



MASTER PLAN 2010 ADDENDUM REPORT

December 2013

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
1.0 INTRODUCTION	1
1.1 Introduction.....	1
1.2 Background	1
1.3 Location.....	3
1.4 Regional Planning Context.....	3
1.5 Economic Significance	4
1.6 Consultation	4
2.0 STRATEGIC DIRECTION	5
3.0 EXISTING AIRPORT INFRASTRUCTURE AND FACILITIES	6
4.0 AVIATION DEMAND FORECASTS	7
4.1 RPT Passenger Movement Forecast.....	8
4.2 RPT Aircraft Movement Forecast.....	9
4.3 GA Aircraft Movement Forecast.....	9
5.0 DEVELOPMENT CONSTRAINTS	10
6.0 AIRCRAFT MOVEMENT AREAS	11
6.1 Runway 03/21	11
6.2 Runway 10/28	11
6.3 Taxiways	11
6.4 RPT Apron.....	12
6.5 GA Facilities	13
6.6 Helicopter Facilities	13
7.0 AVIATION SUPPORT FACILITIES	14
7.1 Refuelling Facilities	14
7.2 Ground Support Equipment Storage Areas	14
7.3 Navigation and Approach Aids.....	14
7.4 Weather Information Service.....	14
7.5 Aerodrome Rescue and Fire-Fighting Services	14
7.6 Air Traffic Control	15
8.0 PASSENGER FACILITIES	16
8.1 Passenger Terminal	16
8.2 Car Parking Facilities	17
9.0 GROUND TRANSPORT SYSTEM	18
9.1 Access Roads	18
10.0 DEVELOPMENT PRECINCTS	19
11.0 UTILITIES.....	19
12.0 ENVIRONMENTAL AND LAND USE PLANNING IMPACTS	20

12.1 Aircraft Noise.....	20
12.2 Obstacle Limitation Surfaces	20
12.3 Flooding and Stormwater Drainage	20
12.4 Other Development Control Considerations	20
13.0 MASTER PLAN 2013	22
13.1 Option 1	22
13.2 Option 2.....	23
14.0 STAGING CONSIDERATIONS AND FUNDING OPTIONS	25
APPENDIX A	27

LIST OF FIGURES

Figure 3–1	Existing Airport Layout 2013.....	Appendix A
Figure 10–1	Development Precincts 2013.....	Appendix A
Figure 12–1	2009 ANEI (Australian Noise Exposure Index).....	Appendix A
Figure 12–4	2030 ANEF (Australian Noise Exposure Forecast)	Appendix A
Figure 12–10	Obstacle Limitation Surfaces (OLS) 2013	Appendix A
Figure 12–11	Inner OLS - North 2013.....	Appendix A
Figure 12–12	Inner OLS - South 2013.....	Appendix A
Figure 12–13	Bird Hazard Areas 2013.....	Appendix A
Figure 13–1	Master Plan Option 1 2013.....	Appendix A
Figure 13–2	Master Plan Option 2 2013	Appendix A

EXECUTIVE SUMMARY

This Addendum Report has been prepared as an update to the Master Plan 2010 taking into account:

- ✈ the Stage 1A airside infrastructure upgrade currently being undertaken; and
- ✈ changes to aerodrome standards and emerging planning considerations proposed by the Civil Aviation Safety Authority (CASA) and the Australian Government Department of Infrastructure and Transport.

The current Stage 1A airside infrastructure upgrade, will cater for the potential introduction of up to Code 4C (B737-800 / A320) aircraft as operated by the main domestic airlines, removing the current constraint to the operation of these aircraft at Port Macquarie Airport. The upgrade will provide significant capacity for growth in air services over the coming years.

During the planning and design phase of the Stage 1A upgrade, CASA advised Council of proposed changes to the aerodrome standards as set out in the Manual of Standards (MOS) Part 139 which had the potential to impact on the proposed upgrade and future operation of Code 4C aircraft at Port Macquarie Airport. In particular, these proposed changes related to the requirement to comply with the full Code 4C aerodrome standards, including:

- ✈ widening the runway to 45 metres, from the existing Code 3C 30 metre width;
- ✈ widening the runway strip and associated 1:7 transitional (obstacle limitation) surface to 300 metres, from the existing Code 3C 150 metre width; and
- ✈ widening the approach surface length of inner edge at each end of runway 03/21 to 300 metres, from the existing Code 3C 150 metre width.

In March 2011, Council resolved to incorporate widening of the existing runway to 45 metres as part of the scope of works for the proposed Stage 1A upgrade, but identified that compliance with the other requirements was not possible due to:

- ✈ the location of existing vegetation along both sides of the runway strip and infringing the associated 1:7 transitional surface and 2% approach surfaces at each end of runway 03/21; and
- ✈ the location of existing infrastructure including the RPT apron, terminal building and car park.

CASA has confirmed that it will provide Port Macquarie Airport with an exemption against these requirements prior to the introduction of Code 4C aircraft, enabling the airport to be declared as a Code 4C aerodrome on completion of the Stage 1A upgrade. This exemption will be in place for a period of up to three years allowing Council to proceed with further detailed investigations to determine the feasibility of widening the runway strip and approach surfaces to comply with the full Code 4C aerodrome standard in the future.

CASA has also confirmed that, either through future compliance with the full Code 4C aerodrome standards or under the provisions of proposed changes to Civil Aviation Regulation CAR235A, Code 4C aircraft will be permitted to operate at Port Macquarie Airport following the current upgrade. Council has however

determined that in order to future proof the ongoing operation and development of Port Macquarie Airport for Code 4C aircraft, the long-term planning and development of the Airport should ultimately seek to comply with the full Code 4C aerodrome standards wherever possible, including the requirement for the 300 metre wide runway strip and approach surface length of inner edge.

Accordingly, this Addendum Report has been prepared to identify the various issues, constraints, and potential future development options available to comply with the full Code 4C aerodrome standards. Figure 13-1 (Option 1) and Figure 13-2 (Option 2) included in Appendix A identify options for the future development of the Airport to meet the forecast growth in RPT air services and passengers numbers to 2030. Both options also identify potential areas for general aviation related business activities to meet demand.

Option 1 has the potential to support incremental staged development of the existing infrastructure to meet demand in air services commensurate with the availability of funding, and as such is considered suitable for development in the short to medium term. Whilst Option 2 offers some operational benefits through the reduced impact on existing airport infrastructure / facilities and locating the RPT apron / terminal building in a more “ideal” location from a master planning perspective, this development option is likely to require a significant one-off capital investment to provide the new infrastructure required (incl. RPT apron, terminal building, car parking, access roads, services etc). As such, Option 2 is considered a potential long-term development scenario subject to the availability of funding.

Figure 13-1 (Option 1) and Figure 13-2 (Option 2) also identify areas of the Airport site available for non-aviation uses, including commercial property development as part of the proposed Airport Precinct business park. The Addendum Report identifies the aviation / non-aviation boundary as being located approximately 600 metres to the east of runway 03/21, with approximately 28 hectares of land to the east of this line being available for business park development, subject to further environmental investigation and rezoning.

The Addendum Report also provides updated guidance to Council on a range of issues for consideration in Council's land use planning and development control functions. This guidance should be read in conjunction with the Australian Government's *National Airports Safeguarding Framework* and *Safeguarding Airports and the Communities Around Them* Discussion Paper.

The Addendum Report sets out a number of priority actions to be addressed over the next 5 years, including further investigation to determine the feasibility of widening the runway strip and approach surfaces to 300 metres to comply with the full Code 4C aerodrome standard in the future and further consideration of the landside (terminal, car park) improvements required to meet demand, along with a recommendation to continue to liaise closely with CASA and airline operators to identify any potential operating constraints and commercial risks to Council, as the aerodrome operator, through continuing to operate the Airport, in the short to medium term, as a Code 3C aerodrome.

The Addendum Report should be read in conjunction with the original Master Plan 2010 - together these documents form the principal planning documents for Port Macquarie Airport, and provide the framework and strategic direction to guide the future operation and development of the Airport to underpin the region's economic development and tourism potential.

1.0 INTRODUCTION

1.1 Introduction

This Addendum Report has been prepared as an update to the Master Plan 2010 taking into account:

- the Stage 1A airside infrastructure upgrade currently being undertaken; and
- changes to aerodrome standards and emerging planning considerations proposed by the Civil Aviation Safety Authority (CASA) and the Australian Government Department of Infrastructure and Transport.

In preparing the Addendum Report, consideration has also been given to the current status of the requirements for:

- future airline (RPT) operations;
- future general aviation (GA) activities;
- commercial property development opportunities; and
- flood-free road access.

The Addendum Report should be read in conjunction with the original Master Plan 2010 - together these documents form the principal planning documents for Port Macquarie Airport, and provide the framework and strategic direction to guide the future operation and development of the Airport to underpin the region's economic development and tourism potential.

1.2 Background

Stage 1A airside infrastructure upgrade

In March 2011, Council resolved to proceed with a staged upgrade of Port Macquarie Airport to cater for operations of up to Code 4C (B737-800 / A320) aircraft as set out in the Master Plan 2010. Following detailed design, the scope of works for the upgrade incorporated:

- strengthening, extending (by 110m to the south) and widening the existing main runway 03/21 to cater for up to Code 4C B737-800 / A320 type aircraft - 1,800 metres long x 45 metres wide;
- expansion of the existing regular public transport (RPT) apron (located in front of the terminal building) to provide additional parking positions for larger aircraft, including a new taxiway connection to the main runway;
- retaining the existing 150 metre wide runway strip and approach surface;
- provision of a new runway end safety area at the northern end of the runway, requiring the permanent closure of a section of Tuffins Lane to the north of the runway and expanded RPT apron;

- provision of new turning areas for vehicles at the truncated ends of Tuffins Lane;
- relocation of the helicopter landing and parking area, and grassed general aviation (GA) aircraft parking area, requiring the permanent closure of the east - west grass runway 10/28; and
- provision of associated infrastructure / facilities (eg runway, taxiway and apron lighting, other visual aids, drainage, line marking etc).

Proposed changes to aerodrome standards - Civil Aviation Safety Authority (CASA)

During the planning and design phase of the Stage 1A upgrade, Council was advised that despite the aerodrome standards in place at that time and previous advice provided by CASA during the preparation of the Master Plan 2010, CASA was planning to make a number of changes to the regulatory environment that would potentially impact on the proposed upgrade and future operation of Code 4C aircraft at Port Macquarie Airport. These changes included a proposed realignment of the Manual of Standards (MOS) Part 139 with the full International Civil Aviation Organisation (ICAO) standards, and in particular related to the requirements for the width of the runway, runway strip and approach (obstacle limitation) surface length of inner edge for a Code 4C aerodrome. The potential impact of these changes to comply with the full Code 4C standards included:

- widening the runway to 45 metres, from the existing 30 metre width;
- widening the runway strip to 300 metres, from the existing 150 metre width; and
- widening the approach surface length of inner edge to 300 metres, from the existing 150 metre width.

In March 2011, Council resolved to incorporate widening of the existing runway to 45 metres as part of the scope of works for the proposed Stage 1A upgrade. This decision was taken as a prudent and cost effective approach to future proof the upgraded runway infrastructure in accordance with the Code 4C runway standard. However, due to a range of environmental constraints and the location of existing infrastructure (including the RPT apron, terminal building and car park) it was identified that it was not possible to widen the associated runway strip and approach surface to 300 metres as part of the proposed upgrade to comply with the full Code 4C aerodrome standards. Further consultation with CASA subsequently confirmed that CASA will provide Port Macquarie Airport with an exemption against these requirements prior to the introduction of Code 4C aircraft, enabling the airport to be declared as a Code 4C aerodrome on completion of the Stage 1A upgrade. This exemption will be in place for a period of up to three years allowing Council to proceed with further detailed investigations to determine the feasibility of widening the runway strip and approach surface to comply with the full Code 4C aerodrome standard in the future. If at the end of the three year exemption period the runway strip and approach surface are unable to be widened from the current Code 3C 150 metre width, Council will be required to declare the widened 45 metre runway to be a Code 3C runway (regardless of the runway width).

It is important to note that this will not necessarily constrain the future operation of Code 4C aircraft at Port Macquarie Airport, as CASA has recently clarified that the Manual of Standards (MOS) Part 139 is not intended to be applied to “limit or regulate the operations” of aircraft at aerodromes. Under proposed changes to Civil Aviation Regulation CAR 235A, CASA will permit conditional approval for airlines to operate aircraft at aerodromes that do not comply with the full ICAO / MOS standard for that aircraft subject to the airline meeting the requirements of CASA’s performance-based assessment for that aircraft. These changes are consistent with existing operations at many Australian airports (where a 300 metre runway strip and approach surface cannot be provided and in some cases, where Code 4 aircraft operate on 30 metre wide runways).

