISSUE	22.05.2025	APC	PJO	



CLIENT
MOIRA SHIRE COUNCIL
PROJECT
YARROWONGA AERODROME MASTER PLAN
130 CAHILLS ROAD, YARROWONGA 3730



DRAWN	APC	22.05.2025
DRAFTING CHECK	PJO	22.05.2025
DESIGNED	APC	22.05.2025
DESIGN CHECK	PJO	22.05.2025
VERIFIED	PJO	22.05.2025



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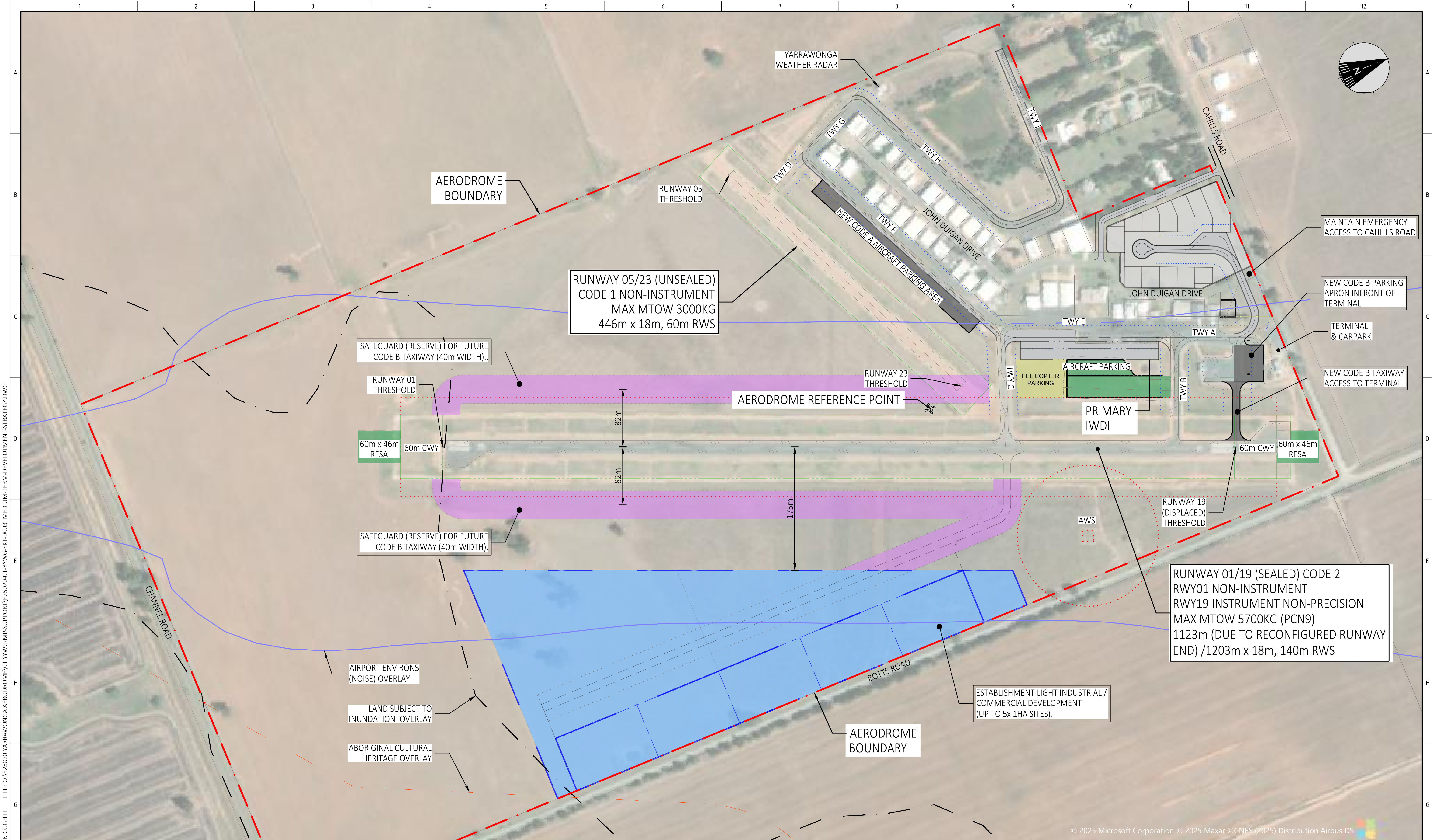
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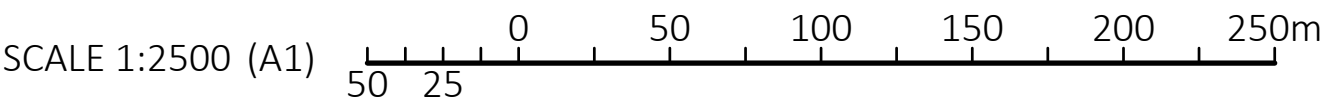
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FOR INFORMATION
MASTER PLAN
SHORT TERM DEVELOPMENT STRATEGY

