CAMDEN AIRPORT

MASTER PLAN 2020 | PRELIMINARY DRAFT

SYDNEY METRO AIRPORTS

CAMDEN

The aviation forecasts in this Master Plan were prepared prior to the impacts of the COVID-19 virus. This is likely to impact aviation forecasts for 2020. However, given the Master Plan is for an eight-year planning period and a 20-year planning horizon, the medium to long-term forecasts remain unchanged.

MAY 2020

DISCLAIMER:

This Master Plan 2020 (the Master Plan) has been prepared by Camden Airport Limited (CAL) ACN [083 056 464] for the purpose of satisfying the statutory requirements of the Airports Act 1996 (Cth).

The development concepts and projections presented in the Master Plan are based on information and assumptions which have been prepared, and adopted by CAL, specifically to satisfy statutory requirements. These development concepts and projections should not be used or relied upon for any other purpose.

Whilst all care has been taken in the preparation of the Master Plan, CAL does not accept any liability whatsoever to any person who relies in any way on any information contained in this document.

The aviation forecasts included in this Master Plan were prepared prior to the impacts of COVID-19 virus. This is likely to impact aviation forecasts for 2020. However, given the Master Plan is for an eight year planning period and a 20-year planning horizon, the medium to long term forecasts remain unchanged.

FOREWORD

I am delighted to present the Preliminary Draft of the Camden Airport Master Plan 2020.

Surrounded by the Nepean River on three sides, this unique aviation facility has been an Airport since before World War II.

This Master Plan outlines our vision, objectives and aspirations for Camden Airport's future over the next 20 years.

Camden Airport is home to general aviation, emergency services aviation, along with sporting and recreational aviation in the Camden region.

Camden Airport will continue to support both current and future airport users, including flying schools, emergency service operators, flying clubs, air charter operators, community and youth aviation groups, as well as sporting and recreational aviation operators.

In addition, the Airport will continue to develop as a bespoke commercial and employment hub for the Camden region, delivering aviation and non-aviation property development opportunities.

Since our last Master Plan in 2015, the Airport has new ownership, with First State Superannuation taking over the lease of this Commonwealth-owned facility. The management structure of the Airport has also been renewed and enhanced, and there has been a strong focus on safety, aviation operations, compliance, customer service and responsiveness, improvement of facilities and environmental management.

Over the next eight years of this Master Plan period, we will continue our work to strengthen and maintain our aviation operations, improve facilities, help our customers grow their businesses, as well as continuing to demonstrate environmental stewardship and responsibility in all Airport operations.

We look forward to continuing to work with our Airport customers, the local community and all levels of government, in the delivery and implementation of this Master Plan, supporting local employment and jobs growth within the region.

LEE DE WINTON

Camden Airport CEO

EXECUTIVE SUMMARY

CAMDEN AIRPORT

Camden Airport is a general aviation, emergency services, sport and recreational aviation airport located approximately 50 kilometres south-west of the Sydney CBD.

Camden Airport is operated by Camden Airport Limited (CAL). CAL is the Airport Lessee Company under a Head Lease from the Commonwealth Government as the owner of the Airport, which Bankstown Airport Limited (BAL) operates within. CAL and BAL have common ownership, and are trading as Sydney Metro Airports.

CAL's vision is to continue to operate and develop Camden Airport to be:

"... the general aviation, emergency services, sport and recreational airport servicing the South West Growth Centre of Sydney, and a bespoke commercial and employment hub for the Camden region."

The Airport operates on a 24/7 basis and currently caters for a wide range of general aviation movements (fixed wing, helicopter and gliders), providing for flight training, emergency services, gliding, ballooning and recreational flying, along with not-for-profit youth organisations and aviation maintenance facilities.

MASTER PLAN 2020

CAL has prepared this Master Plan in accordance with the requirements of the *Airports Act 1996* (Airports Act). This includes the recent changes to the Airports Act as a result of the *Airports Amendment Act 2018* (Airports Amendment Act).

The Airports Act requires CAL to prepare an Airport Master Plan every eight years, setting out the 20-year strategic direction for the Airport, and a more detailed eight year development strategy. This Master Plan builds on the 2015 Master Plan.

CAL presents this Master Plan as a vision and framework for the community, Airport customers and all levels of government. It outlines the vision, objectives and strategic intent for future growth and development of the Airport, providing a clear direction for airport facilities development. This Master Plan also acts as an important link to planning strategies for Camden Council, Greater Sydney and NSW.

A focus for this Master Plan is the development of the existing vacant land to the east of the existing airport hangar facilities, for both airside (hangar) and landside aviation and commercial development.

ECONOMIC SIGNIFICANCE

Airport operations currently contribute approximately $110 million annually and over 500 jobs to the NSW economy. This includes $84.5 million annually and more than 400 jobs to the economy of the Camden region.

COMMUNITY AND STAKEHOLDER ENGAGEMENT

CAL has a strong commitment to consultation and engagement, balancing the needs of Airport customers and businesses, stakeholders and the community.

Extensive engagement with all levels of government, key stakeholders and the community will occur during Master Plan consultation.

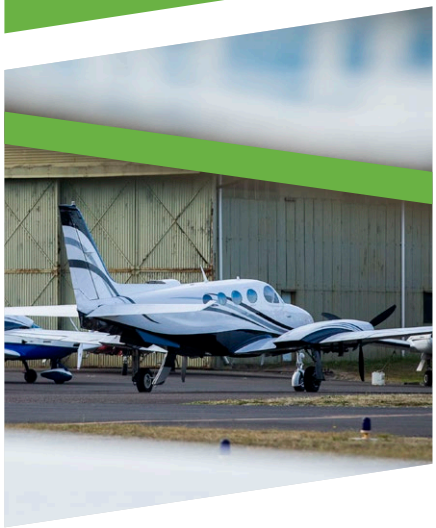
AIRPORT FORECASTS

Camden Airport is one of the busiest general aviation airports in Australia with 104,838 overall aircraft movements in the 2018/19 financial year. Aviation activity at the Airport primarily consists of single-engine and twin-engine piston aircraft, with helicopters accounting for around 7% of movements. In addition, there were more than 7,400 glider movements in 2018.

General aviation will continue to be the predominant form of aviation activity at Camden Airport in the next eight years, growing by approximately 1.0% per annum, to approximately 113,100 movements.

In the 20-year planning horizon for this Master Plan, aircraft movements are forecast to grow by approximately 0.3% annually, to almost 118,000 movements by 2039/2040.

The future Western Sydney Airport which is scheduled to commence operations in 2026, is likely to impact on operations at Camden Airport. The forecast and projections in this Master Plan have not factored the impact of Western Sydney Airport.



AIRCRAFT NOISE

CAL works actively with airport users, government agencies and community representatives on a range of initiatives to manage noise impacts from aircraft operations.

The most effective means for reducing the impact of aircraft noise is through the proper planning of land use for areas adjacent to the Airport. CAL works closely with Camden Council in relation to the application of land use planning controls surrounding the Airport.

CAL has prepared forecasts which indicate minor changes in the level of noise generated by aircraft activity compared with the 2015 Master Plan. With limited growth and changes to aircraft mix, resulting in quieter aircraft from Camden Airport, less residential properties are likely to be affected by aircraft noise over the 20-year planning period.

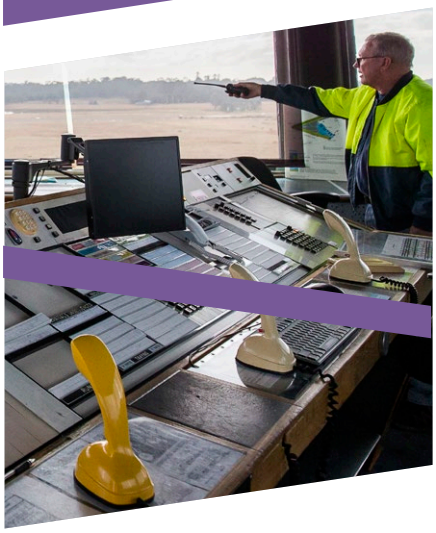
The Airport has established a voluntary Fly Neighbourly Procedures program.

AIRPORT SAFEGUARDING

Long-term and effective Airport safeguarding is critical to ensuring aviation safety and ongoing operations.

This Master Plan describes the objectives of the Airport safeguarding strategy. These consider and build on the national Airport Safeguarding Framework, which aims to improve the following:

- Safety outcomes, by ensuring aviation safety requirements are recognised in land use planning decisions
- Community amenity, by minimising noise-sensitive developments near the Airport
- Aircraft noise-disclosure mechanisms.



AVIATION INFRASTRUCTURE

Camden Airport consists of four runways, two fixed wing and two glider strips, along with a Helicopter Landing Site. The Airport has one asphalt sealed runway with a length of 1,464 metres and a maximum aircraft take-off weight of 5,700 kilograms.

There are no planned runway extensions or improvements in the planning period of this Master Plan. However, CAL will consider any improvements required to meet the Civil Aviation Safety Authority improvement requirements to transition from its current form as a Registered to a Certified Aerodrome.

LAND USE PLANNING

Land use planning at Camden Airport is administered under Commonwealth legislation.

The Land Use Plan features a number of updates to the 2015 Master Plan. These changes ensure the Airport meets evolving local and regional area needs, and provide more detail and visibility around the planned future for the Airport.

The planning framework is aligned with the NSW planning system.

The Airport has been divided into four zones:

1. Airport Business Zone
2. Aviation Zone
3. Airport Support Zone
4. Airport Riparian Zone.

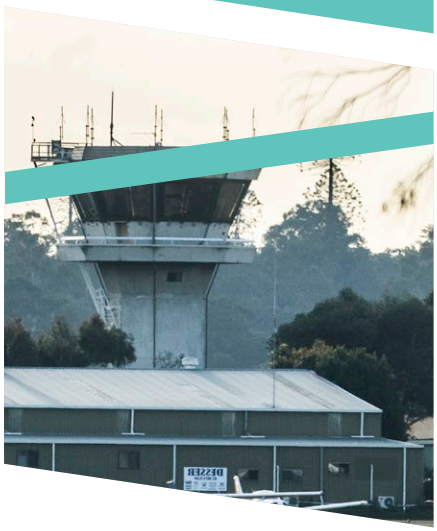
DEVELOPMENT PROGRAM

The development program at the Airport will focus on:

- Supporting and growing on-going aviation operations, including new hangar facilities
- Low traffic generating warehousing and commercial development
- Agricultural/horticultural activities
- Potential renewable energy operations (i.e. solar farms)

Much of the development identified in the Master Plan will likely occur within the eight year planning horizon.

A key aspect of development program at the Airport will be development of the vacant land within the Airport Business Zone, for both aviation and non-aviation development.



GROUND TRANSPORT

The Ground Transport Plan recognises that road access to Camden Airport is limited to Aerodrome Road, accessed off Macquarie Grove Road, with no public transport access.

Traffic volumes to the Airport are light and mainly spread across daylight hours seven day per week, with weekends being slightly busier than weekdays.

With limited aviation growth envisaged for Camden Airport, Aerodrome Road and the Aerodrome Road/Macquarie Grove Road intersection do not require any upgrading in the planning period of this Master Plan.

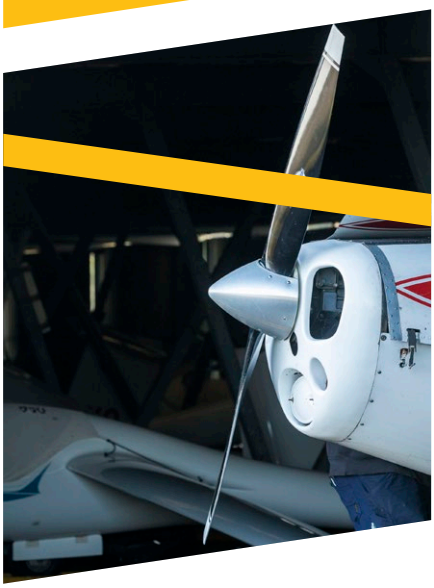
New internal roads will be required to service any future development of the vacant land in the Airport Business Zone.

SERVICES AND INFRASTRUCTURE

CAL owns and maintains a network of utilities to supply various operations and facilities across the site, including power, water supply, sewerage and telecommunications. CAL will continue to work with utility providers to:

- Improve reliability and redundancy in utility networks
- Improve the sustainability of the supply arrangements
- Continue to support growth projected at the Airport.

