

Port Macquarie Airport

2045 Airport Draft Master Plan

April 2025 | Version 1



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Acronyms

Term / Acronym	Definition
AIAC	Australian International Aviation College
ANEF	Australian Noise Exposure Forecast
ARFFS	Aerodrome Rescue and Fire-Fighting Services
ASA	Airservices Australia
ATC	Air Traffic Control
AWS	Automatic Weather Station
BITRE	Bureau of Infrastructure, Transport and Regional Economics
BNN	Back-up Navigation Network
BoM	Bureau of Meteorology
CASA	Civil Aviation Safety Authority
CASR	Civil Aviation Safety Regulations
DME	Distance Measuring Equipment
EPBC	Environment Protection and Biodiversity Conservation
FIFO	Fly-In-Fly-Out
GA	General Aviation
GNSS	Global Navigation Satellite System
HDFC	Hastings District Flying Club
ITP	Integrated Transport Plan (PMHC)
LGA	Local Government Area
MOS	Manual of Standards
NDB	Non-Directional Beacon
NSW	New South Wales
OAR	Office of Airspace Regulations
OLS	Obstacle Limitation Surface
PAL	Pilot Activated Light
PANS-OPS	Procedures for Air Navigation Services - Aircraft Operations
PAPI	Precision Approach Path Indicators
PMHC	Port Macquarie-Hastings Council
PQQ	Port Macquarie Airport (IATA Code)
RESA	Runway End Safety Area
RPT	Regular Passenger Transport
SP	Special Precinct (Land Use category)
TORA	Take Off Run Available
VOR	Very High Frequency - Omi-directional Range

Executive Summary

This draft Master Plan presents a 20-year vision for Port Macquarie Airport (the Airport), considering the land use and spatial requirements for future Regular Passenger Transport and General Aviation operations, as well as complementary developments around the Airport. It provides a framework to enable the delivery of long-term sustainable, safe and secure air transport services for the community.

Since the 2010 Master Plan and the addendum in 2013, the Airport has invested in significant development across the site to improve operations and accommodate the incremental growth in demand. This draft Master Plan builds upon these projects to provide an updated vision for the Airport that responds to latest industry regulations, trends and opportunities. As part of a two-stage consultation approach, consisting of early engagement with airport stakeholders and public consultation on this draft Master Plan, community feedback is fundamental to this 20-year vision.

Since the official opening in 1955, the Airport has served an important role for the local community, providing regional connectivity and jobs to the region. Passenger growth at the Airport is expected to nearly double by 2045 from 218,600 in 2019 to 396,000 passengers. As this forecast growth eventuates, this draft Master Plan envisages a range of developments to accommodate the increase in passengers and aircraft. These are summarised in three stages below.

Stage 1: 1-5 Years

- 1 Runway 03/21 Surface Refurbishment
- 2 Short Stay Car Park Expansion
- 3 General Aviation 1 Apron Resurfacing

Stage 2: 5-10 Years

- 4 Development of Business Park
- 5 New Road Connection to The Binnacle for Emergency Use
- 6 Paved Runway End Safety Area (RESA)
- 7 Development of Potential Solar Farm
- 8 Expansion of General Aviation 1 and 2

Stage 3: 10-20 Years

- 9 Aerodrome Rescue and Fire Fighting Services
- 10 Terminal expansion
- 11 Additional Car Park Across Tuffins Lane
- 12 Development of General Aviation 3
- 13 Extension of Taxiway Charlie
- 14 Ongoing development of the Business Park

Managing land use around airports to prevent inappropriate development is important for safeguarding airport operations, including the protection of airspace, the flight paths and limiting the impact of noise. This draft Master Plan includes updated Obstacle Limitation Surfaces (OLS) to reflect the changes to regulations and retains the current Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS). This draft Master Plan includes updated noise modelling which shows the impact of aircraft noise around the Airport by 2045.

In terms of the environment, this draft Master Plan not only complies with all biodiversity requirements on conservation land around the Airport but also envisages, where possible, potential to reduce the impact of future projects, returning some land areas for inclusion in conservation areas under the Biodiversity Certification Agreement.

This draft Master Plan is a land use and spatial planning tool that considers a range of future growth scenarios. As such, it allows for, but does not advocate for specific growth pathways, development scenarios or particular projects. Any projects or changes to Airport operations required to handle future aviation or other growth needs will be thoroughly modelled, subject to a rigorous business case process, and must satisfy a range of detailed regulatory, planning and financial requirements.

1. Introduction

1.1 Existing Airport

Opened in 1955, Port Macquarie Airport (PQQ, henceforth known as the Airport) is located on the Mid North Coast of New South Wales, south of the Hastings River and west of the town of Port Macquarie. It is owned and operated by Port Macquarie-Hastings Council (PMHC, henceforth referred to as Council) as a commercial business funded through revenue generated by airport operations.

The Airport is accessed from Boundary Street which connects onto Hastings River Drive. Three kilometres to the east, Hastings River Drive connects to the Oxley Highway and then it is a short drive of approximately 10km to the Pacific Highway which runs along the east coast of New South Wales (NSW).

The Airport has a single runway, Runway 03/21, at 1,800m long and 45m wide. The Airport handles a mix of Regular Passenger Transport (RPT) and General Aviation (GA) traffic. The Airport currently offers a range of passenger services including to Sydney (QantasLink and Rex), Brisbane (QantasLink) and Lord Howe Island (Eastern Air Services). Until recently, larger Code C jets also operated to Melbourne (Bonza Airlines)¹. A major terminal expansion was completed in 2019 which has improved passenger facilities and operational efficiency. The runway upgrade in 2013 and the addition of a new power-in/power-out aircraft stand (Bay 4) allows for sustained B737/A320 type operations. The construction of a parallel taxiway for GA aircraft in 2023 has further enhanced runway capacity and operational flexibility.



Figure 1: Aerial view of Port Macquarie Airport from the north (©Port Macquarie Airport)

In addition to RPT operations, the Airport is a base for a range of GA operators and aviation businesses including the Australian International Aviation College (AIAC), Hastings District Flying

¹ Noting that Bonza ceased operation in April 2024.

Club (HDFC), Eastern Air Services, Skydive Port Macquarie, Port Macquarie Helicopters and Helicopter Rebuilds Pty Ltd.

The Airport is zoned as SP2 Infrastructure (Air Transport Facility) in the Port Macquarie-Hastings Local Environmental Plan 2011, with areas on Airport land also zoned as SP4 Enterprise (south-east of the terminal) and C2 Environmental Conservation (south-east and west of the runway).

In 2018, Council signed a Biodiversity Certification Agreement with the NSW Government, and in 2020, received Commonwealth Government approval (subject to extensive conditions) to proceed with Obstacle Limitation Surface (OLS) protection management works.

The management works mainly relate to vegetation clearing and offset requirements as result of upgrading Runway 03/21 to Code 4C jet standard, as well as the provision of the new parallel taxiway described above. Through this agreement, Council has committed to significant environmental protection, including establishing a 446 hectare BioBanking (Stewardship) site around the Airport for environmental conservation purposes. These biodiversity agreements/approvals and Council's environmental commitments are important considerations in developing this draft Master Plan.

1.2 Regional Context

Port Macquarie Airport is located on the Mid North Coast of New South Wales, 380km north of Sydney and 550km south of Brisbane, making it an important transport hub for the region. Nearby airports with RPT services include Coffs Harbour Airport (150km to the north) and Newcastle Airport (225km to the south), with the closest GA airports being at Kempsey (50km to the north) and Taree (75km to the south).

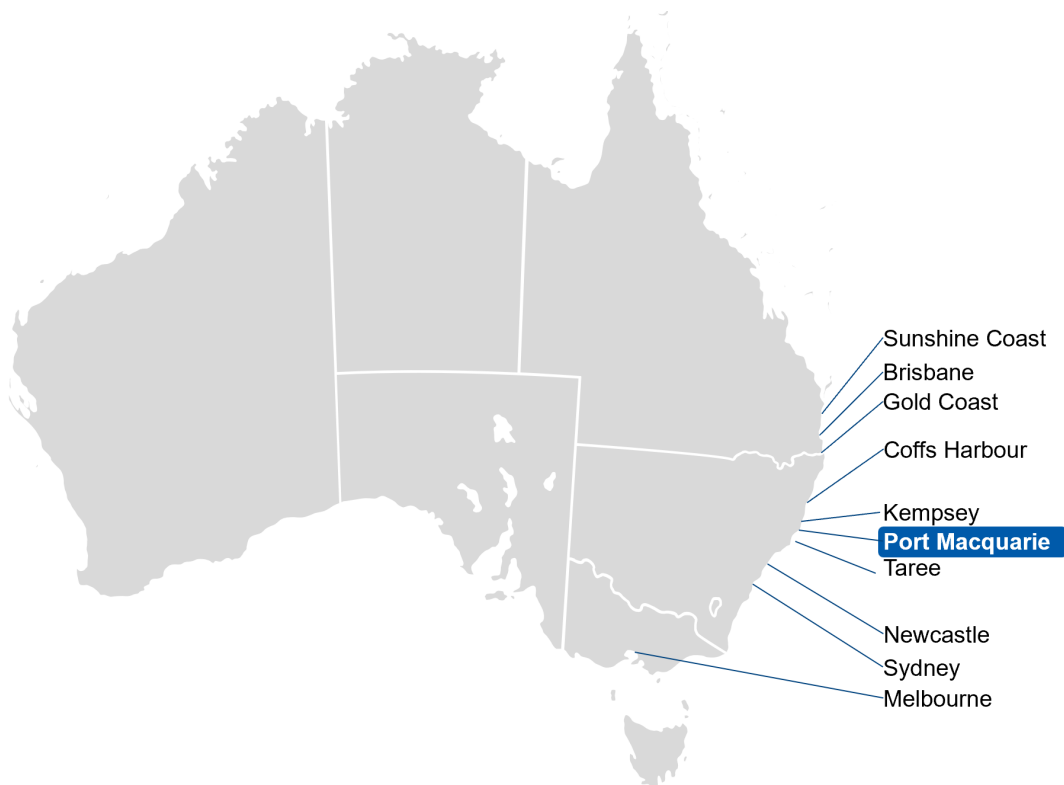


Figure 2: Regional location of Port Macquarie Airport

1.3 Regulatory and Planning Context

Planning and development considerations at Port Macquarie Airport require liaison and coordination between the Airport operator, Council and State government, as well as the Civil Aviation Safety Authority (CASA) and Airservices Australia (ASA), whose responsibilities impinge on, or are affected by, the operation of the Airport. This section summarises relevant policies, strategies and regulation that are pertinent to the Airport and the development of this draft Master Plan.

1.3.1 CASA and MOS139

CASA is the aviation safety authority for airports and aerodromes in Australia. CASA's Manual of Standards 139 (MOS139) provides standards and requirements as well as general guidance on the planning, design, operation, and maintenance of airports in Australia and is therefore critical for maintaining the safe operation of airports. Airports with instrument flight procedures require CASA certification in line with MOS139.

Council is committed to the safe and secure operation of the Airport in line with CASA requirements.

1.3.2 North Coast Regional Plan 2041

The North Coast Regional Plan 2041, published by the NSW Department of Planning and Environment in December 2022, identifies Port Macquarie as an important location for sustainable growth within the region, in particular for housing as well as tourism development, noting however that growth needs to be delivered in an environmentally responsible manner. Regional airports including Port Macquarie Airport are identified as "important gateways for business, tourism and personal travel, as well as high-value freight in the region", playing a key role in providing connectivity as well as delivering local and regional economic growth.

As an important transport hub, Strategy 15.1 in the North Coast Regional Plan 2041 identifies the need to "protect proposed and existing transport infrastructure and corridors to ensure network opportunities are not sterilised by incompatible land uses or land fragmentation"². In response to this, safeguarding the Airport from inappropriate development is described in Section 6.

The North Coast Regional Plan 2041 also describes the diverse economy of Port Macquarie as a result of ongoing investment in the health, education, agriculture, and aviation sectors, with future airport business park identified as having the potential to deliver local employment opportunities. The Airport business park is described in Section 9.4.

1.3.3 Mid North Coast Strategic Regional Plan

Regional Development Australia's Mid North Coast Strategic Regional Plan presents a strategy for sustainable development of the Mid North Coast region of NSW over the next decade, 2023-2033.

² Strategy 15.1, p.54 North Coast Regional Plan 2041, December 2022 (<https://www.planning.nsw.gov.au/sites/default/files/2023-03/north-coast-regional-plan-2041.pdf>)

Port Macquarie is identified as a prime location for residential and commercial development supported by current and improved regional transport connectivity and infrastructure. Coffs Harbour, Port Macquarie, Grafton, and Taree Airports are identified as hubs for domestic air traffic in the region. The Plan also identifies the Pacific Highway as a key link between Sydney and Brisbane, also connecting the region's airports. In addition, a potential upgrade to the Oxley Highway between Port Macquarie and the Pacific Highway is identified, which would improve access to the Airport – see Section 5.5.1.

1.3.4 Imagine2050 Port Macquarie Hastings Community Strategic Plan

Council's Imagine2050 Community Strategic Plan (CSP) identifies the community's priorities and aspirations for the future including ways the Airport can support the community in line with three of the six themes from the CSP, these being Environmentally Sustainable (ES), Connected (C) and Authentic and High Performing (AHP).

Building on Imagine2050, the objectives for the Airport in the 2024/25 Draft Operational Plan include Connected, Environmentally Sustainable and Authentic and High Performing (AHP)³, as follows:

- **Connected, C1** - We safely and efficiently connect people, goods and businesses within and beyond our region.
- **Environmentally Sustainable, ES2** - The impact of our built environment on our natural environment is minimised.
- **Authentic and High Performing, AHP4** - Our Council manages its finite resources sustainably to support the service delivery expectations of our community.

The Imagine2050 CSP is an important reference for shaping the Strategic Vision for this draft Master Plan, as per the next section, Section 2.

1.4 Master Plan Development

Council adopted its first formal Master Plan for the Airport in June 2004 in which it identified its long-term plan to upgrade the Airport to cater for Code 4C jet operations, also known as narrow-body jets, such as the Boeing B737-800 or Airbus A320. This aspiration was reconfirmed in the 2010 Airport Master Plan and then again in the 2013 Airport Master Plan Addendum on completion of infrastructure works to accommodate Code 4C jet operations.

This 2025 draft Master Plan presents the next 20-year vision for the Airport considering the requirements for future RPT and GA operations, as well as complementary commercial development, to deliver a sustainable and safe airport operation for the community.

³ Port Macquarie Airport, p.78 to 82, PMHC Operational Plan 2024-25, May 2024
(<https://haveyoursay.pmhc.nsw.gov.au/92391/widgets/431357/documents/283560>)

2. Strategic Direction

In commissioning this draft Master Plan, Council has reaffirmed its commitment to manage the development of the Airport as a key element of the regional transport network. This will ensure support for local and regional economic development and deliver on Port Macquarie's tourism potential whilst respecting stakeholder considerations, the environment, and communities around the Airport.

Council is committed to the following objectives:

- Promoting a safe and secure environment for all users of the Airport.
- Providing adequate infrastructure and facilities to meet the forecast demand for future airport operations.
- Ensuring the quality of life of nearby communities and the value of environmentally sensitive areas is in all developments and Airport operations.
- Ensuring the commercial and operational success of the Airport business.
- Establishing and maintaining strong partnerships with the community and key stakeholders.

The 2024/25 Draft Operational Plan identifies how Council will deliver on a range of Imagine2050 objectives and these include:

- Managing the Airport (operations and maintenance) as a commercial entity, including stakeholder engagement and advocacy.
- Carrying out inspections, security and safety, and regulatory compliance assessments.
- Planning and delivering airport infrastructure and facility improvements to meet demand, with this draft Master Plan being one element of delivering on this objective.
- Maintaining and ideally increasing community satisfaction with the Airport. Again, this draft Master Plan is a way of delivering an airport that aligns with community needs through the stakeholder engagement undertaken in developing this future plan for the Airport (please see Section 3).
- Ensuring all on-airport vegetation management activities are conducted in accordance with the Port Macquarie Airport Biodiversity Certification Strategy and related environmental agreements, approvals and protocols. This draft Master Plan fully respects these environmental requirements and also envisages determining if land that is surplus to future aviation and non-aviation needs could be returned into the conservation land areas assessed under the Biodiversity Certification Strategy (see Section 7).
- Undertaking asset management planning for Airport assets to meet community service needs, minimise risk, and efficiently manage asset lifecycle costs.

3. Consultation

PQQ has undertaken a two-stage approach to consultation on this draft Master Plan, with a first stage of consultation in 2024 to inform the direction of planning, and a second consultation stage comprising further public consultation on the draft Master Plan, which is planned for early 2025.

3.1 First Stage Consultation

The first stage of consultation was undertaken with airlines, GA operators, tourist, and business stakeholders as well as Council representatives and was held through July and August 2024 with briefings and meetings to inform the direction of this draft Master Plan. The purpose of those sessions was to:

- Gain different perspectives on potential airport development opportunities;
- Create a mechanism for early information exchange; and
- Demonstrate the commitment by Council to ongoing engagement with stakeholders.

3.1.1 Stakeholder engagement, July/August 2024

A summary of this early engagement is shown in Table 1.

Table 1: Summary of first stage stakeholder engagement

Stakeholder/Organisation	Contact	Method of Consultation	Date of Consultation	Relevance
Hastings District Flying Club	Rod Davidson	In person	13/08/2024	On-airport tenant
Eastern Air Services	Christian Corse	In person	13/08/2024	
Australian International Aviation College	Ged Byrne	In person	13/08/2024	
Jetfighter Australia Pty Ltd	Rodney Hall	In person	14/08/2024	
Helicopter Rebuilds	Peter Boyle	In person	14/08/2024	
Aus Flight Handling	Jared Marks	Teams Meeting	20/08/2024	Airport Operations
Port Macquarie Travel Pty Ltd	Justin Joyce	In person	14/08/2024	
Greater Port Macquarie Tourism Association	Janette Hyde	Teams Meeting	30/07/2024	Tourism Association
Destination North Coast NSW	Michael Thurston	Teams Meeting	19/08/2024	
Business NSW	Rod Barnaby	Teams Meeting	19/08/2024	Business Organisation

Stakeholder/Organisation	Contact	Method of Consultation	Date of Consultation	Relevance
Qantas	Ian Blekkenhorst Raphael Revello	Email	12/09/2024	Operating Airline
Port Macquarie Hastings Council	Chris O’Grady Michael Cosgrove	In person	13/08/2024	Local Government
Port Macquarie Hastings Council	Keith Hentschke Robert Fish	Teams Meeting	02/08/2024	
Port Macquarie Hastings Council	Mel Watkins Jan Bouhali Duncan Coulton	Teams Meeting	18/09/2024	

3.1.2 Outcomes from early consultation

A summary of outcomes from this first stage of consultation are described in this section, with a heading which groups where these discussion points have been incorporated into the draft Master Plan.

Aviation forecasts

- A focus on marketing of Port Macquarie as a tourist destination and the Airport as the gateway to the destination. This was informed through discussions with the Greater Port Macquarie Tourism Association and Destination North Coast NSW which identified tourism opportunities related to the area’s natural environment and nature-based tourism such as the Koala Hospital, Sea Acres Rainforest and Coastal Walk, the area’s Aboriginal and European Heritage, as well as local festivals and events, including ArtWalk, Iron Man Australia and Festival of the Sun. However, in line with the Port Macquarie-Hastings Destination Management Plan 2020 to 2024, there is an opportunity for a stronger point of difference to attract new and repeat visitors to the area.

Aeronautical Development

- Resurface the GA 1 apron to provide a resilient and appropriate surface for the GA activities.
- Revisit the airport leasing model to provide longer term leases to incentivise long term investment from existing and future tenants. The leasing model is vital to the attractiveness of the Airport to GA tenants. Longer term leases offer a higher level of certainty for new investment and businesses.
- Consult with GA tenants on the type and size of hangars prior to allocating plots and designing facilities such that hangars meet the different requirements of current and future tenants, in particular noting the potential for a third GA apron area.

- Port Macquarie is located in an advantageous position between Sydney and Brisbane Airports as well as being the closest mainland airport to Lord Howe Island and could become an expanded base for aircraft operating to the Island as well as becoming a hub for aircraft maintenance.
- Safeguard for a future terminal parallel to the runway.

Terminal Development

- Expanding terminal security and the arrivals and baggage hall, including lengthening of the baggage belt to a T-shape or similar to support larger aircraft operating from furthest apron bays (Bay 3 & Bay 4) and provide more active belt length and circulation space for passengers.

Access and Flood Resilience

- Improve ground transport access to the Airport by building flood resilience or alternate road access that can be used as all-weather access.

3.2 Airservices Australia

In October 2024, Council engaged with Airservices Australia (ASA) to notify ASA that the Master Plan was being updated and, as part of that process, that updated noise modelling would be provided to ASA for endorsement.

On 20 November 2024, Council provided ASA with the 2045 noise modelling report and ANEF contours for its endorsement.

ASA responded with a request for specific clarifications on 8 January 2025 and 20 February 2025. These clarifications have been responded to.

Accordingly, the draft 2045 ANEF contours in this draft Master Plan have evolved through continuous engagement with ASA and, whilst not yet endorsed, are considered unlikely to change materially given the engagement that has been completed with ASA.

3.3 Second stage consultation

After Council has formally endorsed the draft Master Plan, a second round of consultation will be undertaken. This entails presenting this 2025 Airport draft Master Plan for public consultation for a period of not less than 28 days.

Council will document all comments received during the consultation period, respond where required, and considering this feedback, identify potential amendments to this draft before it is presented to Council for finalisation and adoption as the final 2025 Port Macquarie Airport Master Plan.

4. Aviation Demand Forecasts

4.1 Passenger demand at Port Macquarie Airport

Demand through Port Macquarie Airport represents a mix of users including leisure travellers, tourists, business travellers and even Fly In Fly Out (FIFO) workers, transferring to sites in the resource sector via Brisbane and Sydney Airports. Demand growth has been supported by both improved prosperity and also changes in travel patterns generated by the COVID-19 pandemic, with people moving to the Port Macquarie area to work flexibly and realise a different lifestyle i.e. a sea or tree change. As a result of these moves, there has been an increase in tourism related to Visiting Friends and Relatives from inside NSW and from Victoria and Queensland. The area is also a stopover for international visitors travelling from Sydney up the North Coast and beyond, attracted by the natural environment and nature-based tourism such as the opportunity to see koalas in the wild, the Koala Hospital, Sea Acres Rainforest and Coastal Walk. WildNets Adventure Park, Timbertown and Billabong Zoo are also popular tourist attractions for visitors.