DRAWING No.
E25020-01-YYWG-DRG-0002

REVISION
A



LAYOUT PLAN
SCALE 1:2500



REV	DESCRIPTION	DATE	DESIGN	VERIFIED	APPROVED
A	ORIGINAL ISSUE	22.05.2025	APC	PJO	



CLIENT
MOIRA SHIRE COUNCIL
PROJECT
YARRAWONGA AERODROME MASTER PLAN
130 CAHILLS ROAD, YARRAWONGA 3730



DRAWN	APC	22.05.2025
DRAFTING CHECK	PJO	22.05.2025
DESIGNED	APC	22.05.2025
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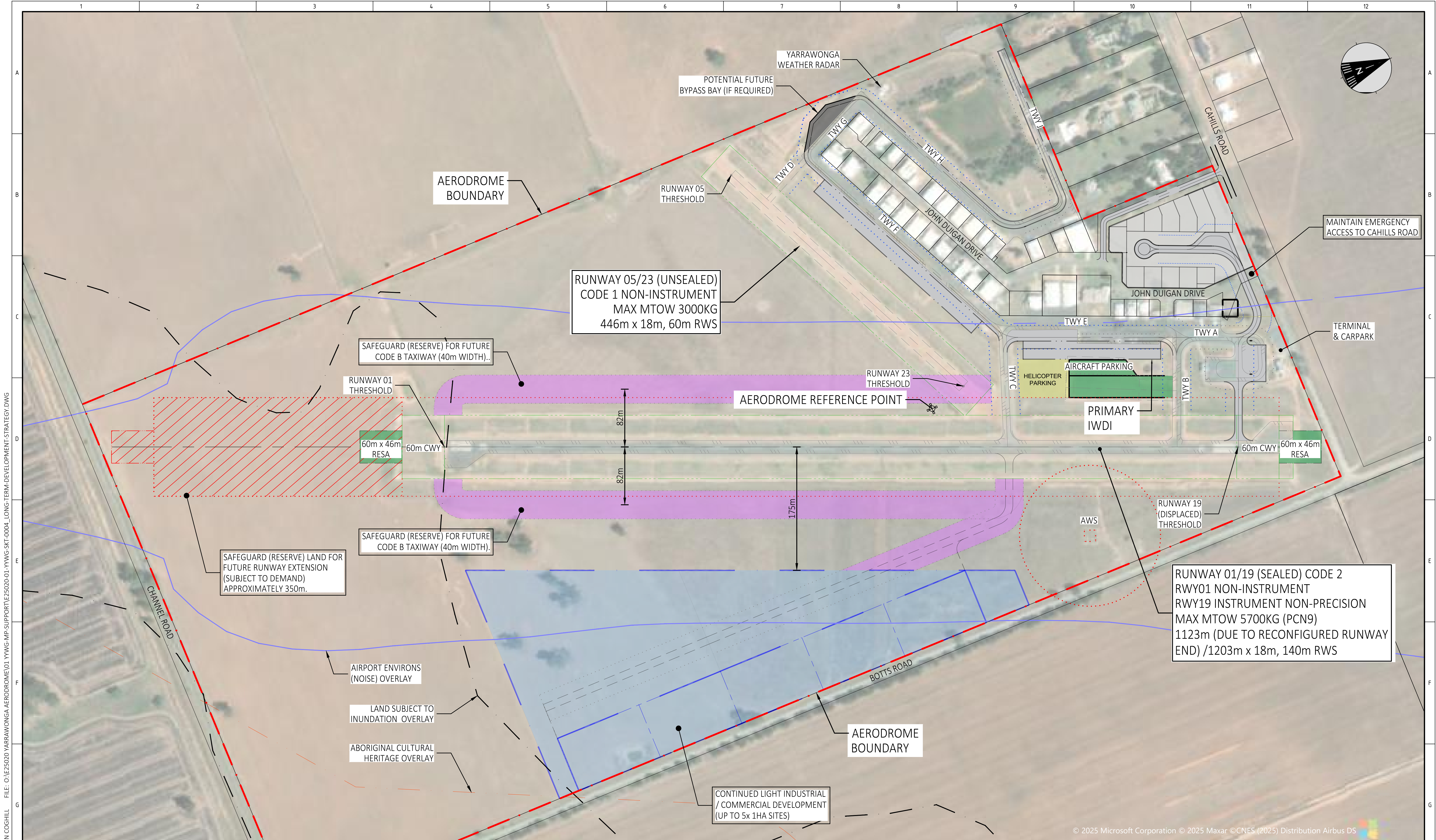


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FOR INFORMATION
MASTER PLAN
MEDIUM TERM DEVELOPMENT STRATEGY

DRAWING No.
E25020-01-YYWG-DRG-0003

REVISION
A



LAYOUT PLAN
SCALE 1:2500

SCALE 1:2500 (A1)
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REV	DESCRIPTION	DATE	DESIGN	VERIFIED	APPROVED
A	ORIGINAL ISSUE	22.05.2025	APC	PJO	



CLIENT
MOIRA SHIRE COUNCIL
PROJECT
YARRAWONGA AERODROME MASTER PLAN
130 CAHILLS ROAD, YARRAWONGA 3730



DRAWN	APC	22.05.2025
DRAFTING CHECK	PJO	22.05.2025
DESIGNED	APC	22.05.2025
DESIGN CHECK	PJO	22.05.2025
VERIFIED	PJO	22.05.2025