Whilst CASA has confirmed to Council that, either through future compliance with the full Code 4C aerodrome standards or under the provisions of CAR235A, Code 4C aircraft will be permitted to operate at Port Macquarie Airport following the current upgrade, Council has determined that in order to future proof the ongoing operation and development of Port Macquarie Airport for Code 4C aircraft, the long-term planning and development of the Airport should ultimately seek to comply with the full Code 4C aerodrome standards wherever possible, including the requirement for the 300 metre wide runway strip and approach surface length of inner edge.

This Master Plan Addendum Report has therefore been prepared to identify the various issues, constraints, and potential future development options available to comply with the proposed changes to the CASA aerodrome standards.

Emerging planning considerations - Department of Infrastructure and Transport

Since the Master Plan 2010 was adopted, the Australian Government Department of Infrastructure and Transport has identified a number of emerging planning considerations in its *National Airports Safeguarding Framework* and *Safeguarding Airports and the Communities Around Them* Discussion Paper. These issues are discussed in Section 8 and Section 12 of this Report, and it is recommended that Council give further consideration to these emerging issues in considering future development options for the passenger terminal building and in Council’s development control and land use planning functions in the vicinity of the Airport.

1.3 Location

see Master Plan 2010

1.4 Regional Planning Context

see Master Plan 2010

1.5 Economic Significance

An *Economic Impact Assessment Study* conducted by consultants Aurecon in 2011 estimated that the upgrade of the Airport to cater for further growth in air services including the potential introduction of up to Code 4C medium jet aircraft such as the Boeing B737-800 and Airbus A320 series aircraft would result in:

- ✈ an additional \$86.1 million in gross output per annum*;
- ✈ an additional \$38.2 million in value added or GRP per annum*;
- ✈ an additional \$21.8 million in wages and salaries paid per annum*; and
- ✈ an additional 408 jobs created per annum*.

* based on 400,000 passenger movements per annum (currently 230,000 passengers pa)

These figures demonstrate the importance of ensuring that the Airport is positioned to handle the forecast growth in air services and passengers numbers to realise these regional economic benefits.

1.6 Consultation

This Addendum Report has been prepared in consultation with CASA and in consideration of the proposed changes to the civil aviation regulations and corresponding aerodrome standards. The development options presented in this report have been prepared on the basis of technical input and planning advice provided by Airport Master Planning Consultants Pty Ltd and in consultation with Council's Airport Project Advisory Group (APAG).

The Addendum Report was also made available for public and stakeholder comment prior to final consideration by Council.

2.0 STRATEGIC DIRECTION

see *Master Plan 2010*

Council's Vision for the Airport remains:

- ✈ ***to be the premier gateway to the NSW Mid North Coast***

Council's Mission for the Airport is:

- ✈ ***to continue to grow the Airport's contribution to the regional economy by promoting a range of competitive airline services that underpin the region's business and tourism industries; and by establishing an airport precinct business park to attract new employment and inward investment opportunities to the region***

Council's priority objectives for the Airport therefore remain:

- ✈ ***to provide adequate infrastructure and facilities to meet the forecast demand for future regular public transport (RPT) airline operations***

(this objective is being progressed through the current Stage 1A airside infrastructure upgrade)

- ✈ ***to provide opportunity for commercial property development to promote employment opportunities, facilitate economic development, and support the long-term financial viability and sustainability of the Airport business***

(this objective is being progressed through ongoing planning for the development of an Airport Precinct business park)

Recent studies, including the Australian Government's *Joint Study on aviation capacity in the Sydney region* dated March 2012, the NSW Government Trade & Investment's *Visitor Economy Industry Action Plan* dated December 2012 and Sydney Airport's *Preliminary Draft Master Plan 2033* dated June 2013, point towards the progressive up-scaling in the size of aircraft operated by the domestic airlines in Australia, including aircraft operated on regional routes. As such, Council's strategy to ensure that Port Macquarie Airport is positioned to cater for continued growth in air services including the potential introduction of larger aircraft up to 180-seat Code 4C (B737-800 / A320) aircraft, is critical to promoting a range of competitive airline services and ensuring continued access to Sydney (Kingsford-Smith) Airport for services from Port Macquarie.

3.0 EXISTING AIRPORT INFRASTRUCTURE AND FACILITIES

Figure 3-1 included in Appendix A shows the airport infrastructure and facilities that will be in place following completion of the Stage 1A airside infrastructure upgrade.

The following table lists the key characteristics of runway 03/21 that will be published in the *En Route Supplement Australia (ERSA)* published by Airservices:

Runway	Ref. Code	Dimensions (m)	Strip Width (m)	Surface	Strength
Runway 03/21	4C	1,800 x 45	150 graded	Asphalt (Flexible) - Grooved	PCN30/F/C/1400 (203PSI)/T

On completion of the upgrade, runway 03/21 will be suitable for regular daily operations of aircraft up to approximately 72.5 tonne maximum take-off weight (MTOW). The grass runway 10/28 was permanently decommissioned in December 2012 as part of the Stage 1A upgrade project.



Figure 3-2 RPT Apron Layout (2013)

On completion of the upgrade, the RPT apron will provide four (4) free moving parking positions for RPT aircraft as shown in Figure 3-2 above. Bays 1 and 2 located immediately in front of the terminal building will be suitable for up to Code 4 aircraft (max. Embraer E190). Bays 3 and 4 will be suitable for up to Code 4 aircraft (max. B737-800 / A320). Bays 3 and 4 will be connected to runway 03/21 via a new taxiway connection (Taxiway Alpha). The Stage 1A apron will provide significant capacity for growth in air services and operational flexibility over the coming years.

Figure 3-1 also shows the location of the relocated helicopter landing and parking area, and grassed general aviation (GA) aircraft parking area to the south of Taxiway Charlie. The relocated helicopter landing and parking area was commissioned at the end of April 2013.

4.0 AVIATION DEMAND FORECASTS

4.1 RPT Passenger Movement Forecast

Based on annual statistics prepared by the Bureau of Infrastructure, Transport and Regional Economics (BITRE) as shown in Figure 4-1 below, Port Macquarie Airport was the fifth largest regional airport in NSW in 2012 with 232,314 passenger movements.

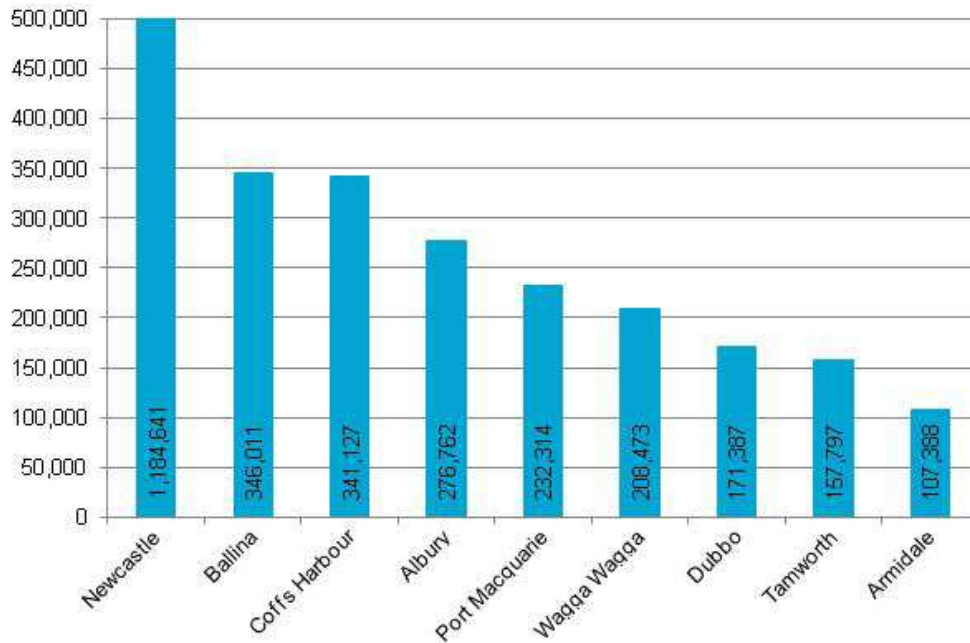


Figure 4-1 Annual Passenger Movements 2012

Source: BITRE

BITRE has predicted that passenger movements through Australian airports will increase by four per cent per annum over the next 20 years, resulting in a doubling of passenger movements over this period. As shown in Figure 4-2 below, adopting this growth rate, passenger movements at Port Macquarie Airport are forecast to reach around 450,000 passengers per annum by 2030. The proposed Stage 1A upgrade will provide the next major impetus to promote growth in passenger numbers, with the potential for 300,000 to 350,000 passengers per annum by 2020.

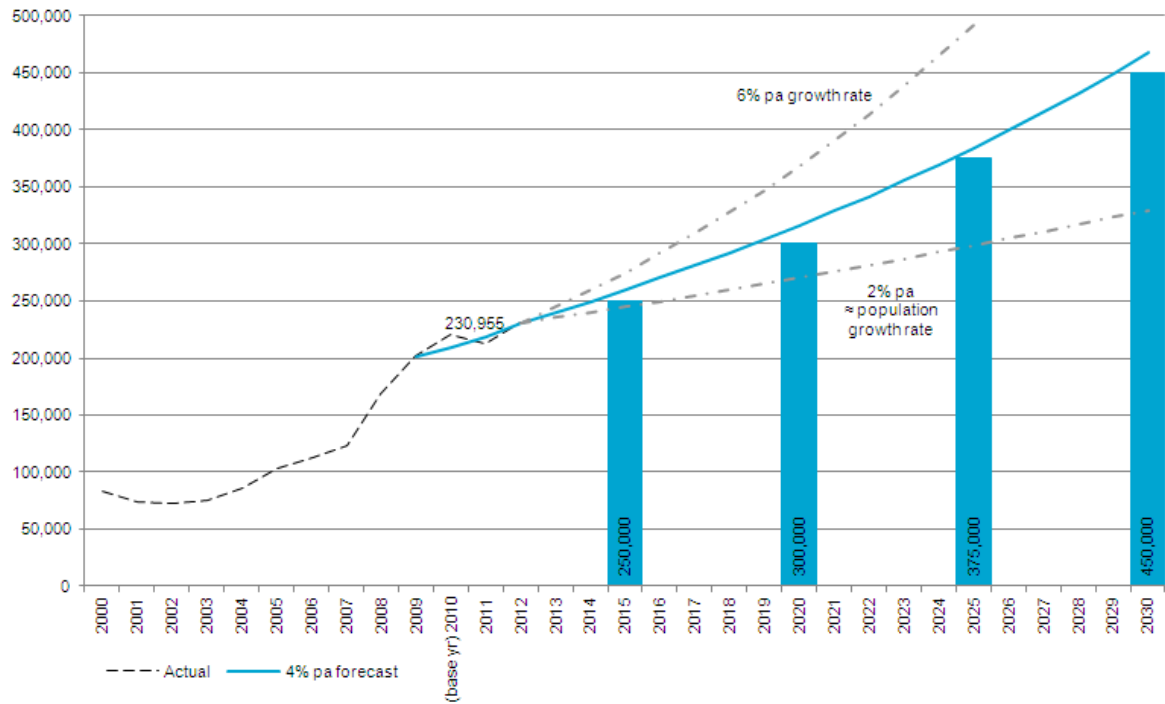


Figure 4-2 RPT Passenger Movement Forecast

4.2 RPT Aircraft Movement Forecast

see Master Plan 2010

4.3 GA Aircraft Movement Forecast

see Master Plan 2010

5.0 DEVELOPMENT CONSTRAINTS

The Master Plan 2010 identified various environmental constraints on or adjacent to the Airport site that require careful consideration as part of the planning for the future operation and development of the Airport. With regard to the requirement for a 300 metre wide runway strip and approach surface length of inner edge, preliminary investigations have identified the following key constraints:

- the location of existing vegetation along both sides of the runway strip and infringing the associated 1:7 transitional surface and 2% approach surfaces at each end of runway 03/21; and
- the location of existing infrastructure including the RPT apron, terminal building and car park.

As the existing vegetation surrounding the Airport includes areas identified as coastal wetlands protected under *State Environmental Planning Policy (SEPP) 14*, and potentially containing endangered ecological communities and / or threatened fauna species including core koala habitat, the requirement to clear and crop this vegetation to comply with the full Code 4C aerodrome standard will be subject to detailed environmental assessment in accordance with the *Environmental Planning and Assessment Act 1979* and the *Environmental Planning and Assessment Regulations 2000*.