Camden Airport, surrounded on three sides by the Nepean River, is subject to significant flood risk. The majority of the Airport is classified as Flood Storage and is subject to regular flood events. Flood depths and flood frequency limits development opportunities on the Airport outside of the existing hangar footprint and vacant development land.

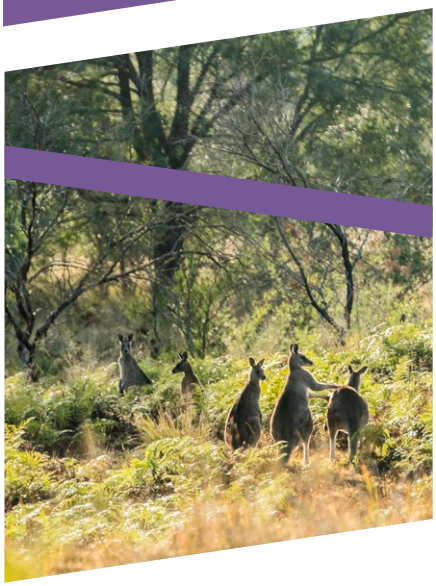


ENVIRONMENT STRATEGY

CAL is committed to continually improving environmental management by fostering a culture of shared responsibility in all areas of Airport operations. Major environmental aspects addressed in this Master Plan and the Airport Environment Strategy (AES) are:

- Air quality
- Heritage
- Biodiversity
- Soil and water
- Hazardous substances
- Ground-based noise.

This Master Plan features a major review and update of the AES, providing a stronger emphasis on environmentally sustainable outcomes. Working with our Airport tenants, we will identify opportunities to minimise impacts on the environment and community by reducing energy, fuel and water use and minimising waste.



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1.0

INTRODUCTION

1.1 WELCOME TO THE CAMDEN AIRPORT MASTER PLAN 2020

CAMDEN AIRPORT IS A GENERAL AVIATION, EMERGENCY SERVICES, SPORT AND RECREATIONAL AVIATION AIRPORT LOCATED APPROXIMATELY 50 KM SOUTH WEST OF SYDNEY CBD.

THIS MASTER PLAN 2020 SETS OUT A LONG-TERM PLAN TO MAINTAIN AND CONTINUE TO DEVELOP CAMDEN AIRPORT AS ONE OF THE CLOSEST GENERAL AVIATION AND RECREATIONAL AIRPORTS TO THE SYDNEY CBD, SERVICING THE GREATER SYDNEY REGION AND THE SOUTHERN HIGHLANDS. THE MASTER PLAN ALSO SEEKS TO RETAIN AND EXPAND AVIATION OPERATIONS, AND TO DEVELOP VACANT LAND NOT SUITABLE FOR AVIATION PURPOSES FOR COMMERCIAL DEVELOPMENT.

SINCE ITS ESTABLISHMENT IN 1935, THE AIRPORT HAS ENABLED THE GENERAL AVIATION INDUSTRY AND RECREATIONAL AVIATION IN NSW TO GROW.

The Airport is operated and managed by Camden Airport Limited (CAL). CAL aspires to develop both aviation and non-aviation activities at the Airport.

The Airport currently caters for a wide range of general aviation movements (fixed wing, helicopter and gliders), providing for flight training, emergency services, gliding, ballooning and recreational flying, along with not-for-profit youth organisations and aviation maintenance facilities.

This Master Plan 2020 outlines the Airport's development plans over the next eight years and provides a strategic vision for the next 20 years. The Master Plan provides details of investment in maintaining and improving existing aviation infrastructure and supporting commercial development.

A focus for this Master Plan is the development of the existing vacant land to the east of the existing airport hangar facilities, for both airside (hangar) and landside aviation and commercial development.

Figure 1.1: Snapshot of Camden Airport today

1.2 VISION AND OBJECTIVES

"Camden Airport will continue to be the general aviation, emergency services, sport and recreational airport servicing the South West Growth Centre of Sydney, and a bespoke commercial and employment hub for the Camden region."

STRATEGIC OBJECTIVES

- To provide a regional general and recreational aviation hub for the South West Growth Centre of Sydney
- To provide an efficient Airport supporting all forms of general and recreational aviation including flight training, emergency services and aircraft maintenance
- To develop the land assets of the Airport to provide high quality employment and commercial development opportunities.

AVIATION: SUPPORTING ALL FORMS OF GENERAL, SPORT AND RECREATIONAL AVIATION

- Provide a home for general aviation and emergency services aviation in the Camden region
- Support recreational aviation for the Sydney's South West Growth Centre and the wider Greater Sydney region
- Support and grow flight training and other aviation training activities
- Maintain and improve existing aviation infrastructure
- Ensure the safety, security, reliability and efficiency of aviation operations
- Safeguard aviation operations from incompatible development, both on and surrounding the Airport.

ENVIRONMENT: CONTINUE TO BUILD A CULTURE OF RESPONSIBILITY IN EVERY ASPECT OF OUR BUSINESS

- Demonstrate environmental stewardship and responsibility in all Airport operations
- Achieve a balance between the development and operations of the Airport and mitigation of environmental impacts.

ECONOMY: CREATING MORE JOBS AND CONTRIBUTING TO THE CAMDEN REGION

- Continue to develop the Airport for small-scale commercial and employment activities, servicing the Camden region
- Deliver aviation and non-aviation property development opportunities at the Airport, including development of the existing vacant land to the east of the existing airport hangar facilities, for both airside and landside development.

COMMUNITY: A GOOD NEIGHBOUR

- Continue to be a good neighbour by working closely with the Camden Council and supporting the local community
- Support local employment and jobs growth in the Camden region.

2.0

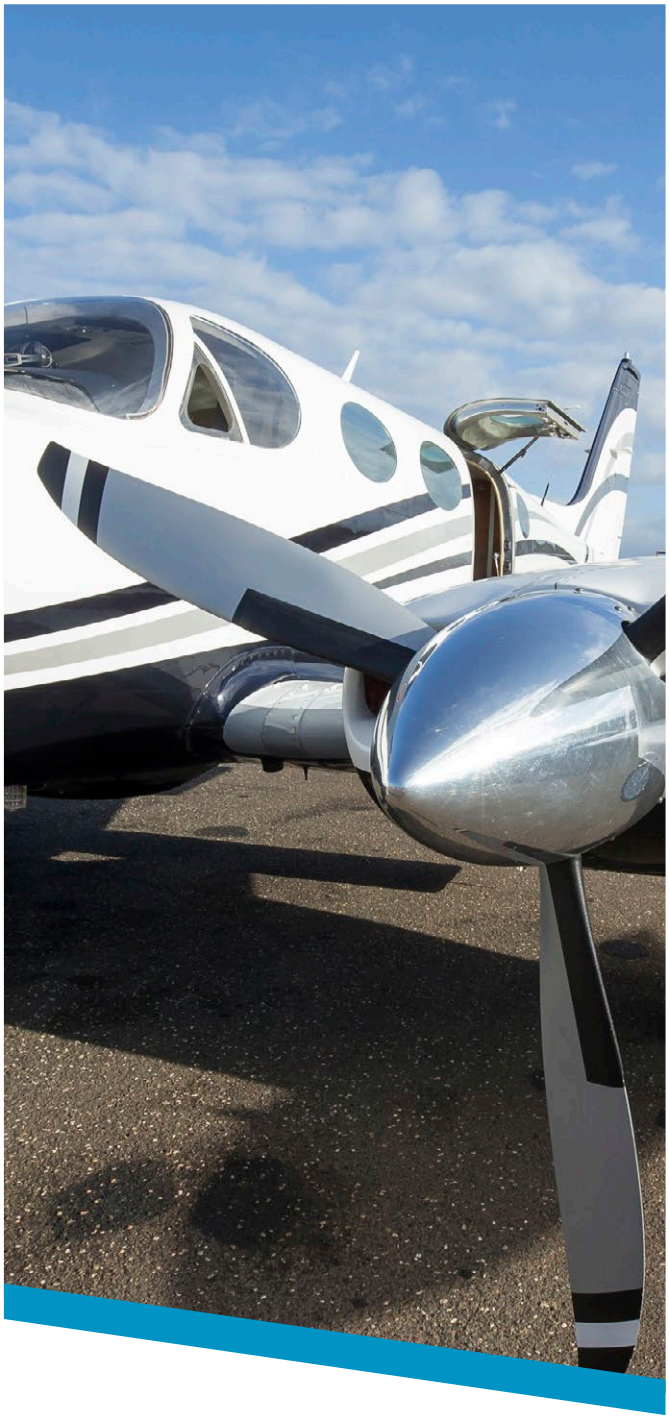
THE MASTER PLAN

2.1 PURPOSE OF THE MASTER PLAN

This Master Plan 2020 for Camden Airport is the principal planning document for the Airport. It describes future aviation operations, land use, facilities and infrastructure, and the management of environmental and noise impacts.

The Master Plan:

- Provides stakeholders with a clear statement of CAL's vision and objectives for the Airport
- Presents a land use plan which balances long-term aviation requirements with new non-aviation developments
- Provides sufficient flexibility for CAL to adjust its plans to accommodate a changing commercial and operating environment
- Reflects local Camden Council and NSW planning frameworks.



2.2 REGULATORY FRAMEWORK

This Master Plan has been prepared in accordance with the requirements of the *Airports Act 1996* (Airports Act). This includes the recent changes to the Airports Act as a result of the *Airports Amendment Act 2018* (Airports Amendment Act). The Airports Act is administered by the Commonwealth Department of Infrastructure, Transport, Regional Development and Communications (DITRDC).

The Airports Act requires the Master Plan to:

- Cover a planning period of 20 years
- Be reviewed every eight years, subject to regulations
- Specify CAL's development objectives for the Airport
- Assess the future needs of civil aviation users and other users
- Specify CAL's proposals for land use and related development
- Include forecasts relating to noise exposure levels and flight paths
- Include CAL's plans for managing aircraft noise intrusion above significant aircraft noise exposure forecast (ANEF) levels
- Specify information about proposed developments for the first eight years
- Assess the likely effect on employment at the Airport, and on the local and regional economy and community in the first eight years of the Master Plan
- Be made available for public comment for a period of 60 business days
- Satisfy the relevant requirements of the *Airports Regulations 1997* (Airports Regulations).

The Airports Act also requires an Airport Environment Strategy to be prepared with this Master Plan. The master planning process has regard to other Commonwealth legislation relating to:

- Land use planning and development controls
- Building and construction approval processes
- Airspace protection
- Airport charges and quality of service monitoring
- Environmental management.

2.3 DEVELOPING THE MASTER PLAN

The Airports Act sets out the process to prepare the Master Plan, as shown in Figure 2.1

This Master Plan has been prepared following engagement with DITRDC and key stakeholders, including Airport customers and tenants, Airservices, CASA, the Department of the Environment and Energy and the New South Wales Government.

The formal public consultation phase for the Master Plan is detailed in Section 2.4.

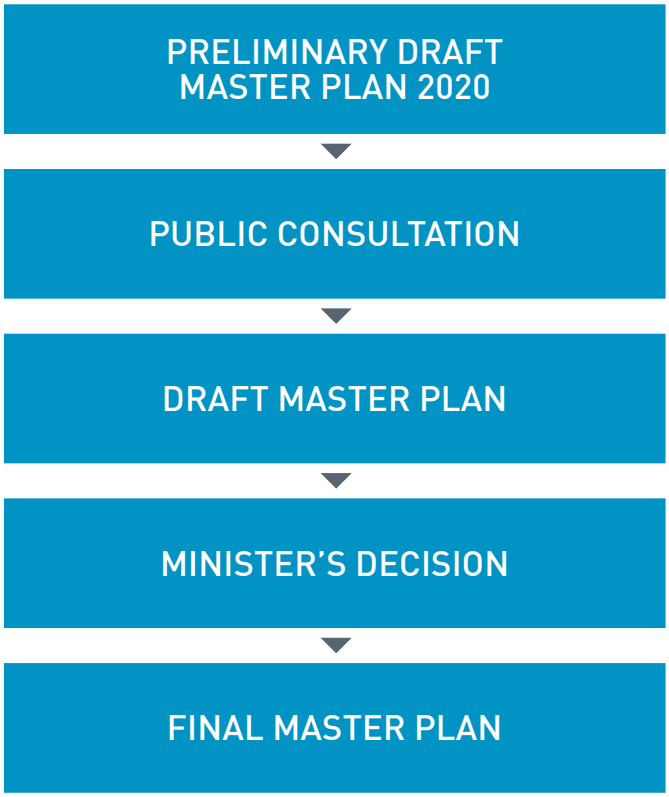


Figure 2.1: Master Plan Preparation Process

2.4 MASTER PLAN CONSULTATION

CAL is aware of the importance of the Airport to the local community. We will continue to work with the community to develop the Airport as a general aviation and recreational airport to service the Greater Sydney region and the Southern Highlands, and continue to provide commercial and employment opportunities for the surrounding community and wider Camden region.