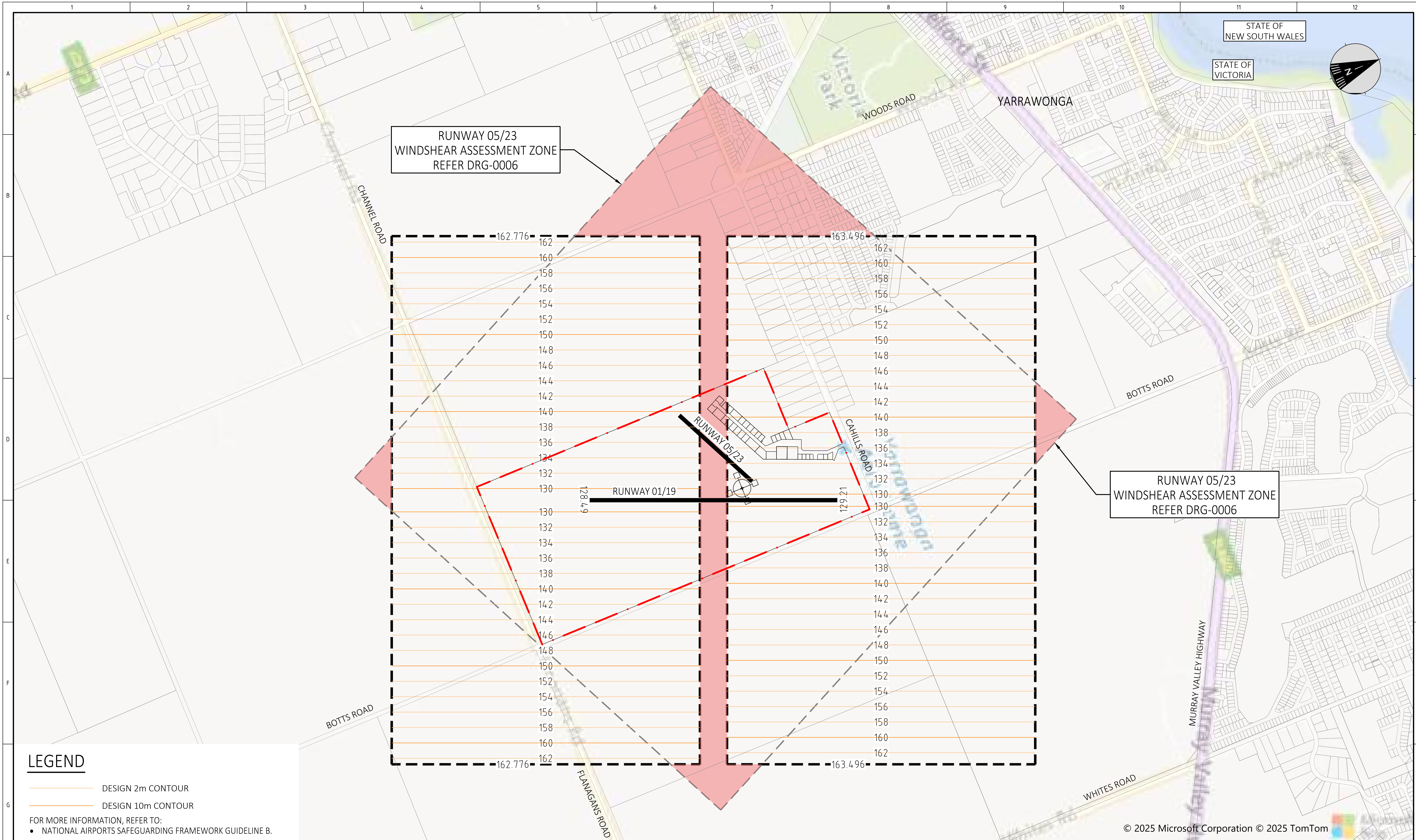


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STATUS
FOR INFORMATION
MASTER PLAN
LONG TERM DEVELOPMENT STRATEGY

DRAWING No.
E25020-01-YYWG-DRG-0004

REVISION
A

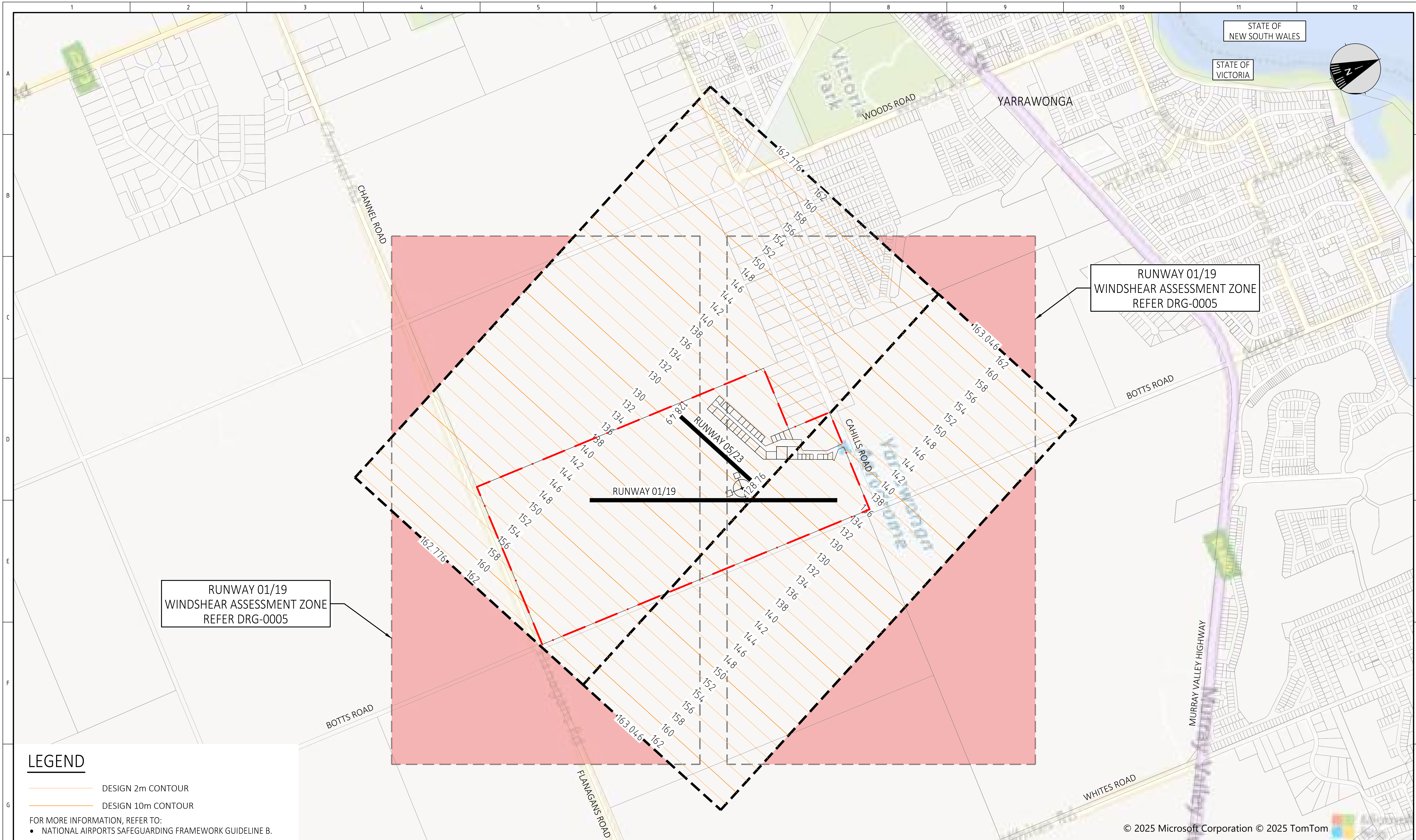


LEGEND

- DESIGN 2m CONTOUR
- DESIGN 10m CONTOUR
- FOR MORE INFORMATION, REFER TO:
 - NATIONAL AIRPORTS SAFEGUARDING FRAMEWORK GUIDELINE B.

LAYOUT PLAN
SCALE 1:8000

						CLIENT MOIRA SHIRE COUNCIL		DRAWN APC 22.05.2025		STATUS FOR INFORMATION	
						PROJECT YARRAWONGA AERODROME MASTER PLAN		DRAFTING CHECK PJO 22.05.2025		MASTER PLAN	
						130 CAHILLS ROAD, YARRAWONGA 3730		DESIGNED APC 22.05.2025		AIRPORT SAFEGUARDING	
								DESIGN CHECK PJO 22.05.2025		WINDSHEAR PROTECTION - RUNWAY 01/19	
								VERIFIED PJO 22.05.2025		DRAWING No.	
								APPROVED		E25020-01-YYWG-DRG-0005	
								DRAWING SCALE 1:8000		REVISION A	
								GRID WGS84-Z55 DATUM AHD			
								ORIG. SIZE A1			



LEGEND

- DESIGN 2m CONTOUR
 - DESIGN 10m CONTOUR
- FOR MORE INFORMATION, REFER TO:
- NATIONAL AIRPORTS SAFEGUARDING FRAMEWORK GUIDELINE B.