4.2 Aviation forecasts

The future volume of passengers and aircraft traffic as well as the mix of aircraft types using an airport have implications for both spatial land use planning as well as modelling of aircraft noise impacts.

As such, forecasting forms the foundation on which all airport Master Plans are based, setting a framework for understanding aviation-related development and its implications, including for noise. This draft Master Plan forecasts out 20 years to 2045, with the intention that it is then updated at regular intervals thereafter (e.g. every 5 years).

It should be noted that 2024 was a very challenging period for the domestic aviation industry in Australia, with the collapse of Bonza in April and Rex entering into administration in July. However, a Master Plan must take a longer-term view (20 years and beyond) and in doing so, long-term forecasts have been considered in an attempt to even out both positive and negative factors that occur in the short-term.

With each update to the Master Plan, the forecasts will be reviewed, and if appropriate revised, to reflect the latest changes in the industry and the factors impacting the long-term projections.

4.3 RPT Passenger Growth

4.3.1 Approach

Given the impact of COVID-19 from 2020 and the short-term impact of Bonza and Rex on recent aviation activity, 2019 was selected as the baseline year for this draft Master Plan, in particular noting that many long-term forecasts use a pre-COVID baseline. Based on annual statistics prepared by the Bureau of Infrastructure, Transport and Regional Economics (BITRE) annual passenger demand through Port Macquarie Airport was 218,600 passengers in 2019⁴.

⁴ https://www.bitre.gov.au/sites/default/files/documents/domestic_aviation_activity_annual_2019.pdf

2019 passenger throughput at the Airport was grown in line with a range of published forecasts as follows:

- Australian airport growth – given that Port Macquarie Airport has flight connections to Sydney, Brisbane and, until recently, Melbourne, a range of published forecasts were considered including 2024 BITRE data for these airports⁵ and all Australian airports out to 2050 as well as forecast growth rates from the 2019 Sydney and 2020 Brisbane Airport Master Plans, given that these datasets provide different Master Plan-specific forecasts over a shorter 20-year period.
- Econometric factors – to supplement the aviation forecasts, econometric factors were also considered such as the growth in population, employment and tourism for New South Wales and the Port Macquarie-Hastings region. Population and employment forecasts are typically undertaken for longer term planning horizons and are usually a useful benchmark when considering air traffic forecasts as they are not typically impacted by short-term market fluctuations.

4.3.2 Australian airport growth

BITRE released the “Australian aviation forecasts – 2024 to 2050 (Summary)”⁶ on May 3, 2024. The report offers an insight into the factors influencing aviation demand across Australia with reported data on passenger movements, airline operations and airport activity. The data spans current demand as well as forecasting the total number of Domestic and International air passengers travelling through Australian airports out to 2050. Growth rates from this study were used to inform potential demand growth at Port Macquarie Airport to 2045, with these varying from between 2.3 to 2.9% per annum compounded depending on the scenarios modelled, as follows:

- BITRE Sydney Airports (SYD and WSI) at 2.3% Compound Annual Growth Rate (CAGR);
- BITRE All Australian Airports (INT & DOM) at 2.3% CAGR;
- BITRE Melbourne Airport 2.6% CAGR;
- BITRE Brisbane Airport 2.8% CAGR; and
- BITRE All Australian Airports (DOM only) at 2.9% CAGR.

The Brisbane and Sydney Airport Master Plan forecasts show higher and lower end growth rates. Whilst the Brisbane forecast is considered optimistic (average 3.3% CAGR), Sydney Airport’s lower growth rate for Domestic/Regional routes (1% CAGR) is reflective of their 2039 Master Plan, which shows that available capacity at Sydney Airport will primarily be linked with increased international traffic. However, with the planned opening of the new Western Sydney International Airport (WSI) in 2026, alternate routes to the Sydney-basin could be established for Port Macquarie, providing

⁵ The BITRE forecast is for the Sydney region and includes Sydney Kingsford Smith and the future Western Sydney Airport.

⁶ Bureau of Infrastructure and Transport Regional Economics (BITRE), (2024), Australian aviation forecasts – 2024 to 2050 (Summary), (Page 5) Available at: <https://www.bitre.gov.au/sites/default/files/documents/bitre-rr157-summary.pdf> [Accessed 17 June 2024]

additional connectivity and demand growth related to the new airport's route network and the opportunity presented.

4.3.3 Econometric factors

Econometric factors were also considered in terms of projecting potential passenger throughput at the Airport including NSW Population Projections for (2021-2041), Port Macquarie Hasting Council's REMPLAN data for the 25-year period (2021-2046), NSW Employment Projections for the Mid North Coast SA4 from 2016-2026 and 2026-66 as well as Tourism Forecasts for NSW and the local region. These forecasts generated a range of potential growth rates of between 0.5% and 2.9% per annum compounded, as follows:

- Population growth for NSW and the Port Macquarie Hastings region at an average 0.9% and 1.2% respectively.
- Employment growth for NSW at 1.3% CAGR.
- Domestic Visitor Nights for NSW at 2.9% CAGR.

The highest growth rate of 2.9% per annum is from Tourism Forecasts for Australia 2023 to 2028, published in November 2023 provide short-term projection for tourism growth, including data broken down at state level. Whilst it is unlikely that this level of growth could be sustained over 20 years, consultation has indicated that there is an opportunity for a stronger marketing of the region in line with the Port Macquarie-Hastings Destination Management Plan 2020 to 2024, which should deliver short-term growth through to 2030.

4.3.4 Demand Projects for Port Macquarie Airport

When considering the above datasets, a range of forecasts have been considered for this draft Master Plan.

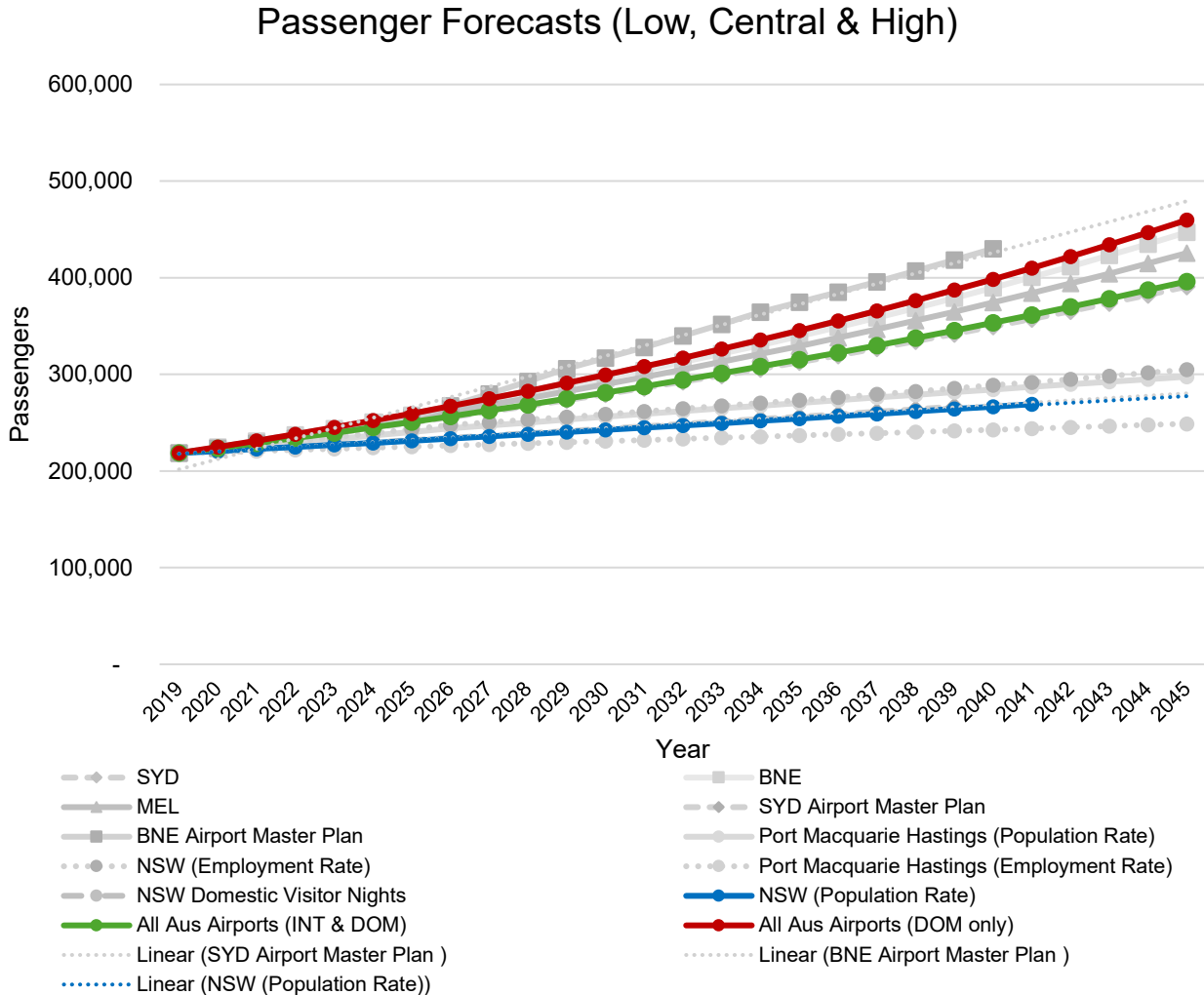


Figure 3: Proposed Low, Central and High Demand Projections for PQQ by 2045

- A **Low** demand projection taking the population growth forecast for the NSW region which results in 298,000 passengers per year through the Airport by 2045.
- A **Central** case which takes the All Australian Airport forecast from BITRE as an appropriate central case for planning to 396,000 passengers per year through the Airport by 2045. This scenario is also comparable to the BITRE forecast for Airports in the Sydney basin.
- A **High** growth projection taking the All Australian Airports (Domestic only) forecast from BITRE which results in up to 460,000 passengers per year through the Airport by 2045.

The **Central** case has been used as a prudent forecast to inform planning for RPT operations in this draft Master Plan. This represents an almost doubling of demand over 20 years and therefore broadly double the daily number of passengers and potentially aircraft movements.

Table 2: Proposed Low, Central and High Demand Projections for PQQ by 2045

Annual Passenger Demand	Low	Central	High
2019	218,600		
2025	241,000	251,000	260,000
2030	256,000	281,000	299,000
2035	271,000	315,000	345,000
2040	284,000	353,000	398,000
2045	298,000	396,000	460,000

4.3.5 Benchmarking

An approximate doubling of demand in the next 20 years reflects the direction of growth captured in the industry published forecasts and has been demonstrated at Port Macquarie Airport previously with demand increasing from around 80,000 passengers per annum in 1999 to over 200,000 passengers 20 years later.

With a population of 50,193 in the urban area⁷ and 86,638 in the Port Macquarie-Hastings Local Government Area (LGA)⁸ in 2021, demand through the airport at 218,600 passengers per annum in 2019 represents approximately 2.5 to 4.5 trips per resident per year.

Taking the central demand case results in a demand projection of 396,000 passengers per year through PQQ by 2045.

Taking population growth forecasts and applying these to the 2021 population for the Port-Macquarie-Hastings urban area and the whole LGA, gives projected populations of approximately 66,000 and 114,000 respectively by 2045. Accordingly, annual demand of 396,000 passengers per year through PQQ by 2045 is equivalent to between 3.5 and 6 trips per person per year. Assuming increased prosperity and therefore a higher propensity to travel over time, this forecast therefore benchmarks as a considered and proportionate forecast to use for the Master Plan.

⁷ NSW Government (n.d) NSW Population Projections, Available at: <https://www.planningportal.nsw.gov.au/populations> [Accessed 17 June 2024]

⁸ Port Macquarie Hasting Council (2024), Population, Households and Dwellings Forecasts to 2046, Available at: <https://app.remplan.com.au/portmacquariehastings/forecast/summary?state=y9LMcwr7xTmPVljtVXYjVnfntPtdpN> [Accessed 23 July 2024]

4.4 RPT Aircraft Movement Forecast

Port Macquarie Airport currently handles 18 RPT aircraft movements on a typical day (around 450 movements per month or around 5,100 movements per annum). RPT aircraft types include the Dash8 Q400 as flown by QantasLink to Sydney and Brisbane, the Saab 340 as flown by Rex and 737-800 Code C jet aircraft as operated by Bonza before its collapse in April 2024. It is assumed that a lower cost carrier flying larger jet aircraft will again be operating from Port Macquarie Airport by 2045.

With the mix of RPT aircraft operating at Port Macquarie comparable to 2023, it is envisaged that the forecast passenger growth to 2045 will result in an increase in aircraft movements on a typical day to around 30 movements and over 8,400 movements per annum. This maintains an approximate 80% planning load factor across all movements.

Daily and annual aircraft movements have been used to inform spatial planning and noise modelling – for example, the 2045 future flight schedule demonstrated that the peak number of aircraft on ground at any one time would total 4 RPT aircraft, of which at least one and potentially up to two could be for a Code 4C jet. This indicates that all existing stands on the RPT apron will be being used by commercial aircraft, meaning aeromedical, business jet and larger charter operations will need to be accommodated elsewhere in passenger peak periods (see Section 5.2.4).

4.5 General Aviation Growth

Port Macquarie Airport is an important base for GA operators and aviation businesses including the Australian International Aviation College (AIAC), Hastings District Flying Club (HDFC), Eastern Air Services, Skydive Port Macquarie, Port Macquarie Helicopters and Helicopter Rebuilds Pty Ltd.

Circuit training makes up the highest proportion of GA movements at almost 28,000 movements per annum in 2023. GA arrivals and departures account for the remainder, at around 11,500 movements in 2023.

GA arrivals and departures are projected to increase by 1.5% per annum between 2023 and 2045, as flight schools that represent a significant proportion of the GA movements are anticipated to pivot towards advanced flight training services. As such, the circuit training movements associated with basic flight training in the forecast have been maintained at 2023 levels to 2045, with all GA growth considered as arrivals and departures.

By 2045, circuits are expected to remain at around 28,000 movements per annum, with arrivals and departures increasing to 16,000 movements per annum.

5. Aeronautical Development

5.1 Aerodrome Reference Code

The CASA Manual of Standards 139 (MOS139) provides standards and requirements as well as general guidance on the planning, design, operation and maintenance of airports in Australia.

MOS139 specifies the Aerodrome Reference Code for individual airports in terms of performance capability and size of aircraft which use that airport. Generally speaking, the higher Code numbers and letters designate larger aircraft and accordingly larger aerodrome infrastructure to accommodate them.

The Aerodrome Reference Code comprises a number of components including runway length required on take-off as well as an aeroplane's physical dimensions in terms of wingspan and outer main gear wheel span. Port Macquarie Airport has an Aerodrome Reference Code of 4C with a Runway 03/21 at 1,800m in length and suitable for aircraft operations up to 36m in wingspan.

5.2 Airfield and aircraft movement areas

5.2.1 Runway 03/21

Runway 03/21 at the Airport is a Code 4C runway 1,800m long and 45m wide and can accommodate Code 4C aircraft, such as the Airbus A320 or 737-Max 8.



Figure 4: Runway 03/21 on approach from the north (© ACG)

In accordance with CASA requirements, the runway strip width is 280m, 140m each side of the runway centreline.

In 2013, Council completed a \$21 million airside infrastructure upgrade at the Airport to underpin the region's future growth, economic development and tourism potential. The project was supported by \$15 million in funding assistance from the Australian Government.

The project included:

- Strengthening, extending (by 110m to south) and widening Runway 03/21 to 1,800m long and 45m wide;
- Expansion of the existing RPT apron located in front of the terminal building to provide additional parking positions for larger aircraft, including a new taxiway connection, Taxiway Alpha, to the main runway;
- Relocation of the helicopter landing and parking area, and GA aircraft parking areas; and
- Provision of associated infrastructure / facilities (e.g. runway, taxiway and apron lighting, other visual aids, drainage, line marking etc).

Whilst no changes are proposed to runway geometry in this draft Master Plan, Runway 03/21 will require refurbishment / overlay in the next few years owing to the age of the surface.

CASA's MOS139 requires a Runway End Safety Area (RESA) to be provided at the end of each runway to protect an aircraft that lands too early or overruns the end of the runway. The current RESAs at the Airport are 60m long and 90m wide and are clear and graded but not paved.

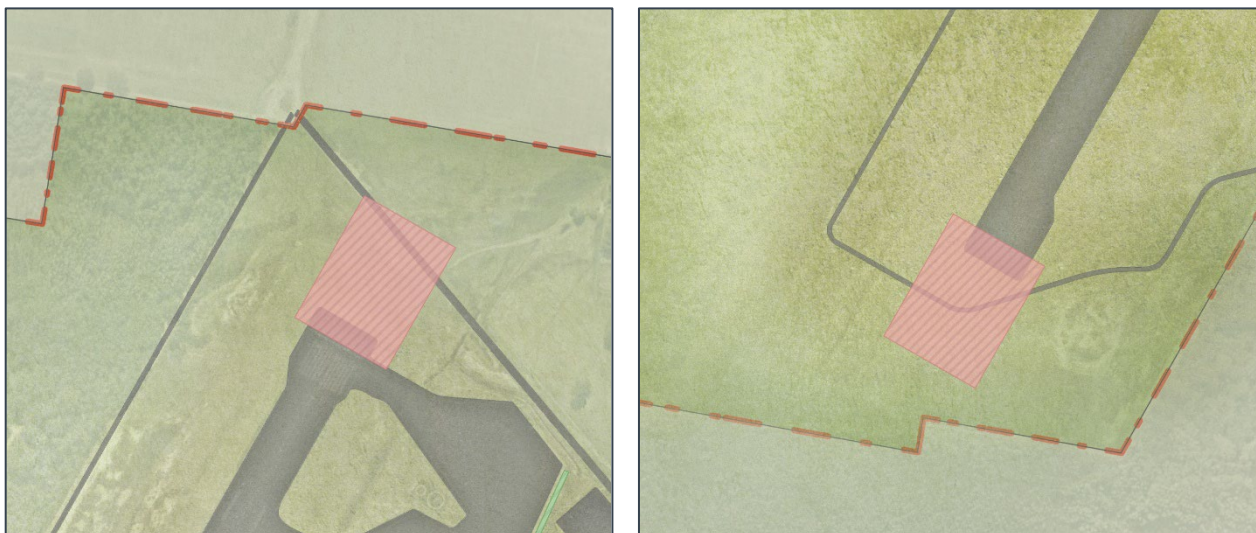


Figure 5: Proposed 120m paved RESAs on each end of Runway 03/21

This draft Master Plan proposes paving the first 120m of the RESA at each end of the runway to increase the Take Off Run Available (TORA) of the runway to 1,920m in each direction. With a TORA of 1,920m, Code 4C aircraft such as the A320 and 737 should be able to fly to longer distances i.e. to Melbourne and Adelaide without weight restriction i.e. at Maximum Take Off Weight.

Changes proposed in this draft Master Plan:

Refurbishment / overlay of Runway 03/21 in the next few years owing to the age of the surface.

Paved 120m long RESAs at each runway end to provide for longer take-off runs for large Code 4C jets flying interstate.

5.2.2 Decommissioned Runway 10/28

The east-west grass runway 10/28, used by light GA aircraft, was permanently decommissioned in December 2012 in conjunction with the above works on Runway 03/21.

5.2.3 Taxiways

A new taxiway connection, Taxiway Alpha, was provided between the Runway 21 threshold and the expanded RPT apron (Bays 3 and 4) as part of the 2013 upgrade.

A partial 877m parallel taxiway, Taxiways Foxtrot 3 (F3 below) and Delta (D below), was built in 2023 at a cost of \$8 million to improve aviation safety, efficiency and to support and enhance GA operations at the Airport. This project was jointly funded by Council and by the Australian Government through a grant from the Regional Airports Program. The new parallel taxiway relieves runway congestion by reducing the time GA aircraft occupy the runway, and ensures that local, smaller aircraft can continue their operations safely in conjunction with larger, passenger aircraft.

A dedicated engine run-up area was also introduced to support GA pre-flight procedures.

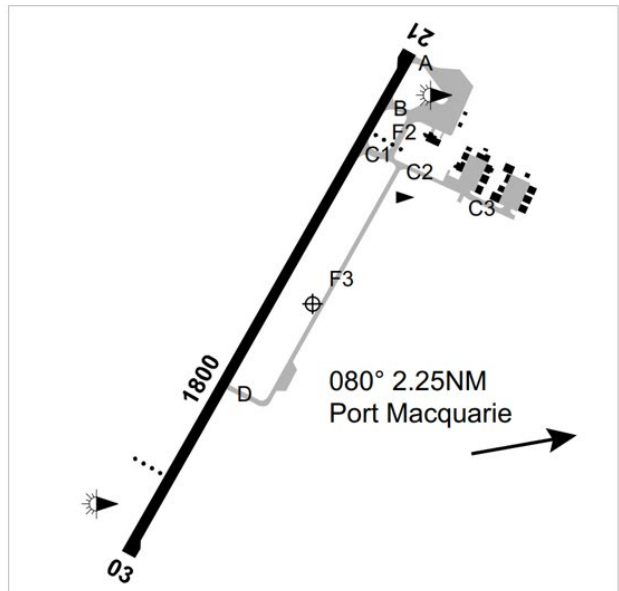


Figure 6: Aerial and AIP image showing Runway 03/21 and taxiways

The parallel taxiway project did consider a full-length taxiway (as well as the ability to upgrade to Code B) but was only built to chainage 1,200m during the 2023 project. Subject to runway activity, extension of the taxiway could be considered in the future.

The existing Taxiway Charlie (Charlie 1, 2 & 3) leading to the GA areas is currently operated as a Code B taxiway. As and when development of the GA apron area 3 progresses, Taxiway Charlie will need to be extended to provide access for aircraft to this new apron.

Changes proposed in this draft Master Plan:

Extension of Taxiway Charlie to serve an expanded GA apron.

5.2.4 RPT Apron

The apron adjacent to the terminal provides parking for aircraft operating as Regular Passenger Transport (RPT) services i.e. carrying passengers. The RPT apron provides four (4) parking positions, with Bays 1 and 2 located immediately in front of the terminal building being suitable for smaller Code 3C aircraft, such as QantasLink's Dash-8 Q400 turboprop aircraft or the Embraer E190, and Bays 3 and 4 being suitable for Code 4C aircraft such as Boeing 737 or Airbus A320. Bays 3 and 4 of the RPT apron can be accessed by a 100m covered walkway leading from the Airport terminal (see Section 5.4).