With regard to the location of the existing RPT apron, terminal building and car park infrastructure, which were originally established based on the Code 3C aerodrome standard and a 150 metre wide runway strip, CASA has advised that future development in this area should not encroach into the 300 metre runway strip or infringe the associated transitional surface. While the existing infrastructure remains in its current location, Port Macquarie Airport will only be able to achieve a 150 metre runway strip in this area - this infrastructure would need to be relocated to comply fully with the 300 metre Code 4C standard.

As identified in the Master Plan 2010, one of the priority objectives for Council is to promote further employment and economic development opportunities through the development of an Airport Precinct business park (see Section 10). The area identified for this development is also subject to potential environmental constraints, and it is proposed to develop an overall Environmental Strategy for the Airport encompassing all aspects of future development to ensure that appropriate consideration, including mitigation and offsetting strategies, is given to the various environmental issues.

6.0 AIRCRAFT MOVEMENT AREAS

6.1 Runway 03/21

As previously discussed, on completion of the current Stage 1A airside infrastructure upgrade, runway 03/21 will be declared as a Code 4C runway 1,800 metres long x 45 metres wide (currently Code 3C 1,600 metres x 30 metres). The upgraded runway will be suitable for operations up to Code 4C (B737-800 / A320) aircraft as operated by the main domestic airlines, and will provide significant capacity for growth in air services over the coming years.

There are no further upgrades proposed to runway 03/21 as part of this Addendum Report, other than investigation into the feasibility of widening the runway strip and approach surface from the existing Code 3C 150 metre width to the full Code 4C 300 metre standard.

6.2 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 Stage 1A upgrade to make way for other airport facilities, including the relocated helicopter landing and parking area, GA aircraft parking area, and the potential for future airport development as outlined in the Master Plan 2010 and this Addendum Report.

6.3 Taxiways

A new taxiway connection, Taxiway Alpha, will be provided between the Runway 21 threshold and the expanded RPT apron (Bays 3 and 4) as part of the current Stage 1A upgrade. This will necessitate renaming of parts of the existing taxiway system.

The Master Plan 2010 provided for a future full length Code C taxiway parallel to (and to the east of) runway 03/21. Based on ICAO guidelines, this taxiway (Taxiway Foxtrot) may not be required until aircraft movements reach around 50,000 to 60,000 movements per annum (currently 30,000). The timing for provision of this infrastructure will be subject to demand (runway occupancy and circuit / airspace capacity) and the availability of funding, with further consideration to be given to the potential for a staged provision of this infrastructure. The location of the parallel taxiway is impacted by the potential future requirement for a 300 metre wide runway strip, with the corresponding minimum separation distance between the Code 4C runway and parallel taxiway centrelines being 168 metres for a 300 metre wide runway strip (previously identified as being 101 metres). This alignment conflicts with the location of:

- the existing terminal building and car park towards the northern end of the Airport site;
- the existing Bureau of Meteorology weather station; and
- the existing Airport property boundary at the southern end of the Airport site.

Consultation will be required with the Bureau of Meteorology to determine the feasibility of relocating the existing weather station facility. Subject to further planning consideration, the constraints at each

end of the Airport site may limit the length of the parallel taxiway ultimately able to be provided in the future.

A 36 metre clearance has been allowed for, from the centreline of the parallel taxiway to the east to the new fence (boundary) line to allow for the required taxiway strip width, perimeter access road and security clearances. The location of the parallel taxiway and taxiway strip extends into land zoned as *E2 Environmental Conservation* under the Port Macquarie-Hastings Local Environmental Plan 2011. Clearing of existing vegetation in this area will be subject to further detailed environmental assessment and planning approval.

The existing Taxiway Charlie leading to the general aviation precinct is currently operated as a Code B taxiway with a 20 metre wingspan limit and corresponding 39 metre wide taxiway strip. This Addendum Report has made provision to reserve a 52 metre wide taxiway strip from the boundary of the existing general aviation hangar sites (GA1 and GA2), to allow for future upgrading of this taxiway to Code C standard should this be required to support further aviation related development in the future.

6.4 RPT Apron

As previously discussed, on completion of the current Stage 1A airside infrastructure upgrade, the RPT apron will provide four (4) free moving parking positions for RPT aircraft, with Bays 1 and 2 located immediately in front of the terminal building being suitable for up to Code 4 aircraft (max. Embraer E190), and Bays 3 and 4 being suitable for up to Code 4 aircraft (max. B737-800 / A320). The Stage 1A apron will provide significant capacity for growth in air services and operational flexibility over the coming years. As identified in the Master Plan 2010, further consideration may need to be given to the provision of a covered passenger walkway to Bays 3 and 4 to protect passengers during periods of inclement weather.

Tuffins Lane, to the north of the RPT apron, is due to be closed as part of the Stage 1A upgrade to comply with CASA and Office of Transport Security safety and security requirements associated with the operation of aircraft on the expanded apron.

The apron layout, including flood lighting arrangement, is consistent with the existing Code 3C 150 metre wide runway strip and its associated 1:7 transitional (obstacle limitation) surface. To comply with the full Code 4C 300 metre wide runway strip standard (and associated transitional surface) in the future, this Addendum Report has identified two potential options to either expand the existing apron further to the east of its current location (Figure 13-1 Option 1), or to relocate the apron to a new “greenfield” site south of Taxiway Charlie (Figure 13-2 Option 2). The expansion of the apron at Option 1 potentially impacts on Oliver Drive and the existing GA1 apron and hangar area. Option 2, whilst providing a more “ideal” location from a master planning perspective, being located approximately midway along the runway minimising taxiing time for arriving and departing aircraft, also requires the provision of a new terminal building and associated facilities (including car parking, access roads, services etc) and as such is likely to be subject to funding constraints.

Recognising the significant cost implication of relocating the RPT apron (and potentially also the terminal building and associated facilities), an alternative or interim option to relocating this infrastructure may be available, whereby the existing 150 metre wide runway strip is retained on the eastern side of runway 03/21 north of Taxiway Charlie (approximately 300 metres from the RWY 21 threshold) - this option would be subject to further consultation with CASA and airlines consistent with the provisions of Civil Aviation Regulation CAR 235A.

6.5 GA Facilities

Council's strategy remains, as set out in the Master Plan 2010, to cater for increasing demand for general aviation facilities in partnership with Taree and Kempsey Airports as part of the Mid North Coast Regional Aviation Plan. Council acknowledges the importance of retaining a vibrant and sustainable general aviation presence at Port Macquarie Airport and will continue to support aviation related business activities that have the potential to provide significant employment and economic benefits to the Port Macquarie – Hastings region.

This Addendum Report identifies an area south of Taxiway Charlie (opposite the existing GA2 apron area) as a possible site for general aviation related business activities subject to further consultation. It should be noted that the development option identified in the Master Plan 2010 (west of runway 03/21) has since been determined to be not feasible due to a range of environmental and infrastructure constraints.

Figure 13-1 (Option 1) presented in this Report identifies that the area currently occupied by the GA1 apron and hangar sites may need to be reserved for future expansion of the RPT facilities (terminal building and car parking) subject to growth in air services and passenger numbers. As such, Council's current policy of limiting lease renewals in this area to short terms (max. 5 years) will continue, to provide Council with flexibility for redevelopment of this area should that be required in the future. Figure 13-2 (Option 2) shows no such impact on the GA1 apron area.

On completion of the current Stage 1A airside infrastructure upgrade, an area south of Taxiway Charlie as shown in Figure 3-1 included in Appendix A will be made available as a grassed parking area for local and itinerant GA aircraft.

6.6 Helicopter Facilities

As part of the current Stage 1A upgrade, the helicopter landing and parking area, previously located north of the RPT apron, has been relocated to an area south of Taxiway Charlie as shown in Figure 3-1 included in Appendix A. This new facility was commissioned at the end of April 2013.

Should the master plan Option 2 be adopted as the future development scenario, an alternative location for the helicopter landing and parking area will need to be determined as part of the detailed planning and design for that development scenario.

7.0 AVIATION SUPPORT FACILITIES

7.1 Refuelling Facilities

The existing RPT fuel farm (operated by Air BP) located adjacent to Taxiway Foxtrot 2 (previously Bravo) and the western end of the terminal building is due to be relocated to Air BP's general aviation refuelling site as part of Air BP's current development plans. This will relocate the RPT fuel facility outside of the potential future 300 metre wide runway strip.

The existing general aviation fuel farms (Air BP and Aero Refuellers) are located north of Taxiway Charlie adjacent to the GA1 apron area. As previously discussed, Figure 13-1 (Option 1) has identified the need to reserve this area for potential future expansion of the RPT facilities associated with this option, and as such, and in consideration of Air BP's current development plans, consideration needs to be given to identifying the most appropriate long-term location for these aircraft refuelling facilities.

Figure 13-1 (Option 1) and Figure 13-2 (Option 2) included in Appendix A show a potential site south of Taxiway Charlie for the relocation of the refuelling facilities subject to further consultation.

7.2 Ground Support Equipment Storage Areas

An additional storage area for airline ground support equipment (GSE) is being provided adjacent to Bay 3 as part of the current Stage 1A airside upgrade. Growth in air services and the introduction of potential new aircraft will continue to require operational assessment and identification of areas suitable for the storage of airline ground support equipment.

7.3 Navigation and Approach Aids

This Addendum Report identifies the potential requirement for the relocation of the existing non-directional beacon (NDB) to make way for future aviation related development east of runway 03/21. Figure 13-1 (Option 1) and Figure 13-2 (Option 2) included in Appendix A identify an area west of runway 03/21 as a possible future location for the NDB subject to consultation with Airservices.

7.4 Weather Information Service

As previously discussed, this Addendum Report identifies the potential requirement for the relocation of the existing Bureau of Meteorology weather station (AWIS) to make way for future aviation related development east of runway 03/21 including the future parallel taxiway. Figure 13-1 (Option 1) and Figure 13-2 (Option 2) included in Appendix A identify an area west of runway 03/21 as a possible future location for the weather station subject to consultation with the Bureau of Meteorology.

7.5 Aerodrome Rescue and Fire-Fighting Services

As set out in the Master Plan 2010, Aerodrome Rescue and Fire-Fighting Services (ARFFS) are required to be established (by Airservices) when annual passenger numbers exceed 350,000 passengers per annum. Based on the forecast passenger growth outlined in Section 4.1, ARFFS facilities may be required within the next 10 years. Figure 13-1 (Option 1) and Figure 13-2 (Option 2)

included in Appendix A identify an area east of runway 03/21 as a possible location for a future ARFFS facility.

7.6 Air Traffic Control

As identified in the Master Plan 2010, there are currently no air traffic control (ATC) facilities located at Port Macquarie Airport (a non-towered aerodrome). The Australian Government Department of Infrastructure and Transport published new guidelines for the provision of ATC facilities in June 2012 in its *Australian Airspace Policy Statement*. This document identified the following airspace criteria thresholds (for ATC and Class D airspace) to assist in determining when changes to airspace classification may be required:

- ✈ 80,000 total annual aircraft movements;
- ✈ 15,000 total annual RPT aircraft movements; or
- ✈ 350,000 total annual RPT passengers.

Whilst the forecasts for aircraft movements at Port Macquarie Airport fall well short of the corresponding thresholds shown above, the passenger threshold is consistent with that set for ARFFS facilities, and as such, subject to an airspace review by CASA (Office of Airspace Regulation) at that time, ATC facilities may be required within a similar timeframe (ie next 10 years) as identified for ARFFS services.

Figure 13-1 (Option 1) and Figure 13-2 (Option 2) included in Appendix A identify an area east of runway 03/21 as a possible location for a future ATC facility (co-located with a future ARFFS facility).

8.0 PASSENGER FACILITIES

8.1 Passenger Terminal

The existing passenger terminal building was originally established based on the Code 3C aerodrome standard for a 150 metre wide runway strip and associated transitional surface. Whilst the terminal building is located outside the area of the potential future Code 4C 300 metre wide runway strip, part of the existing building infringes the associated 1:7 transitional (obstacle limitation) surface. CASA does not require that part of the existing terminal building to be removed, but has advised that future development in this area should not encroach into the 300 metre runway strip or infringe the associated transitional surface.

New guidelines have also been published since the Master Plan 2010 was adopted, with regard to the location of buildings adjacent to runways. The *National Airports Safeguarding Framework* published by the Australian Government Department of Infrastructure and Transport in May 2012, sets out factors for consideration with regard to the possible effects on aircraft operations of building generated windshear and turbulence in strong cross wind conditions. In considering future development options, further assessment of the existing terminal building may be required due to its proximity to runway 03/21.