CAL has demonstrated a strong track record of stakeholder and community engagement and will continue to do so during the preparation, consultation and delivery of this Master Plan.

2.4.1 ENGAGEMENT APPROACH

The following objectives guide CAL's approach to communication and stakeholder engagement during the Master Plan preparation process:

- Provide the community with a long-term vision for the Airport
- Inform the local and wider community about the Airport's role in economic development and employment growth
- Create awareness of the Master Plan and keep the community and stakeholders informed throughout its development
- Provide a range of opportunities for stakeholders, interest groups and the wider community to be informed about the Master Plan and provide feedback
- Ensure ideas, issues, concerns and opportunities identified by stakeholders are given consideration during Master Plan preparation
- Continue to build strong stakeholder relationships and partnerships with the community, which continue beyond the Master Plan
- Create an accessible and inclusive process for stakeholder and community input.

CAL's approach to consultation focuses on creating robust, transparent and engaging communications. It will:

- Meet legislative consultation requirements in the Airports Act
- Explain the benefit of the Airport in terms of increased employment opportunities and economic growth in Western Sydney
- Reach a wide stakeholder group, including Federal, State and local government, business, tenants and the general community
- Use creative, innovative and engaging communication techniques to interact with the community
- Continue to develop a positive and cooperative relationship with Camden Council
- Use the existing Camden Airport Community Aviation Consultation Group (CACACG), formerly known as the Camden Airport Community Consultation Forum (CACCF), for ongoing consultation about Airport management.

2.4.2 ENGAGEMENT ACTIVITIES

The Airports Act requires CAL, when consulting on the Master Plan, to:

- Inform DITRDC, the NSW Minister for Planning and Public Spaces, Department of Energy and Environment, and the Camden Council that a Draft Master Plan has been prepared
- Publish a notice about the consultation in the Sydney Morning Herald
- Place information about the consultation on CAL's website
- Display the Preliminary Draft Master Plan at the Airport and in surrounding locations
- Conduct a 60 business day consultation period
- Provide a summary of how comments received during consultation have been addressed.

2.4.3 ONGOING CONSULTATION AND ENGAGEMENT

The CACACG (in its different forms) has operated since 2005. Representative members of the community are selected based on an open expression of interest and their ability to meet specifically-designed criteria. The CACACG's role is to enable stakeholders to be consulted and become involved in the master planning process and issues relating to ongoing Airport management. The group will continue to be engaged on a regular basis throughout the Master Plan preparation process.

2.4.4 STAKEHOLDER ENGAGEMENT APPROACH FOR THIS MASTER PLAN

CAL regularly consults and engages with the community and key stakeholders, about future plan, developments and operations for the Airport. As part of this ongoing commitment, a Consultation Strategy has been developed to guide communications and engagement activities for the public consultation of the Preliminary Draft Master Plan. The Consultation Strategy:

- Ensures that CAL addresses its legislative requirements as outlined in Section 79 and 80 of the Airports Act
- Identifies additional communication activities for the effective public consultation of the Preliminary Master Plan
- Is guided by the International Association for Public Participation Spectrum which helped to identify the most appropriate.

In addition to the requirements of the Airports Act, the Consultation Strategy for the Camden Airport Preliminary Draft Master Plan 2020 has recognised the current social distance guidelines imposed as a result of the COVID-19 Coronavirus. As such, no public gatherings are proposed as part of the public consultation process and the public consultation has been extended to a minimum of 60 business days.

The following stakeholder and community engagement activities will be undertaken:

- Public notification that the Preliminary Draft Master Plan had been released for public comment
- Public display of the Preliminary Draft Master Plan
- A dedicated Master Plan website, email and phone line
- A notice in the Aero Flyer May edition and a special edition specifically for the Master Plan
- A Camden Airport Master Plan 2019 Quick Reference Guide
- On-line community Information and feedback
- On-line Master Plan presentation to the Airport tenants.

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2.5 PREVIOUS MASTER PLANS

Since privatisation of the Airport in 1998, two Master Plans have been prepared. The 2010 Camden Airport Master Plan was approved on 27 October 2010. The current 2015 Master Plan was approved on 18 December 2015. The 2015 Master Plan will remain in force for a period of five years from the date of approval, or until it is replaced by Master Plan 2020.

The 2015 Master Plan outlined the strategic direction for Airport development over a 20 year period, and detailed CAL's aviation and non-aviation development concept. It also addressed key issues such as road traffic, infrastructure, environmental management and heritage protection and provided a five year implementation plan.

The 2015 Master Plan also incorporated the following items for the first time:

- An implementation plan for the first eight years
- A socio-economic impact assessment of the Master Plan
- A five year Ground Transport Plan for the Airport
- An Airport Environment Strategy, which presented CAL's objectives and an approach to managing the environment at the Airport.

2.5.1 ACHIEVEMENTS SINCE THE 2015 MASTER PLAN

Over the past five years since preparing the 2015 Master Plan, CAL has focused on reviewing and implementing new management policies and procedures. It has also directed its energies to empower the new management team to deliver its statutory, community and development roles for the long-term future of Camden Airport.

Key achievements during this period are shown in Figure 2.2.

MANAGEMENT AND OPERATIONS

- ✓ Single ownership of the Airport
- ✓ New and enhanced management team
- ✓ Focus on aviation operations, compliance, financial and environmental management
- ✓ Continued communication with all Airport operators.

AVIATION

- ✓ Safety policies review and related compliance
- ✓ Regular airport inspections and maintenance
- ✓ Taxiway naming and installation of Movement Areas Guidance Signs.
- ✓ Grassed parking area has been extended.

ENVIRONMENT

- ✓ Undertaking ongoing environmental monitoring
- ✓ Further development of the Environmental Management System
- ✓ Vegetation maintenance and monitoring of threatened species Rufus Pomaderris (Pomaderris brunnea) and Camden White Gum (Eucalyptus benthamii)
- ✓ Bush regeneration works within the new Airport Riparian Zone
- ✓ Developing and maintaining environmental registers
- ✓ Proactive governance for gathering information
- ✓ Increased engagement with Airport customers.

TECHNICAL AND ECONOMIC ASSESSMENTS

- ✓ Annual review and implementation of fire safety statements
- ✓ Commencement of Airport-wide heritage management assessment
- ✓ Review of the development approval process.

Figure 2.2: Key Achievements since the 2015 Master Plan

3.0

THE AIRPORT

3.1 CAMDEN AIRPORT

3.1.1 THE AIRPORT TODAY

Camden Airport is located approximately 50 kilometres south-west of the Sydney Central Business District (CBD) and incorporates 21 aviation related companies and small not for profit organisations and gliding clubs within its 196 hectare site. Figure 3.1 provides details of the layout of Camden Airport today.

The Airport currently caters for a wide range of general aviation movements (fixed wing, helicopter and gliders), providing for flight training, emergency services, gliding, ballooning and recreational flying, along with not-for-profit youth organisations and aviation maintenance facilities.

3.1.2 HISTORY OF CAMDEN AIRPORT

Camden Airport was established in 1935 on the Macarthur-Onslow family property as a private aerodrome. The Australian Federal Government acquired the aerodrome in 1940 following the commencement of World War II. The Royal Australian Air Force (RAAF) was based at the Airport which included several Squadrons that were involved with training, anti-submarine, convoy escort, reconnaissance, general air and meteorological roles.

Following World War II, the Airport was transferred to the Department of Civil Aviation in 1946 which expanded operations for the Airport to be used as a general aviation facility for the Sydney Basin Region. In 1988 the Airport ownership was transferred to the Federal Airports Corporation (FAC). In 1998, the Airport was privatised and transferred to CAL.

Significant stages in the evolution of the Airport are shown in the timeline figure, Figure 3.2.

Airport heritage is important, and its values have been incorporated into the Airport Environment Strategy in Chapter 12.0. CAL's approach to Airport heritage protection and management is presented in Section 12.4.2.