REV	DESCRIPTION	DATE	DESIGN	VERIFIED	APPROVED
A	ORIGINAL ISSUE	22.05.2025	APC	PIO	



CLIENT
MOIRA SHIRE COUNCIL
PROJECT
YARRAWONGA AERODROME MASTER PLAN
130 CAHILLS ROAD, YARRAWONGA 3730



DRAWN	APC	22.05.2025
DRAFTING CHECK	PIO	22.05.2025
DESIGNED	APC	22.05.2025
DESIGN CHECK	PIO	22.05.2025
VERIFIED	PIO	22.05.2025

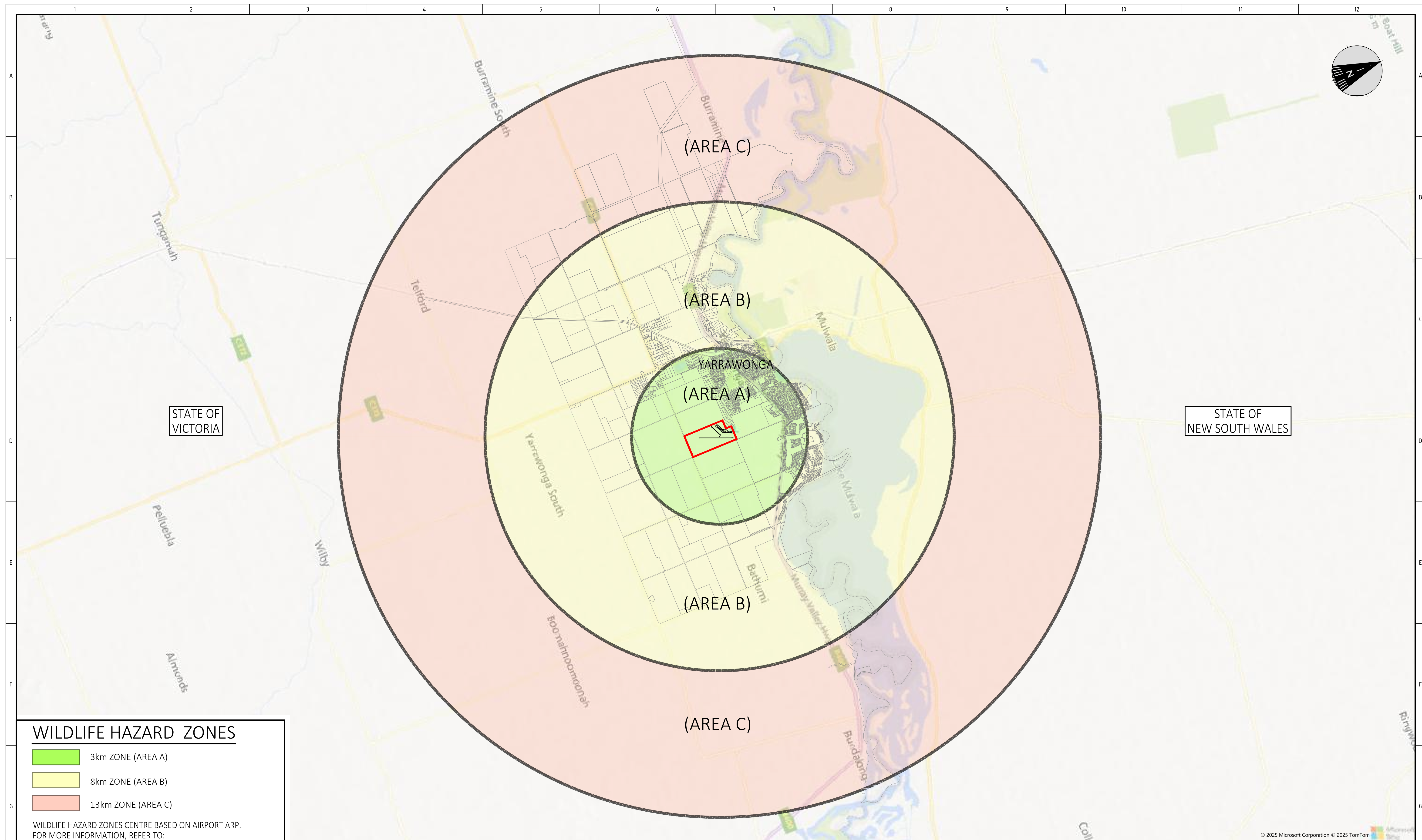


DRAWING SCALE	GRID	ORIG. SIZE
1:8000	WGS84-Z55	A1
	DATUM	AHD

STATUS
FOR INFORMATION
MASTER PLAN
AIRPORT SAFEGUARDING
WINDSHEAR PROTECTION - RUNWAY 05/23

DRAWING No.
E25020-01-YYWG-DRG-0006

REVISION
A



WILDLIFE HAZARD ZONES

- 3km ZONE (AREA A)
- 8km ZONE (AREA B)
- 13km ZONE (AREA C)

WILDLIFE HAZARD ZONES CENTRE BASED ON AIRPORT ARP.
FOR MORE INFORMATION, REFER TO:

- PART 139 MANUAL OF STANDARDS, CHAPTER 17
- NATIONAL AIRPORTS SAFEGUARDING FRAMEWORK GUIDELINE C

LAYOUT PLAN

SCALE 1:8000

H					
A	ORIGINAL ISSUE	22.05.2025	APC	PJO	
REV	DESCRIPTION	DATE	DESIGN	VERIFIED	APPROVED



CLIENT
MOIRA SHIRE COUNCIL

PROJECT
YARRAWONGA AERODROME MASTER PLAN

130 CAHILLS ROAD, YARRAWONGA 3730

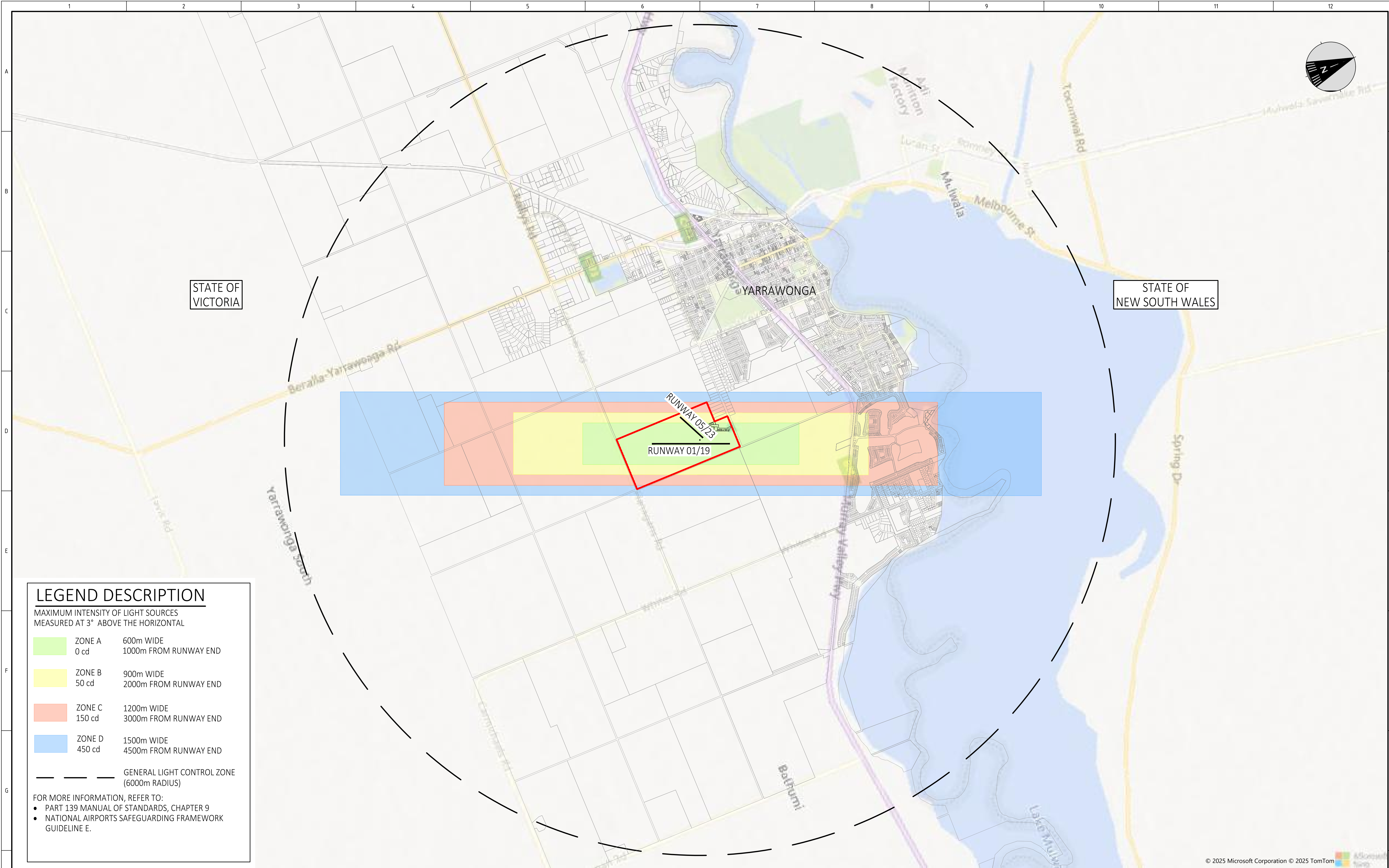


DRAWN	APC	22.05.2025
DRAFTING CHECK	PJO	22.05.2025
DESIGNED	APC	22.05.2025
DESIGN CHECK	PJO	22.05.2025
VERIFIED	PJO	22.05.2025



DRAWING SCALE	GRID WGS84-Z55	ORIG. SIZE
1:60,000	DATUM AHD	A1

STATUS FOR INFORMATION		H
MASTER PLAN AIRPORT SAFEGUARDING WILDLIFE HAZARD ZONES		
ZE	DRAWING No. E25020-01-YYWG-DRG-0007	



LEGEND DESCRIPTION

MAXIMUM INTENSITY OF LIGHT SOURCES
MEASURED AT 3° ABOVE THE HORIZONTAL

ZONE A

600m WIDE

0 cd

1000m FROM RUNWAY END

ZONE B

900m WIDE

50 cd

2000m FROM RUNWAY END

ZONE C

1200m WIDE

150 cd

3000m FROM RUNWAY END

ZONE D

1500m WIDE

450 cd

4500m FROM RUNWAY END

GENERAL LIGHT CONTROL ZONE

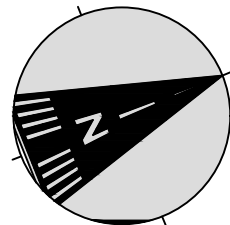
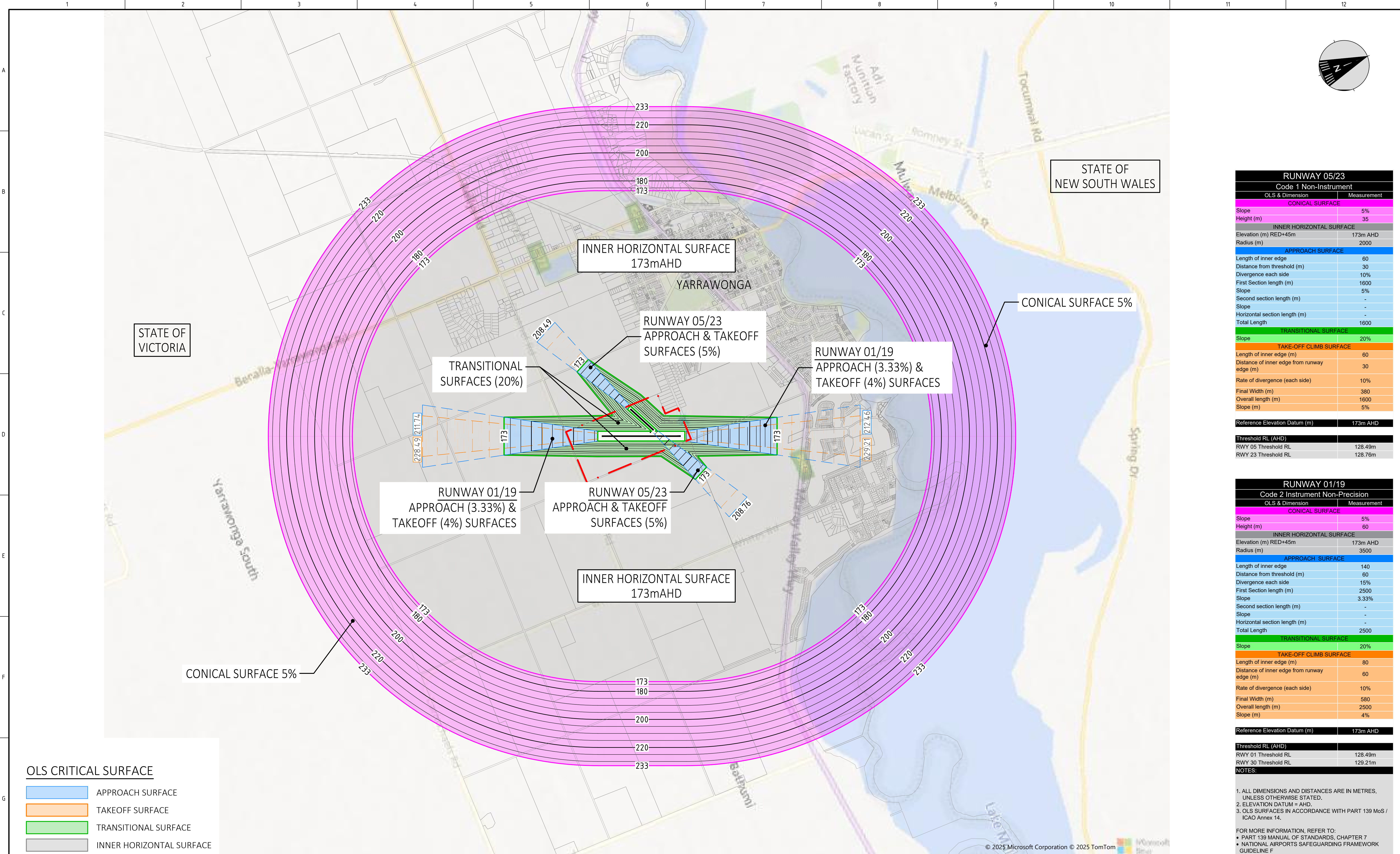
(6000m RADIUS)