It should be noted that Bays 1 to 4 on the RPT apron, including lighting masts, reflect the previous Code 3C runway strip (150m, with 75m either side of the runway centreline) and its associated 1:7 transitional surface. All new bays will need to comply with the Code 4C 280m runway strip width and associated transitional surface.

Whilst not required in the 20-year life of this draft Master Plan, airfield planning has identified that a fifth and potentially a sixth stand for Code 4C jets could be provided to the north of the current RPT apron across Tuffins Lane, which was closed as part of delivering Bay 4 to comply with safety and security requirements associated with the operation of aircraft on the expanded apron. The aircraft on these new stands would need to taxi onto stand and turn to face back towards the runway such that their tail height does not infringe the transitional surface.



Figure 7: Hatched area showing potential location of a fifth or sixth RPT aircraft stand

Should an alternative location be required to deliver RPT apron expansion reflecting a Code 4C 280m runway strip width for all stands, this draft Master Plan safeguards for a potential new apron located approximately midway along the runway, minimising taxiing time for arriving and departing aircraft. However, this long-term alternative would also require the provision of a new terminal building and associated facilities including road access, car parking, fuel facilities etc. and as such implies significant capital investment. Accordingly, this is considered from a safeguarding perspective only and would be beyond the 20-year life of this draft Master Plan.

Changes proposed in this draft Master Plan:

No changes to the RPT apron are proposed in this draft Master Plan.

Beyond 2045, additional aircraft stands to the north of current Bay 4 could be provided in line with requirements in CASA's MOS139 or alternatively a new apron could be developed approximately midway along the runway.

5.2.5 GA Apron Areas

GA operators at the Airport include the Australian International Aviation College (AIAC), Hastings District Flying Club Inc (HDFC), Eastern Air Services and Port Macquarie Helicopters. Other pilot training providers based at other airports are able to conduct circuit and other training within Port Macquarie airspace, abiding by the regulations set out by the Civil Aviation Safety Authority (CASA) and Airservices Australia.

The existing GA precinct is located to the east of the passenger terminal and car park. The precinct consists of two U-shaped cul-de-sac aprons, GA1 and GA2, which provide access to the adjacent aircraft hangar facilities. Parking areas for local and itinerant GA aircraft up to Code B are available on the GA aprons and on natural (grassed) surface areas located adjacent to Taxiway Charlie including on the decommissions runway 10/28. A refuelling facility, currently under development, will be located adjacent to the GA1 apron.

This draft Master Plan proposes maximising the development of GA1 and GA2 by expanding these back towards Boundary Street as well as safeguarding for a third GA3 apron to the east of GA2. The GA1 apron will be resurfaced with hot mix to provide a resilient and improved surface for GA activities.

The expansion areas for GA1-3 will provide an additional 45,000m² for GA operations, an increase of 120% from current facilities. Subject to demand, as a precursor to permanent hangar structures, there is the potential for temporary domed hangar structures to be placed in the GA3 area.



Figure 8: GA areas 1, 2 and 3

Consultation for this draft Master Plan identified that GA tenants would welcome consultation on the type and size of hangars prior to allocation of plots and design of facilities such that hangars meet the different requirements of current and future tenants.

Changes proposed in this draft Master Plan:

The GA1 apron will be resurfaced with hot mix to provide a resilient and improved surface for GA activities.

Expansion of GA1 and GA2 areas to maximise the space.

Safeguarding for a GA3 area to support future GA growth.

5.2.6 Helicopter Facilities

The helicopter parking area is located just to the east of parallel Taxiway Foxtrot and south of Taxiway Charlie 2.

Changes proposed in this draft Master Plan:

No changes to helicopter facilities are proposed as part of this draft Master Plan.

5.3 Aviation Support

5.3.1 Refuelling Facilities

The fuel farm is located to the south-east of the passenger terminal on the western edge of GA1. Refuelling of RPT aircraft is by fuel truck (JetA1) on the RPT apron. AVGAS and JetA1 are available from GA bowsers.

Changes proposed in this draft Master Plan:

No changes to refuelling facilities are proposed as part of this draft Master Plan.

5.3.2 Navigational Aids (Nav aids)

Runway 03/21 is classified as an instrument non-precision approach runway. Unlike precision approaches which have equipment such as an Instrument Landing System, non-precision approaches do not provide a glidepath to help pilots with vertical descent, though do provide nav aids for lateral guidance. At the Airport, Baro-VNAV approach procedures are provided. These make use of onboard GPS systems and barometric pressure readings to give aircraft vertical descent guidance rather than using ground-based nav aids.

On the ground, the Airport has a non-directional beacon (NDB - Airservices Australia infrastructure) as well as precision approach path indicators (PAPI). Positioned alongside the runway, PAPI provide visual descent guidance information to pilots during the visual final approach.



Figure 9: Non-directional beacon (NDB) location

There is also a pilot activated lighting (PAL), which provides low intensity runway lighting and edge lighting on Taxiway Alpha, Bravo and Charlie 1. The PAL also activates the PAPI and illuminated wind indicators (IWI) located at both ends of the main runway.

In 2018, the Office of Airspace Regulation (OAR) conducted a Preliminary Airspace Review of the Airport in terms of airspace arrangements and classifications within a 20 nautical mile (nm) radius of the facility. This confirmed that the current nav aids are suitable for the current traffic and conditions, whilst also identifying a number of measures which could enhance the operation of the Airport, including constructing a parallel taxiway to increase aerodrome efficiency, which has now happened – see Section 5.2.3.

In 2016, CASA required the use of the Global Navigation Satellite System (GNSS) for instrument flight rules (IFR) navigation, reducing reliance on ground-based nav aids. Consequently, many nav aids were decommissioned, and the remaining ones form Australia’s Backup Navigation Network (BNN), which includes over 200 nav aids at 124 airports. This network, consisting of NDBs (as per the equipment at the Airport), Distance Measuring Equipment (DME), and VHF Omni-directional Radio Ranges (VOR), serves as a backup in case the GNSS network fails.

In 2023, Airservices Australia carried out a post-implementation review of the BNN. Whilst the results of this review have not been published yet, it is likely that the Airport’s NDB will continue to be an important part of Australia’s BNN during this draft Master Plan period and, as such, the NDB and its associated 300 metre radius buffer zone will continue to be safeguarded as part of this draft Master Plan.

Changes proposed in this draft Master Plan:

No changes to nav aids are proposed as part of this draft Master Plan.

5.3.3 Weather Information

The Bureau of Meteorology (BoM) has an Automatic Weather Station (AWS) located centrally on airport.

Changes proposed in this draft Master Plan:

No changes to the weather station are proposed as part of this draft Master Plan.

5.3.4 Aerodrome Rescue and Fire Fighting Services

CASA requires Aerodrome Rescue and Fire-Fighting Services (ARFFS) to be provided on-airport when demand exceeds 350,000 passengers per annum. Based on the forecast passenger growth outlined in Section 4, ARFFS facilities will be required to be established during the 20-year planning period of this Master Plan (estimated to be 2040, as per Table 2). Planning and development of the ARFFS would need to be undertaken in the period leading up to 2040.

As set out in CASA's MOS Subpart 139H, critical to the siting of the ARFFS facility will be response times which usually determine an optimised location with respect to the runway and airfield. The MOS sets a requirement for:

- A two-minute response time to the end of each runway; and
- A response time not exceeding three minutes to any part of the movement area.

An area to the east and midway along Runway 03/21 has been identified as a possible location for a future ARFFS facility at the Airport as this will provide appropriate response times to all parts of the airfield in the required times.

Should regulation change and airport rescue and fire-fighting no longer be the sole remit of ASA, a different strategy and location might be considered allowing sharing of the facility with Fire and Rescue NSW.

The category of ARFFS required at an airport is dependent on the largest design aircraft using that airport and the frequency that aircraft uses the airport. As future RPT operations will primarily be Code C turboprops and jets (Dash8 Q400 and 737s), the ARFFS provision is likely to be Category 6 cover, requiring the Airport to have a minimum of two ARFFS vehicles.

Changes proposed in this draft Master Plan:

A potential location for a future Aerodrome Rescue and Fire-Fighting Services facility has been identified as part of this draft Master Plan.

5.3.5 Air Traffic Control

There are no Air Traffic Control (ATC) facilities at the Airport, and it is unlikely that an ATC tower will be warranted at the Airport over the period of this draft Master Plan.

Whilst no specific standards exist which state when tower facilities are required, the current example of Ballina-Byron Gateway Airport, 350km north of the Airport, provides a live example of ATC being provided, with an ATC tower scheduled to be in place by late 2025.

Passenger traffic at Ballina Byron Gateway Airport is in excess of 600,000 passengers per annum and projected to exceed 900,000 passengers per annum by 2040. Accordingly, the airspace in and around the airport is getting busier and will move to being controlled airspace in 2025 in advance of the opening of ATC facilities at the airport in November 2025.

With demand at Port Macquarie Airport projected to reach 396,000 passengers per annum by 2045, less than half of passenger demand at Ballina Byron, it is unlikely that the airspace around the Airport will be busy enough to warrant ATC facilities by that time horizon, though this requirement will be continuously reviewed with each regular update of the Master Plan.

Changes proposed in this draft Master Plan:

No requirement for a control tower in the life of this draft Master Plan, though a potential location for future ATC has been safeguarded for, proximate to ARFFS. Civil Aviation Safety Regulations (CASR) Part 172 Manual of Standards (MOS) requires that air traffic controllers have an unobstructed view of the runway and airport movement area from the control tower and accordingly a central location is envisaged for this type of future facility should it be required.

5.4 Terminal Development

The Airport terminal upgrade project was completed in December 2019. The \$10 million upgrade, jointly funded by the Australian and NSW Governments as well as Council, has doubled the size of the previous terminal building facility and provides improved services and functionality. The project has provided:

- An expanded passenger check-in area;
- Expanded, air-conditioned departures and arrivals areas, providing enhanced passenger and visitor facilities;
- Expanded passenger, carry-on and checked baggage security screening areas, and new passenger screening equipment;
- Expanded and improved baggage claim area and facilities;
- Upgraded utilities and services infrastructure, including 100kW rooftop solar PV system installed as the final stage in June 2021; and
- Updated communications and IT facilities and free public Wi-Fi.

The new terminal building has been central to rebranding the Airport as a contemporary, convenient and comfortable facility, which still provides that renowned personalised, regional service, consistent with the Greater Port Macquarie tourism brand.

In addition, Council successfully secured funding through round two of the Regional Airport Program for construction of a 100m covered walkway leading from the Airport terminal, to Bays 3 and 4 of the RPT apron. The walkway provides shelter and improves the passenger experience when accessing these bays, particularly during inclement weather.

Given the projected doubling of RPT traffic to 2045, an expansion of the terminal will be needed by 2045 in particular to accommodate the need for expanded security screening (with two lanes, rather than just one), an enlarged passenger departures area post-security to accommodate demand associated with regular Code C jet operations and expanded baggage reclaim with two carousels and greater reclaim presentation length for passengers collecting bags.

To accommodate these larger functions, this draft Master Plan envisages an expanded terminal footprint with a new departures and arrivals hall to the north, effectively widening the existing covered walkway into an enclosed building to accommodate the departure lounge and arrivals

corridor, with the security and baggage reclaim reconfigured and expanded within the footprint of the existing terminal to provide the required future capacity.



Figure 10: Expanded terminal footprint to accommodate demand to 2045

As described in Section 5.2.4, this draft Master Plan safeguards for an RPT apron reflecting a Code 4C 280m runway strip width for all stands approximately midway along Runway 03/21. This new midfield apron would require a new terminal facility and accordingly an appropriate area for a new terminal and associated car parking has also been safeguarded.

Changes proposed in this draft Master Plan:

Enlarged terminal footprint to accommodate expanded functions to deliver a doubling of demand by 2045.

Safeguarding for a future terminal beyond the 20-year life of this draft Master Plan and approximately midway along the runway.

5.5 Ground Transport Planning

5.5.1 Access Roads

The principal vehicular access to the airport is currently provided via Hastings River Drive and Boundary Street.

Flooding of Boundary Street in 2021 highlighted the need for improved access to the Airport during flood events. Council's Integrated Transport Plan (ITP) acknowledges the importance of road access for the resilient operations of the Airport precinct, setting out the short-term actions to duplicate the Boundary Street connection between the Airport and Hastings River Drive, as well as to explore alternative flood free access to the Airport⁹.

Consultation and preliminary planning processes have commenced for a future project to upgrade and improve the capacity of Boundary Street¹⁰. Capacity enhancements potentially include widening and making Boundary Street an arterial road, through provision of two traffic lanes on each side of the road separated by a median and with a shared path on the west side. Flood resilience could also be improved through improved drainage or other alleviation measures (e.g. upgrading existing culvert crossings). To accommodate for development on the Airport Precinct, Council's ITP envisages the further improvements in the Medium Term, providing additional turning capacity at the intersection between Boundary Street and Hastings River Drive¹¹.

Whilst the Boundary Street upgrade will provide flood resilience for a 20-year flood event, the flood event of March 2021 was a 1 in a 100 year event which significant areas of the airfield and Boundary Street underwater. In alignment with Council's ITP actions⁹, this draft Master Plan plans for an alternative access emergency route for the Airport between the eastern edge of the airfield and The Binnacle during extreme weather events such as flooding, bushfires or a comparable emergency. This access route would be gated and locked for use by specified emergency and Airport personnel only. It would be used during extreme events only and would not be suitable for and could not be used as a secondary/alternative general public access route to the Airport.

The upgrade of Runway 03/21 required closure of a section of Tuffins Lane to the north at the end of the runway. This section of roadway was decommissioned in 2013.

⁹ PMHC Integrated Transport Plan – Action 12.2.0 and Action 12.1.0

¹⁰ [PMHC – Our Projects – Boundary Street Upgrade](#)

¹¹ PMHC Integrated Transport Plan – Action 4.1.0



Figure 11 Locked and gated emergency road access from The Binnacle (no access permitted to the general public)

Changes proposed in this draft Master Plan:

A new locked and gated road connection to The Binnacle for alternative access by emergency and Airport personnel only in the case of flood or bushfire or comparable emergency.

5.5.2 Forecourt and Car Parking

Private and taxi drop-off and pick-up of passengers and their baggage is possible outside the front of the terminal along the kerbside in the forecourt outside the terminal. Vehicle standing in this zone is permitted for 2 minutes only.

For people wishing to farewell passengers and accompany them into the terminal building, or to meet them in the terminal, a limited period of free parking is provided in Car Park 1.

There are two car parking areas at the Airport:

- Car Park 1 (175 public spaces) which is adjacent to the main terminal.

- Car Park 2 (124 public spaces and 96 car rental spaces) which is located approximately 150m from the main terminal building.

Car Park 1 is located directly in front of the passenger terminal building and has been allocated to short stay parking.

Car Park 2 is located off Boundary St and has been allocated for longer term parking (e.g. one week or more) and car rentals.

This draft Master Plan has identified additional car parks to support growth at the Airport. These include:

- Expansion of the existing short stay Car Park 1 to the south, being cognisant of airfield separation distances from CASA's MOS139 as well as the OLS (see Section 6). This car park extension could provide approximately 170 additional spaces.
- The triangle plot north of Boundary Street and south-east of Car Park 2 that has previously been used informally for car parking during peaks associated with Bonza's jet operations. This new car park could provide approximately 160 additional spaces.
- Across Boundary St, which has the highest potential capacity though could increase minimum walking distances to the terminal by ~350m. This new car park could provide approximately 390 additional spaces at grade.

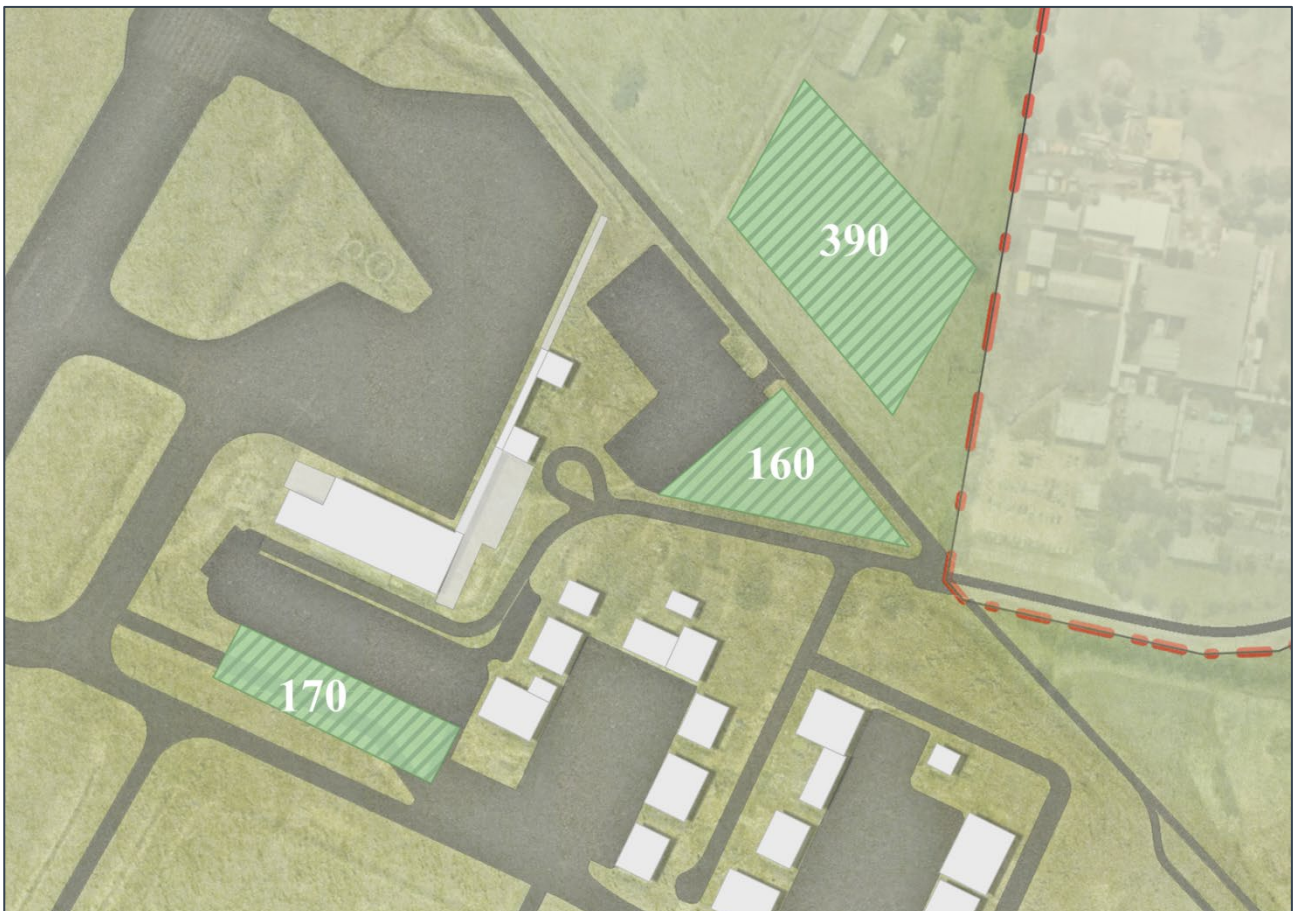


Figure 12: Locations for additional car parking

This draft Master Plan safeguards all three areas. How and when the car parks are developed will be subject to demand triggers and specific planning/design studies but would likely entail expansion of Car Park 1 to the south and development of the triangular plot south-east of Car Park 2. The larger car park across Boundary St would likely be the final development. These car parks would all be at grade but in order to maximise the current terminal site there may be a need to deck new car parks where the OLS allows.

Changes proposed in this draft Master Plan:

Additional car parking areas identified to be developed in line with demand increases.

5.5.3 Public Transport

A range of public transport, taxi and rideshare options are available to passengers travelling to and from the Airport.

Taxi and shuttle bus services are located in the forecourt, outside the terminal and in close proximity to the baggage claim area.

Route 341 bus services operate from the bus stop located next to the rental car park, with 8 services per day in each direction between the Airport and the town centre. With a doubling of passenger demand by 2045, there will be a strong case for a more frequent service operating every hour in each direction into the future.

Changes proposed in this draft Master Plan:

In line with demand increases, Council to consider an improved bus service frequency between the Airport and the town centre.

6. Airport Safeguarding

Managing land use around airports to prevent inappropriate development is important for protecting airspace and flight paths and limiting the impact of noise.

6.1 Obstacle Limitation Surfaces and PANS-OPS

Obstacle Limitation Surfaces (OLS) and Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS) surfaces are a set of 3-dimensional invisible surfaces that define the volume of airspace that should be kept free of development and obstacles to minimise the risk to aircraft on approach to or on departure from an airport. OLS apply when flying by sight, also known as using Visual Flight Rules or VFR. PANS-OPS surfaces describe the minimum airspace required for Instrument Flight Rules or IFR when flying without external visual reference to the ground, obstacles or other aircraft. Ideally the OLS and PANS-OPS should be kept free of obstacles such as radio masts, tall buildings, even trees and vegetation.

The OLS and PANS-OPS surfaces defined for Runway 03/21 are provided in Appendices D and H, with a smaller version of the OLS mapping provided in Figure 13. PANS-OPS surfaces have been developed by ASA.



Figure 13: OLS for Runway 03/21

Since the addendum to the 2010 Master Plan was published in 2013, the Civil Aviation Safety Authority (CASA) has updated the OLS design criteria in MOS139. Most notably for the Airport, the

runway strip width was reduced from 300m to 280m, which also reduces the width of the approach surfaces at either end and the position of the transitional surfaces.

In terms of OLS, MOS139 specifies a 2% take-off climb surface for Code 4C runways such as Runway 03/21. Regular cropping of vegetation at the southern end of the runway is required to prevent vegetation growth infringing the 2% slope. Council has implemented detailed mitigation measures to control the implementation of cropping works so as to minimise any impact on environmentally sensitive areas within the OLS take-off areas.

Changes proposed in this draft Master Plan:

This draft Master Plan incorporates an updated OLS design to reflect the adjusted requirements set out by the Civil Aviation Safety Authority since the 2010 Master Plan addendum was released in 2013.

No changes are made to the current PANS-OPS designed by ASA.