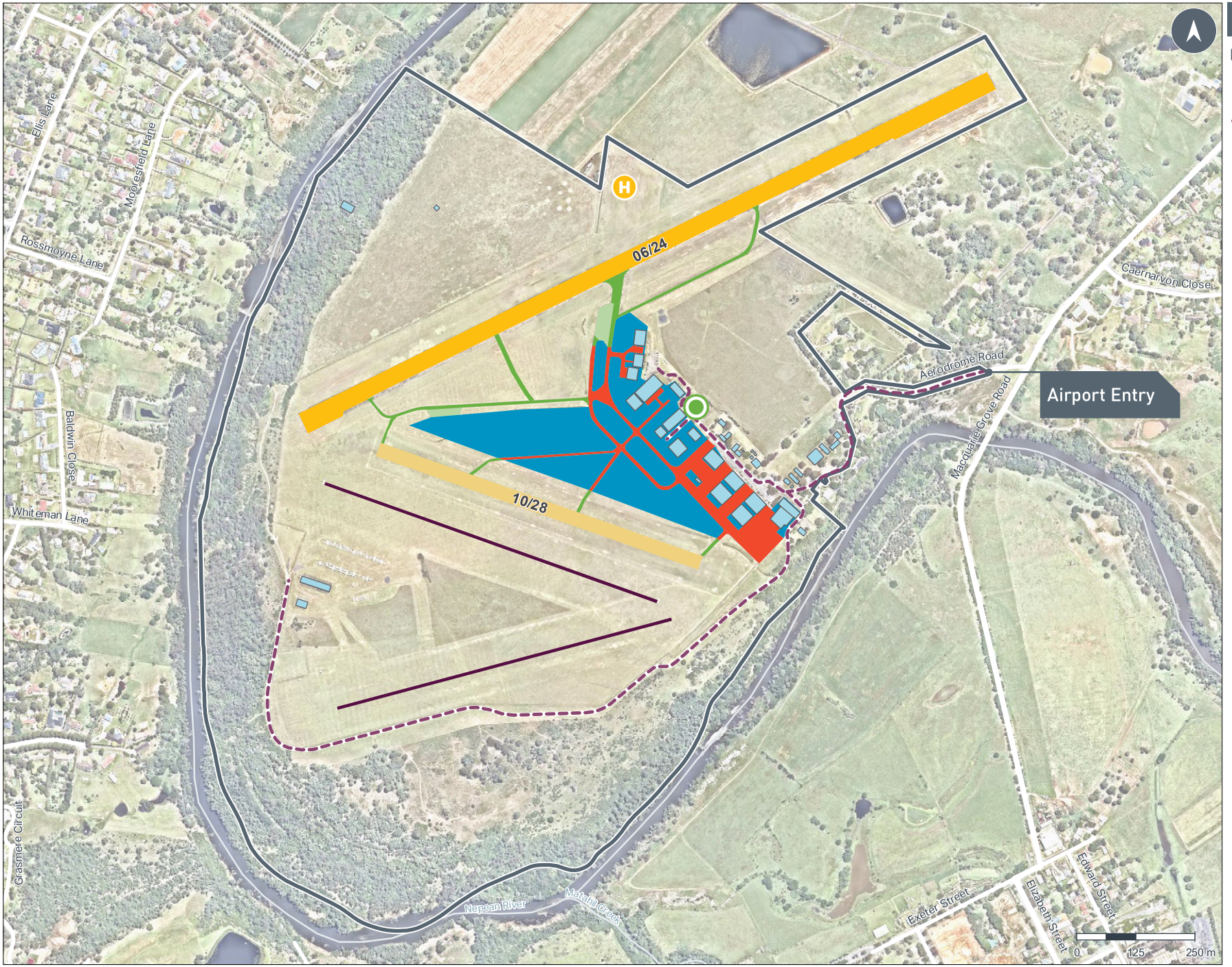


Figure 3.1: Camden Airport Today

PRELIMINARY DRAFT

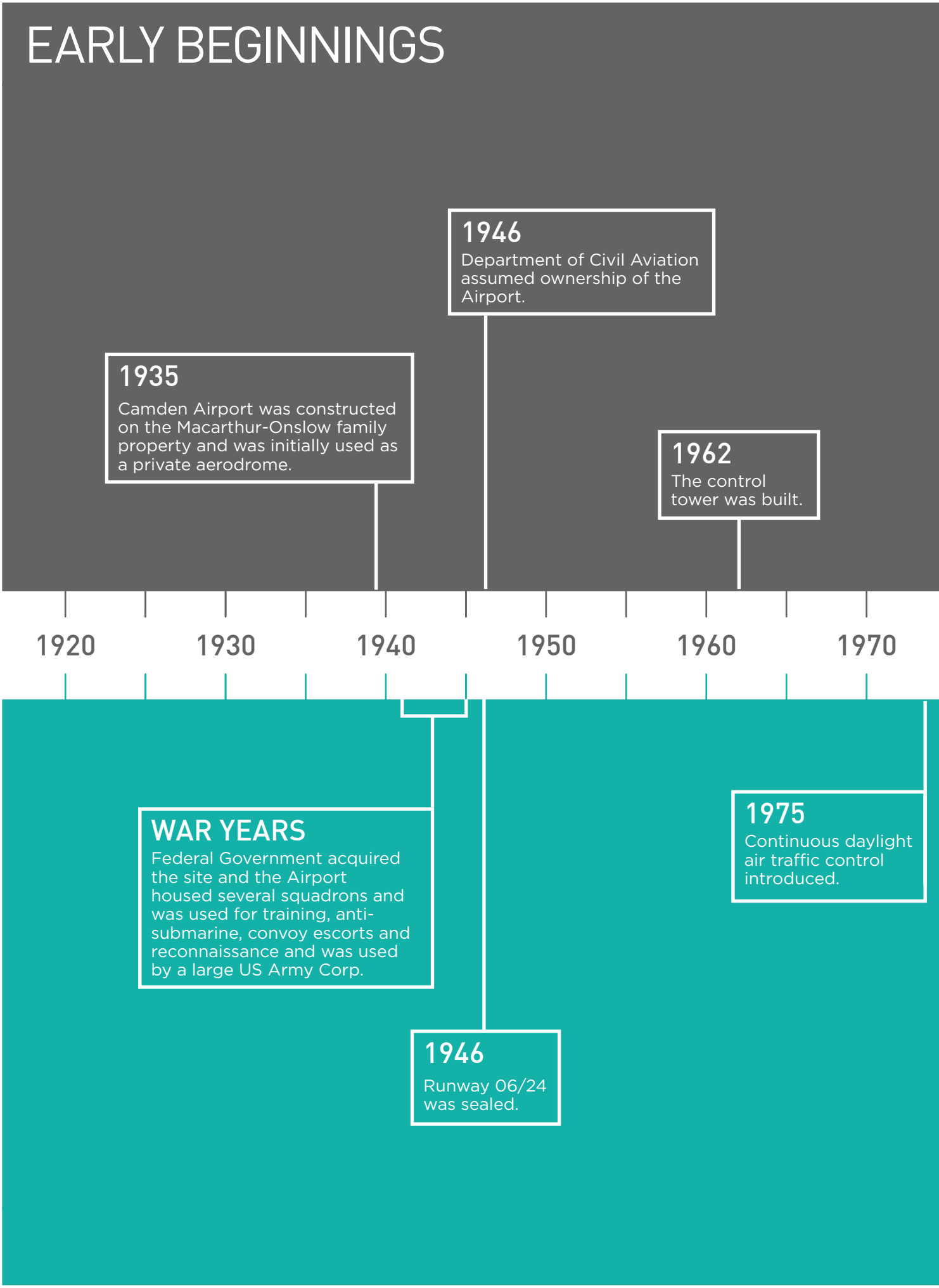
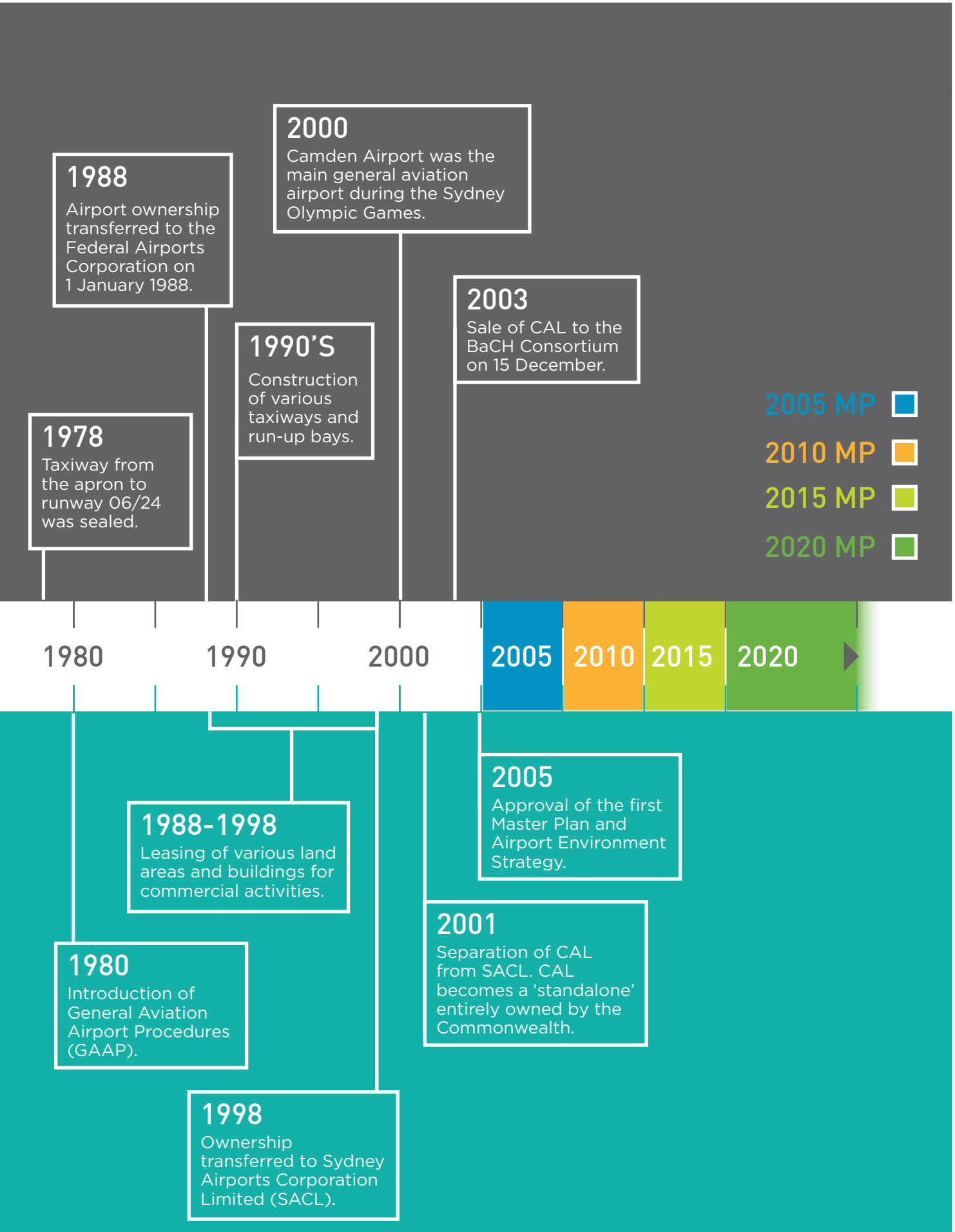


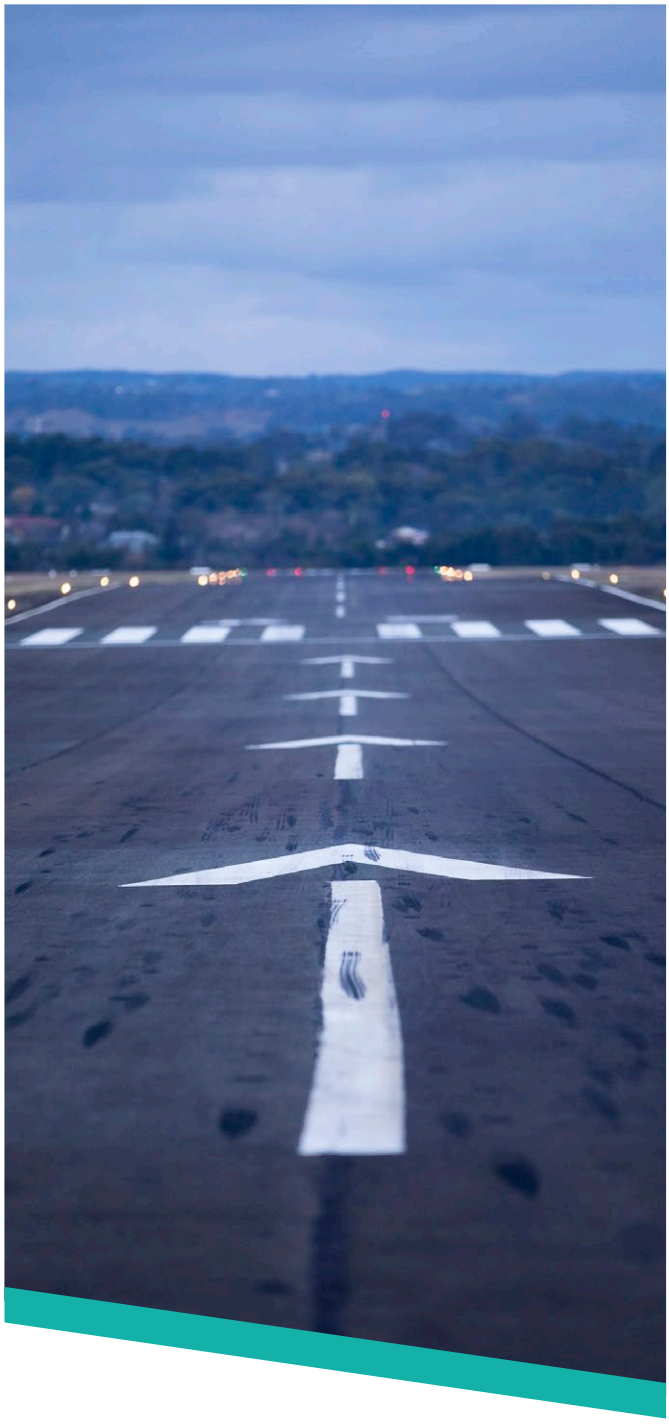
Figure 3.2: Historic Timeline of Camden Airport



NEW ERA/OWNERSHIP

3.2 AIRPORT OPERATIONS

Camden Airport accommodates an average of approximately 290 aircraft movements each day. It operates on a 24/7 basis and currently averages approximately 105,000 movements each year (2019), with capacity for up to 210,000 movements.



3.3 ROLE OF CAMDEN AIRPORT

Camden Airport is one of the closest general aviation and recreational airports to the Sydney CBD, servicing the Greater Sydney region and the Southern Highlands.

The Airport has a complimentary role to Sydney's premier general aviation airport, Bankstown Airport, which is also under the management of Sydney Metro Airports. The Airport currently caters for a wide range of general aviation movements (fixed wing, helicopter and gliding), providing for flight training, emergency services, gliding, ballooning and recreational flying, along with aviation maintenance facilities.

3.3.1 CAMDEN AIRPORT'S CONTRIBUTION TO SYDNEY AVIATION

There are a number of other Airports operating within the Sydney Basin. The location and general role of these Airports are shown in Figure 3.3 and summarised in the following section.