Figure 13-1 (Option 1) and Figure 13-2 (Option 2) included in Appendix A identify various options for the future development of the passenger terminal facilities to achieve compliance with the Code 4C aerodrome standards and advice provided by CASA. These options include:

- ✈ staged development / redevelopment of the existing terminal building generally to the east of the existing building and / or clear of the transitional surface associated with the 300 metre runway strip (Option 1 - short to medium term);
- ✈ new terminal development to the east of the existing / expanded RPT apron (Option 1 - long term); or
- ✈ new terminal development in new “greenfield” site south of Taxiway Charlie (Option 2 - long term).

The new terminal options ultimately allow for compliance to be achieved with the full Code 4C aerodrome standards. The location of the terminal building in these options (that is, the set back from the runway centreline) has been determined on the basis of the associated RPT apron and critical planning height allowed for the required apron flood lighting poles (25 metres) - to avoid the 1:7 transitional (obstacle limitation) surface, the apron / terminal interface has been set at a distance of 325 metres from the runway centreline. The final location will be subject to detailed design.

Due to funding constraints and the requirement for associated infrastructure, the new terminal options are considered potential long-term future development scenarios.

Given that the Master Plan 2010 identified that the existing terminal building operates at near capacity during current “busy hour” peak periods, further growth in air services and passengers numbers in the short term will dictate the need for further consideration to be given to options for the incremental, staged development of the existing terminal building to cater for demand.

On completion of the current Stage 1A airside upgrade, it is recommended that further consideration be given to the options and funding available for a cost effective upgrade of the existing passenger terminal facilities as part of the previously proposed Stage 1B landside upgrade which was deferred by Council in July 2012 pending further consultation with CASA and a review of the Master Plan 2010.

8.2 Car Parking Facilities

As with the terminal building, the existing car parking area was originally established based on the Code 3C aerodrome requirement for a 150 metre wide runway strip and associated transitional surface. The western edge of the existing car park encroaches into the area required for the potential future Code 4C 300 metre runway strip. On the basis of the advice provided by CASA, that future development in this area should not encroach into the 300 metre runway strip or infringe the associated transitional surface, further consideration will need to be given to plans to upgrade the existing car park.

The Master Plan 2010 identified that the existing car park is operating at capacity during current peak periods. In lieu of the previously proposed Stage 1B car park upgrade, Council is progressing with plans to provide a new 110 space standalone rental and staff car park to the east of the RPT apron off Tuffins Lane, to free up capacity in the main public car park located in front of the existing terminal building. Development approval has been granted for this facility, with detailed design currently underway. The new car park is expected to be completed by the end of 2013, increasing car park capacity at the Airport from the existing 175 spaces to 285 spaces.

With the relocation of the existing GA aircraft parking area adjacent to Taxiway Charlie as part of the current Stage 1A airside upgrade, the area south of the existing car park will become available for a possible future expansion of the existing car park, with space for at least 100 additional parking spaces subject to detailed design. This expansion, together with the planned rental and staff car park, has the potential to provide significant capacity in the short term (up to approximately 400 car parking spaces) to cater for forecast growth in air services and passenger numbers.

Figure 13-1 (Option 1) and Figure 13-2 (Option 2) included in Appendix A identify options for future development of the car parking facilities to meet demand and achieve compliance with the Code 4C aerodrome standards. Subject to growth in air services and passenger numbers, Option 1 identifies the possible future expansion of car parking into the area currently occupied by the GA1 apron and hangar sites. Option 2 shows no such impact on the GA1 apron area.

9.0 GROUND TRANSPORT SYSTEM

9.1 Access Roads

The Master Plan 2010 identified the following key points in relation to the road network adjacent to the Airport:

- ✈ closure of Tuffins Lane as part of the upgrade of runway 03/21 and provision of the northern runway end safety area (RESA);
- ✈ improvements to the Hastings River Drive - Boundary Street intersection;
- ✈ flooding of Boundary Street and the requirement for flood-free access to the Airport; and
- ✈ the future Outer Link Road proposed as part of the strategic regional road network.

A section of Tuffins Lane to the north of the runway and expanded RPT apron was closed at the end of August as part of the current Stage 1A airside upgrade. The closure is required to meet the safety and security requirements of CASA and the Office of Transport Security. Following closure, access to the Airport will not be available from Tuffins Lane, with access only being available from Boundary Street.

Council is currently working on the planning and design for a proposed upgrade of the Hastings River Drive - Boundary Street intersection (to traffic signals) to improve the operation of this key intersection. These improvement works are planned to be undertaken in 2013-14.

Flooding of Boundary Street in February 2013 highlights the need for improved flood-free road access to the Airport and surrounding area. Planning for improvements to Boundary Street is to be considered in conjunction with planning for an Outer Link Road (North - South link) linking the Oxley Highway and Hastings River Drive as part of Council's strategic regional road network.

It is recommended that as part of the planning for a future Outer Link Road, Council give consideration to the future road access requirements to the Airport noting Figure 13-1 (Option 1) and Figure 13-2 (Option 2) included in Appendix A showing the potential future development scenarios for the Airport.

10.0 DEVELOPMENT PRECINCTS

The Master Plan 2010 identified various precincts for future development at the Airport. This Addendum Report has rationalised those areas consistent with Council's priority objectives identified in Section 2, to define:

- ✈ areas required for future aviation uses, that being areas required for the future operation and development of the Airport consistent with the aviation demand forecasts provided in Section 4 and the requirement to comply with the full Code 4C aerodrome standards including the 300 metre wide runway strip and associated transitional surface; and
- ✈ areas available for non-aviation uses, including commercial property development as part of the proposed Airport Precinct business park.

Figure 10-1 included in Appendix A identifies the above areas, with the aviation / non-aviation boundary being located approximately 600 metres to the east of the centreline of runway 03/21, east of the existing general aviation precinct.

Approximately 28 hectares of land to the east of this line has been identified as being available for the proposed Airport Precinct business park subject to further environmental investigation and rezoning.

Figure 10-1 also identifies an area of Council-owned land within the Airport site, adjacent to "The Binnacle" residential area, which is zoned as *R1 General Residential* under the Port Macquarie-Hastings Local Environmental Plan 2011. Subject to further environmental assessment, this area has been identified as a potential site for a future Airport related accommodation / hotel development.

11.0 UTILITIES

see Master Plan 2010

12.0 ENVIRONMENTAL AND LAND USE PLANNING IMPACTS

12.1 Aircraft Noise

Figure 12-1 and Figure 12-4 included in Appendix A show the 2009 Australian Noise Exposure Index (2009 ANEI) and 2030 Australian Noise Exposure Forecasts (2030 ANEF) charts for Port Macquarie Airport as formally endorsed by Airservices in 2012. These charts, as described in *Australian Standard AS2021-2000* provide a measure of the aircraft noise exposure levels in the vicinity of the Airport and are provided for information purposes for the local community and for use by Council in its land use planning and development control functions.

The charts provided in Appendix A indicate:

- ✈ Figure 12-1: 2009 ANEI – the estimated current level of aircraft noise exposure based on actual aircraft movements recorded in the 2009 calendar year; and
- ✈ Figure 12-4: 2030 ANEF – the estimated future level of aircraft noise exposure based on forecast aircraft movements in 2030 (as described in Section 4)

12.2 Obstacle Limitation Surfaces

Figure 12-10, Figure 12-11 and Figure 12-12 included in Appendix A show the updated obstacle limitation surfaces (OLS) around the Airport consistent with the current Stage 1A airside upgrade and advice provided by CASA with regard to the future Code 4C aerodrome requirement for a 300 metre wide runway strip and approach surface length of inner edge.

These charts should be adopted by Council for future land use planning and development control purposes so as to safeguard the future operation of the Airport and prevent inappropriate development in the vicinity of the Airport which could result in unnecessary constraints on airport operations.

As discussed previously in this Addendum Report, due to a range of environmental constraints and the location of existing infrastructure (including the RPT apron, terminal building and car park) widening of the runway strip and approach surface to 300 metres will be subject to further detailed environmental investigations and the development of future infrastructure clear of the associated transitional surface.

12.3 Flooding and Stormwater Drainage

see *Master Plan 2010*

12.4 Other Development Control Considerations

As identified in Section 1, since the Master Plan 2010 was adopted, the Australian Government Department of Infrastructure and Transport has identified a number of emerging planning considerations in its *National Airports Safeguarding Framework* and *Safeguarding Airports and the Communities Around Them* Discussion Paper. These documents identify a potential future requirement for the provision of public safety zones (PSZs) at each end of runway 03/21. Whilst there

is currently no national standard in place for these areas, Figure 12-11 and Figure 12-12 included in Appendix A show indicative PSZ areas based on United States and Queensland standards for information purposes only. It is recommended that Council give further consideration to this emerging issue in conjunction with its land use planning and development control functions.

Figure 12-13 included in Appendix A also provides updated guidance to Council as to appropriate land uses in the vicinity of the Airport so as to minimise the risk of bird hazards to aircraft operations. Figure 12-13 should be read in conjunction with the guidelines published in the *National Airports Safeguarding Framework*.

13.0 MASTER PLAN 2013

Figure 13-1 (Option 1) and Figure 13-2 (Option 2) included in Appendix A identify options for the future development of the Airport to meet the forecast growth in RPT air services and passengers numbers to 2030, and comply with CASA's full Code 4C aerodrome standards. Both options also identify potential areas for general aviation related business activities to meet demand, and areas for future commercial property development as part of the proposed Airport Precinct business park. The key features of the two options include:

13.1 Option 1

- the Stage 1A airside upgrade of runway 03/21 to Code 4C standard, 1,800 metres long x 45 metres wide, including closure of Tuffins Lane - initial operations of Code 4C aircraft in accordance with CASA exemption with respect to the existing Code 3C 150 metre wide runway strip and approach surface;
- future widening of the existing Code 3C 150 metre wide runway strip and approach surface to 300 metres in accordance with the full Code 4C aerodrome standard - subject to detailed environmental investigation and planning approval;
- staged construction of a new Code C taxiway (Taxiway Foxtrot) parallel to and 168 metres to the east of runway 03/21 - subject to detailed environmental investigation and planning approval; timing / staging also subject to demand (runway occupancy and circuit / airspace capacity) and the availability of funding;
- reserving of a 52 metre wide Code C taxiway strip at Taxiway Charlie to allow for future upgrading of the taxiway to Code C standard should this be required to support further aviation related development in the future;
- future expansion of the existing RPT apron to the east to comply with the full Code 4C aerodrome standards, with four (4) free moving parking positions for up to Code 4C aircraft;
- either, staged development / redevelopment of the existing terminal building generally to the east of the existing building and / or clear of the transitional surface associated with the 300 metre runway strip, or provision of a new terminal building to the east of the expanded RPT apron, in accordance with the full Code 4C aerodrome standard;
- expansion of the existing car parking facilities to meet demand - noting the potential impact on the existing GA1 apron and hangar area;
- possible future relocation of the general aviation facilities to an area south of Taxiway Charlie to support aviation related business activities;

- possible future relocation of aircraft refuelling facilities to an area south of Taxiway Charlie subject to further consultation;
- relocation of the existing non-directional beacon (NDB) to an area west of runway 03/21, to make way for future aviation related development - subject to consultation with Airservices;
- relocation of the existing Bureau of Meteorology weather station (AWIS) to an area west of runway 03/21, to make way for future aviation related development including the future parallel taxiway - subject to consultation with the Bureau of Meteorology;
- possible future provision of Aerodrome Rescue and Fire-Fighting Services (ARFFS), and Air Traffic Control (ATC) facilities subject to growth in air services / passenger numbers;
- identification of land not required for future aviation uses, to be made available for commercial property development as part of the proposed Airport Precinct business park;
- identification of land zoned *R1 General Residential* adjacent to “The Binnacle” residential area for possible future Airport related accommodation / hotel development; and
- principal road access subject to further planning for an Outer Link Road (North - South link) linking the Oxley Highway and Hastings River Drive.

Option 1 has the potential to support incremental staged development of the existing infrastructure to meet demand in air services commensurate with the availability of funding, and as such is considered suitable for development in the short to medium term.