6.2 Noise

Council recognises that noise from aircraft operations is an important issue for local communities and is committed to reducing the noise impact of aircraft operations where possible.

RPT aircraft noise at the Airport is influenced by airline scheduling and slot allocation at origin and destination ports, in particular Sydney Kingsford Smith Airport. Council is committed to influencing and improving noise outcomes where possible, such as through the Fly Neighbourly agreement. This voluntary code of practice with GA operators seeks to limit circuit training to specific hours and proposes preferred use of the runway and maintaining specific altitudes over residential areas to minimise noise impacts (see Section 6.2.2).

In accordance with industry best practice and in line with the Australian Government requirements at capital city airports, Council has commissioned Australian Noise Exposure Forecast (ANEF) modelling to demonstrate aircraft noise impacts out to 2045. This is to both inform the community of noise impacts, but also to prevent inappropriate development in areas which will experience aircraft noise in the future.

6.2.1 Australian Noise Exposure Forecast (ANEF)

The aircraft Noise Exposure Forecast (NEF) technique was first developed in the United States of America in the late 1960s. It was subsequently redefined in Australia in 1982. The NEF system is a scientifically based computational procedure for determining aircraft noise exposure levels around aerodromes. It can be used for assessing average community response to aircraft noise as well as for land-use planning around aerodromes. In the Australian NEF system, noise exposure levels are calculated in Australian Noise Exposure Forecast (ANEF) units, which take into account the following features of aircraft noise:

- The intensity, duration, tonal content and spectrum of audible frequencies of the noise of aircraft take offs, approaches to landing, and reverse thrust after landing (for practical reasons, noise generated on the aerodrome from aircraft taxiing and engine running during ground maintenance is not included).

- The forecast frequency of aircraft types and movements on the various flight paths, including flight paths used for circuit training. The average daily distribution of aircraft arrivals and departures in both daytime and night-time (daytime defined as 0700 hours to 1900 hours, and night-time defined as 1900 hours to 0700 hours). Aircraft in the night-time period count as four aircraft in the day period to account for the more sensitive nature of the night-time aircraft movements.

6.2.2 Flight Tracks

Maps of modelled flight tracks are presented in Appendix B.

Arrival and departure tracks have been modelled in line with published procedures. Utilisation of tracks was informed by the previous 2030 ANEF modelling which was formally endorsed by Airservices Australia (ASA) in 2012 and which reflects the 1,800m long runway. Further data provided by ASA was also incorporated into the assessment to reflect RPT flight tracks. Consideration of available wind rose data indicates a prevailing wind from the south-west and the west which reflects the orientation of Runway 03/21 and has not changed significantly since the previous Master Plan.

Circuit track usage was informed by the Fly Neighbourly Agreement, a voluntary code of practice endorsed by GA operators aimed at reducing noise disturbance to local residents from circuits within a 3.7km radius of the Airport.

Table 3: Fly Neighbourly operating hours

Period	Hours Circuits allowed
Daylight Savings	Monday to Friday 0700hrs-2200hrs
Winter	Monday to Friday 0700hrs-2100hrs
Saturdays	Monday to Friday 0800hrs-1800hrs
Sundays and Public holidays	No continuous circuit training *Exemptions apply

The Fly Neighbourly Agreement encourages preferred use of Runway 03 when wind and traffic conditions permit, with circuits conducted to the west of the Airport. This has resulted in a higher use of the western circuit (up to 52%) and a corresponding reduction in use of the east circuit.

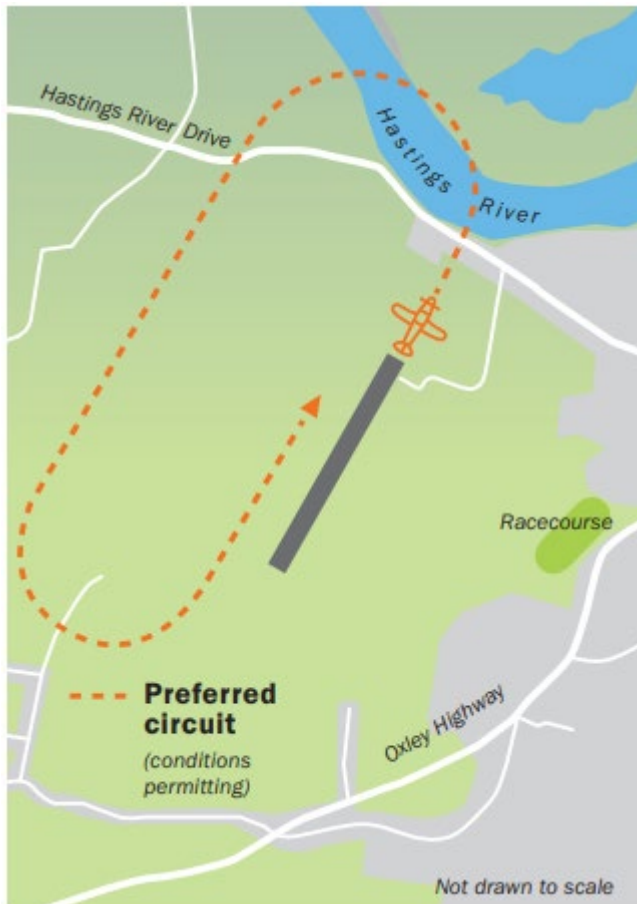


Figure 14: Fly Neighbourly - Preferred Circuit

More details on the Airport's Fly Neighbourly Agreement can be found on the Airport's website¹² page.

6.2.3 Aircraft Noise Forecasts in Australia using AS2021:2015

AS 2021:2015 describes the ANEF system and the method for producing ANEF contours. The output of the ANEF modelling process is a map showing ground contours representing aircraft noise levels around the airfield.

ANEF charts show an airport and the surrounding localities on which noise exposure contours of 20, 25, 30, 35 and 40 ANEF units have been drawn. These contours indicate land areas around an airport which are exposed to aircraft noise of certain levels; the higher the ANEF value the greater the noise exposure.

AS 2021:2015 provides guidance on the suitability of different types of new development inside these contours, reproduced in Table 4.

¹² <https://www.portmacquarieairport.com.au/Community/Fly-Neighbourly-Agreement>

Table 4: ANEF building acceptability categories for new buildings, reproduced from Table 2.1 of AS 2021:2015

Building Type	ANEF Zone of Site		
	Acceptable	Conditionally Acceptable	Unacceptable
House, home unit, flat, caravan park	< 20	20 to 25	> 25
School, university	< 20	20 to 25	> 25
Hospital, nursing home	< 20	20 to 25	> 25
Public building	< 20	20 to 30	> 30
Hotel, motel, hostel	< 25	25 to 30	> 30
Commercial building	< 25	25 to 35	> 35
Light industrial	< 30	30 to 40	> 40
Other industrial	Acceptable in all ANEF zones		

The general process for developing the ANEF is outlined in Figure 15 below.

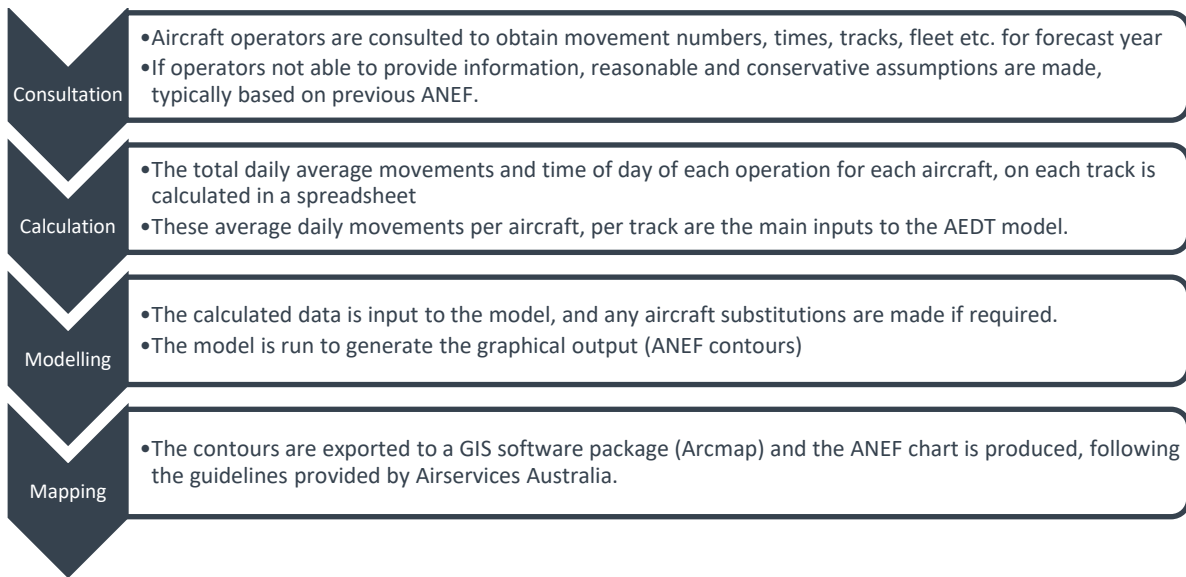


Figure 15: ANEF development process

6.2.4 ANEF Contours

The predicted 2045 ANEF 20 contour covers parts of the suburbs of Thrumster, Fernbank Creek, Riverside and Port Macquarie. The ANEF 20 contour boundary contains 32% of Port Macquarie land with the next largest area in Thrumster (16%) and less than 5% covering Fernbank and Riverside (most of which is over the Hastings River).

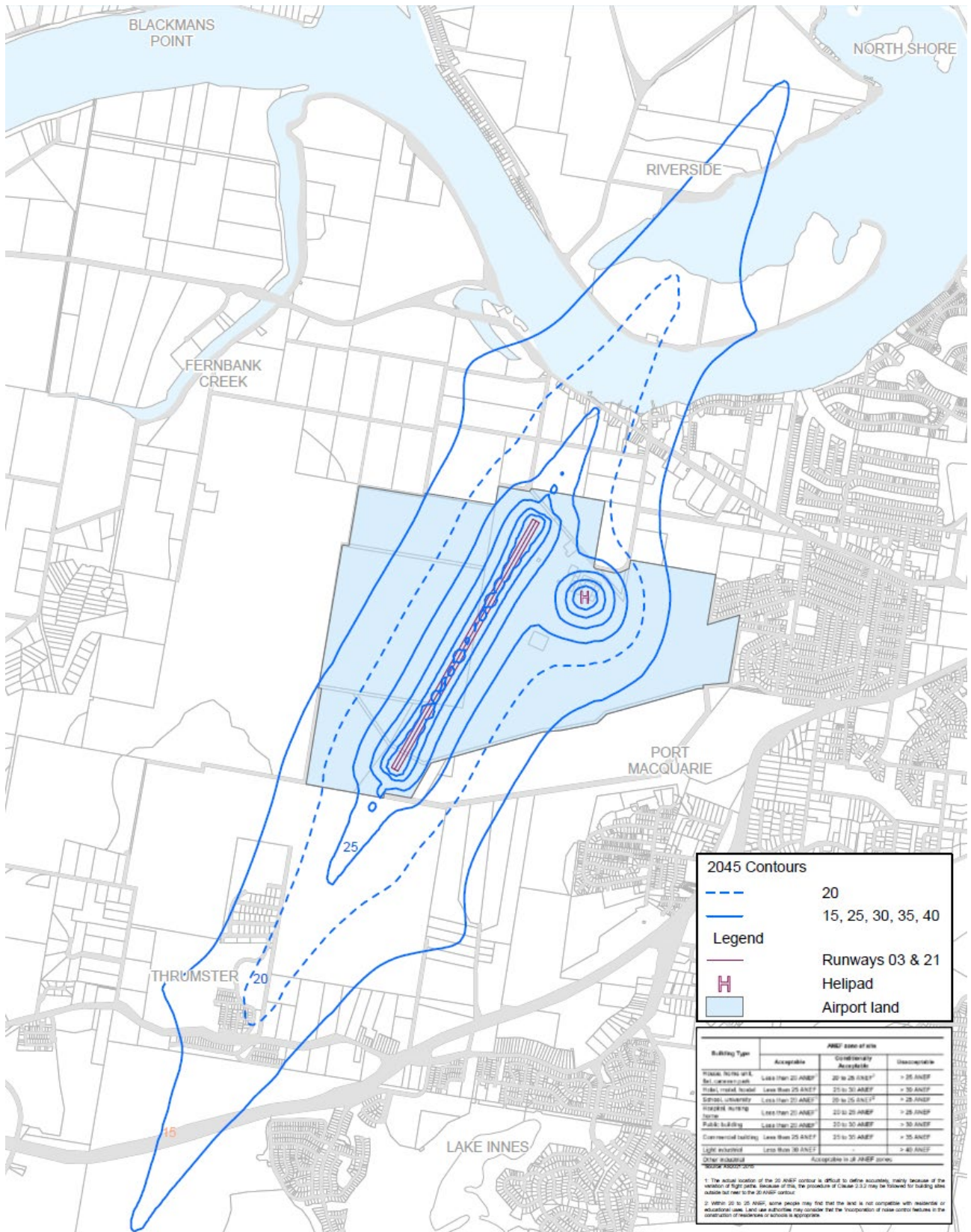


Figure 16: 2045 ANEF 15- 40 Contours (under review by Airservices Australia)

The 2045 ANEF 20 contour is expanded in every direction compared to the 2030 ANEF 20 contour. The 2045 ANEF 20 covers some additional area in the suburb of Thrumster and in Port Macquarie. The area showing the greatest predicted increase in aircraft noise exposure from the 2030 to the 2045 ANEF is north of the airport in the suburb of Fernbank Creek. This area is under the Runway 03 circuit which is the preferred track for GA and is used by 52% of circuits.

The increase in the area of the ANEF contours (compared to 2030) is predominantly due to the increase of circuits to the east and west of Runway 03/21 but also increased frequency of RPT and GA arrival and departure movements.

Whilst no specific planning requirement is attributed to the ANEF 15 contour, this contour has also been shown to indicate areas which will still experience lower levels of aircraft noise, which may also cause some minor disturbance.

The ANEF contours are shown in Appendix B.

Changes proposed in this draft Master Plan:

This draft Master Plan includes updated ANEF noise modelling to 2045 which shows some additional areas in the suburb of Thrumster and in Port Macquarie within the ANEF 20 contour. This draft noise modelling is in the process of being endorsed for technical accuracy by ASA. Consultation with ASA indicates that these contours are unlikely to change significantly in the final Master Plan.

7. Environmental Considerations

7.1 Environment

Council is committed to the protection of environmental and biodiversity values on land surrounding the Airport. In 2015, Council embarked on a project to gain Biodiversity Certification to offset the development impact of future land clearing required at the Airport, in particular in relation to the upgrade of Runway 03/21 for Code 4C aircraft. This certification process included the ecological assessment of over 1,000 hectares of surrounding land and its vegetation and habitat types, biodiversity values and criticality, as well as the calculation of ecosystem and species credits to offset development impacts. This detailed assessment was completed and lodged in 2016.

The 'Port Macquarie Airport and surrounding lands' Biodiversity Certification Agreement was approved by the NSW Minister of the Environment in 2018. The proposed vegetation clearing was also referred to the Australian Government for assessment of the impact on any endangered species under the Environment Protection and Biodiversity Conservation (EPBC) Act 1999. Council received EPBC approval to proceed with the clearing projects in 2020 (shown in Figure 17 below), subject to securing additional offsets before clearing could proceed through the approved stages. Forecast OLS and other clearing stages shown below in Figure 17 are partially offset through the conservation requirements secured in the on-site Biobanking Agreement. Depending on the realisation of growth-related Airport projects, additional biodiversity offsets will be required off site.

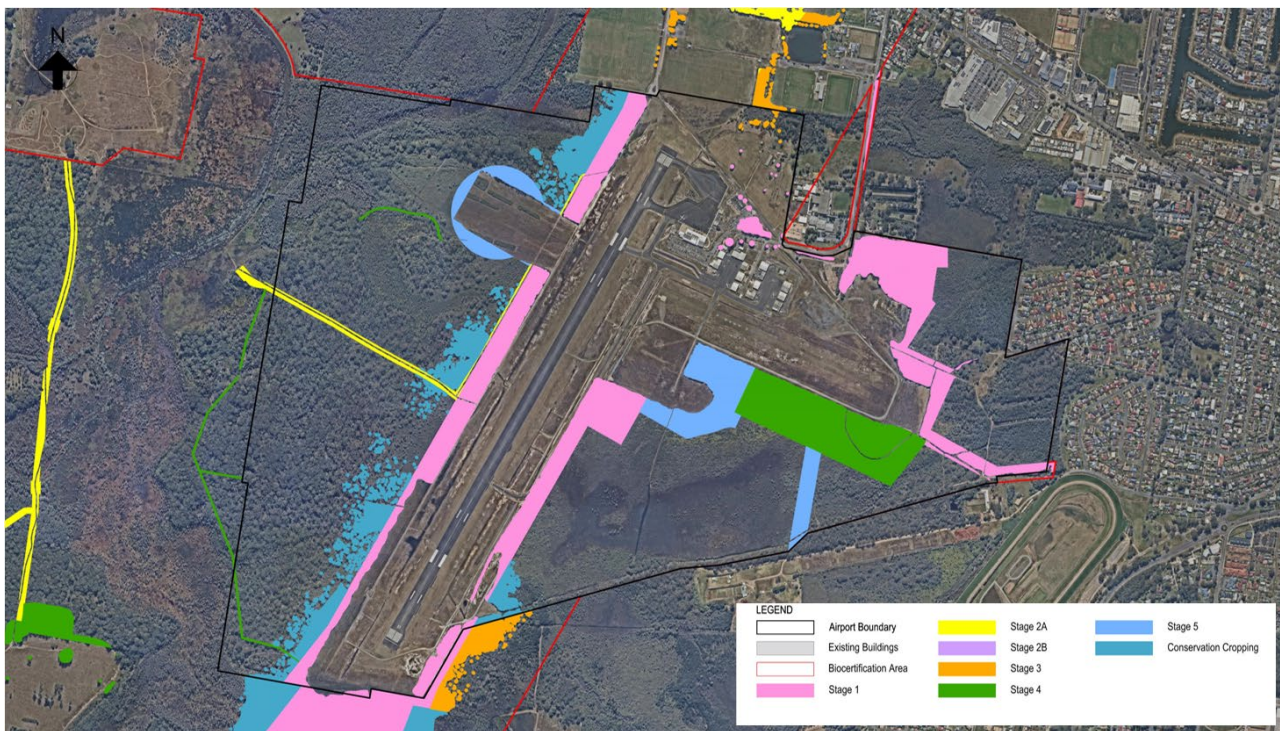


Figure 17: Environment Protection and Biodiversity Conservation (EPBC) areas within or adjacent to the Airport

Onsite offsets for the above clearing were secured through a BioBanking Agreement (BA487, signed 20/03/2020), creating the 'Partridge Creek' BioBanking Site (Stewardship site). The agreement commits Council to environmental protection measures and includes the establishment

and ongoing management, monitoring and reporting of 446 hectares of environmental conservation land.

Mapping of land designated under the Biodiversity Certification Agreement and which can only be used with provision of appropriate offsets is shown in Figure 18 and as a full map in Appendix F.

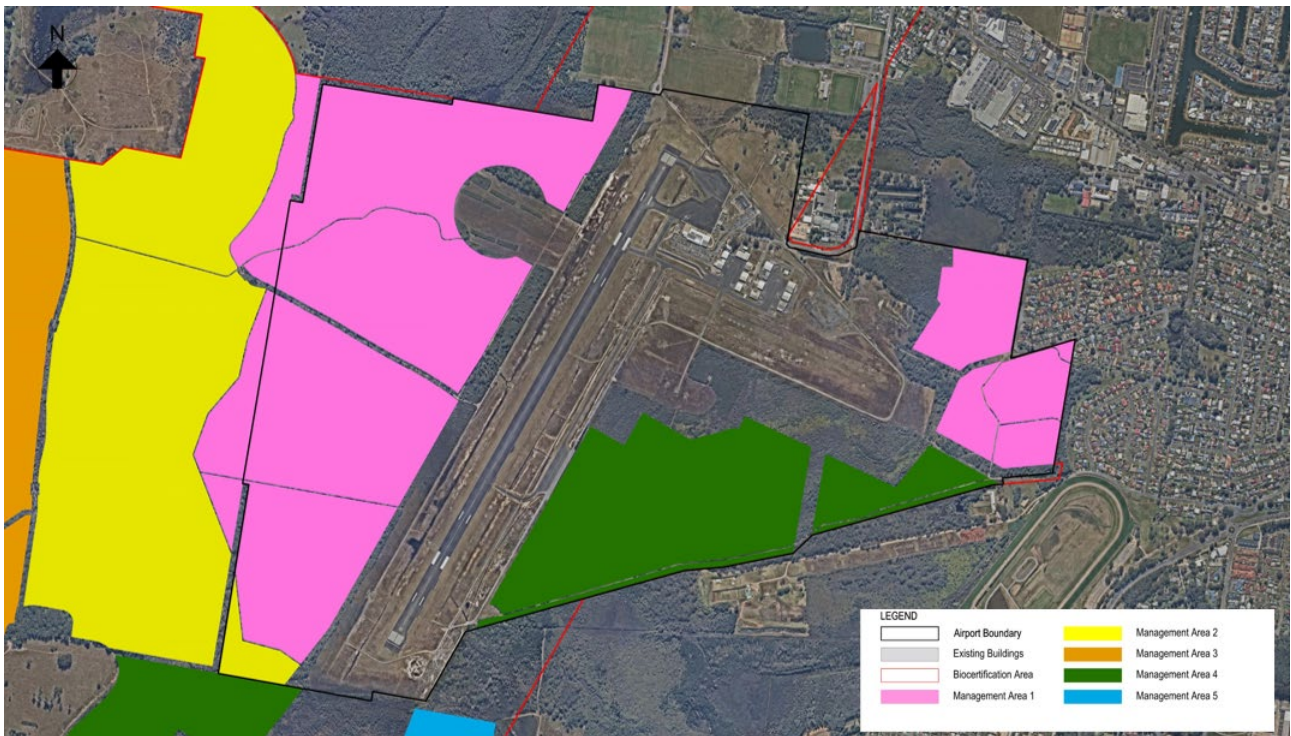


Figure 18: Biobanking Management Areas within or adjacent to the Airport

Changes proposed in this draft Master Plan:

This draft Master Plan does not propose additional impacts on areas of biodiversity, and envisages (where feasible) returning land not required for future development for inclusion as conservation land in accordance with the Biodiversity Certification Agreement and EPBC approval.