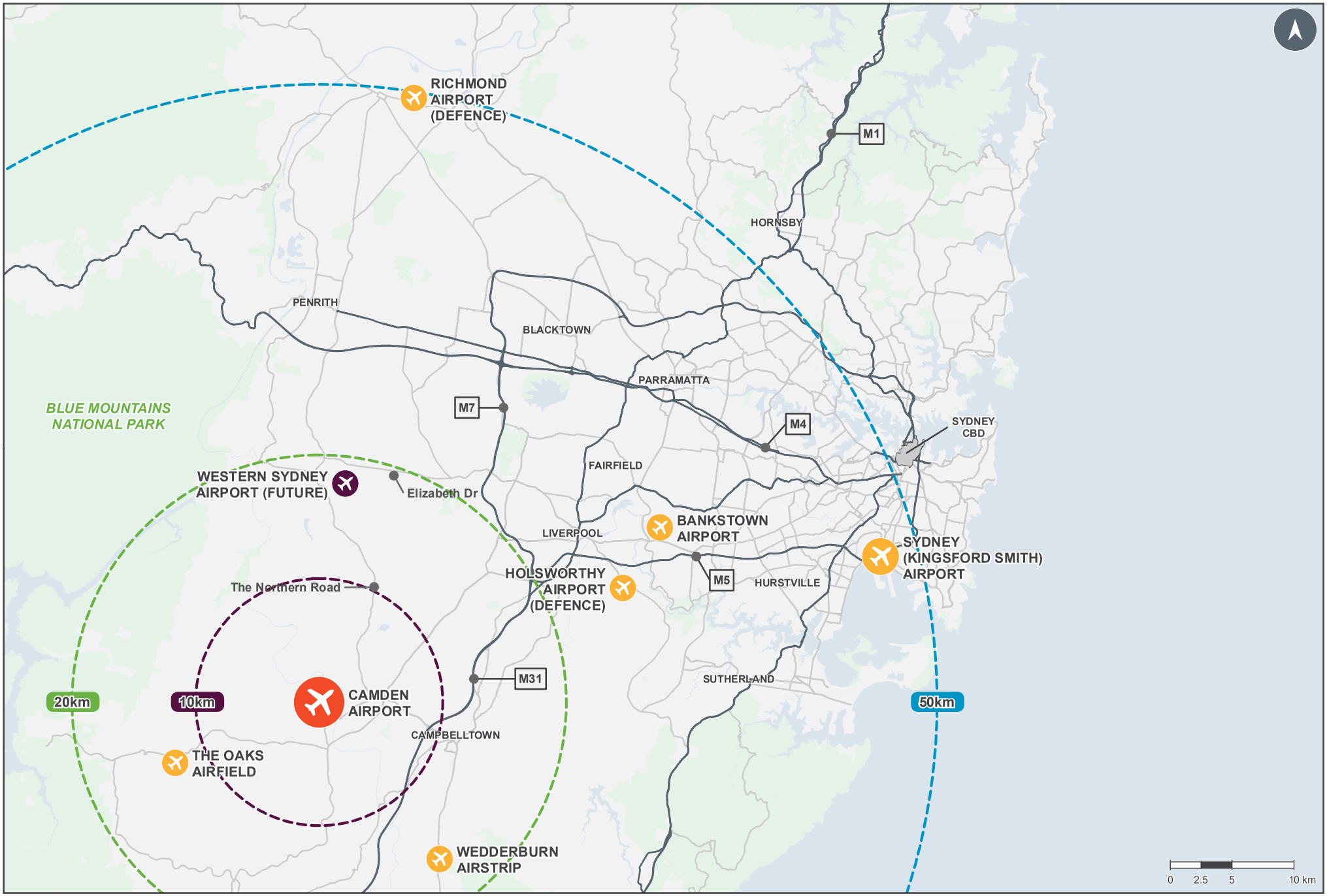


Figure 3.3: Regional Context for Camden Airport

PRELIMINARY DRAFT

SYDNEY AIRPORT

Sydney (Kingsford Smith) Airport is Sydney's major airport, providing passenger services to international, interstate and regional destinations. Located approximately eight kilometres south of the Sydney CBD, Sydney Airport serves as Australia's gateway to the international air transportation system.

Sydney Airport is Australia's largest transport and logistics hub, with 43 international airlines and seven domestic and regional airlines serving 54 international and 49 domestic destinations in 2017.

Total air passenger numbers at Sydney Airport are forecast to increase by 51%, from 43.3 million in 2017 to 65.6 million in 2039. Total freight at Sydney Airport is forecast to grow by 58% to one million tonnes in 2039.

The three existing runways at Sydney Airport can accommodate growth in aviation, with improvements to taxiways, aprons and infrastructure delivering operational efficiencies.

The business and general aviation industry using Sydney Airport is almost exclusively limited to the premium corporate market, such as business jets, helicopters and commercial flights. Some of these aircraft types may be accommodated at other Airports in the Sydney Basin over time.

BANKSTOWN AIRPORT

Bankstown Airport is the State's premier general aviation airport. Located approximately 26 kilometres south-west of the Sydney CBD, the Airport accommodates fixed-wing aircraft, helicopters and related aircraft maintenance activities through its three runway complex.

Bankstown Airport is the second busiest airport in Australia and the busiest general aviation airport, with more than 279,000 aircraft movements in the 2018/2019 financial year. The Airport operates on a 24/7 basis and serves as a flying base for emergency services, major flying schools and small to medium-size air freight, aircraft maintenance, charter and private business flights.

RAAF BASE RICHMOND

The RAAF Base Richmond is located 50 kilometres north-west of the Sydney CBD. RAAF Richmond occupies a 270 hectare site, which houses the military aviation activities for the RAAF Air Lift Group, with a single sealed runway with a length of 2,134 metres.

Some civilian general aviation activity is allowed, including practice Instrument Landing System (ILS) approaches and gliding activity on weekends.

The operation of RAAF Base Richmond is significant due to the impact it has on air traffic control and airspace management in the Sydney Region.

HOLSWORTHY (MILITARY) AIRPORT

Holsworthy Airport is located within the Holsworthy Military Reserve, which has restricted public access. This Airport is 26 kilometres south-west of the Sydney CBD. Access to the Airport is restricted and only suited to use by helicopters, with a runway length of 670 metres.

PROPOSED WESTERN SYDNEY AIRPORT

In April 2014, the Commonwealth Government announced Badgerys Creek as the site for a new Airport in Western Sydney. An opening date of 2026 has been established for the Airport, which has been planned with an initial single 3,700 metre runway and terminal and other support facilities.

On opening, the Nancy-Bird Walton International Airport (Western Sydney Airport) will be a full service airport offering domestic and international passenger and air freight services. It is anticipated that this new Airport will accommodate 10 million passenger movements per annum within the first five years of operation, and transport 265,600 tonnes of freight per annum.

As Sydney Airport approaches its full capacity, it is anticipated that Western Sydney Airport will absorb a significant proportion of future demand for passenger and freight services. Beyond the initial stage, Western Sydney Airport will be further developed in line with demand to include a substantial terminal, support and commercial facilities. As demand approaches 37 million passengers per year, anticipated by 2050, a second parallel runway may be required. Western Sydney Airport is expected to be capable of handling approximately 82 million passengers per year by 2063.

Western Sydney Airport operations will alter airspace arrangements within the Sydney Region. Over the long term, flight training, gliding and other activities originating from Camden Airport may be impacted by these airspace changes.

CAL will continue to engage with DITRDC, CASA, and Airservices on any future airspace changes that may impact on aviation operations at Camden Airport when Western Sydney Airport begins operations in 2026.

SMALLER AIRFIELDS/AIRSTRIPS

There are two smaller airfield/airstrips within 20 kilometres of Camden Airport, Wedderburn Airfield and The Oaks Airstrip. These airfield/airstrips provide general aviation facilities and cater for activities such as private flying, flying training and sports aviation.

A summary of the use and aviation facilities for these airfield/airstrips is provided in Table 3.1.

Table 3.1: Smaller Airfield/Airstrips within close proximity to Camden Airport

Airport/Airfield	Use	Aviation Facilities		
		Runway	Lighting	Control Tower
Wedderburn Airfield Private airfield (unlicensed)	• Recreational	Runway 17/35 • 950m • Sealed • 4,000kg weight limit	No	No
The Oaks Airfield Private airfield (unlicensed)	• Recreational • Flight training • Gliding • Emergency alternative to Camden & Bankstown Airports	Three grass runways • Two North-South Parallel (800m and 900m) • One South-West Emergency Only (400m) • 5,700kg weight limit	No	No

3.4 ECONOMIC SIGNIFICANCE TODAY

Camden Airport serves as a local economic and employment hub within the Camden Local Government Area (LGA) and south-western Sydney region.

This section provides an overview of the Airport's economic contribution and forecast growth. Implementation of this Master Plan is forecast to deliver growth in investment and employment through aviation and non-aviation commercial development activities.

The current 21 aviation related businesses located at Camden Airport, along with a number of small not-for-profit organisations and gliding clubs, results in approximately 135 FTE employees on the Airport plus approximately 20 volunteers. In addition, offsite employment directly related to the Camden Airport operations accounts for an additional 74 FTE employees and 46 volunteers.

Current airport operations contribute approximately $110 million annually and over 500 jobs to the NSW economy. Locally, the Airport contributes $84.5 million annually and more than 400 jobs to the economy of the Camden region (South West and Outer West Region of Sydney).

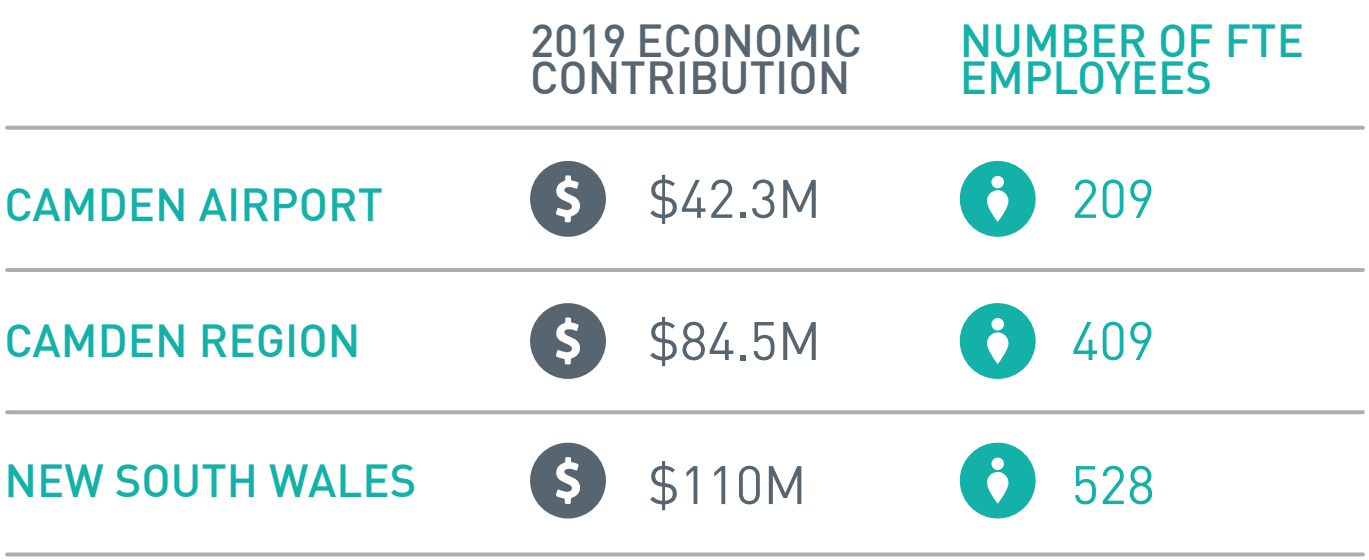


Figure 3.4: Camden Airport Regional Economic Impact 2019 (Source: Hudson Howells 2019)

Table 3.2: Camden Airport Employment and Economic Activity 2019 (Source: Hudson Howells 2019)

Airport Operations	Camden Airport	Camden Region	New South Wales
Employment (FTEs)			
Direct On-Airport	135	135	135
Direct Off-Airport	74	74	74
Induced	-	200	319
Total	209	409	528
Value Added Outcome			
Direct Operational	$42.3m	$42.3m	$42.3m
Employment	-	$42.2m	$67.7m
Total	$42.3m	$84.5m	$110.0m

3.5 REGIONAL SIGNIFICANCE

3.5.1 OVERVIEW

The NSW Government and the Camden Council recognise Camden Airport as an important general facility and have identified the importance of protecting its ongoing aviation operations.