13.2 Option 2

- the Stage 1A airside upgrade of runway 03/21 to Code 4C standard, 1,800 metres long x 45 metres wide, including closure of Tuffins Lane - initial operations of Code 4C aircraft in accordance with CASA exemption with respect to the existing Code 3C 150 metre wide runway strip and approach surface;
- future widening of the existing Code 3C 150 metre wide runway strip and approach surface to 300 metres in accordance with the full Code 4C aerodrome standard - subject to detailed environmental investigation and planning approval;
- staged construction of a new Code C taxiway (Taxiway Foxtrot) parallel to and 168 metres to the east of runway 03/21 - subject to detailed environmental investigation and planning approval; timing / staging also subject to demand (runway occupancy and circuit / airspace capacity) and the availability of funding;
- reserving of a 52 metre wide Code C taxiway strip at Taxiway Charlie to allow for future upgrading of the taxiway to Code C standard should this be required to support further aviation related development in the future;

- ✈ provision of a new RPT apron south of Taxiway Charlie in accordance with the full Code 4C aerodrome standards, with four (4) free moving parking positions for up to Code 4C aircraft;
- ✈ provision of a new terminal building south of Taxiway Charlie in accordance with the full Code 4C aerodrome standard;
- ✈ provision of new car parking facilities south of Taxiway Charlie;
- ✈ relocation of existing helicopter landing and parking area, and general aviation aircraft parking areas subject to further detailed planning;
- ✈ possible future general aviation facilities in an area south of Taxiway Charlie to support aviation related business activities;
- ✈ possible future relocation of aircraft refuelling facilities to an area south of Taxiway Charlie subject to further consultation;
- ✈ relocation of the existing non-directional beacon (NDB) to an area west of runway 03/21, to make way for future aviation related development - subject to consultation with Airservices;
- ✈ relocation of the existing Bureau of Meteorology weather station (AWIS) to an area west of runway 03/21, to make way for future aviation related development including the future parallel taxiway - subject to consultation with the Bureau of Meteorology;
- ✈ possible future provision of Aerodrome Rescue and Fire-Fighting Services (ARFFS), and Air Traffic Control (ATC) facilities subject to growth in air services / passenger numbers;
- ✈ identification of land not required for future aviation uses, to be made available for commercial property development as part of the proposed Airport Precinct business park;
- ✈ identification of land zoned *R1 General Residential* adjacent to “The Binnacle” residential area for possible future Airport related accommodation / hotel development; and
- ✈ principal road access subject to further planning for an Outer Link Road (North - South link) linking the Oxley Highway and Hastings River Drive.

Whilst Option 2 offers some operational benefits through the reduced impact on existing airport infrastructure / facilities and locating the RPT apron / terminal building in a more “ideal” location from a master planning perspective, this development option is likely to require a significant one-off capital investment to provide the new infrastructure required (incl. RPT apron, terminal building, car parking, access roads, services etc). As such Option 2 is considered a potential long-term development scenario subject to the availability of funding.

14.0 STAGING CONSIDERATIONS AND FUNDING OPTIONS

As highlighted in this Addendum Report, significant works will be required to upgrade the airport infrastructure and facilities to ultimately comply with the full Code 4C aerodrome standards. Much of this work will also be subject to detailed environmental investigation and planning approval. It is recommended that Council continue to liaise closely with CASA and airline operators through this period of significant regulatory reform to identify any potential operating constraints and commercial risks to Council, as the aerodrome operator, through continuing to operate the Airport in the short to medium term, as a Code 3C aerodrome (irrespective of the upgraded 45 metre wide Code 4C runway) - noting that CASA has confirmed that Code 4C aircraft will be permitted to operate at Port Macquarie Airport following the current Stage 1A airside upgrade either through achieving compliance with the full Code 4C aerodrome standards or under the provisions of Civil Aviation Regulation CAR235A.

Notwithstanding the above, Council has stated its long term planning objective as set out in this Addendum Report to seek to comply with the full Code 4C aerodrome standards wherever possible to future proof the ongoing operation and development of Port Macquarie Airport for Code 4C aircraft. This program of work will be staged as necessary to suit:

- compliance with mandatory CASA standards (and other relevant legislation) commensurate with the level and type of aircraft operations at the time;
- demand brought about through forecast growth in RPT air services and passenger numbers;
- demand brought about through growth in general aviation (GA) related business activities;
- demand for commercial property development as part of the proposed Airport Precinct business park; and
- the availability of funding for major capital projects (noting that the investment decision for major projects will continue to be subject to the approval of a detailed and robust business case, consistent with the requirements of the Division of Local Government *Capital Expenditure Review* guidelines).

It should be noted that following completion of the current Stage 1A airside infrastructure upgrade, the Airport's borrowing capacity will be constrained in the short to medium term.

This Addendum Report recommends the following short-term (0 to 5 years) priority actions:

- completion of the current Stage 1A airside upgrade including runway 03/21, taxiways and RPT apron to cater for initial operations of Code 4C (B737-800 / A320 aircraft);
- completion of environmental investigations to determine the feasibility of widening the runway strip and approach surface to comply with the full Code 4C aerodrome standard - this work to include detailed environmental assessment of the clearing and cropping of existing vegetation required, and submission of a development application to obtain planning approval from relevant

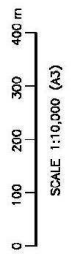
Consent Authorities (including the NSW Department of Planning, NSW Office of Environment and Heritage, and Council) Note: progressing these investigations is a condition of the initial 3-year exemption to be issued by CASA on completion of the current Stage 1A upgrade;

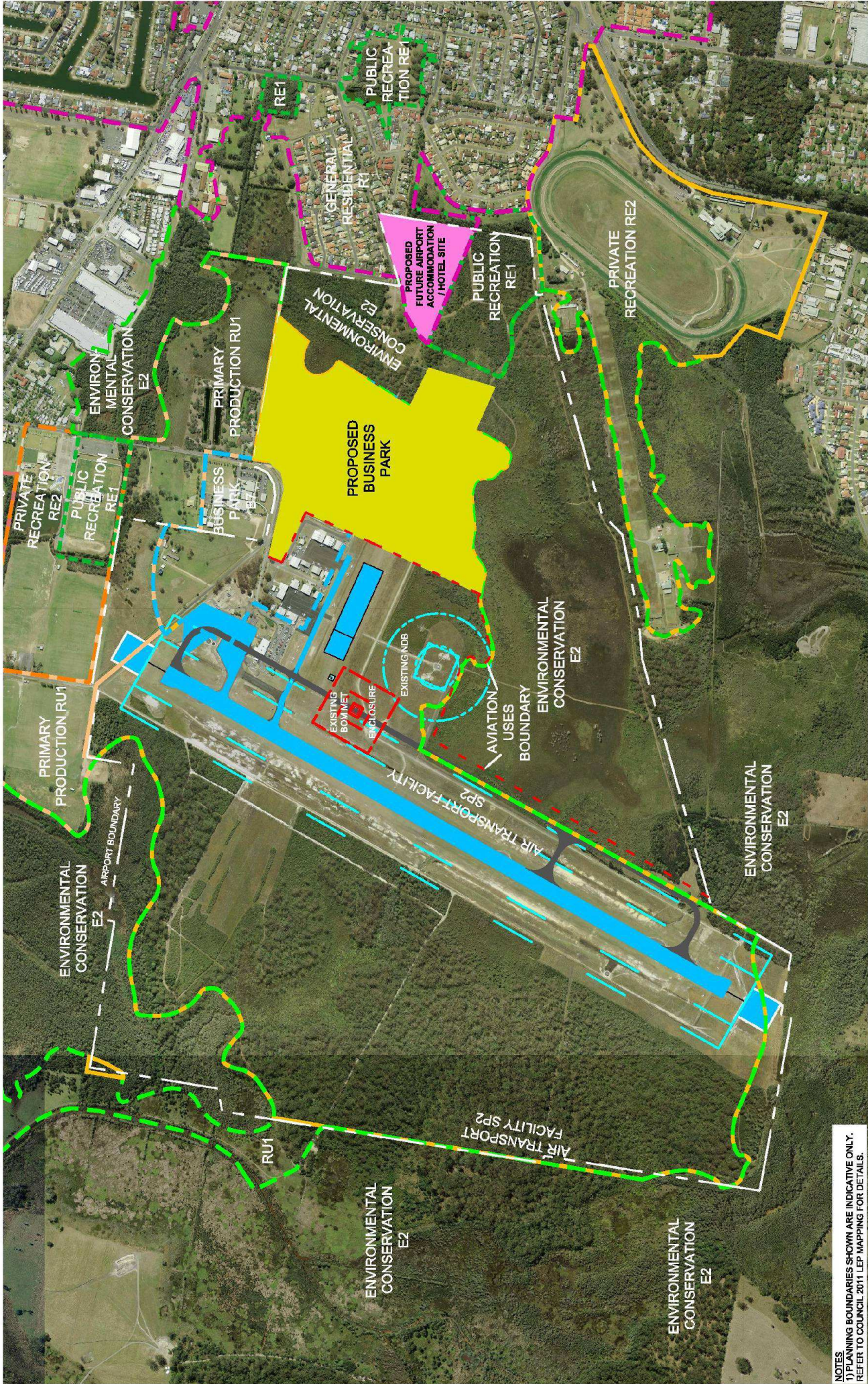
- ✈ completion of the proposed 110 space rental and staff car park to relieve current capacity constraints in the main public car park - due to be completed by the end of 2013;
- ✈ further consideration to be given to the options and funding available for a cost effective upgrade of the existing passenger terminal and car parking facilities as part of the deferred Stage 1B landside upgrade, to cater for demand brought about through forecast growth in RPT air services and passenger numbers - subject to the availability of funding and ongoing consultation with CASA;
- ✈ further consideration to be given to the opportunities / demand for other aviation related business activities and the identification of corresponding infrastructure requirements - subject to the availability of funding and approval of a detailed business case;
- ✈ consultation with Airservices and Bureau of Meteorology regarding the potential future relocation of the existing NDB and weather station respectively;
- ✈ ongoing consultation with CASA and airlines as to the future operating standards / requirements for Code 4C aircraft at Port Macquarie Airport; and
- ✈ completion of environmental and land use planning investigations to determine the feasibility of the proposed Airport Precinct business park (Airport lands) and submission of a development application to obtain planning approval from relevant Consent Authorities (including the NSW Department of Planning, NSW Office of Environment and Heritage, and Council).

APPENDIX A



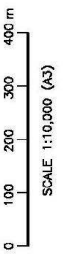
PORT MACQUARIE AIRPORT MASTERPLAN 2010 ADDENDUM **FIGURE 3-1** EXISTING AIRPORT LAYOUT 2013





NOTES
 1) PLANNING BOUNDARIES SHOWN ARE INDICATIVE ONLY.
 REFER TO COUNCIL 2011 LEP MAPPING FOR DETAILS.

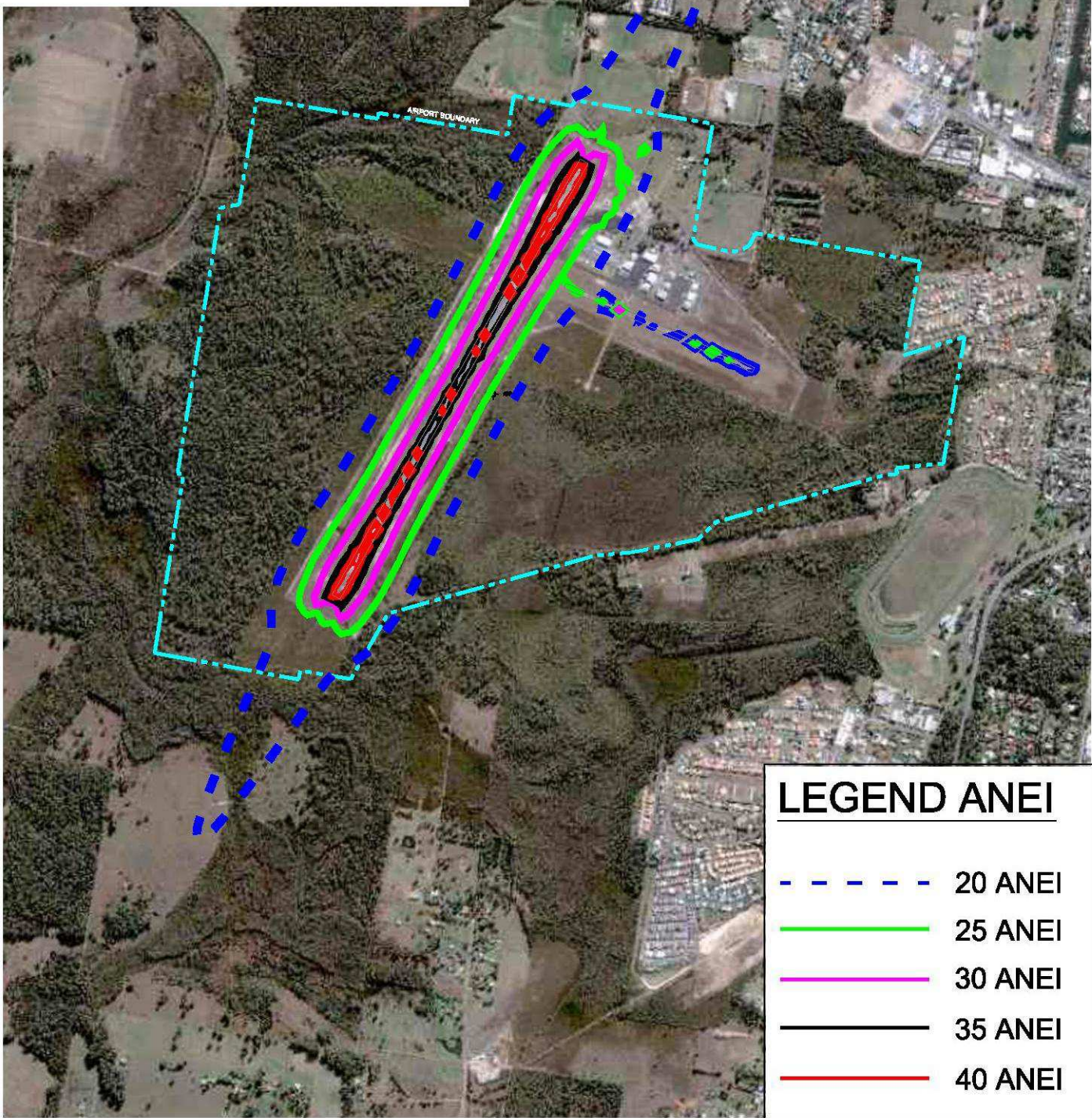
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**PORT MACQUARIE AIRPORT
 MASTERPLAN 2010 ADDENDUM**