FOR MORE INFORMATION, REFER TO:

- PART 139 MANUAL OF STANDARDS, CHAPTER 9
- NATIONAL AIRPORTS SAFEGUARDING FRAMEWORK GUIDELINE E.

						CLIENT MOIRA SHIRE COUNCIL		DRAWN APC 22.05.2025		STATUS FOR INFORMATION	
						PROJECT YARRAWONGA AERODROME MASTER PLAN		DRAFTING CHECK PJO 22.05.2025		MASTER PLAN AIRPORT SAFEGUARDING LIGHTING IN THE VICINITY OF AERODROME	
						130 CAHILLS ROAD, YARRAWONGA 3730		DESIGNED APC 22.05.2025			
								DESIGN CHECK PJO 22.05.2025			
								VERIFIED PJO 22.05.2025			
						APPROVED		DRAWING SCALE 1:25,000		DRAWING No. E25020-01-YYWG-DRG-0008	
								GRID WGS84-Z55		REVISION A	
								DATUM AHD		ORIG. SIZE A1	
										DRAWING No. E25020-01-YYWG-DRG-0008	
										REVISION A	

A ORIGINAL ISSUE		22.05.2025	APC	PJO	
REV	DESCRIPTION	DATE	DESIGN	VERIFIED	APPROVED
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					



OLS CRITICAL SURFACE

- APPROACH SURFACE
- TAKEOFF SURFACE
- TRANSITIONAL SURFACE
- INNER HORIZONTAL SURFACE
- CONICAL SURFACE

RUNWAY 05/23	
Code 1 Non-Instrument	
OLS & Dimension	Measurement
CONICAL SURFACE	
Slope	5%
Height (m)	35
INNER HORIZONTAL SURFACE	
Elevation (m) RED+45m	173m AHD
Radius (m)	2000
APPROACH SURFACE	
Length of inner edge	60
Distance from threshold (m)	30
Divergence each side	10%
First Section length (m)	1600
Slope	5%
Second section length (m)	-
Slope	-
Horizontal section length (m)	-
Total Length	1600
TRANSITIONAL SURFACE	
Slope	20%
TAKE-OFF CLIMB SURFACE	
Length of inner edge (m)	60
Distance of inner edge from runway edge (m)	30
Rate of divergence (each side)	10%
Final Width (m)	380
Overall length (m)	1600
Slope (m)	5%
Reference Elevation Datum (m)	
173m AHD	
Threshold RL (AHD)	
RWY 05 Threshold RL 128.49m	
RWY 23 Threshold RL 128.76m	

RUNWAY 01/19	
Code 2 Instrument Non-Precision	
OLS & Dimension	Measurement
CONICAL SURFACE	
Slope	5%
Height (m)	60
INNER HORIZONTAL SURFACE	
Elevation (m) RED+45m	173m AHD
Radius (m)	3500
APPROACH SURFACE	
Length of inner edge	140
Distance from threshold (m)	60
Divergence each side	15%
First Section length (m)	2500
Slope	3.33%
Second section length (m)	-
Slope	-
Horizontal section length (m)	-
Total Length	2500
TRANSITIONAL SURFACE	
Slope	20%
TAKE-OFF CLIMB SURFACE	
Length of inner edge (m)	80
Distance of inner edge from runway edge (m)	60
Rate of divergence (each side)	10%
Final Width (m)	580
Overall length (m)	2500
Slope (m)	4%
Reference Elevation Datum (m)	
173m AHD	
Threshold RL (AHD)	
RWY 01 Threshold RL 128.49m	
RWY 30 Threshold RL 129.21m	
NOTES:	
1. ALL DIMENSIONS AND DISTANCES ARE IN METRES, UNLESS OTHERWISE STATED.	
2. ELEVATION DATUM = AHD.	
3. OLS SURFACES IN ACCORDANCE WITH PART 139 MoS / ICAO Annex 14.	
FOR MORE INFORMATION, REFER TO:	
• PART 139 MANUAL OF STANDARDS, CHAPTER 7	
• NATIONAL AIRPORTS SAFEGUARDING FRAMEWORK GUIDELINE F	