7.2 Flooding

The Airport is surrounded by flood prone areas with the extent of the 1 in 100 and 1 in 20-year flood events shown in Figure 19 and included in Appendix G.

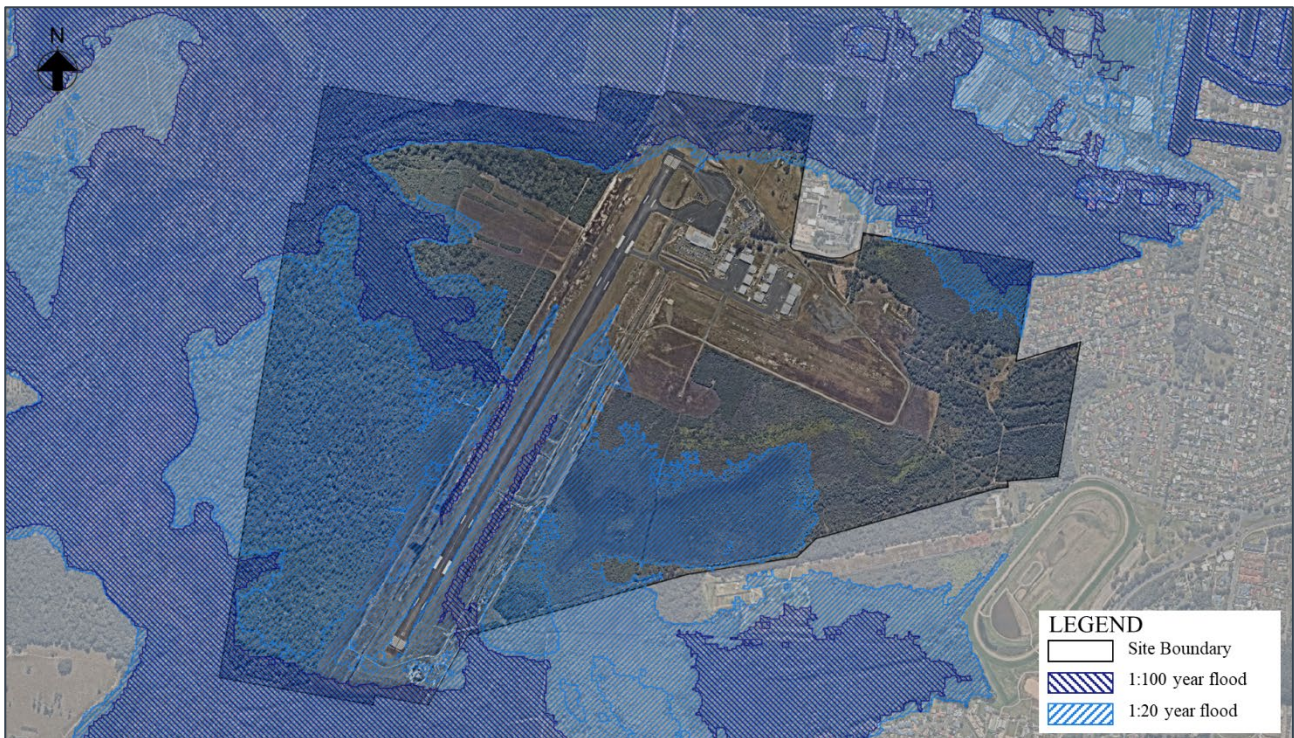


Figure 19: Flood Risk (1:100 and 1:20 year areas)

Prior to any major development of the airside infrastructure and property development precincts, a detailed flooding and stormwater drainage assessment will need to be conducted to examine the potential effect of any proposed filling within the existing flood plain and of the additional stormwater runoff expected from the expanded development areas.

Given the importance of the Airport in emergencies and its status as critical transport infrastructure, all key airport infrastructure and facilities should be located above the 1 in 100 year flood level.

It should be noted, Council is currently assessing a report titled Hastings River Flood Study Update and Extension. This study has the potential to impact 1 in 100-year flood contours for the Airport. Once approved, the report will be included as a planning parameter by the Airport, and will be included in the next revision of the Master Plan.

8. Utilities and Stormwater Drainage

8.1 Utilities

The major development of the airport facilities and the proposed business park will require upgrades to utilities and services supplying the current Airport site. Any proposed developments will require a technical assessment as part of the feasibility review to determine the impact on current facilities and operations.

Council is currently working in collaboration with Essential Energy to investigate connection opportunities in relation to the Thrumster Sewer Scheme. The routings currently considered as part of this project cross the Airport land to the north of the runway. The in-ground solution is expected to align with the current effluent pipeline, avoiding the critical airfield infrastructure.

8.2 Solar Farm

Council is committed to reducing its carbon impact and increasing sustainable energy generation, with a commitment to source 100% of its electricity from renewable sources by 2027.

As part of this broader initiative, Council installed solar panels on the passenger terminal during the 2019 upgrade and these now provide most of the power requirements associated with the terminal operation.

In addition, Council is safeguarding for a potential mid-scale solar farm to the west of Runway 03/21, utilising the run-off area for the decommissioned runway, just over 5 hectares for a 7-8 Megawatt (MW) solar array to support operation of the Airport with any excess power being available for other uses in the local area.

8.3 Stormwater Drainage

The future design of stormwater drainage will need to consider the requirements of the NSW water quality objectives to ensure that appropriate controls are placed on the quality of stormwater discharges from the Airport and in particular into the adjacent coastal wetland areas.

9. Land Use Planning

9.1 Zoning

The Airport land covers a total of 350 hectares which is zoned into three categories in the Port Macquarie-Hastings Local Environmental Plan 2011. The operational airport land is zoned as SP2 Infrastructure (Air Transport Facility) with 144 hectares of land. This is surrounded by the C2 Environmental Conservation areas with a total of 183 hectares, and a smaller pocket of SP4 Enterprise zone of 24 hectares.

9.2 SP2 Infrastructure (Air Transport Facility)

The SP2 Infrastructure (Air Transport Facility) zoning at the Airport has a dual purpose:

- To provide for aviation infrastructure and related uses.
- To prevent development that is not compatible with or that may detract from the provision of aviation infrastructure.

Within this zone, the following development aviation-related land uses and areas are proposed as part of this draft Master Plan:

- **Airfield:** A 64 hectare area of land comprising Runway 03/21, its RESAs, partial parallel Taxiway Foxtrot as well as all other taxiway connections from Runway 03/21 to the RPT apron.
- **Passenger Terminal:** A 12 hectare area of land including the existing and expanded passenger terminal, RPT apron and associated car parks.
- **General Aviation:** A 9.5 hectare area of land comprising GA apron, hangar areas and access arrangements for GA1 to GA3, Taxiway Charlie east of Taxiway Foxtrot, and a portion of the informal grassed GA parking on the former cross-wind runway.
- **Future Aviation Area:** 11 hectares of land safeguarding an area for a future RPT apron, passenger terminal and car parks as well as ARFFS and ATC, as well as containing the existing NDB, Bureau of Meteorology weather station, a portion of the former cross-wind runway and the helicopter parking.
- **Solar:** safeguarding for a potential mid-scale solar farm to the west of Runway 03/21, just over 5 hectares for a 7-8 Megawatt solar array to support operation of the Airport with any excess power being available for other uses in the local area.

9.3 C2 Environmental Conservation

There are areas zoned as C2 Environmental Conservation on Airport land, reflecting the biodiversity considerations described in Section 7.1.

The objectives of this zone are:

- To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.
- To prevent development that could destroy, damage or otherwise have an adverse effect on those values.
- To protect coastal wetlands and littoral rainforests.
- To protect land affected by coastal processes and environmentally sensitive land.
- To prevent development that adversely affects, or would be adversely affected by, coastal processes.
- To enable development of public works and environmental facilities where such development would not have an overall detrimental impact on ecological, scientific, cultural or aesthetic values.

No uses are permitted on conservation land without consent and those that are allowed are limited.

This draft Master Plan respects all environmental conservation areas on the Airport and surrounding land.

9.4 SP4 Enterprise

With the scale of future aeronautical development and environmental considerations identified, Council will consider appropriate land use and development opportunities which complement the existing operation and provide additional economic and employment opportunities for the local community. This type of development will be considered for land identified as SP4 Enterprise in the Local Environmental Plan 2011.

The objectives of this zone are:

- To provide for development and land uses that support enterprise and productivity.
- To enable a mix of business and warehouse uses, and specialised retail premises that require a large floor area, in locations that are close to, and that support the viability of, centres.

This draft Master Plan safeguards for 12 hectares of land for the future Business Park with access provided via Boundary Street and through internal roads within the Business Park itself. Development of the Business Park is contingent on the delivery of the Oxley Highway connection which was identified in Council's Integrated Transport Plan¹³, and the potential demand as a result of the improved connectivity to the Pacific Highway. Alternative uses of the SP4 area will be explored in the event that the Oxley highway connection is permanently ruled out by Council. Such

¹³ [PMHC Integrated Transport Plan](#) - Action 3.30 - Undertake planning to consider feasibility of north-south connection between Hastings River Drive and Oxley Highway

alternative uses may also enable the returning of discrete areas for conservation under the Biocertification Certification Agreement.

The specific uses in the Business Park will form part of separate planning applications and accordingly this draft Master Plan seeks only to safeguard the Business Park zone.

In the event that commercial business park demand exceeds the proposed SP4 area, a section of the decommissioned cross-wind runway has been identified as a potential expansion zone for Business Park uses. Following the appropriate changes to land-use, this area could be delivered without impacting on the long-term function of the airport.

10. Implementation Plan

This draft Master Plan considers a three staged implementation plan that responds to the forecast demand set out in Section 4. Close monitoring of actual growth will be necessary to assess trends and the potential need to adjust implementation plans and programs. For safeguarding purposes, a fourth stage is included for potential developments beyond the 2045 planning horizon.

10.1 Stage 1 (1- 5 years)



Figure 20: Proposed Master Plan Layout - Stage 1

Subject to demand and available funding, this draft Master Plan envisages the following developments in the first 1 – 5 year period:

- Refurbishment / overlay of Runway 03/21 owing to the age of the existing surface.
- Additional car parking provided in line with demand increases, with expansion of the existing short stay Car Park 1 to the south and development of the triangle plot north of Boundary Street and south-east of Car Park 2 likely being the first new car parking areas.
- Resurfacing of the GA1 apron with hot mix to provide a resilient and improved surface for GA activities.
- Consideration of an improved bus service frequency.

10.2 Stage 2 (5 – 10 years)

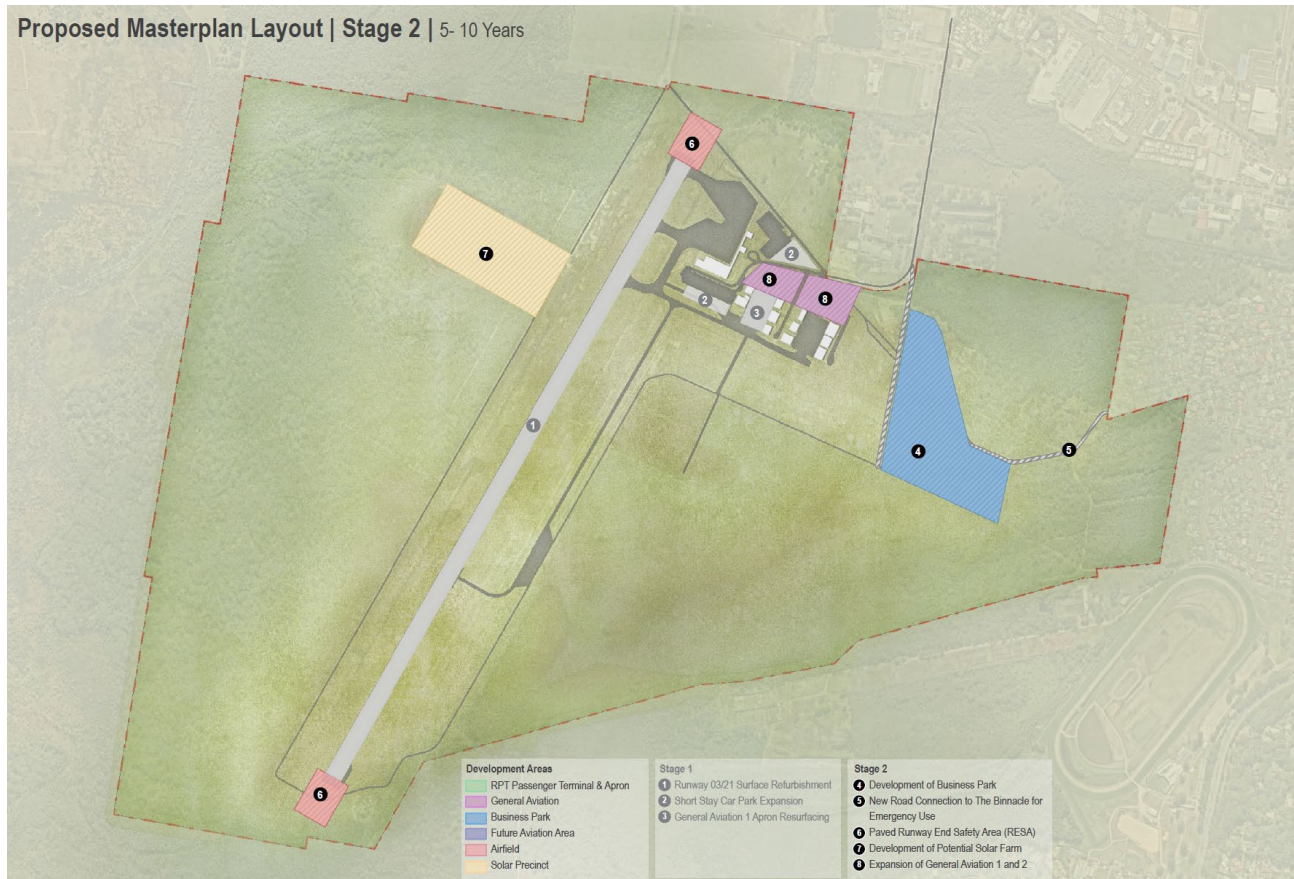


Figure 21: Proposed Master Plan Layout - Stage 2

Subject to demand and available funding, this draft Master Plan envisages the following developments in the second period, 5 – 10 years from now:

- Appropriate development in the Business Park to support additional economic and employment opportunities for the local community.
- New gated and locked road connection to The Binnacle for emergency access by specified emergency and Airport operations personnel in the case of flood or bushfire and comparable emergencies.
- Paved RESAs to provide for longer take-off runs for large Code 4C jets flying interstate.
- Development of a potential mid-scale solar farm to the west of Runway 03/21.
- Expansion of General Aviation 1 (GA1) and General Aviation 2 (GA2) areas by developing these back towards Boundary Street to maximise the space available.

10.3 Stage 3 (10 – 20 years)

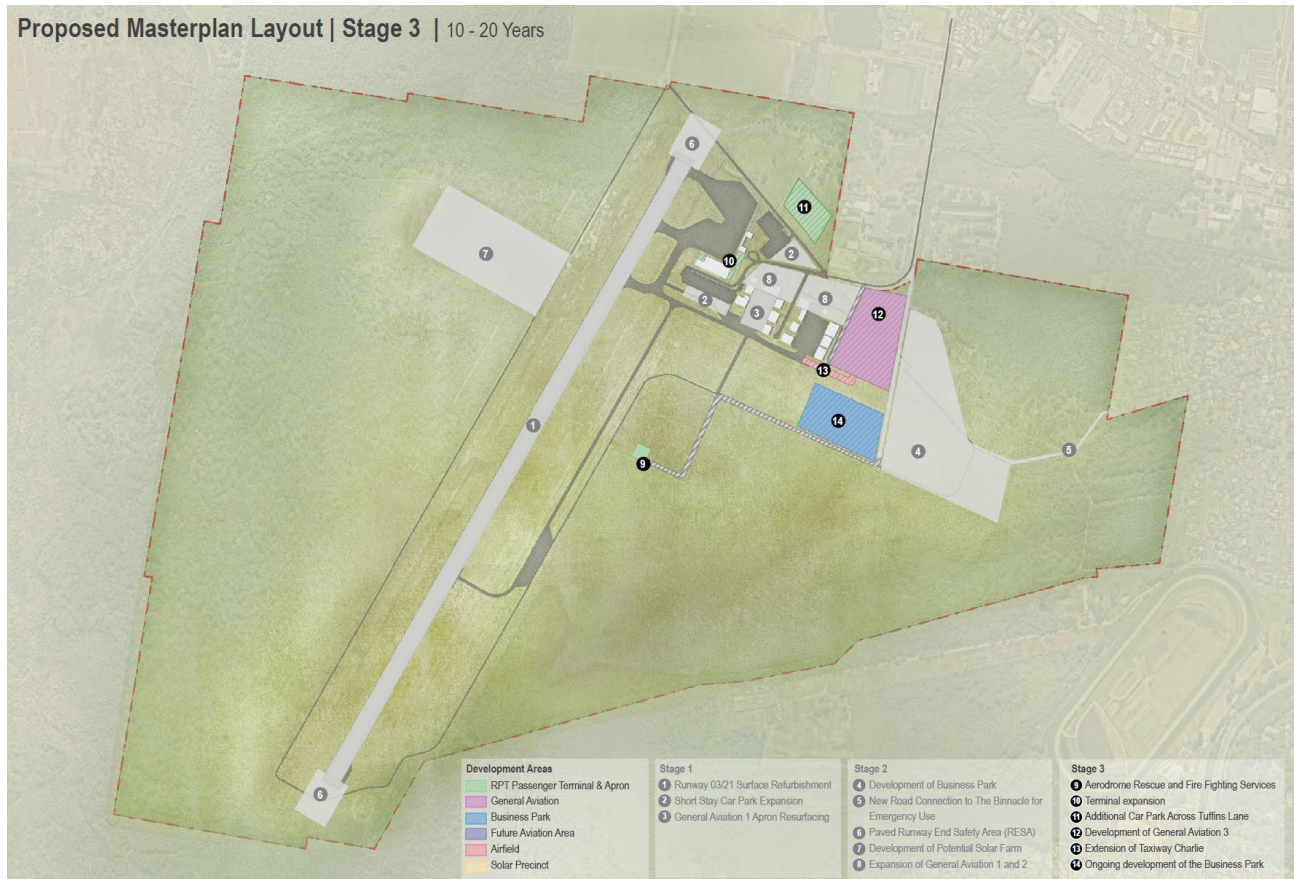


Figure 22: Proposed Master Plan Layout - Stage 3

Subject to demand and available funding, this draft Master Plan envisages the following developments in the second period, 10 – 20 years from now:

- Provision of an Aerodrome Rescue and Fire-Fighting Services facility east and midway along Runway 03/21.
- Should regular Code 4C jet operations recommence at the Airport, Council envisages the need for an enlarged terminal footprint to accommodate expanded processing functions likely in the first 10 years of this draft Master Plan.
- Additional car parking across Tuffins Lane to be provided in line with demand increases. In order to maximise the current terminal site, there may be a need to deck new car parks where the OLS allows.
- Addition of General Aviation 3 (GA3) apron and hangar developments.
- Extension of Taxiway Charlie to serve a future GA3 apron.
- Ongoing development in the Business Park to support additional economic and employment opportunities for the local community.

10.4 Beyond 2045 (20+ years)



Figure 23: Proposed Master Plan Layout - Beyond 2045

Subject to demand and available funding, this draft Master Plan also safeguards for the following potential developments beyond the planning horizon:

- A future terminal and RPT apron beyond 2045 approximately midway along the runway. This would also be the location for any future ATC.
- Carpark adjacent to the future terminal location.
- Extension of the parallel Taxiway Foxtrot to improve runway efficiency.
- If Council decides to accommodate future growth through additional expansion of the existing terminal, an expansion of the existing apron to include two Code C stands would enable greater capacity in the peaks.

Port Macquarie Hastings Council

BIRPAI COUNTRY

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Appendix A – Proposed Master Plan Layouts

Proposed Master Plan Layout



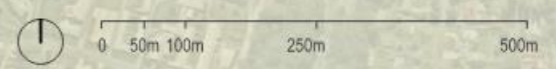
Development Areas

	RPT Passenger Terminal & Apron
	General Aviation
	Business Park
	Future Aviation Area
	Airfield
	Solar Precinct

- Stage 1**
- 1 Runway 03/21 Surface Refurbishment
 - 2 Short Stay Car Park Expansion
 - 3 General Aviation 1 Apron Resurfacing







- Stage 2**
- 4 Development of Business Park
 - 5 New Road Connection to The Binnacle for Emergency Use
 - 6 Paved Runway End Safety Area (RESA)
 - 7 Development of Potential Solar Farm
 - 8 Expansion of General Aviation 1 and 2

- Stage 3**
- 9 Aerodrome Rescue and Fire Fighting Services
 - 10 Terminal expansion
 - 11 Additional Car Park Across Tuffins Lane
 - 12 Development of General Aviation 3
 - 13 Extension of Taxiway Charlie
 - 14 Ongoing development of the Business Park



Proposed Master Plan Layout | Stage 1 | 1-5 Years



Development Areas	Stage 1
 RPT Passenger Terminal & Apron	1 Runway 03/21 Surface Refurbishment
 General Aviation	2 Short Stay Car Park Expansion
 Business Park	3 General Aviation 1 Apron Resurfacing
 Future Aviation Area	
 Airfield	
 Solar Precinct	

Proposed Master Plan Layout | Stage 2 | 5- 10 Years



Development Areas	
	RPT Passenger Terminal & Apron
	General Aviation
	Business Park
	Future Aviation Area
	Airfield
	Solar Precinct

Stage 1	
	Runway 03/21 Surface Refurbishment
	Short Stay Car Park Expansion
	General Aviation 1 Apron Resurfacing

Stage 2	
	Development of Business Park
	New Road Connection to The Binnacle for Emergency Use
	Paved Runway End Safety Area (RESA)
	Development of Potential Solar Farm
	Expansion of General Aviation 1 and 2

Proposed Master Plan Layout | Stage 3 | 10 - 20 Years



Development Areas

■	RPT Passenger Terminal & Apron
■	General Aviation
■	Business Park
■	Future Aviation Area
■	Airfield
■	Solar Precinct

Stage 1

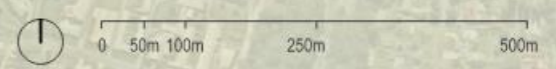
1	Runway 03/21 Surface Refurbishment
2	Short Stay Car Park Expansion
3	General Aviation 1 Apron Resurfacing

Stage 2

4	Development of Business Park
5	New Road Connection to The Binnacle for Emergency Use
6	Paved Runway End Safety Area (RESA)
7	Development of Potential Solar Farm
8	Expansion of General Aviation 1 and 2

Stage 3

9	Aerodrome Rescue and Fire Fighting Services
10	Terminal expansion
11	Additional Car Park Across Tuffins Lane
12	Development of General Aviation 3
13	Extension of Taxiway Charlie
14	Ongoing development of the Business Park



Beyond 2045

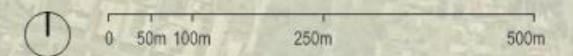


Development Areas

- Future Terminal Safeguard
- Airfield
- RPT Apron

Beyond 2045

- 1** Safeguarding for New Aircraft Terminal and Apron
- 2** Safeguarding for New Car Park
- 3** Foxtrot Taxiway extension
- 4** Potential Expansion of Existing Aircraft Apron



Appendix B – Aircraft Noise

Submitted to Airservices Australia for review and endorsement on 12 February 2025.