Camden Airport sits within a broad strategic planning framework at the State, regional and local levels:

- Setting the framework at the State level is the Greater Sydney Regional Plan – A Metropolis of Three Cities 2018
- The Greater Sydney Regional Plan cascades down to specific and more detailed District Plans, with Camden Airport being located within the Western City District Plan 2018
- At the regional/local level, Camden Council has prepared a number of strategic planning documents including the Camden Community Strategic Plan 2017 and the Camden Draft Local Strategic Planning Statement 2019.

In addition, the NSW Government has identified a number of priority Growth Areas, including the following Growth Areas which are adjacent Camden Airport:

- Western Sydney Priority Growth Area (around the new Western Sydney Airport)
- South West Priority Growth Area (north of Camden Airport, centred on Leppington)
- Land to the south of Campbelltown-Macarthur has been identified as the Macarthur South Investigation Area.

The NSW Government has also prepared Future Transport Strategy 2056, providing a framework for the future NSW transport system over the next 40 years.

The following section will provide an overview of each of these strategic planning frameworks and their relationship and context to Camden Airport. Such strategic planning frameworks inform the detailed State and Camden Council planning polices, described in Chapter 8.0.

3.5.2 GREATER SYDNEY REGION PLAN

The *Greater Sydney Regional Plan – A Metropolis of Three Cities* (Greater Sydney Regional Plan), prepared by the Greater Sydney Commission in 2018, sets out a 40-year vision for the city's future and a plan for the next 20 years.

The vision for Sydney is based on the concept of 'a metropolis of three cities' comprising the current CBD, the emerging CBD of Parramatta and a new Western Sydney CBD to be planned as part of the new Western Sydney Airport. Key elements of the Greater Sydney Plan are show in Figure 3.5.

From an aviation perspective, the Greater Sydney Regional Plan focusses on the future development of the new Western Sydney Airport and the Western Sydney (Badgerys Creek) Aerotropolis, along with the ongoing role of Bankstown Airport for general aviation and non-aviation related business growth, playing a role as a significant 'Trade Gateway'.

Whilst Greater Sydney Regional Plan provides limited commentary in relation to Camden Airport, it does identify the importance of improving amenity and safety, and supporting ongoing aviation at Sydney, Bankstown and Camden Airports, at the RAAF Base Richmond, and at the future Western Sydney Airport.

Further, the Greater Sydney Regional Plan identifies the importance of long-term transport and infrastructure corridors, including the planning for the future Outer Sydney Orbital transport connection (future road and freight rail connection). This corridor is identified within close proximity of Camden Airport.

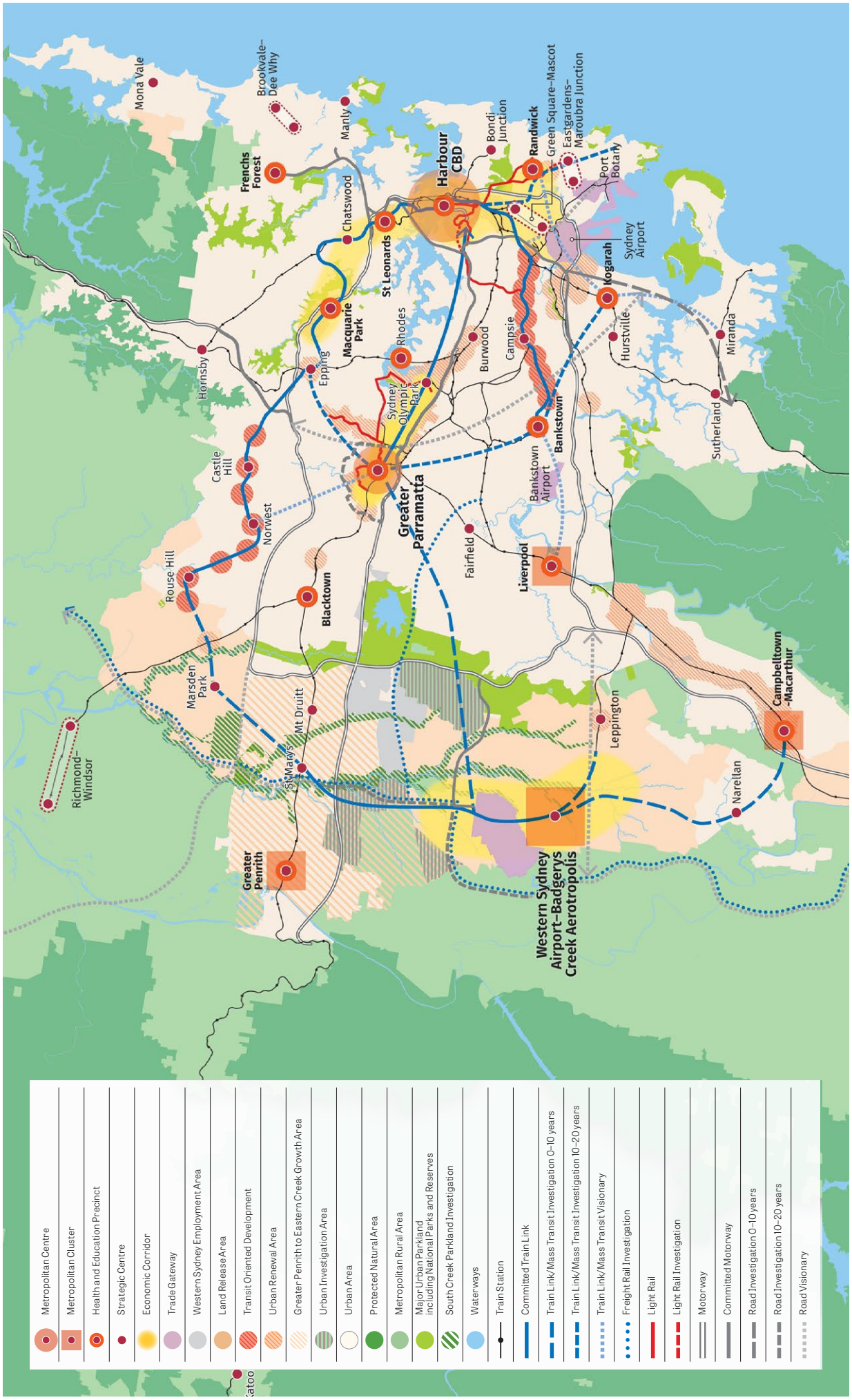


Figure 3.5: Greater Sydney Region Plan (Source: Greater Sydney Commission 2018)

3.5.3 WESTERN CITY DISTRICT PLAN

Camden Airport is located within the Western City District Plan of Greater Sydney Regional Plan.

The Western City District Plan covers the Blue Mountains, Camden, Campbelltown, Fairfield, Hawkesbury, Liverpool, Penrith and Wollondilly local government areas and is described as Greater Sydney's 'Parkland City'.

The Western City District Plan, published by the Greater Sydney Commission in 2018, is a 20-year plan to manage growth in the context of economic, social and environmental matters to achieve the 40-year vision for Greater Sydney. It is a guide for implementing the Greater Sydney Region Plan and a bridge between regional and local planning.

The Western City District Plan acknowledges Camden Airport as an important general aviation facility in the District. However, from an aviation perspective, the focus of the Western City District Plan is on the future development of Western Sydney Airport. The development of Western Sydney Airport and the Western Sydney Aerotropolis will play a significant role in the growth and a major employment and economic hub within the District, providing another gateway for both national and international visitors to NSW.

The Western City District Plan provides greater detail in relation to the priority Growth Areas and the future Outer Sydney Orbital Investigation Corridor, as identified in the Greater Sydney Regional Plan.

3.5.4 FUTURE TRANSPORT STRATEGY 2056

The NSW Government Future Transport Strategy 2056 (Future Transport 2056) released in March 2018, provides an update to the 2012 Long Term Transport Master Plan for NSW. Future Transport 2056 seeks to ensure that NSW is prepared for rapid changes in technology and innovation to create and maintain a world class, safe, efficient and reliable transport system over the next 40 years.

Future Transport 2056 has been developed to meet six outcomes:

- Customer focused
- Successful places
- A strong economy
- Safety and performance
- Accessible services
- Sustainability.

Aligned with the Greater Sydney Region Plan, which is built on a metropolis of three cities for Greater Sydney, Future Transport 2056 seeks an integrated network of corridors between these cities to support the efficient movement of people and goods. Such an integrated network of corridors is based around the following corridor hierarchy:

- City-shaping corridors
- City-serving corridors
- Centre-serving corridors.

City-shaping corridors are major trunk road and public transport corridors providing higher speed volume connections between the cities and centres that shape locational decisions of residents and businesses. Future Transport 2056 recognises the need to strengthen connections between Sydney Airport, the Harbour CBD, Greater Parramatta, and Western Sydney Airport.

The Strategy also identifies a strategic freight network for Greater Sydney which identifies the most significant corridors that support the movement of goods. This includes corridors connecting trade gateways, freight precincts and centres across Greater Sydney as well as corridors that connect the region with outer metropolitan areas and regional NSW.

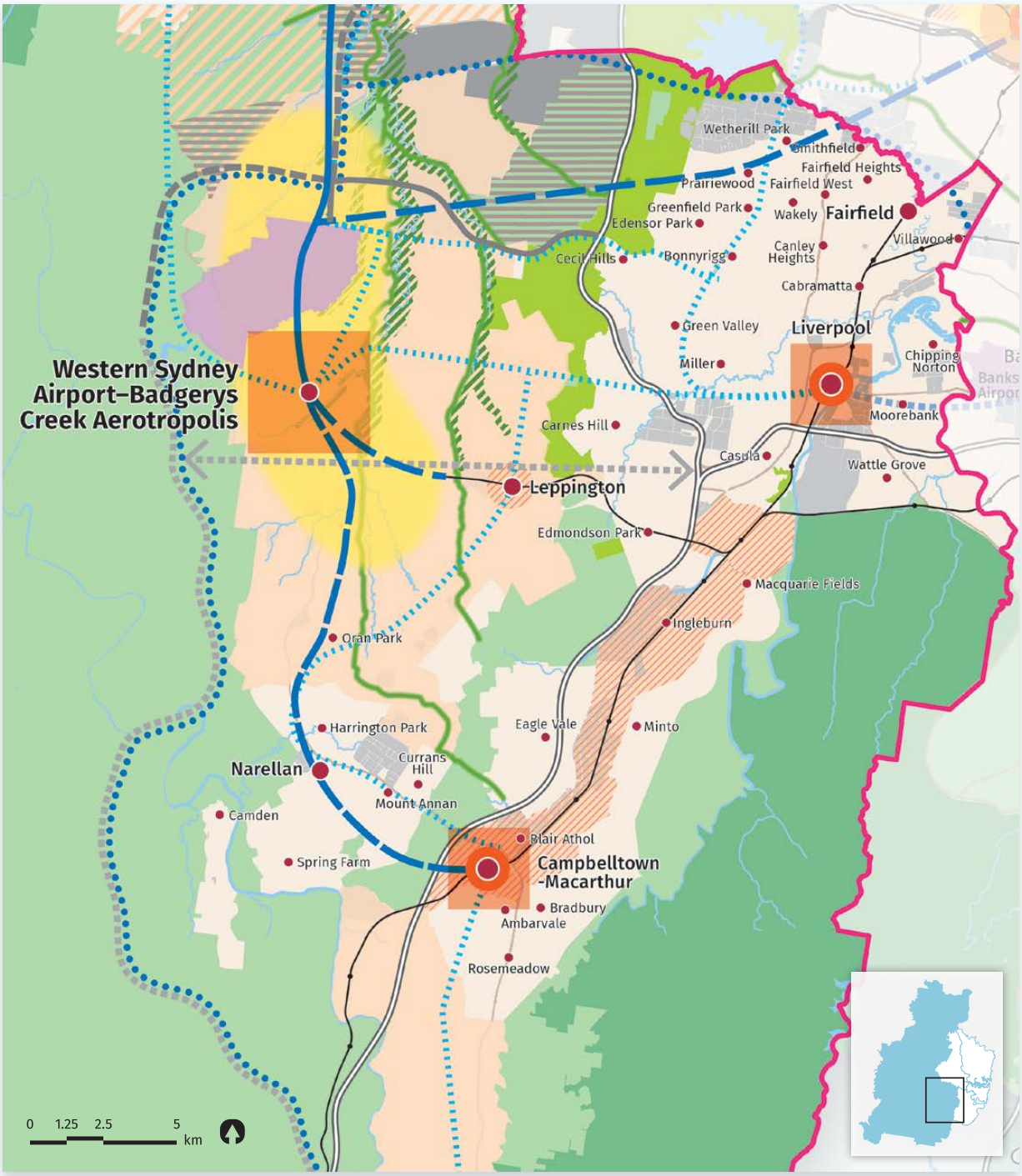


Figure 3.6: Western District Plan Suburban Area South (Source: Greater Sydney Commission 2018)

3.5.5 CAMDEN COMMUNITY STRATEGIC PLAN 2017

The Camden Community Strategic Plan 2017 provides Camden Council a long-term community vision with set objectives and strategies. The plan outlines six directions with a set of objectives and strategies for the Council to deliver and measure progress. The following strategies are relevant to Camden Airport:

- Ensure provision of appropriate urban development for sustainable growth in the Camden LGA
- Maintain and enhance the Camden LGA's waterways and its catchments and promote water saving initiatives
- Monitor air quality and promote initiatives to reduce air pollution
- Monitor noise complaints and promote initiatives to reduce noise pollution
- Maintain and develop the existing lifestyle setting to further attract tourists and businesses to the Camden LGA
- Activate under-utilised public and private spaces across Camden LGA
- Strengthen and support business growth and attract new industries
- Facilitate community connections, inclusion, resilience and sense of belonging through the provision and support of a broad range of events and activities.