REV	DESCRIPTION	DATE	DESIGN	VERIFIED	APPROVED
A	ORIGINAL ISSUE	22.05.2025	APC	PJO	



CLIENT
MOIRA SHIRE COUNCIL
PROJECT
YARRAWONGA AERODROME MASTER PLAN
130 CAHILLS ROAD, YARRAWONGA 3730

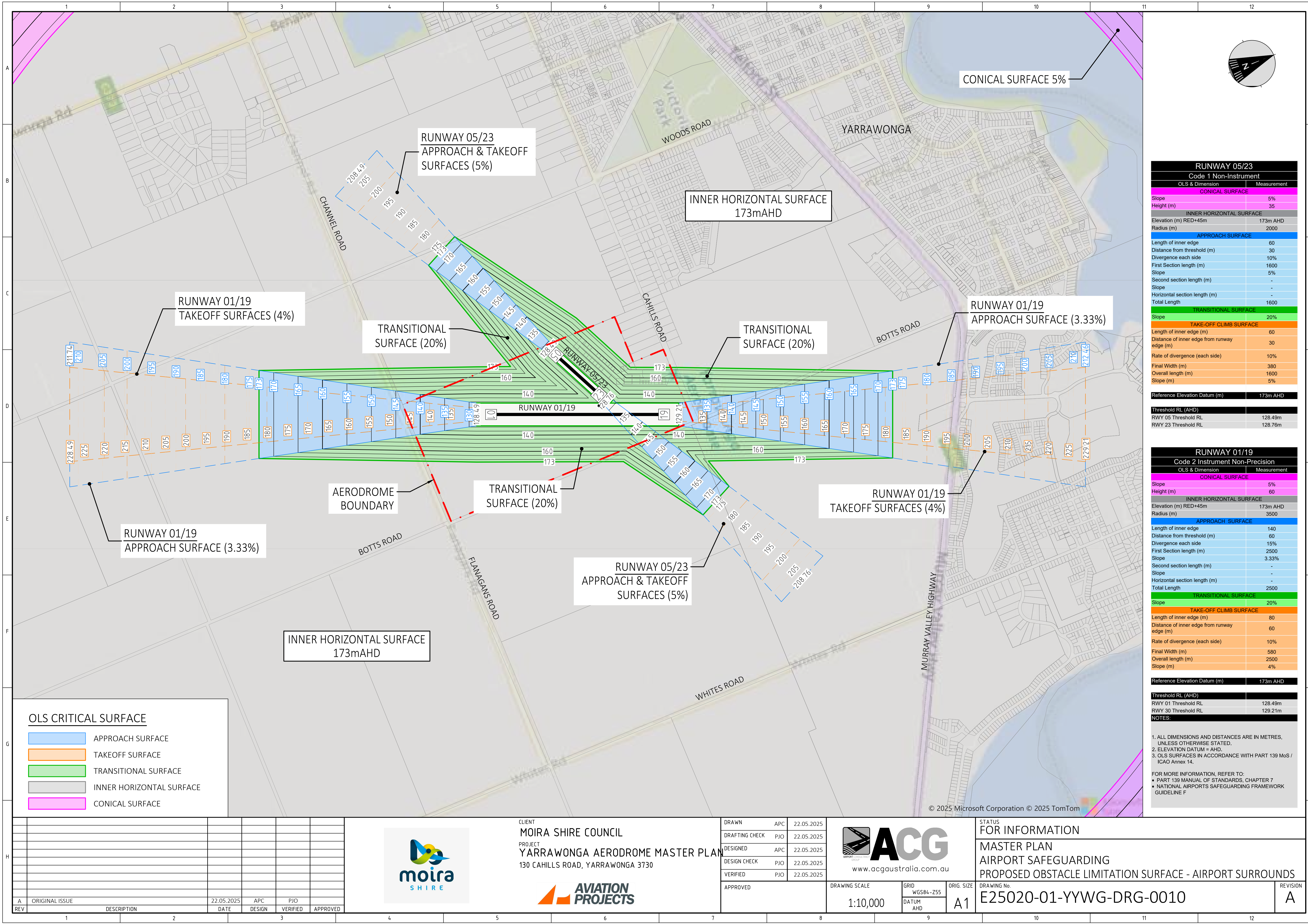


DRAWN	APC	22.05.2025
DRAFTING CHECK	PJO	22.05.2025
DESIGNED	APC	22.05.2025
DESIGN CHECK	PJO	22.05.2025
VERIFIED	PJO	22.05.2025



DRAWING SCALE	GRID	ORIG. SIZE
1:25,000	WGS84-Z55	A1
	DATUM AHD	

STATUS FOR INFORMATION	
MASTER PLAN AIRPORT SAFEGUARDING PROPOSED OBSTACLE LIMITATION SURFACE - REGIONAL PLAN	
DRAWING No. E25020-01-YYWG-DRG-0009	REVISION A



RUNWAY 05/23
APPROACH & TAKEOFF
SURFACES (5%)

INNER HORIZONTAL SURFACE
173mAHD

CONICAL SURFACE 5%

RUNWAY 01/19
TAKEOFF SURFACES (4%)

TRANSITIONAL
SURFACE (20%)

TRANSITIONAL
SURFACE (20%)

RUNWAY 01/19
APPROACH SURFACE (3.33%)

AERODROME
BOUNDARY

TRANSITIONAL
SURFACE (20%)

RUNWAY 01/19
TAKEOFF SURFACES (4%)

RUNWAY 05/23
APPROACH & TAKEOFF
SURFACES (5%)

INNER HORIZONTAL SURFACE
173mAHD

RUNWAY 01/19
APPROACH SURFACE (3.33%)

OLS CRITICAL SURFACE

- APPROACH SURFACE
- TAKEOFF SURFACE
- TRANSITIONAL SURFACE
- INNER HORIZONTAL SURFACE
- CONICAL SURFACE

RUNWAY 05/23	
Code 1 Non-Instrument	
OLS & Dimension	Measurement
CONICAL SURFACE	
Slope	5%
Height (m)	35
INNER HORIZONTAL SURFACE	
Elevation (m) RED+45m	173m AHD
Radius (m)	2000
APPROACH SURFACE	
Length of inner edge	60
Distance from threshold (m)	30
Divergence each side	10%
First Section length (m)	1600
Slope	5%
Second section length (m)	-
Slope	-
Horizontal section length (m)	-
Total Length	1600
TRANSITIONAL SURFACE	
Slope	20%
TAKE-OFF CLIMB SURFACE	
Length of inner edge (m)	60
Distance of inner edge from runway edge (m)	30
Rate of divergence (each side)	10%
Final Width (m)	380
Overall length (m)	1600
Slope (m)	5%
Reference Elevation Datum (m)	
173m AHD	
Threshold RL (AHD)	
RWY 05 Threshold RL	128.49m
RWY 23 Threshold RL	128.76m

RUNWAY 01/19	
Code 2 Instrument Non-Precision	
OLS & Dimension	Measurement
CONICAL SURFACE	
Slope	5%
Height (m)	60
INNER HORIZONTAL SURFACE	
Elevation (m) RED+45m	173m AHD
Radius (m)	3500
APPROACH SURFACE	
Length of inner edge	140
Distance from threshold (m)	60
Divergence each side	15%
First Section length (m)	2500
Slope	3.33%
Second section length (m)	-
Slope	-
Horizontal section length (m)	-
Total Length	2500
TRANSITIONAL SURFACE	
Slope	20%
TAKE-OFF CLIMB SURFACE	
Length of inner edge (m)	80
Distance of inner edge from runway edge (m)	60
Rate of divergence (each side)	10%
Final Width (m)	580
Overall length (m)	2500
Slope (m)	4%
Reference Elevation Datum (m)	
173m AHD	
Threshold RL (AHD)	
RWY 01 Threshold RL	128.49m
RWY 30 Threshold RL	129.21m
NOTES:	
1. ALL DIMENSIONS AND DISTANCES ARE IN METRES, UNLESS OTHERWISE STATED.	
2. ELEVATION DATUM = AHD.	
3. OLS SURFACES IN ACCORDANCE WITH PART 139 MoS / ICAO Annex 14.	
FOR MORE INFORMATION, REFER TO:	
• PART 139 MANUAL OF STANDARDS, CHAPTER 7	
• NATIONAL AIRPORTS SAFEGUARDING FRAMEWORK GUIDELINE F	