Includes:

- 2045 ANEC for ASA Chart
- 2045 Noise contours 15-40dB
- 2045 and 2030 Comparison
- Flight Tracks Map

PORT MACQUARIE AIRPORT

ENDORSEMENT FOR TECHNICAL ACCURACY
STANDARD ANEF



Environmental Assessments Team Lead

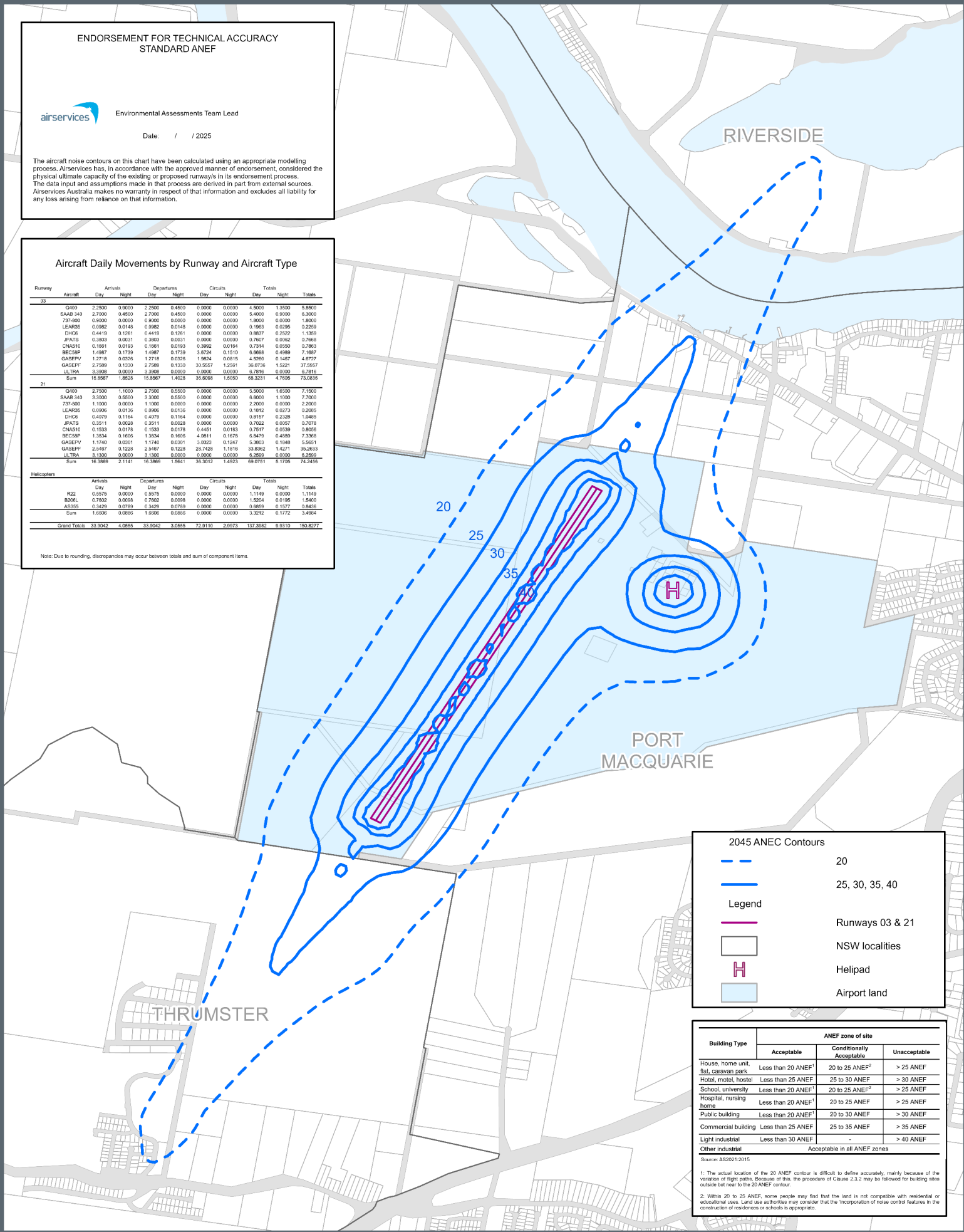
Date: / / 2025

The aircraft noise contours on this chart have been calculated using an appropriate modelling process. Airservices has, in accordance with the approved manner of endorsement, considered the physical ultimate capacity of the existing or proposed runways in its endorsement process. The data input and assumptions made in that process are derived in part from external sources. Airservices Australia makes no warranty in respect of that information and excludes all liability for any loss arising from reliance on that information.

Aircraft Daily Movements by Runway and Aircraft Type

Runway	Aircraft	Arrivals		Departures		Circuits		Totals		Totals
		Day	Night	Day	Night	Day	Night	Day	Night	
03	Q400	2,750	0.000	2,750	0.000	0.000	0.000	4,500	1,350	5,850
03	SNAB 340	2,700	0.000	2,700	0.000	0.000	0.000	4,500	0.000	4,500
03	737-800	0.000	0.000	0.000	0.000	0.000	0.000	1,800	0.000	1,800
03	LEAR35	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
03	DHC6	0.4419	0.1261	0.4419	0.1261	0.0000	0.0000	0.8837	0.2522	1.1359
03	JPAT5	0.3803	0.0031	0.3803	0.0031	0.0000	0.0000	0.7607	0.0062	0.7669
03	CN4510	0.1991	0.0193	0.1991	0.0193	0.3962	0.0164	0.7144	0.0550	0.7694
03	BEC58P	1.4987	0.1739	1.4987	0.1739	3.8724	0.1510	6.8688	0.4989	7.3677
03	GASEP1	1.2718	0.0326	1.2718	0.0326	1.9624	0.0815	4.2060	0.1457	4.3517
03	GASEP2	2.7500	0.0000	2,750	0.000	0.000	0.000	4,500	0.000	4,500
03	ULTRA	3.3908	0.0000	3,390	0.000	0.000	0.000	6,781	0.000	6,781
03	Sum	15,8567	1,8528	15,8567	1,4028	36,8068	1,6590	68,3231	4,7405	73,0636
21	Q400	2,750	1,100	2,750	0,550	0,000	0,000	5,500	1,650	7,150
21	SNAB 340	3,300	0,550	3,300	0,550	0,000	0,000	6,600	1,100	7,700
21	737-800	1,100	0,000	1,100	0,000	0,000	0,000	2,200	0,000	2,200
21	LEAR35	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
21	DHC6	0,4079	0,1164	0,4079	0,1164	0,0000	0,0000	0,8157	0,2328	1,0485
21	JPAT5	0,3511	0,0028	0,3511	0,0028	0,0000	0,0000	0,7022	0,0057	0,7079
21	CN4510	0,1533	0,0178	0,1533	0,0178	0,4461	0,0183	0,7517	0,0539	0,8056
21	BEC58P	1,3334	0,1606	1,3334	0,1606	4,2811	0,1678	6,9476	0,4989	7,4465
21	GASEP1	1,1740	0,0301	1,1740	0,0301	3,0323	0,1247	5,3803	0,1848	5,5651
21	GASEP2	2,5497	0,1229	2,5497	0,1229	28,7428	1,1819	33,8362	1,4271	35,2633
21	ULTRA	3,1300	0,0000	3,1300	0,0000	0,0000	0,0000	6,2600	0,0000	6,2600
21	Sum	16,3669	2,1141	16,3669	1,5641	36,3012	1,4923	69,0751	8,1705	77,2456
Helicopters										
	R22	0,5575	0,0000	0,5575	0,0000	0,0000	0,0000	1,1149	0,0000	1,1149
	B206L	0,7502	0,0008	0,7502	0,0008	0,0000	0,0000	1,5004	0,0195	1,5200
	AS355	0,3620	0,0000	0,3620	0,0000	0,0000	0,0000	0,7240	0,0000	0,7240
	Sum	1,6707	0,0008	1,6707	0,0008	0,0000	0,0000	3,3413	0,0195	3,3608
Grand Totals		33,9042	4,6555	33,9042	3,6555	72,9110	2,8973	137,3682	9,9110	150,2792

Note: Due to rounding, discrepancies may occur between totals and sum of component items.



2045 ANEC Contours

- 20
- 25, 30, 35, 40

Legend

- Runways 03 & 21
- NSW localities
- Helipad
- Airport land

Building Type	ANEF zone of site		
	Acceptable	Conditionally Acceptable	Unacceptable
House, home unit, flat, caravan park	Less than 20 ANEF ¹	20 to 25 ANEF ²	> 25 ANEF
Hotel, motel, hostel	Less than 25 ANEF	25 to 30 ANEF	> 30 ANEF
School, university	Less than 20 ANEF ¹	20 to 25 ANEF ²	> 25 ANEF
Hospital, nursing home	Less than 20 ANEF ¹	20 to 25 ANEF	> 25 ANEF
Public building	Less than 20 ANEF ¹	20 to 30 ANEF	> 30 ANEF
Commercial building	Less than 25 ANEF	25 to 35 ANEF	> 35 ANEF
Light industrial	Less than 30 ANEF	-	> 40 ANEF
Other industrial	Acceptable in all ANEF zones		

Source: AS2021:2015

1: The actual location of the 20 ANEF contour is difficult to define accurately, mainly because of the location of flight paths. Because of this, the procedure of Clause 2.3.2 may be followed for building sites outside but near to the 20 ANEF contour.

2: Within 20 to 25 ANEF, some people may find that the land is not compatible with residential or educational uses. Land use authorities may consider that the incorporation of noise control features in the construction of residences or schools is appropriate.

2045 Australian Noise Exposure Forecast



ANEF contour modelled with AEDT 3g
Terrain data incorporated
GDA94MCS-84
Runway End/Helipad Coordinates:
03-31 442859244385, 152 857 82293164
21-31 428855695961, 152 86652407227
HP1-31 433002923574, 152 86642484187

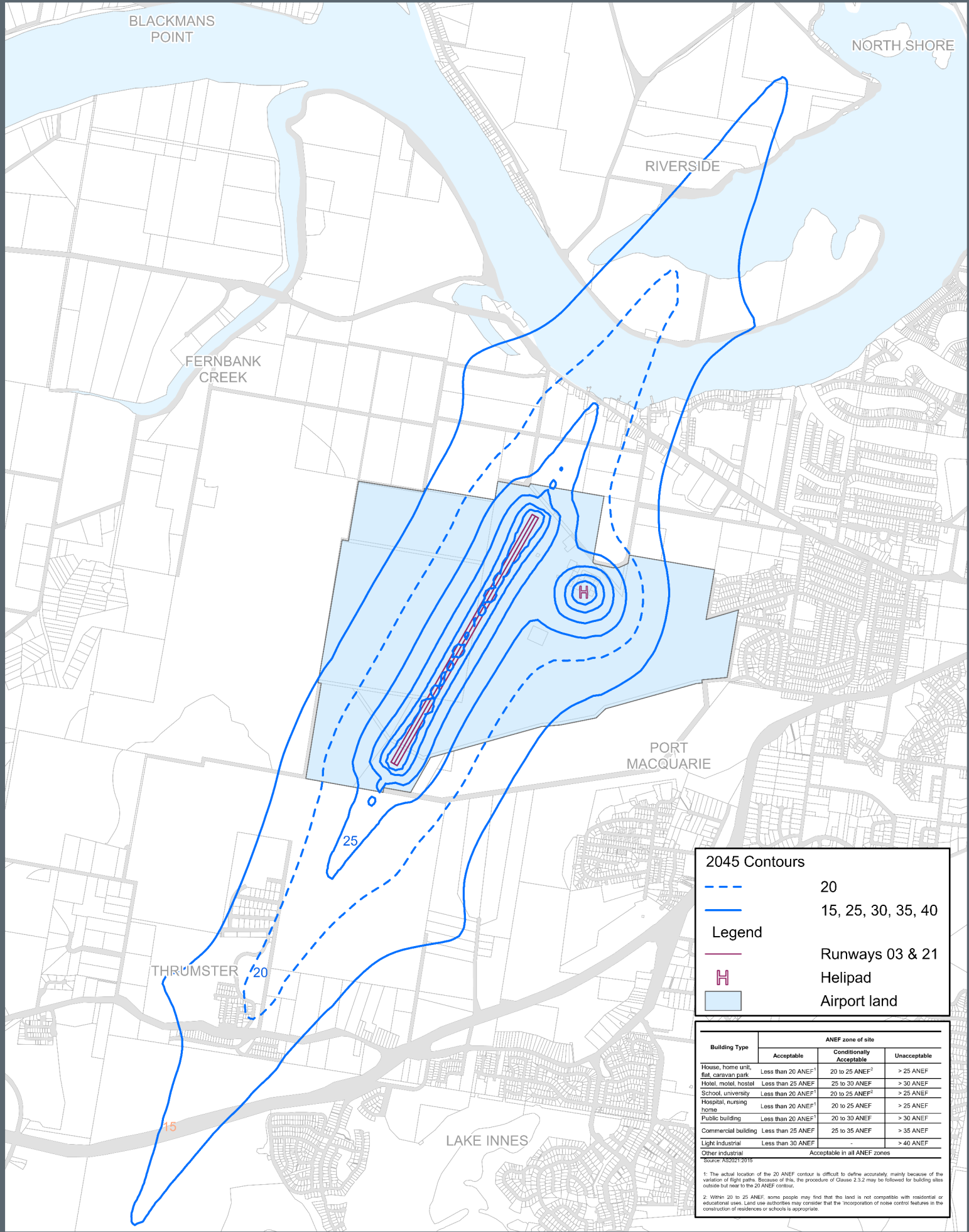
Produced by BAS & JMW
Issued 12/02/2025

Scale at A1: 1:22,400



To be read in conjunction with AS2021:2015

PORT MACQUARIE AIRPORT



2045 Contours

- - - 20
- 15, 25, 30, 35, 40

Legend

- Runways 03 & 21
- H Helipad
- Airport land

Building Type	ANEF zone of site		
	Acceptable	Conditionally Acceptable	Unacceptable
House, home unit, flat, caravan park	Less than 20 ANEF ¹	20 to 25 ANEF ²	> 25 ANEF
Hotel, motel, hostel	Less than 25 ANEF	25 to 30 ANEF	> 30 ANEF
School, university	Less than 20 ANEF ¹	20 to 25 ANEF ²	> 25 ANEF
Hospital, nursing home	Less than 20 ANEF ¹	20 to 25 ANEF	> 25 ANEF
Public building	Less than 20 ANEF ¹	20 to 30 ANEF	> 30 ANEF
Commercial building	Less than 25 ANEF	25 to 35 ANEF	> 35 ANEF
Light industrial	Less than 30 ANEF	-	> 40 ANEF
Other industrial	Acceptable in all ANEF zones		

¹Source: AS2021:2015
 1: The actual location of the 20 ANEF contour is difficult to define accurately, mainly because of the variation of flight paths. Because of this, the procedure of Clause 2.3.2 may be followed for building sites outside but near to the 20 ANEF contour.
 2: Within 20 to 25 ANEF, some people may find that the land is not compatible with residential or educational uses. Land use authorities may consider that the 'incorporation of noise control features in the construction of residences or schools is appropriate.'

2045 Australian Noise Exposure Comparison with 15 contour
 To be read in conjunction with AS2021:2015

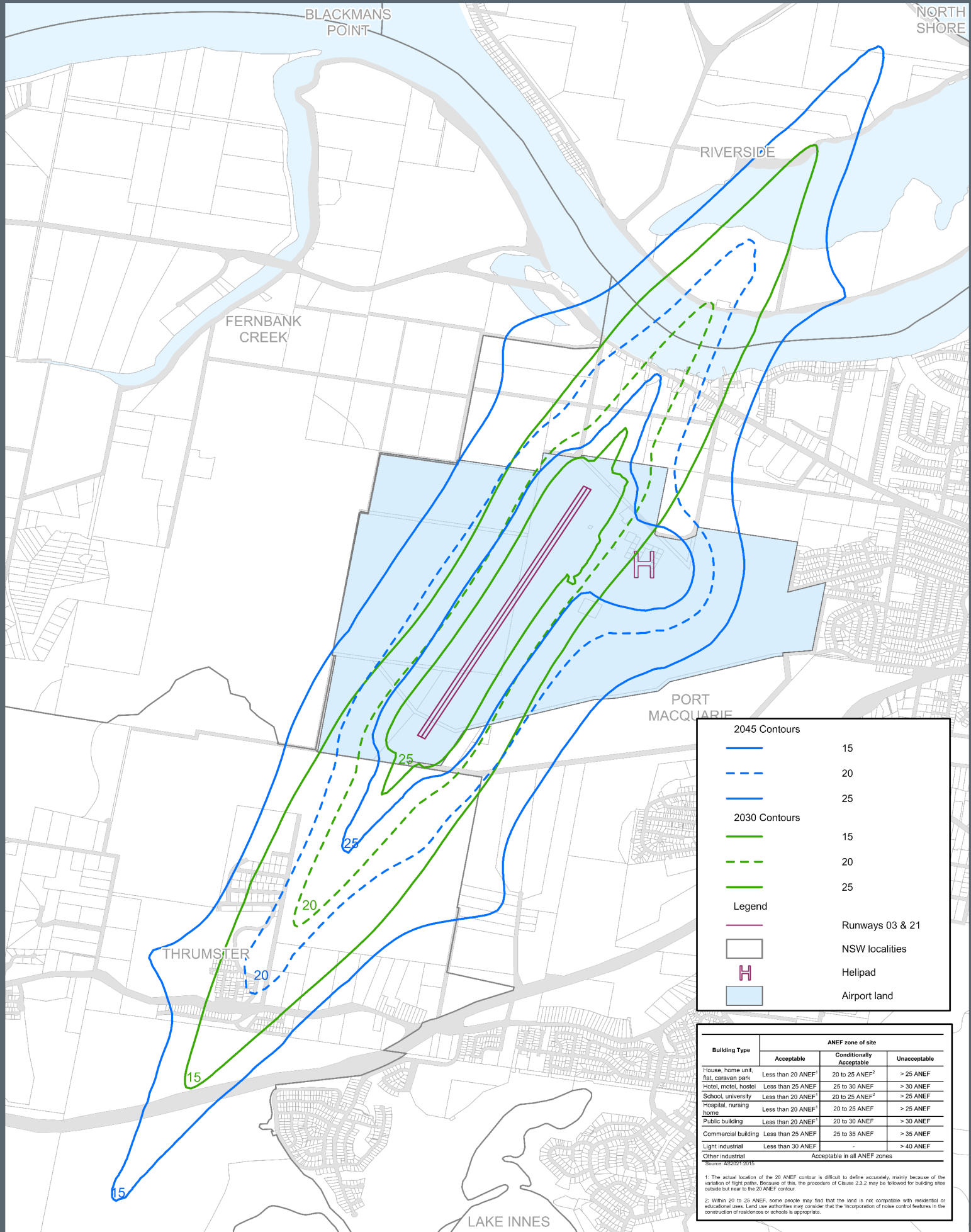


ANEF contour modelled with AEDT 5g
 Terrain data incorporated
 CDAS4/WCSB-04
 Runway End/Helipad Coordinates:
 03:-31.442959244385, 152.8571929893164
 21:-31.42662909981, 152.86692407227
 HP1:-31.4330029923574, 152.86642464187

Produced by BAS & JMW
 Issued 12/02/2025

Scale at A1: 1:30,000

PORT MACQUARIE AIRPORT

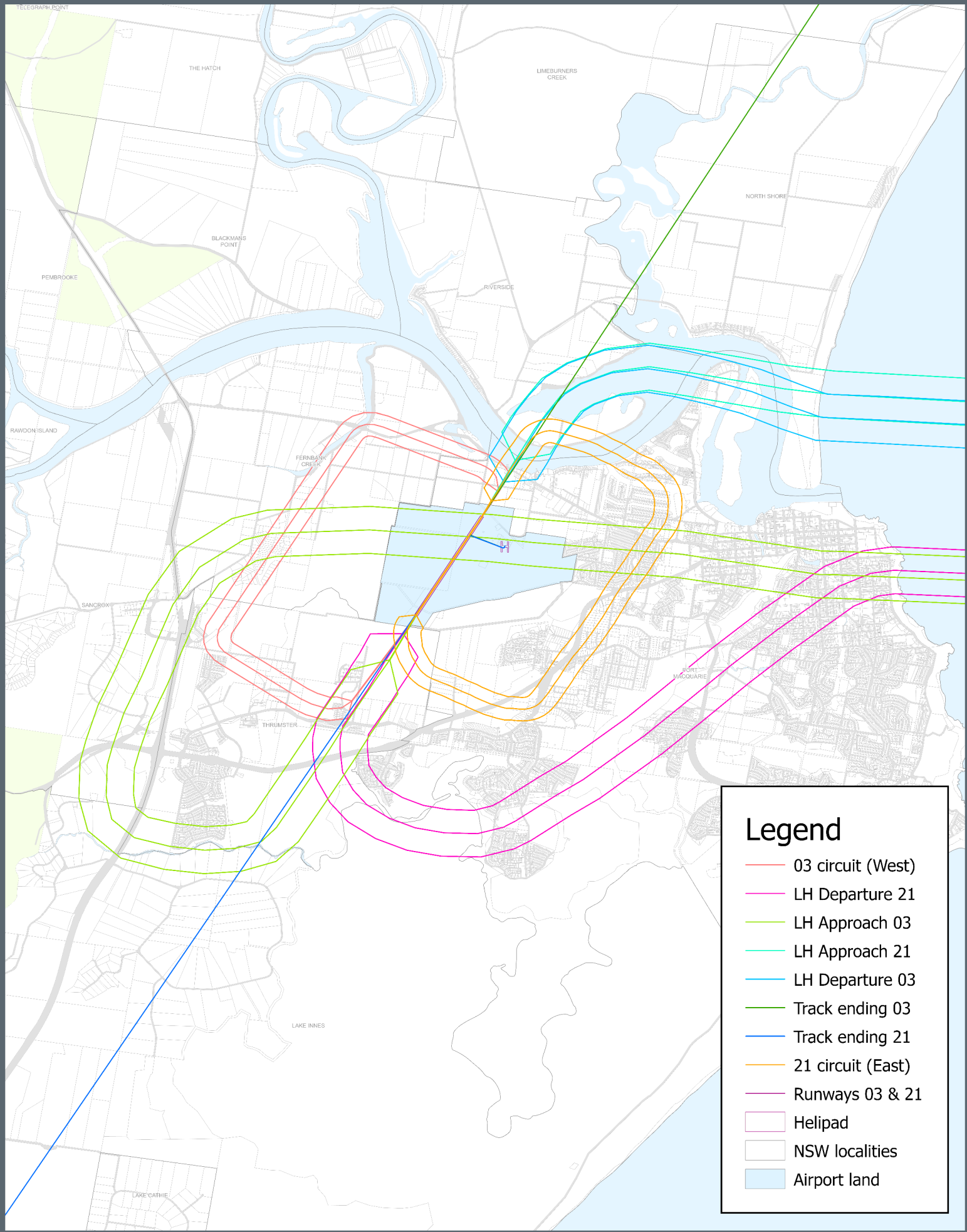


2025 Contours	
	15
	20
	25
2030 Contours	
	15
	20
	25
Legend	
	Runways 03 & 21
	NSW localities
	Helipad
	Airport land

Building Type	ANEF zone of site		
	Acceptable	Conditionally Acceptable	Unacceptable
House, home unit, flat, caravan park	Less than 20 ANEF ¹	20 to 25 ANEF ²	> 25 ANEF
Hotel, motel, hostel	Less than 25 ANEF ¹	25 to 30 ANEF ²	> 30 ANEF
School, university	Less than 20 ANEF ¹	20 to 25 ANEF ²	> 25 ANEF
Hospital, nursing home	Less than 20 ANEF ¹	20 to 25 ANEF ²	> 25 ANEF
Public building	Less than 20 ANEF ¹	20 to 30 ANEF ²	> 30 ANEF
Commercial building	Less than 25 ANEF ¹	25 to 35 ANEF ²	> 35 ANEF
Light industrial	Less than 30 ANEF ¹	-	> 40 ANEF
Other industrial	Acceptable in all ANEF zones		

Source: AS2021:2015
 1: The actual location of the 20 ANEF contour is difficult to define accurately, mainly because of the location of flight paths. Because of this, the procedure of Clause 2.3.2 may be followed for building sites outside but near to the 20 ANEF contour.
 2: Within 20 to 25 ANEF, some people may find that the land is not compatible with residential or educational uses. Land use authorities may consider that the incorporation of noise control features in the construction of residences or schools is appropriate.