**FIGURE 10-1
 DEVELOPMENT PRECINCTS 2013**

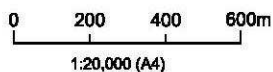
AS2021 - TABLE OF BUILDING SITE ACCEPTABILITY BASED ON ANEF ZONES			
BUILDING TYPE	ANEF ZONE OF SITE		
	ACCEPTABLE	CONDITIONAL	UNACCEPTABLE
House, home unit, flat, caravan park	Less than 20 ANEF (Note 1 of AS2021)	20 to 25 ANEF (Note 2 of AS2021)	Greater than 25 ANEF
Hotel, motel, hostel	Less than 25 ANEF	25 to 30 ANEF	Greater than 30 ANEF
School, university	Less than 20 ANEF (Note 1 of AS2021)	20 to 25 ANEF (Note 2 of AS2021)	Greater than 25 ANEF
Hospital, nursing home	Less than 20 ANEF (Note 1 of AS2021)	20 to 25 ANEF	Greater than 25 ANEF
Public building	Less than 20 ANEF (Note 1 of AS2021)	20 to 30 ANEF	Greater than 30 ANEF
Commercial building	Less than 25 ANEF	25 to 35 ANEF	Greater than 35 ANEF
Light industrial	Less than 30 ANEF	30 to 40 ANEF	Greater than 40 ANEF
Other industrial	Acceptable in all ANEF zones		



DATE: 03-04-13



Airport Master Planning Consultants
 Base Image: © Land and Property Information, Panorama Dr. Bathurst (2013)



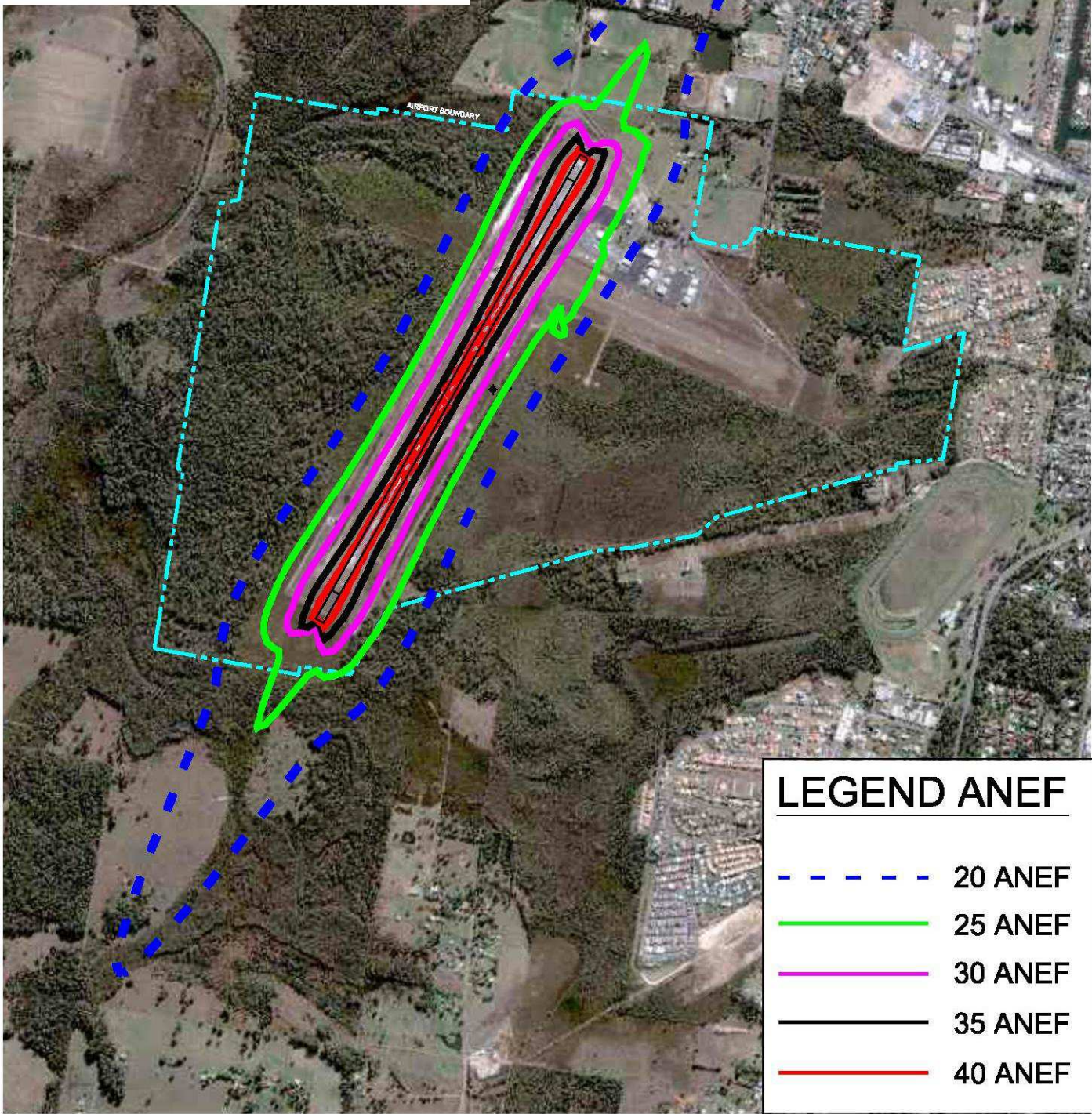
PORT MACQUARIE AIRPORT



**PORT MACQUARIE AIRPORT
 MASTER PLAN 2010 ADDENDUM
 FIGURE 12-1**

**2009 ANEI
 (BASED ON A2 DRAWING PMAN 100C)**

AS2021 - TABLE OF BUILDING SITE ACCEPTABILITY BASED ON ANEF ZONES			
BUILDING TYPE	ANEF ZONE OF SITE		
	ACCEPTABLE	CONDITIONAL	UNACCEPTABLE
House, home unit, flat, caravan park	Less than 20 ANEF (Note 1 of AS2021)	20 to 25 ANEF (Note 2 of AS2021)	Greater than 25 ANEF
Hotel, motel, hostel	Less than 25 ANEF	25 to 30 ANEF	Greater than 30 ANEF
School, university	Less than 20 ANEF (Note 1 of AS2021)	20 to 25 ANEF (Note 2 of AS2021)	Greater than 25 ANEF
Hospital, nursing home	Less than 20 ANEF (Note 1 of AS2021)	20 to 25 ANEF	Greater than 25 ANEF
Public building	Less than 20 ANEF (Note 1 of AS2021)	20 to 30 ANEF	Greater than 30 ANEF
Commercial building	Less than 25 ANEF	25 to 35 ANEF	Greater than 35 ANEF
Light industrial	Less than 30 ANEF	30 to 40 ANEF	Greater than 40 ANEF
Other industrial	Acceptable in all ANEF zones		



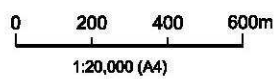
LEGEND ANEF

- 20 ANEF
- 25 ANEF
- 30 ANEF
- 35 ANEF
- 40 ANEF

DATE: 03-04-13



Airport Master Planning Consultants
Base Image: © Land and Property Information, Panorama Dr. Bathurst (2013)



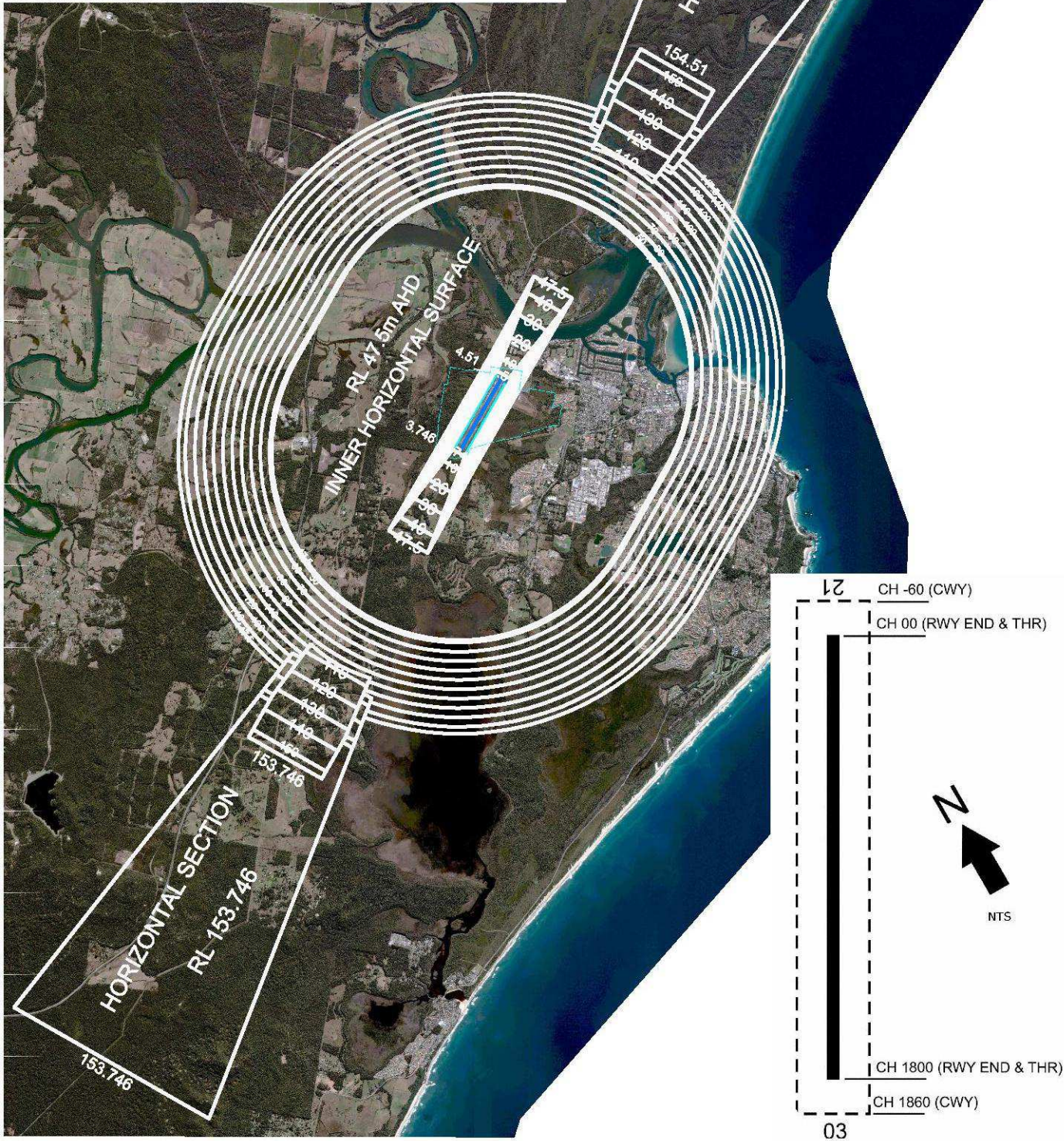
PORT MACQUARIE AIRPORT MASTER PLAN 2010 ADDENDUM