CLIENT
MOIRA SHIRE COUNCIL
PROJECT
YARRAWONGA AERODROME MASTER PLAN
130 CAHILLS ROAD, YARRAWONGA 3730



DRAWN	APC	22.05.2025
DRAFTING CHECK	PJO	22.05.2025
DESIGNED	APC	22.05.2025
DESIGN CHECK	PJO	22.05.2025
VERIFIED	PJO	22.05.2025

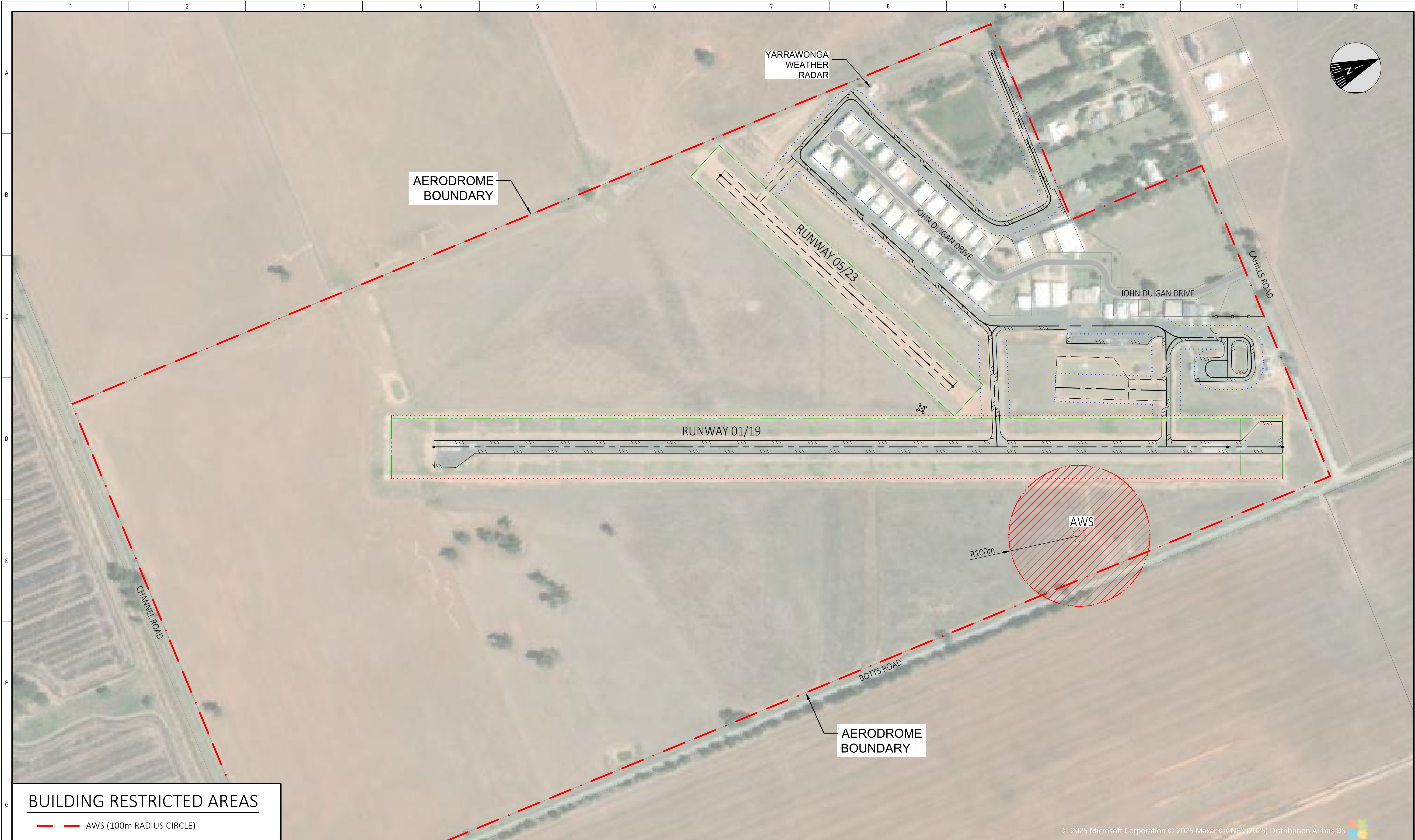


DRAWING SCALE
1:10,000
GRID
WGS84-Z55
DATUM
AHD

ORIG. SIZE
A1

STATUS FOR INFORMATION	
MASTER PLAN AIRPORT SAFEGUARDING PROPOSED OBSTACLE LIMITATION SURFACE - AIRPORT SURROUNDS	
DRAWING No. E25020-01-YYWG-DRG-0010	REVISION A

REV	DESCRIPTION	DATE	DESIGN	VERIFIED	APPROVED
A	ORIGINAL ISSUE	22.05.2025	APC	PJO	



BUILDING RESTRICTED AREAS

— AWS (100m RADIUS CIRCLE)

BRA (BUILDING RESTRICTED AREAS) BASED ON EXISTING LOCATIONS.
FOR MORE INFORMATION, REFER TO:

- PART 139 MANUAL OF STANDARDS, CHAPTER 17
- NATIONAL AIRPORTS SAFEGUARDING FRAMEWORK GUIDELINE G

LAYOUT PLAN
SCALE 1:2500

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REV	DESCRIPTION	DATE	DESIGN	VERIFIED	APPROVED
A	ORIGINAL ISSUE	22.05.2025	APC	PJO	



CLIENT
MOIRÁ SHIRE COUNCIL
PROJECT
YARRAWONGA AERODROME MASTER PLAN
130 CAHILLS ROAD, YARRAWONGA 3730



DRAWN	APC	22.05.2025
DRAFTING CHECK	PJO	22.05.2025
DESIGNED	APC	22.05.2025
DESIGN CHECK	PJO	22.05.2025
VERIFIED	PJO	22.05.2025



DRAWING SCALE	GRID	ORIG. SIZE
1:2500	WGS84-Z55	A1
	DATUM	AHD

STATUS FOR INFORMATION	REVISION A
MASTER PLAN AIRPORT SAFEGUARDING BUILDING RESTRICTED AREAS FOR AVIATION FACILITIES	
DRAWING No. E25020-01-YYWG-DRG-0011	



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