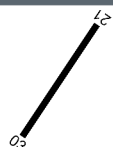
PORT MACQUARIE AIRPORT



Legend

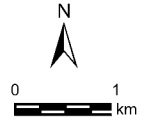
- 03 circuit (West)
- LH Departure 21
- LH Approach 03
- LH Approach 21
- LH Departure 03
- Track ending 03
- Track ending 21
- 21 circuit (East)
- Runways 03 & 21
- Helipad
- NSW localities
- Airport land

Aircraft Tracks



ANEF contour modelled with AEDT 3g
 Terrain data incorporated
 GDA94/MCS-94
 Runway End/Helipad Coordinates:
 03-31 442959244385, 152 871 192993164
 21-31 428859859691, 152 869592407227
 HP1-31 4330029923574, 152 86642464187

Scale at A1: 1:75,000



To be read in conjunction with AS2021:2015

Produced by BAS & JMW
 Issued 12/02/2025

Appendix C – Bird Hazard Areas


PORT MACQUARIE AIRPORT

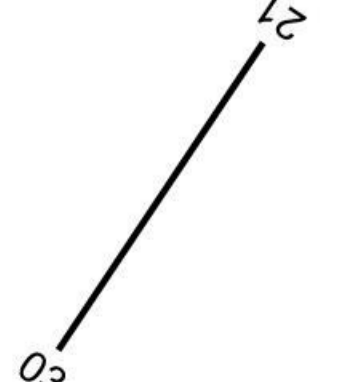


Source: Esri, Mapbox, Earthstar Geographics, and the GIS User Community

SCALE:
0 5 km
Scale at A1: 1:50,000

CLIENT:
 PORT MACQUARIE
HASTINGS COUNCIL

COORDINATE SYSTEM: GDA 1994 MGA56




PORT MACQUARIE AIRPORT MASTER PLAN 2045
BIRD HAZARD AREAS
RUNWAY AERODROME REFERENCE POINT (S31° 26.2', E152° 51.8')

Appendix D – Obstacle Limitation Surfaces

PORT MACQUARIE AIRPORT



SCALE:

0 5 km

Scale at A1: 1:50,000

CLIENT:



PORT MACQUARIE
HASTINGS COUNCIL

COORDINATE SYSTEM:

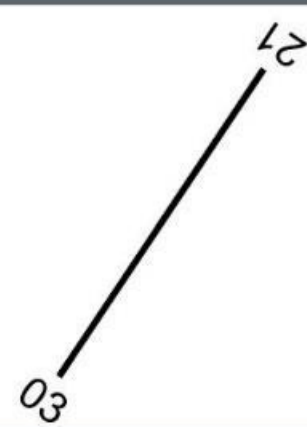
GDA 1994 MGA56

ARUP

DRAFT PORT MACQUARIE AIRPORT MASTER PLAN 2045

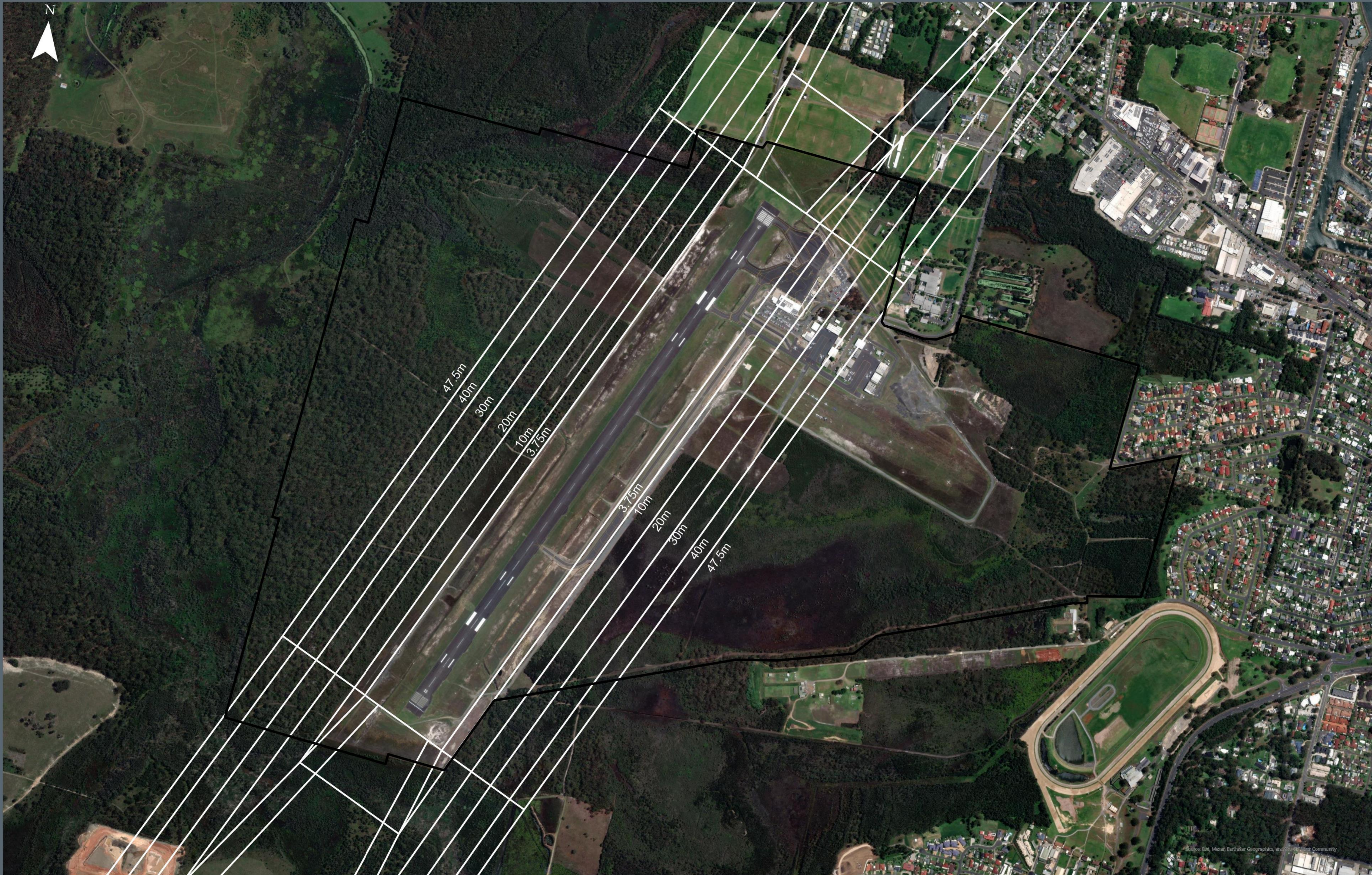
OBSTACLE LIMITATION SURFACES (OLS)

RUNWAY AERODROME REFERENCE POINT (S31° 26.2', E152° 51.8')
Elevation 2.9m (AHD)



12/02/2025

PORT MACQUARIE AIRPORT



SCALE:



CLIENT:



COORDINATE SYSTEM:

GDA 1994 MGA56



DRAFT PORT MACQUARIE AIRPORT MASTER PLAN 2045

OBSTACLE LIMITATION SURFACES (OLS) - TRANSITION SURFACES
RUNWAY AERODROME REFERENCE POINT (S31° 26.2', E152° 51.8')
Elevation 2.9m (AHD)

Scale at A1: 1:5,000

12/02/2025

PORT MACQUARIE AIRPORT



SCALE: 0 0.5 Km
Scale at A1: 1:5,000

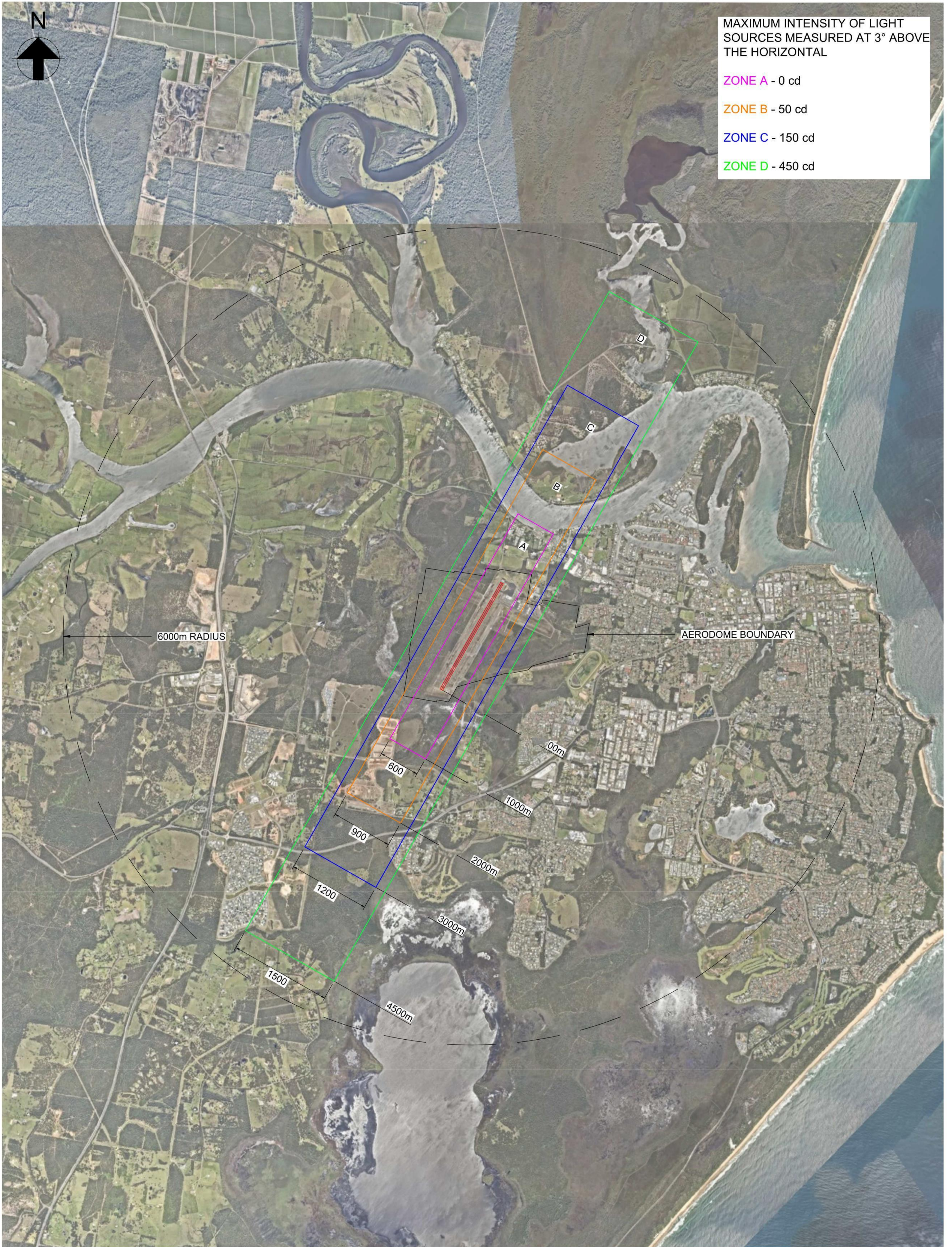
CLIENT: PORT MACQUARIE HASTINGS COUNCIL

COORDINATE SYSTEM: GDA 1994 MGA56

ARUP

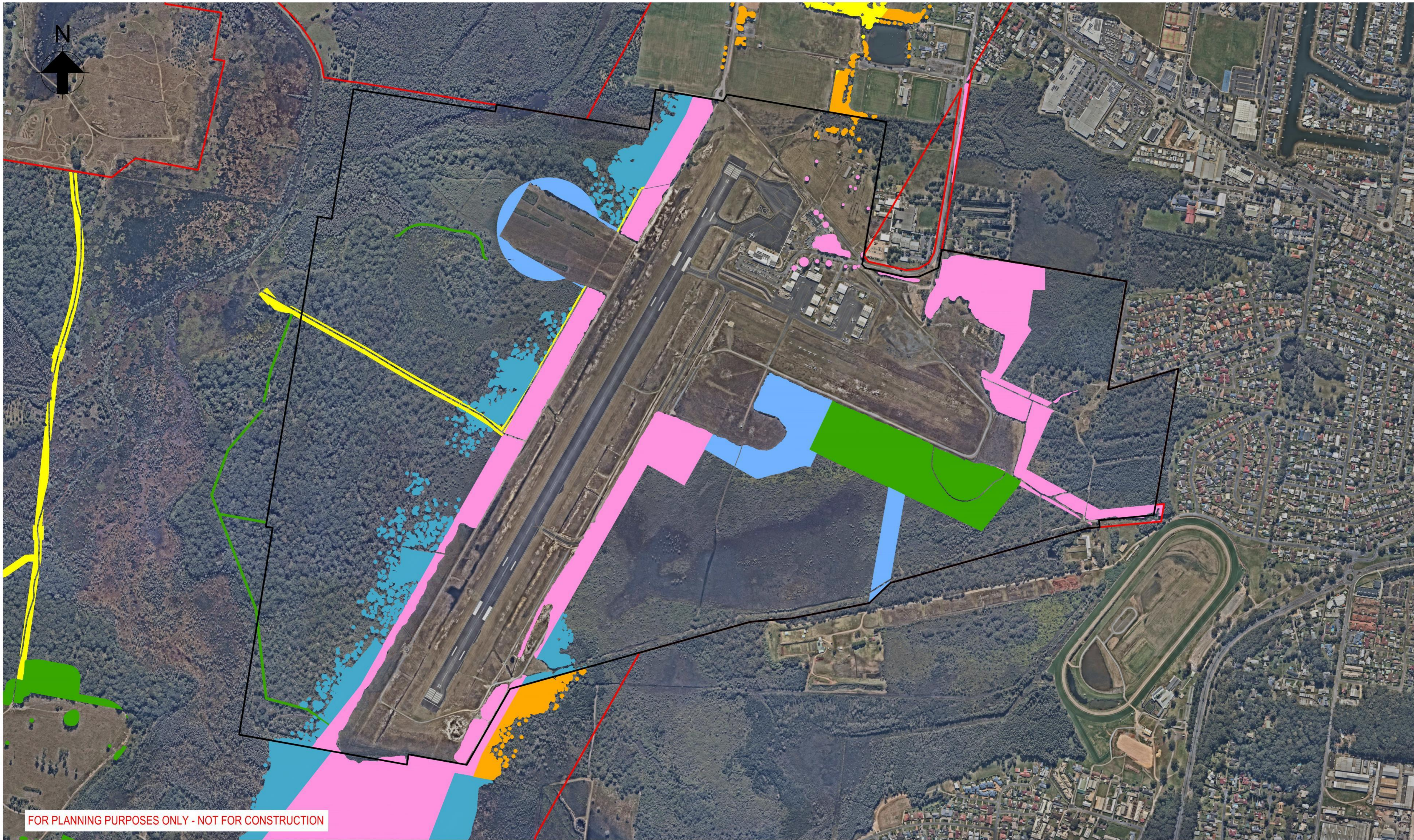
DRAFT PORT MACQUARIE AIRPORT MASTER PLAN 2045
OBSTACLE LIMITATION SURFACES (OLS) - TRANSITION SURFACES
RUNWAY AERODROME REFERENCE POINT (S31° 26.2', E152° 51.8')
Elevation 2.9m (AHD)
12/02/2025

Appendix E – Lighting Intensity Areas



SCALE:	CLIENT:	COORDINATE SYSTEM:	PORT MACQUARIE AIRPORT MASTER PLAN 2045
			MAXIMUM EXTERNAL LIGHTING INTENSITY
			DRAWING SET No: 01 STATUS: DRAFT DRG No: PQQ-MASTERPLAN-ARUP-DRG-01

Appendix F – Biocertification Constraints



FOR PLANNING PURPOSES ONLY - NOT FOR CONSTRUCTION

DRAWING COLOUR CODED - PRINT ALL COPIES IN COLOUR

LEGEND			
	Airport Boundary		Stage 2A
	Existing Buildings		Stage 2B
	Biocertification Area		Stage 3
	Stage 1		Stage 4
	Stage 5		Conservation Cropping

SCALE:

1:5000(A1)/1:10000(A3)

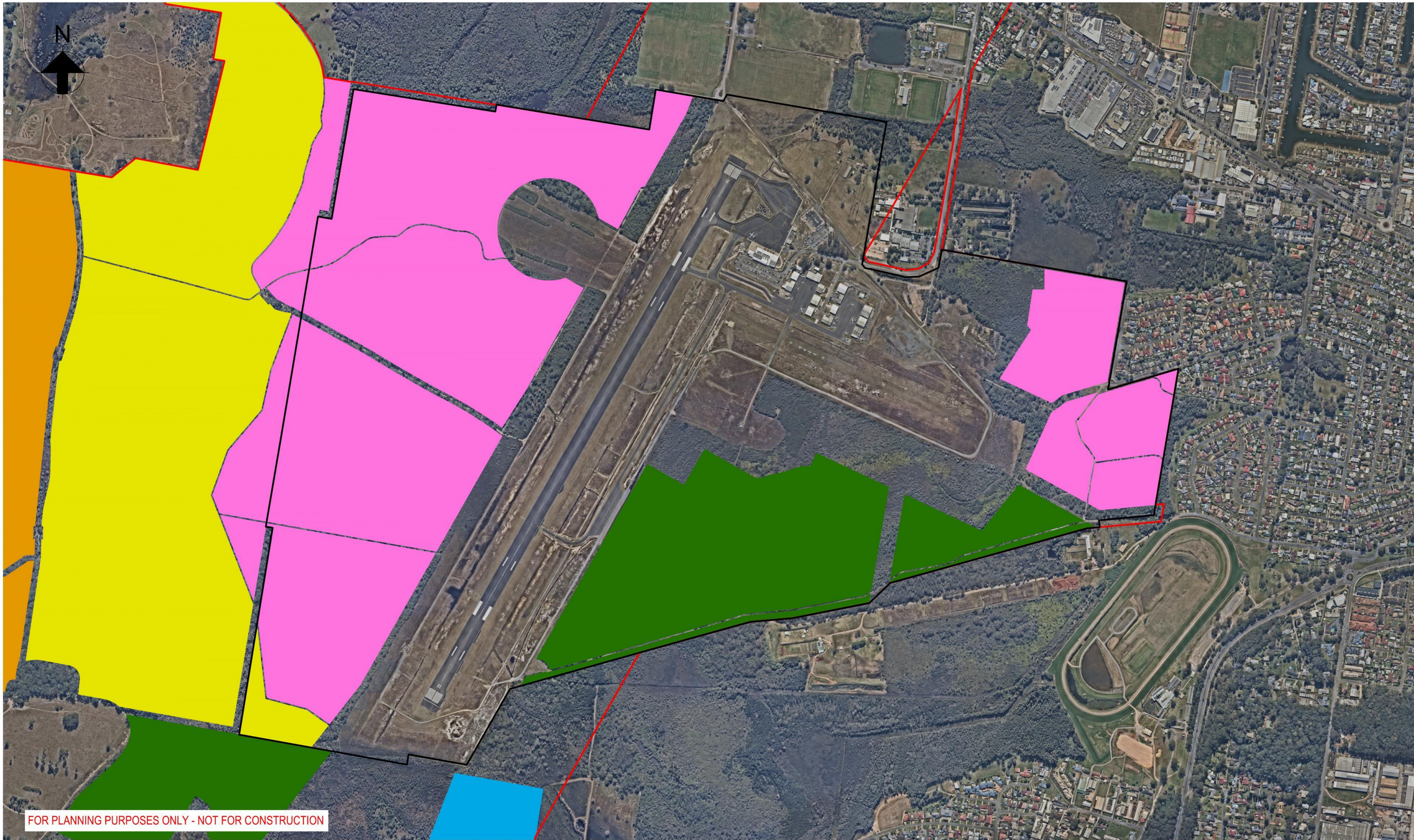
CLIENT:

PORT MACQUARIE
HASTINGS
COUNCIL

COORDINATE SYSTEM: GDA 1994 MGA56

ARUP

PORT MACQUARIE AIRPORT MASTER PLAN 2045		
EPBC CLEARING STAGING IMPACTS (WITHIN OR ADJACENT TO THE AIRPORT BOUNDARY)		
DRAWING SET No: 01	DATE: 12/02/2025	
STATUS: DRAFT	REVISION: A	VERSION: 1
DRG No: PQQ-MASTERPLAN-ARUP-DRG-02		




FOR PLANNING PURPOSES ONLY - NOT FOR CONSTRUCTION

DRAWING COLOUR CODED - PRINT ALL COPIES IN COLOUR

LEGEND	
	Airport Boundary
	Existing Buildings
	Biocertification Area
	Management Area 1
	Management Area 2
	Management Area 3
	Management Area 4
	Management Area 5


SCALE:



CLIENT:



COORDINATE SYSTEM: GDA 1994 MGA56



PORT MACQUARIE AIRPORT MASTER PLAN 2045		
BIOBANKING MANAGEMENT AREAS (WITHIN OR ADJACENT TO THE AIRPORT BOUNDARY)		
DRAWING SET No: 01	DATE: 12/02/2025	
STATUS: DRAFT	REVISION: A	VERSION: 1
DRG No: PQQ-MASTERPLAN-ARUP-DRG-03		

Appendix G – Flooding Areas



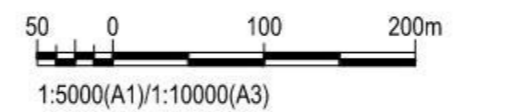
FOR PLANNING PURPOSES ONLY - NOT FOR CONSTRUCTION

DRAWING COLOUR CODED - PRINT ALL COPIES IN COLOUR

LEGEND

-  Airport Boundary
-  Existing Buildings
-  1 in 20 year flood
-  1 in 100 year flood

SCALE:




CLIENT:



PORT MACQUARIE
HASTINGS
COUNCIL

COORDINATE SYSTEM: GDA 1994 MGA56



PORT MACQUARIE AIRPORT MASTER PLAN 2045

FLOODING CONSTRAINTS

DRAWING SET No: 01		DATE: 12/02/2025
STATUS: DRAFT		REVISION: A
DRG No: PQQ-MASTERPLAN-ARUP-DRG-04		VERSION: 1

Appendix H – PANS-OPS

Aerodrome Manager
Port Macquarie-Hasting Council
PO Box 84
Port Macquarie, NSW 2444

Protection of PANS-OPS surfaces for Instrument Departure and Approach Procedures

Dear Sir/Madam,

Pursuant to CASR Part 139 Section 7.1.7 **Monitoring of Obstacles Associated with Instrument Runways**, I am writing to you to provide information with respect to the Instrument Flight Procedures at Port Macquarie aerodrome. The following text is considered in the provision of this data.

- *"...besides monitoring the applicable OLS, obstacle monitoring includes areas outside the OLS, also known as PANS-OPS surfaces, used in the design of the NPA procedures. To make it easier for aerodrome operators to carry out this task, procedure designers will ... provide aerodrome operators with a drawing or drawings of the area around the aerodrome, showing the designed approach paths, the circling areas and locations of critical obstacles taken into account in the design."*
- *"Aerodrome operators must establish procedures to monitor ... the critical obstacles associated with the NPA procedures and have them included in the Aerodrome Manual."*
- *"... designer must be advised of any changes of the status of the existing critical obstacles and any proposed development that is likely to be higher than the critical obstacles within the area depicted"*

To assist with your obligations regarding the protection of Instrument Flight Procedure Areas, you will find the following tabulated data and cross referenced diagrams. This information has been extracted from the flight validation information that has been compiled for instrument departure and approach procedures at your aerodrome and includes:

- A table of critical obstacles as a function of range and bearing from the Port Macquarie ARP. **Relevant fields are highlighted in yellow**
- The diagrams which display the circling areas associated with the aerodrome along with the approach, missed approach and, where applicable, the departure protection areas

- The parameters for the visual segment surface (VSS) for instrument approach procedures, as well as a VSS diagram with contours. (Note – VSS is only for approach procedures that have a published straight-in (SI) minima and is not applicable to circling-only approach procedures):
 - Circling Areas
 - VSS RWY 03
 - VSS RWY 21
 - NDB-A
 - RNAV-Z (GNSS) RWY 03
 - RNAV-Z (GNSS) RWY 21

Should any obstacles be observed to extend above those elevations listed and in the areas marked on the maps, it is imperative that you advise this office. Based on that feedback, a safety assessment will be conducted and any necessary amendments made to protect aircraft using Instrument Flight Procedures.

In addition to any agreement in place regarding the supply of survey data and monitoring of areas, it is requested that a copy of the yearly aerodrome OLS survey be forwarded to Airservices. This does not absolve the operator from the obligations indicated in CASR Part 139, however provision of current survey information assists the review of extant Instrument Flight Procedures and aircraft minimum safe altitudes.

If you have any questions regarding the contents of this letter, please contact Cesar Calingasan on phone 1300 301 120 or email ifp@airservicesaustralia.com

Cesar Calingasan
IFP Designer
Flight Paths Design
Airservices Australia

30/09/2020

cc

Mr Joe Hain
Team Leader Aerodromes
Civil Aviation Safety Authority
GPO Box 2005
CANBERRA ACT 2601

CRITICAL OBSTACLES

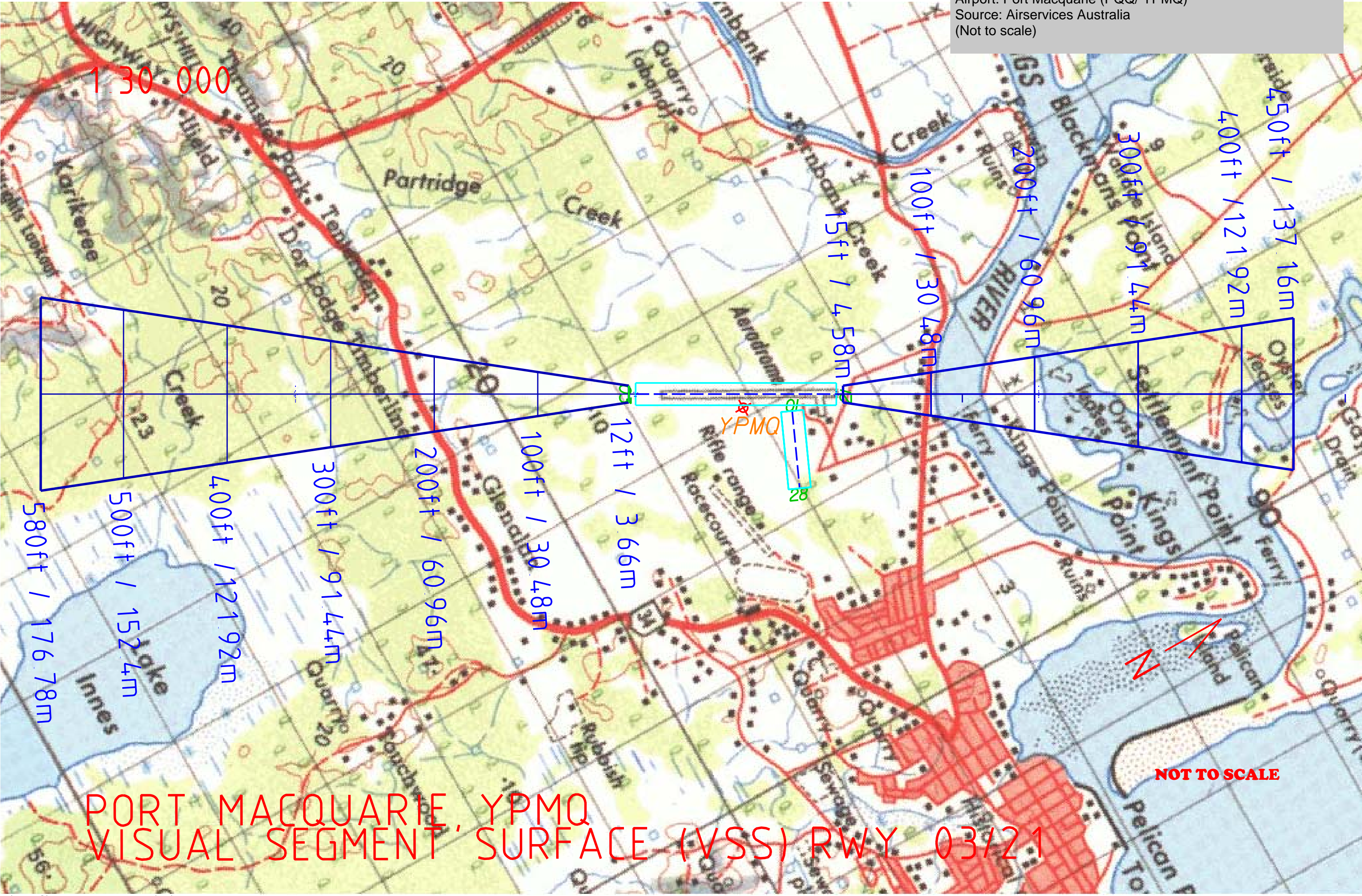
VSS Runway 03		
<p>VSS 03 Parameters: Inner Edge: 150m Start Pt fm THR: 60m Divergence (L): 8.53°/ 15% Divergence (R): 8.53°/ 15% End Pt fm THR: 5334.39m Height at end point: 176.78m / 580.0ft Surface Gradient: 1.88°/3.28% Nominal Descent Gradient: 3.0°/5.24%</p>	<p>With Penetrations by a Euc Tree. VSS Approach RWY 03 Survey Point #28</p>	<p>Requirement: Publish in ERSA as obstacles. Lopping of tree, if impractical to undertake, is not required as it is clear of VSS OCS</p>

VSS Runway 21		
<p>VSS 21 Parameters: Inner Edge: 150m Start Pt fm THR: 60m Divergence (L): 8.53°/ 15% Divergence (R): 8.53°/ 15% End Pt fm THR: 4099.37m Height at end point: 137.16m / 450.0ft Surface Gradient: 1.88°/3.28% Nominal Descent Gradient: 3.0°/5.24%</p>	<p>With Penetrations by a Causarina Tree. VSS Approach RWY 21 Survey Point #3</p>	<p>Requirement: Publish in ERSA as obstacles. Lopping of tree, if impractical to undertake, is not required as it is clear of VSS OCS</p>

AERODROME: (YPMQ) OBSTACLES

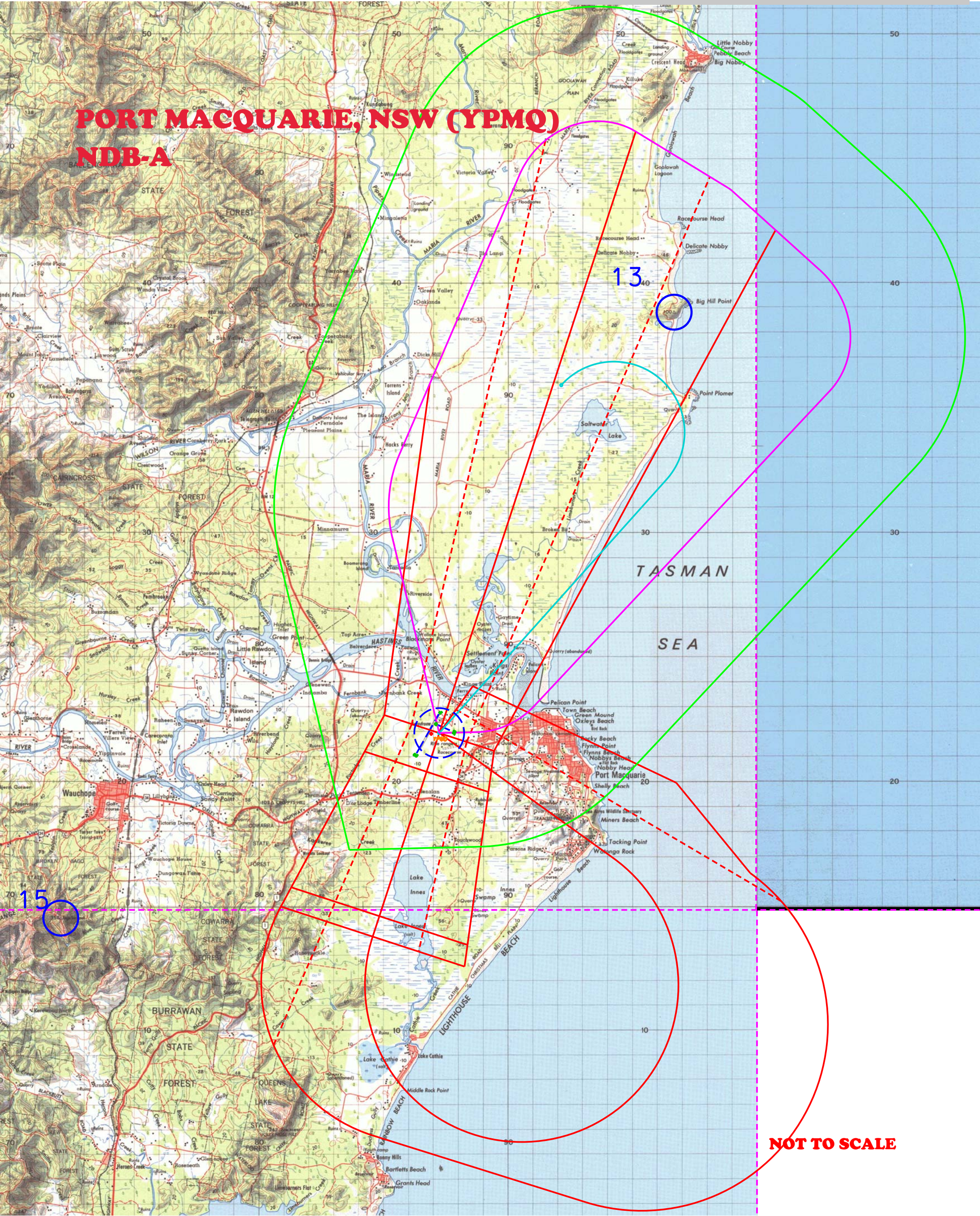
Serial	Segment	Description	BRG °T ARP	Dist (KM)	Dist (NM)	Elev (ft)	MOC	Nominal Alt (ft)	OIS / Flt Alt (ft)	Approximate Position	
PMQ 01	NW 25 MSA	Terrain-1258m SPOT	307°	50.7	27.4	4316	984	5300	4316	31 09.57	152 26.33
PMQ 02	E 25 MSA	Terrain - 240m TRIG	014°	31.0	16.7	986	984	2000	1016	31 09.92	152 56.65
PMQ 03	SW 25 MSA	Terrain - 865m TRIG	240°	52.0	28.1	3020	984	4100	3116	31 40.04	152 23.20
PMQ 04	10N MSA Sector C Initial 16nm-8nm	Terrain/Tower - 534m Trig/Mt Cairncross Tower	301°	20.1	10.9	1905	1000	3000	2000	31 20.48	152 40.96
PMQ 05	CAT A/B Circling Sector B Final 2nm-MAPt Sector C Final 3nm-MAPT	Terrain - 60m CONT	270°	4.5	2.4	396	300	700	400	31 26.16	152 48.96
PMQ 06	Cat C Circling Sector A Final 3nm-MAPt	Terrain - 117m TRIG	122°	6.0	3.2	527	300	830	530	31 27.94	152 55.16
PMQ 07	Sector A Initial 16nm-12nm	Terrain - 487M TRIG	198°	26.0	14.0	1774	519	2500	1981	31 39.56	152 46.76
PMQ 08	RNAV 21 Missed	Terrain-40m Cont	115°	1.9	1.0	330	10	393	383	31 26.61	152 52.90
PMQ 09	RNAV 03 Initial	Terrain-420M CONT	237°	27.5	14.8	1577	984	2600	1616	31 34.22	152 37.23
PMQ 10	RNAV 03 Intermediate RNAV 21 Missed Sector A Intermediate 12nm-7nm	Terrain -247M SPOT	201°	17.1	9.2	986	492	1500	1008	31 34.77	152 47.94

PMQ 11	RNAV 03 Final	Terrain - 140M CONT	213°	9.8	5.3	658	246	910	664	31 30.56	152 48.40
PMQ 12	RNAV 03 Final RNAV 21 Missed	Terrain - 40M CONT	220°	3.8	2.1	330	150	480	330	31 27.74	152 50.24
PMQ 13	NDB-A Initial NDB-A Final	Terrain -100m TRIG	030°	19.5	10.5	527	984	2200	1216	31 17.00	152 57.96
PMQ 15	NDB-A Final	Terrain - 400m contour	246°	21.2	11.4	1511	984	2500	1516	31 30.79	152 39.58
PMQ 18	Sector B Initial 19nm-10nm	Terrain - 668m TRIG	242°	33.5	18.1	2364	1000	3400	2400	31 34.70	152 33.12
PMQ 19	Sector B Initial 19nm-10nm	TWR-Middle Brother	211°	34.3	18.5	2352	1000	3400	2400	31 42.11	152 40.74
PMQ 20	RNAV 03 Holding	Mt Gibraltar 851 Trig	240	47.49	25.64	2955	984	4100	3116	31 38.79	152 25.67
PMQ 21	Sector B Initial 19nm-10nm Sector C Initial 19nm-16nm	669m Spot	297°	36.0	19.4	2364	1000	3400	2400	31 17.20	152 31.64
PMQ 22	Sector B Intermediate 6nm- 2nm Sector C Intermediate 7nm- 4nm	Terrain - 160M CONT	226°	12.3	6.6	724	500	1300	800	31 30.80	152 46.25



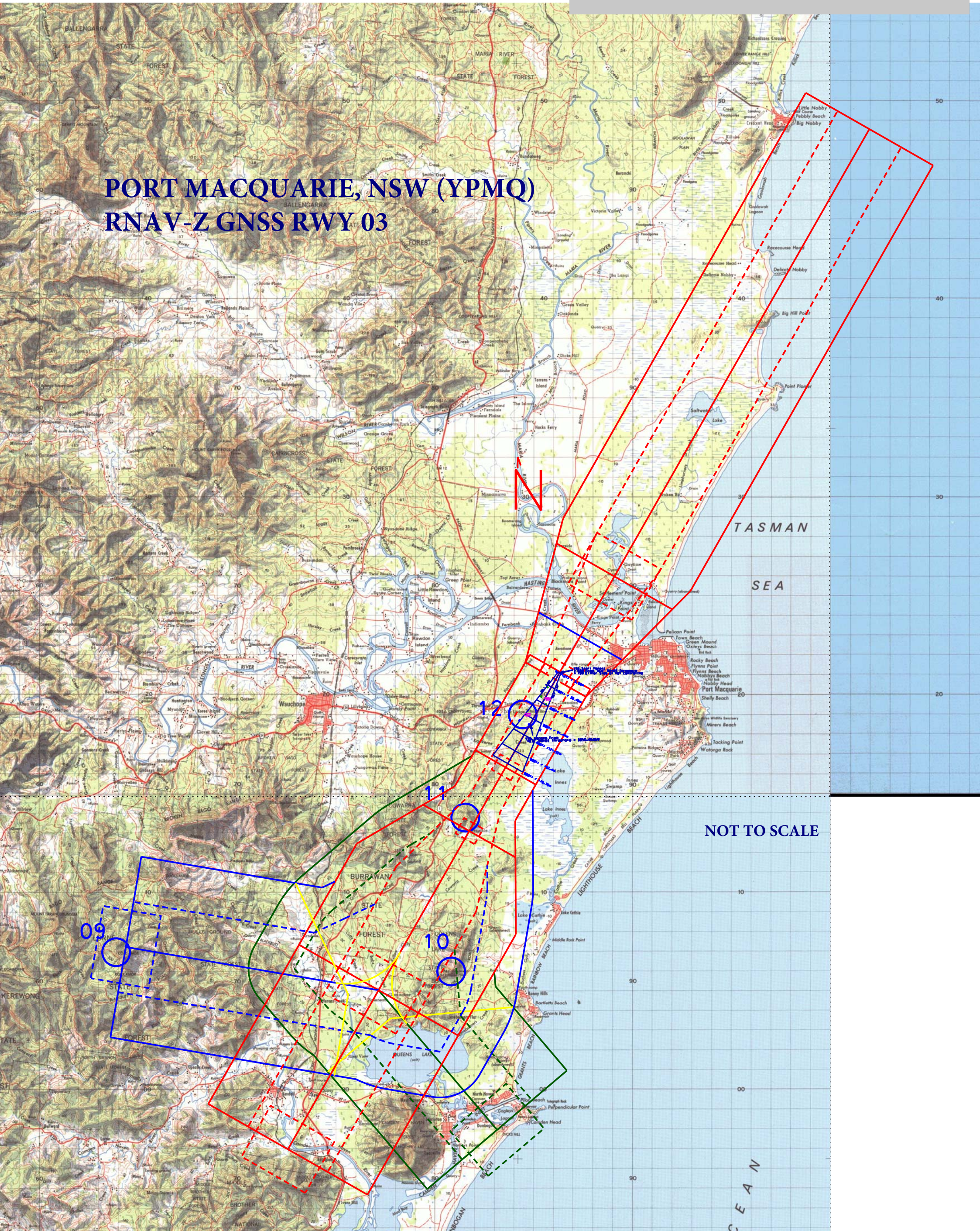
PORT MACQUARIE, YPMQ
VISUAL SEGMENT SURFACE (VSS) RWY 03/21

NOT TO SCALE



NOT TO SCALE

PORT MACQUARIE, NSW (YPMQ) RNAV-Z GNSS RWY 03



PORT MACQUARIE, NSW (YPMQ) RNAV-Z GNSS RWY 21 - APV