FIGURE 12-4

2030 ANEF
(BASED ON A2 DRAWING PMAN 104C)

APPROACH AND TAKE-OFF SURFACES DATA - RUNWAY 03/21 45m Wide								
RWY DIRECTION	CATEGORY	ORIGIN	HT.	WIDTH AT	APPROACH SURFACES			
		[CHGE]	(m)	INNER EDGE	DIVERGENCE	SLOPE	LENGTH	
03	4 I/NP	1860.0	3.746	300m	15	2	3000	FIRST SECTION
						2.5	3600	SECOND SECTION
						0	8400	HORIZONTAL SECTION
21	4 I/NP	-60.0	4.510	300m	15	2	3000	FIRST SECTION
						2.5	3600	SECOND SECTION
						0	8400	HORIZONTAL SECTION
RWY DIRECTION	CATEGORY	ORIGIN [CHGE]	HT. (m)	WIDTH AT INNER EDGE	DIVERGENCE (%)	SLOPE (%)	TOTAL LENGTH	
03	4	-60.0	4.510	180m	12.5	2	15000m	
21	4	1860.0	3.746	180m	12.5	2	15000m	

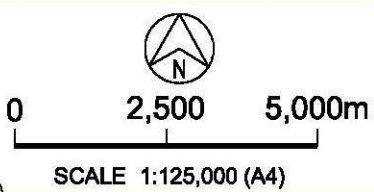
AIRPORT DETAILS
 S 31° 26.2' E 152° 51.8' AERODROME ELEVATION 12ft ARP HT. RL 2.903m AHD
 ARP ADOPTED AS REFERENCE ELEVATION DATUM I.E. ROUNDED DOWN TO RL 2.5m AHD
 (WITHIN 3m OF AVERAGE ELEVATION OF PROPOSED RUNWAY ENDS)
 INNER HORIZONTAL SURFACE HT. RL 47.5m AHD
 CONICAL SURFACE 5% UPWARDS FROM OUTER EDGE OF INNER HORIZONTAL SURFACE TO RL 147.5m AHD
ABBREVIATIONS - 4 I/NP - CODE 4 INSTRUMENT NON-PRECISION
NOTE - INNER EDGE HEIGHTS BASED ON GHD DRAWINGS 33-15692 C100 REV 2 & 33-15692 C102 REV 0



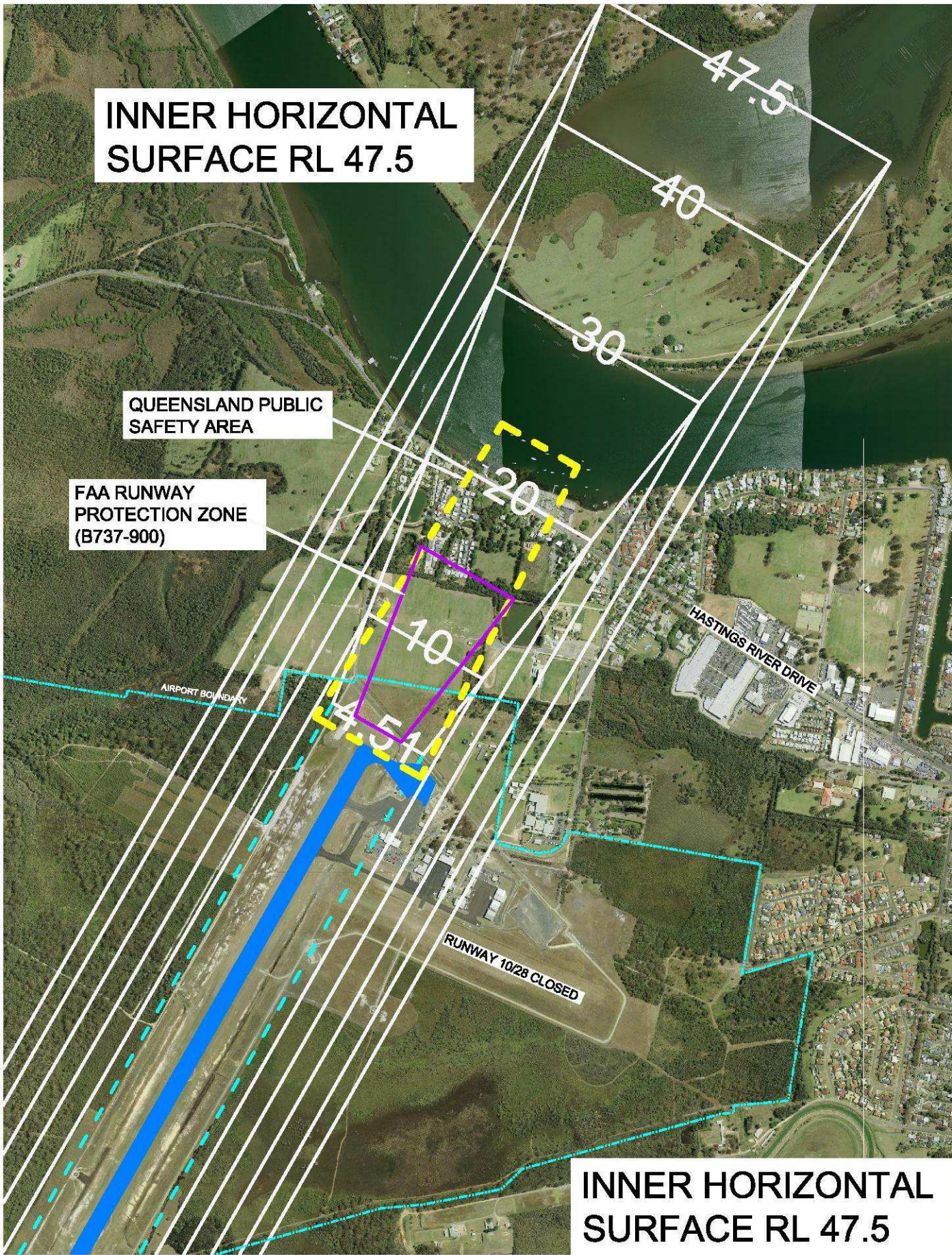
DATE: 29-04-13



Airport Master Planning Consultants
 Base Image: Land and Property Information, Panorama Dr. Bathurst (2013)



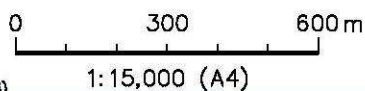
**PORT MACQUARIE AIRPORT
 MASTER PLAN 2010 ADDENDUM
 FIGURE 12-10
 OLS 2013**



DATE: 29-04-13



Airport Master Planning Consultants
 Base Image: © Land and Property Information, Panorama Dr. Bathurst (2013)

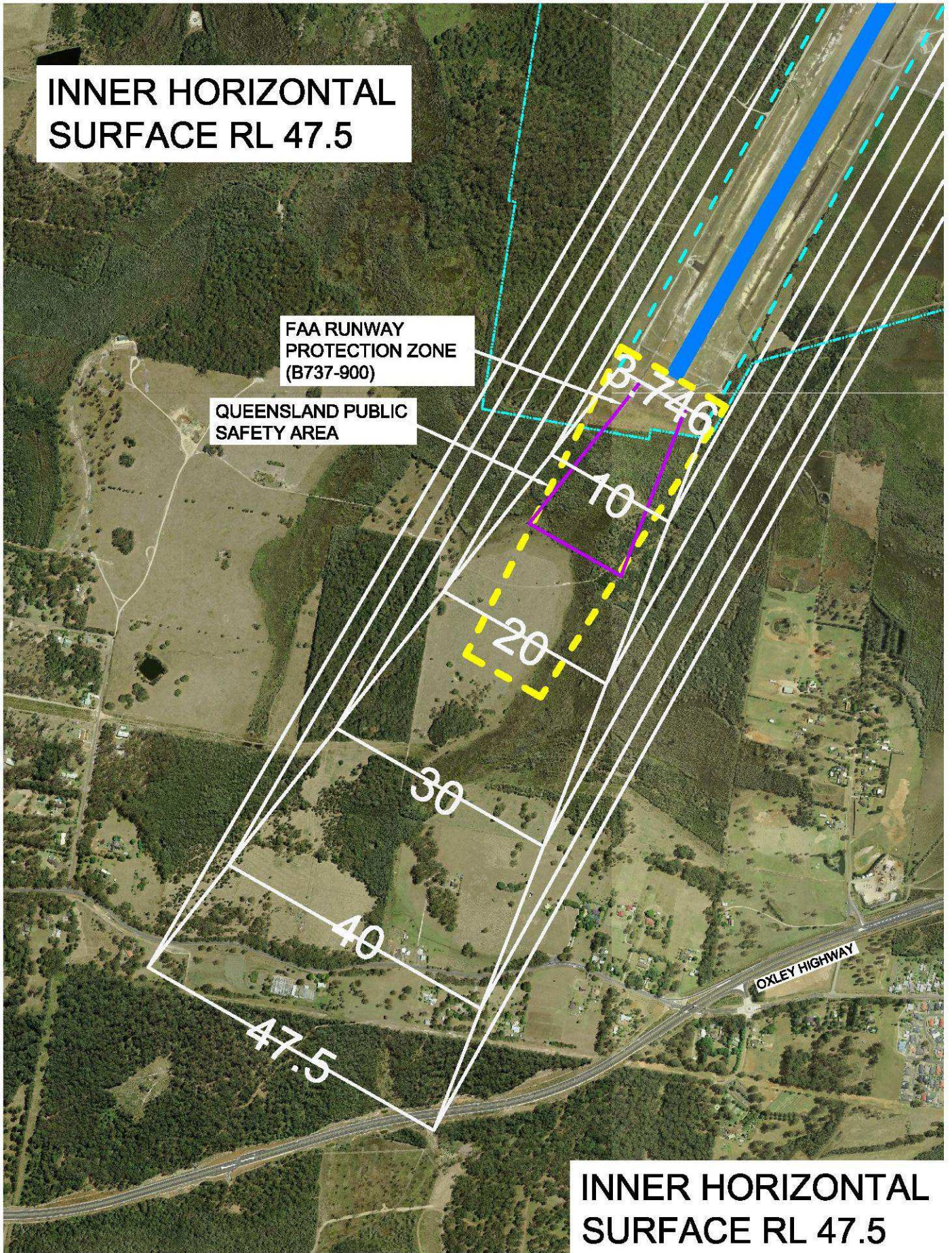


PORT MACQUARIE AIRPORT
 MASTER PLAN 2010 ADDENDUM
 FIGURE 12-11
 INNER OLS - NORTH 2013

INNER HORIZONTAL
SURFACE RL 47.5

FAA RUNWAY
PROTECTION ZONE
(B737-900)