3.5.6 DRAFT CAMDEN LOCAL STRATEGIC PLANNING STATEMENT 2019

Camden Council is required to review and update its Local Environmental Plan and prepare a Local Strategic Planning Statement. The Local Environmental Plan and the Local Strategic Planning Statement seeks to implement the strategic directions of the Greater Sydney Region Plan and Western City District Plan – at the local level.

The Camden Draft Local Strategic Planning Statement 2019 (Camden Draft LSPS) was recently the subject of publicly exhibition. The Camden Draft LSPS is a 20-year planning vision, emphasising land use, transport and sustainability objectives to demonstrate how the Camden LGA will change to meet the community's needs over the next 20 years.

The Camden Draft LSPS sets out:

- The 20-year vision for land use in the Camden LGA
- The special local characteristics which contribute to local identity
- Shared community values to be maintained and enhanced
- How growth and change will be managed into the future.

In relation to Camden Airport, the Camden Draft LSPS seeks to:

- Align infrastructure delivery with growth
- Work in partnership to deliver a more liveable, productive and sustainable Camden
- Encourage vibrant and connected centres which reflect Camden's evolving character
- Increase the quantity and diversity of local jobs, and improving access to jobs across the Western City District
- Ensure a suitable supply of industrial and urban services land
- Leverage Camden's natural and cultural asses to promote local agricultural production and increase tourism
- Protect and enhance the health of Camden's waterways, and strengthen the role and prominence of the Nepean River
- Reduce emissions, manage waste and increase energy efficiency
- Improve Camden's resilience to natural hazards and extreme weather events
- Identify Narellan as a 'Strategic Centre' and Camden as a 'Town Centre'
- Recognise the area around Camden Airport as a 'Tourism' area
- Identify the alignment of the proposed future Outer Sydney Orbital transport connection (noting that the Camden Draft LSPS identifies the future Outer Sydney Orbital as a road tunnel through or adjacent Camden Airport).

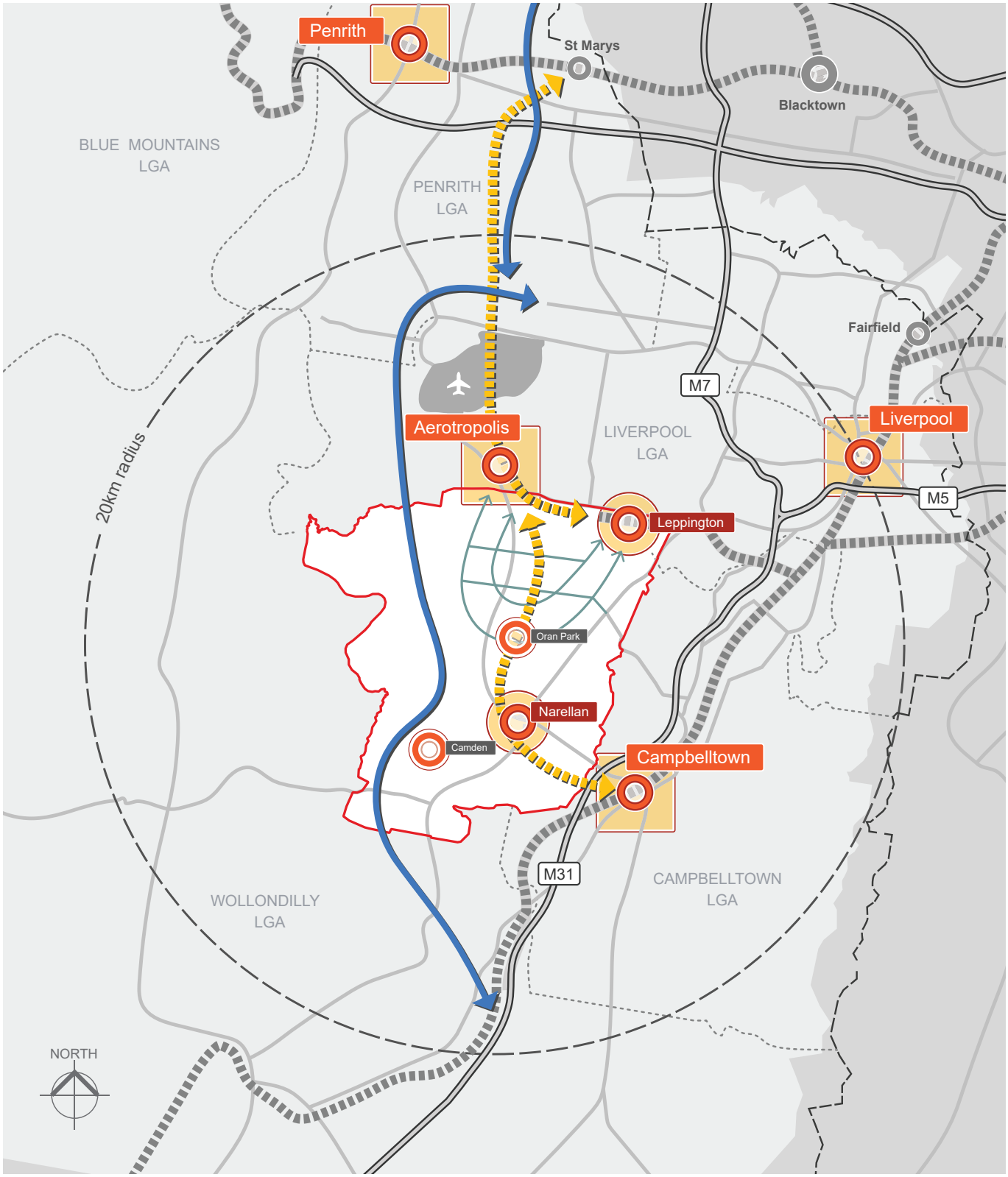


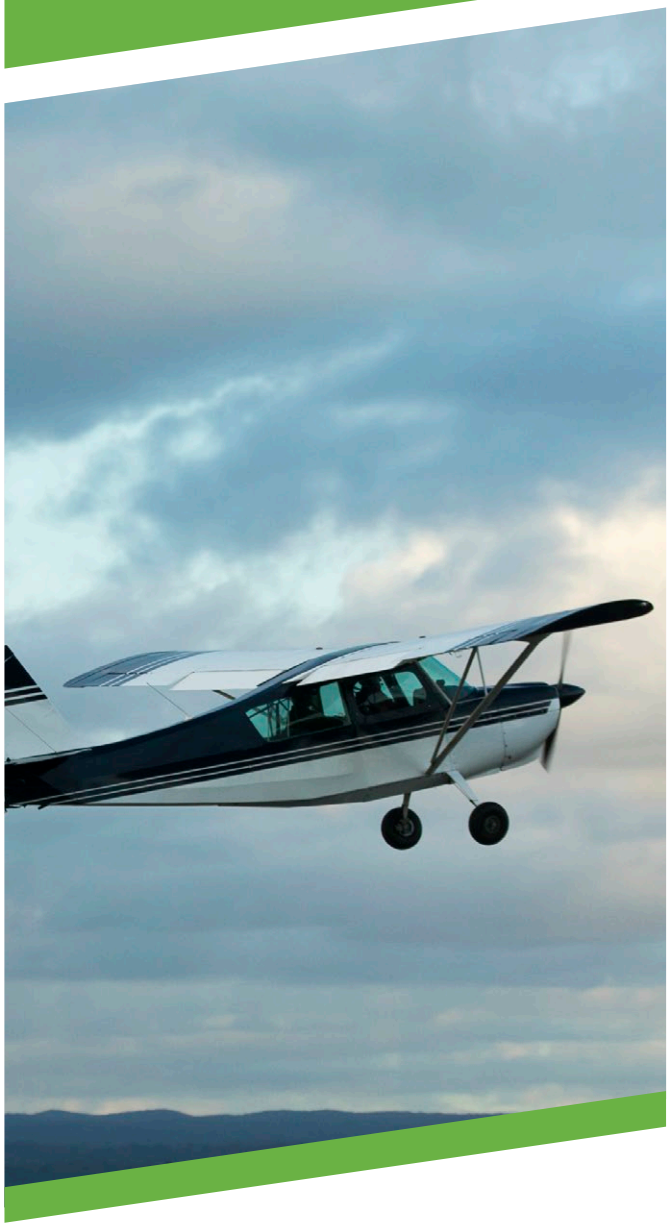
Figure 3.7: Camden Draft Local Strategic Planning Statement 2019

4.0

AIRPORT FORECASTS

4.1 OVERVIEW

IN 2019, CAMDEN AIRPORT WAS ONE OF BUSIEST GENERAL AVIATION AIRPORTS IN AUSTRALIA.



Camden Airport recorded 104,838 aircraft movements in the 2018/19 financial year, making it one of the busiest general aviation airports in Australia. Aviation activity at Camden Airport primarily consists of single-engine and twin-engine piston aircraft (more than 93% of aircraft movements), with helicopters accounting for a further 7%, as shown in Figure 4.1.

In addition, it is estimated that there were more than 7,400 glider movements in 2018.

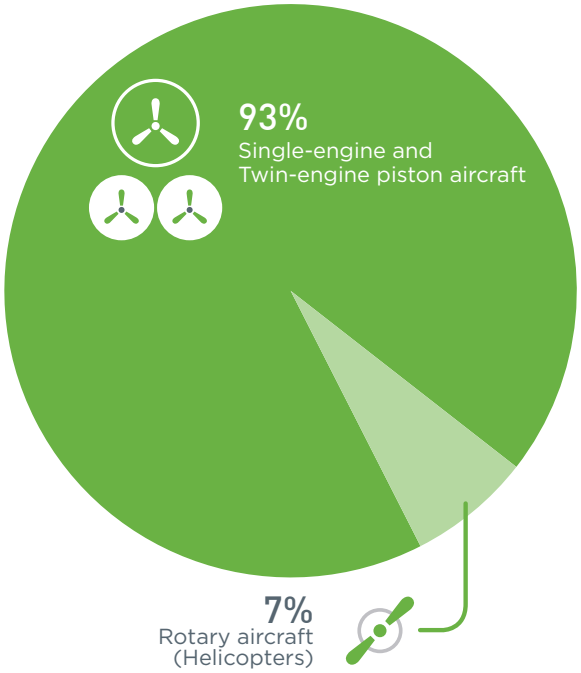


Figure 4.1: Aircraft Type using Camden Airport

4.2 AIR TRAFFIC MOVEMENTS

Forecasting aircraft movements and aviation-related developments relies on a detailed understanding of prevailing and future economic conditions. These directly affect the main drivers for airport activity. The Australian economy strongly influences general aviation activity. Camden Airport has experienced a reduction in air traffic during the past decade. This is a similar trend with other Australian general aviation airports.

Figure 4.2 charts aircraft traffic movement at the Airport since 2011. In the past eight years, overall annual air traffic has declined from 106,830 (FY2011) to 104,838 movements (FY2019). This represents an annual decline of approximately 0.2%.