QUEENSLAND PUBLIC
SAFETY AREA

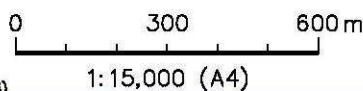


INNER HORIZONTAL
SURFACE RL 47.5

DATE: 29-04-13



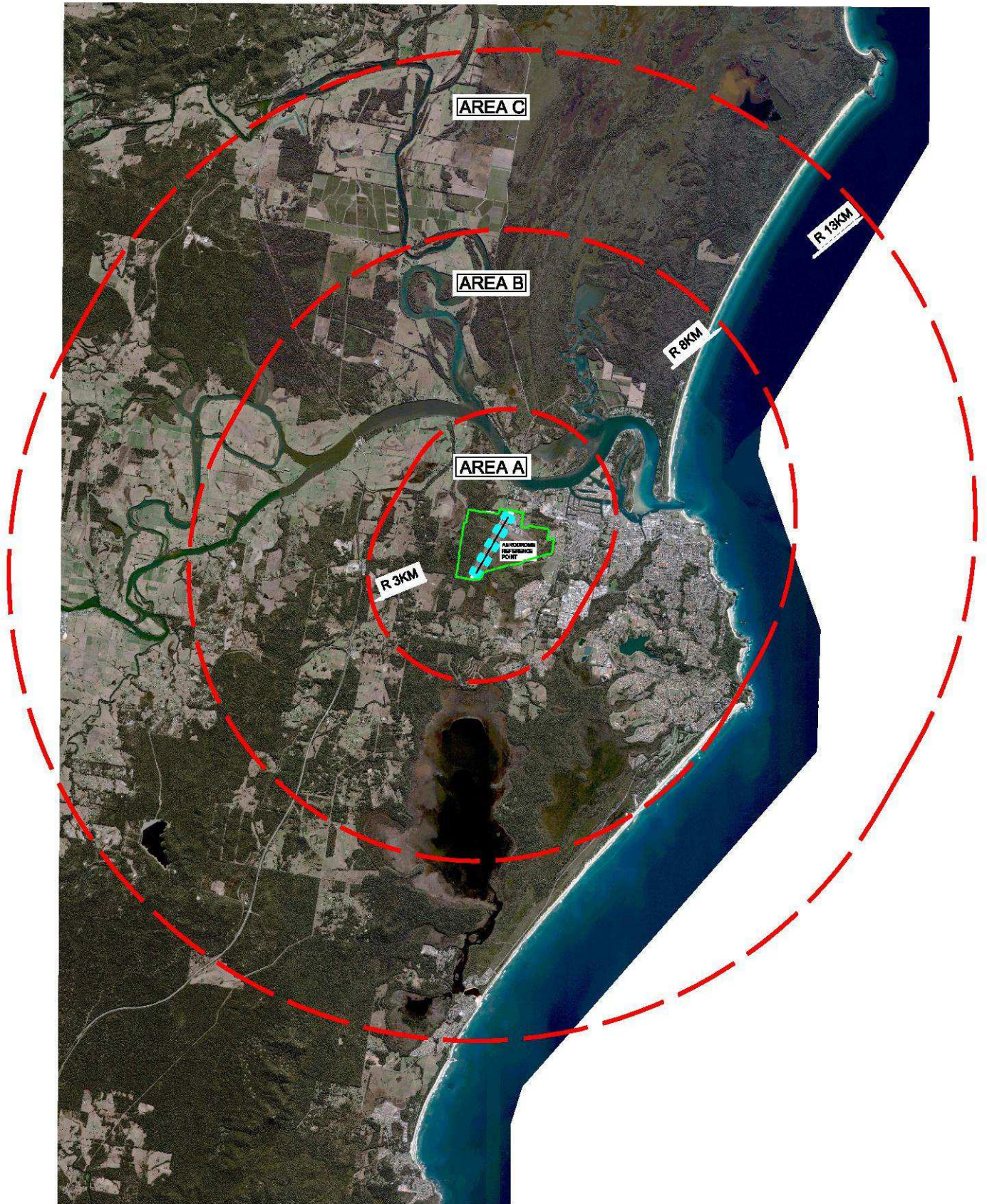
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PORT
MACQUARIE
AIRPORT



PORT MACQUARIE AIRPORT
MASTER PLAN 2010 ADDENDUM
FIGURE 12-12
INNER OLS - SOUTH 2013



DATE: 2-05-13



Airport Master Planning Consultants

Base Image: © Land and Property Information, Panorama Dr. Bathurst (2013)



0 2.5km 5km

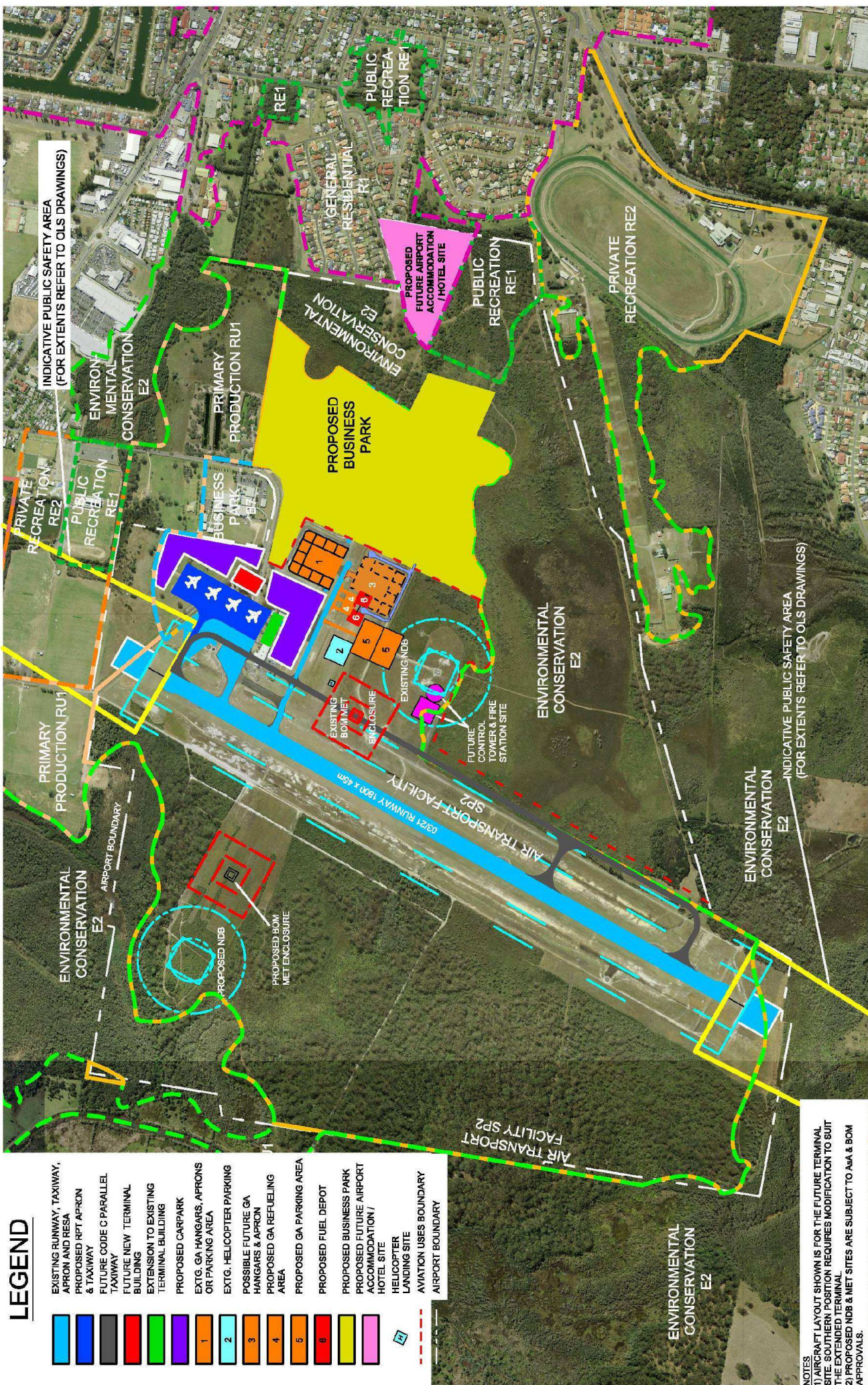
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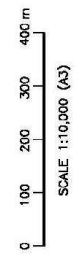
PORT MACQUARIE AIRPORT
 MASTERPLAN 2010 ADDENDUM
 FIGURE 12-13
 BIRD HAZARD AREAS 2013

LEGEND

- EXISTING RUNWAY, TAXIWAY, APRON AND RESA
- PROPOSED RPT APRON & TAXIWAY
- FUTURE CODE C PARALLEL TAXIWAY
- FUTURE NEW TERMINAL BUILDING
- EXTENSION TO EXISTING TERMINAL BUILDING
- PROPOSED CARPARK
- EXTG. GA HANGARS, APRONS OR PARKING AREA
- EXTG. HELICOPTER PARKING
- POSSIBLE FUTURE GA HANGARS & APRON
- PROPOSED GA REFUELING AREA
- PROPOSED GA PARKING AREA
- PROPOSED FUEL DEPOT
- PROPOSED BUSINESS PARK
- PROPOSED FUTURE AIRPORT ACCOMMODATION / HOTEL SITE
- HELICOPTER LANDING SITE
- AVIATION USES BOUNDARY
- AIRPORT BOUNDARY

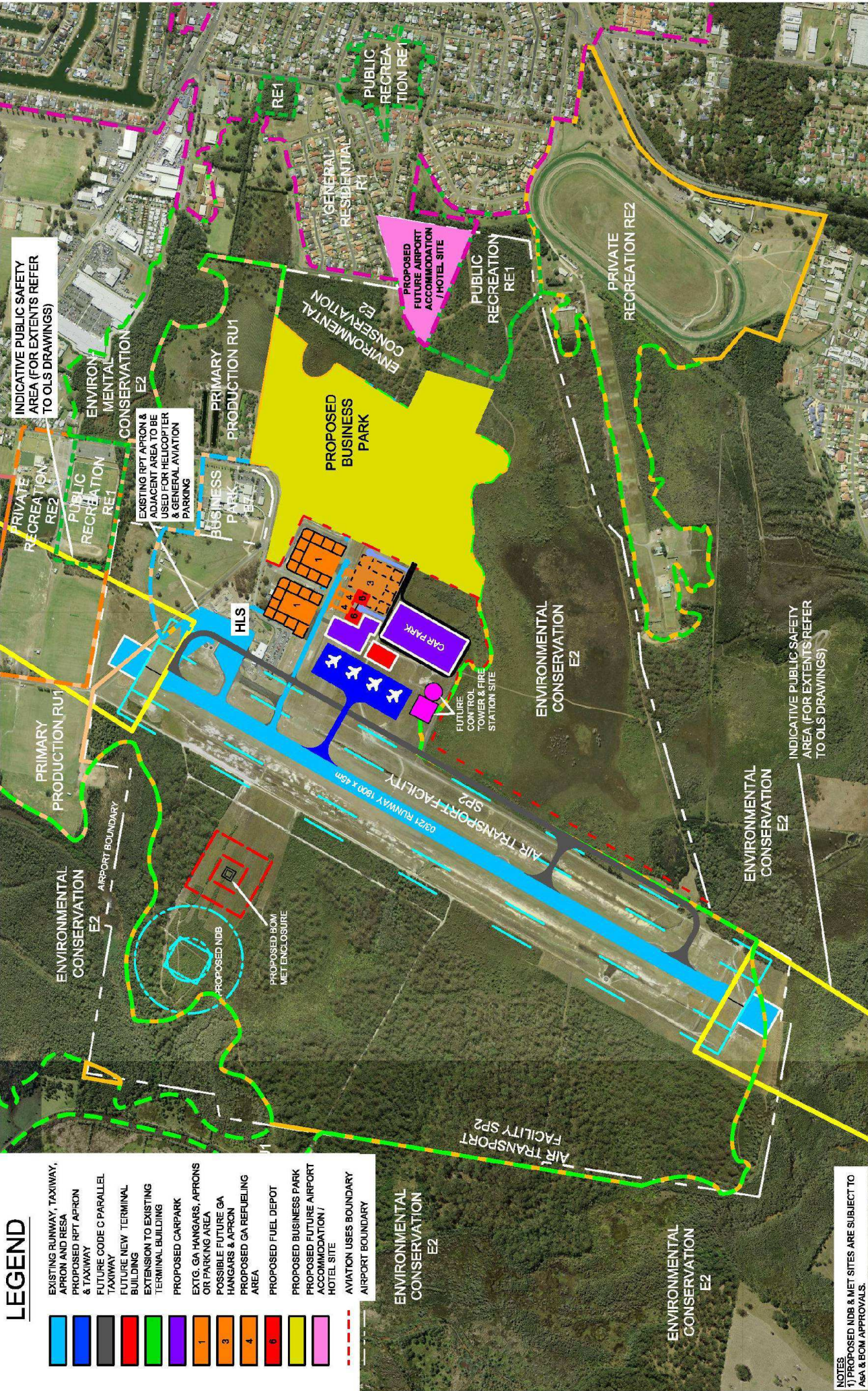


NOTES
 1) AIRCRAFT LAYOUT SHOWN IS FOR THE FUTURE TERMINAL SITE. SOUTHERN POSITION REQUIRES MODIFICATION TO SUIT THE EXTENDED TERMINAL.
 2) PROPOSED NDB & NIET SITES ARE SUBJECT TO ANA & BOM APPROVALS.



LEGEND

- EXISTING RUNWAY, TAXIWAY, APRON AND RESA
- PROPOSED RPT APRON & TAXIWAY
- FUTURE CODE C PARALLEL TAXIWAY
- FUTURE NEW TERMINAL BUILDING
- EXTENSION TO EXISTING TERMINAL BUILDING
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- PROPOSED BUSINESS PARK
- PROPOSED FUTURE AIRPORT ACCOMMODATION / HOTEL SITE
- AVIATION USES BOUNDARY
- AIRPORT BOUNDARY



NOTES
 1) PROPOSED NDB & MET SITES ARE SUBJECT TO ASA & BOM APPROVALS.