Other general aviation airports, including Bankstown, Moorabbin, Parafield and Jandakot, have experienced similar declines in general aviation activity over the same period.

During this period, fixed wing aircraft movements at Camden Airport have experienced an annual decline of approximately 0.4%. In contrast, helicopter operations have increased during this period (average growth of 2.2% per annum over the same period).

A significant decline in general aviation at Camden Airport was evident in the 2012/13 financial year (14.1% decline from the previous financial year).

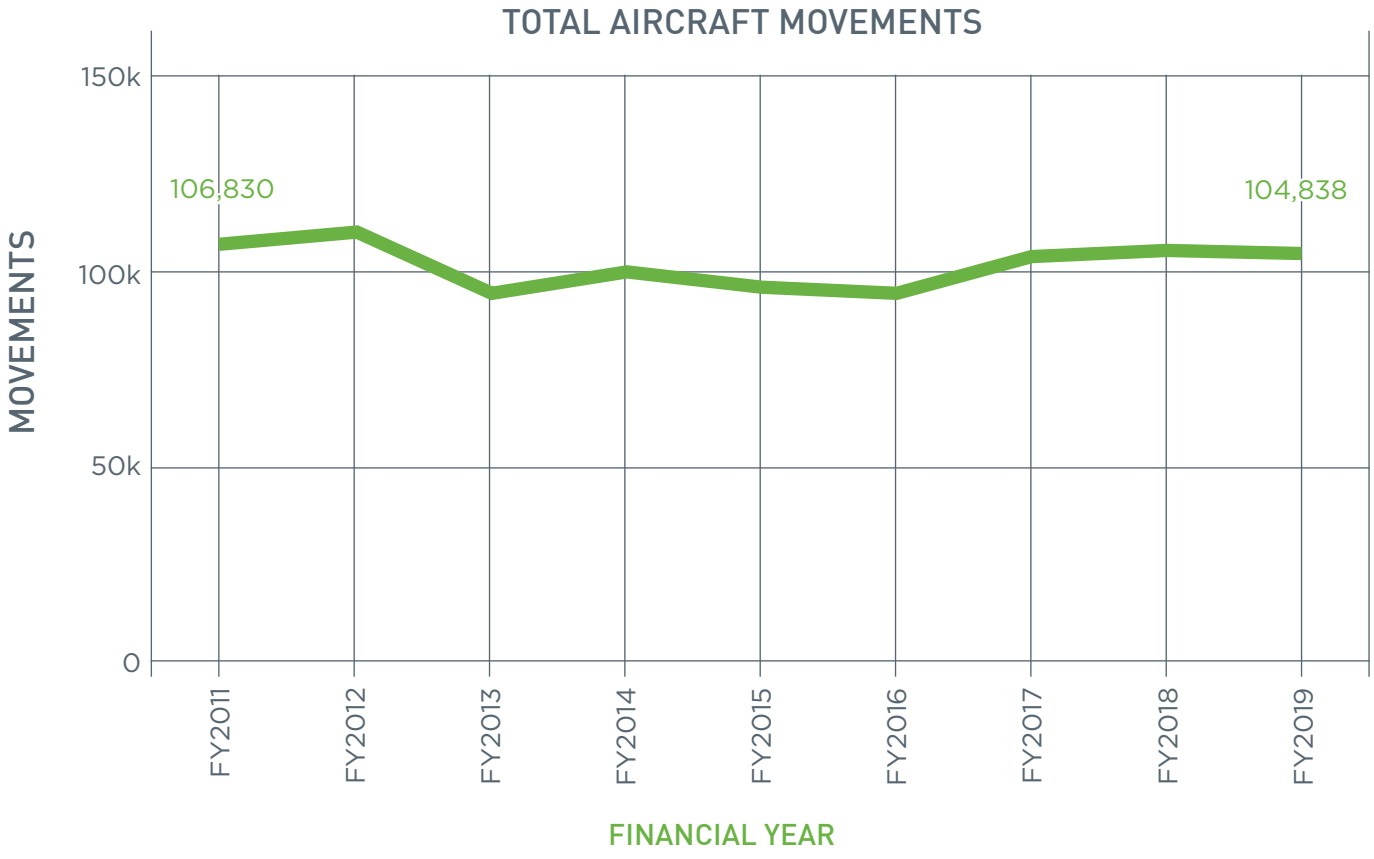


Figure 4.2: Camden Airport, Total Aircraft Movements (Source: TFI 2019)

A large number of events have contributed to the overall long-term decline in aircraft movements at all Australian general aviation airports, including at Camden Airport. These events include:

- General economic conditions that are linked to demand for travel, aircraft demand and pilot demand
- Major economic events, such as recessions, in the Australian and global economy
- A higher Australian Dollar over recent years, which has increased the cost of education, new aircraft and aircraft parts in Australia
- Aviation-related events, such as the collapse of Ansett in 2001
- Terrorist attacks and health events (pandemics), which slow travel growth and impact airline revenues and profits
- Increases in aviation fuel prices
- Increases in user charges and general aviation compliance costs
- Technological changes increasing the use of flight simulators for pilot training and use of drones in agriculture and other aerial activities.

Increased air traffic movements at Camden since the 2015 financial year are considered to be due to increased aviation training and general aviation activity.

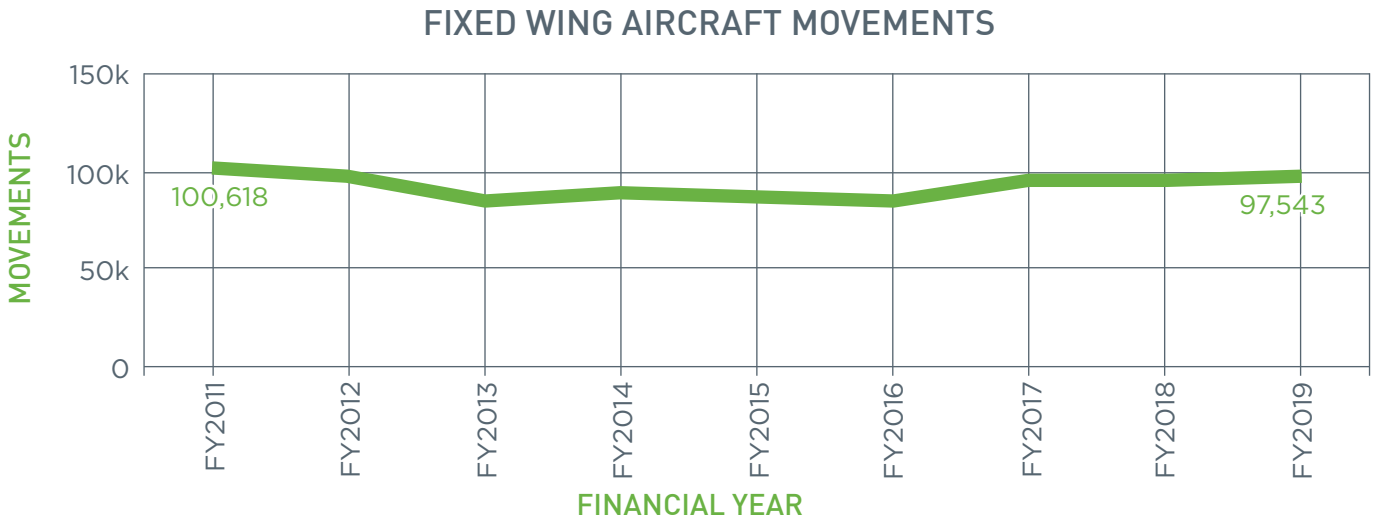


Figure 4.3: Camden Airport, Total Movements by Fixed Wing Aircraft, 2011 - 2018 (Source: TFI 2019)

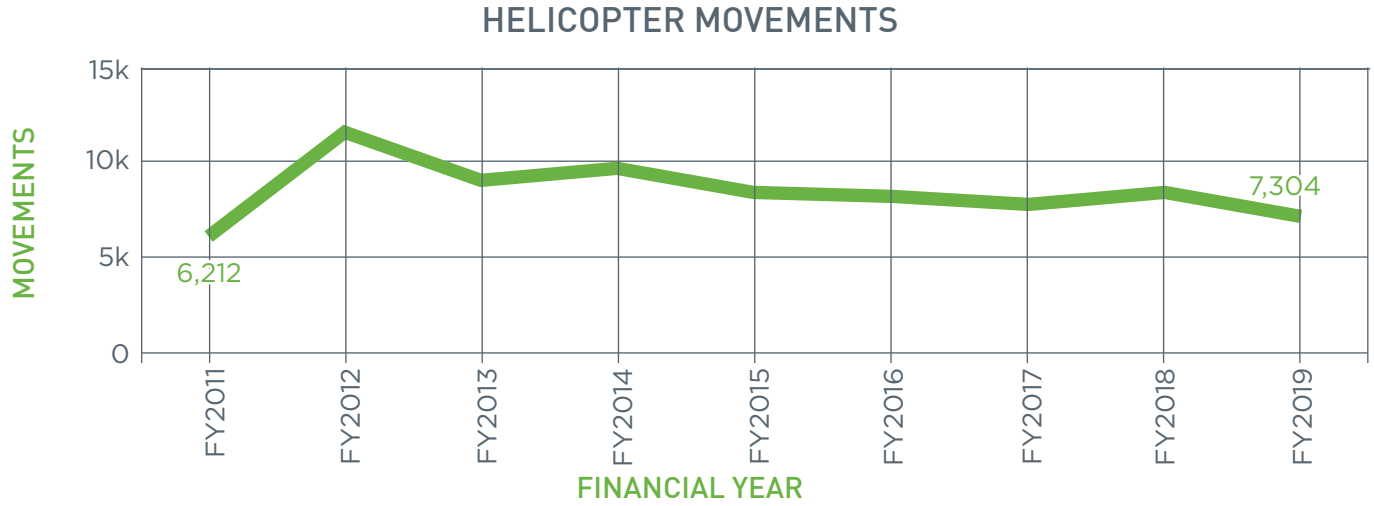


Figure 4.4: Camden Airport, Total Movements by Helicopters, 2011 - 2018 (Source: TFI 2019)

4.2.1 AIR TRAFFIC FORECASTS FOR CAMDEN AIRPORT

Total aircraft movements are forecast to grow from 104,838 in the 2018/2019 financial year to 117,958 by 2039/2040. This represents an average annual growth of approximately 0.6%.

This forecast is based on a survey of existing aviation service providers at the Airport and the anticipated aviation and general economic conditions.

The modelling results indicate limited aircraft movement growth for both fixed-wing and helicopter movements in the next eight years at the Airport.

The following is a summary of types of drivers influencing general aviation activities:

- **Income.** The stronger the economy, the greater demand there is for aviation training, engagement in recreational and business-oriented flying, and purchasing aircraft
- **Population growth.** This increases the demand for flying overall
- **Costs.** This includes the cost of aircraft, spare parts, fuel, airport charges and regulatory compliance
- **Exchange rates.** Changes in the exchange rate influence the cost of oil, aircraft and spare parts in Australian Dollars
- **Growth in the commercial aviation sector.** This has an influence on the demand for pilot training.

Research undertaken by Tourism Futures International (TFI) in 2019 concluded that income and population growth are the two most significant factors influencing the demand for aviation and non-aviation activities at the Airport.

TFI uses specific indicators to forecast growth in demand for aviation at the Airport. These include:

- NSW economic performance
- NSW and Sydney population growth
- Currency exchange rates
- Oil prices
- Committed and proposed aviation development projects.

The compound annual growth rate (CAGR) used to generate aviation forecasts for the Airport varies between 0.3% and 1.4% per annum. The variation is primarily to forecast changes in economic conditions. The growth forecasts are summarised in Table 4.1.

Table 4.1: TFI Projections of Air Traffic Movements at Camden Airport - Financial Year (Source: TFI 2019)

Years end 30 June	Movements*			CAGR Period	CAGR movements (%)		
	Fixed Wing	Helicopter	Total		Fixed Wing	Helicopter	Total
2011	100,618	6,212	106,830				
2019	97,534	7,304	104,838	FY11 to FY19	-0.4%	2.2%	-0.2%
2027	105,605	7,496	113,101	FY19 to FY27	1.0%	0.3%	1.0%
2040	109,908	8,050	117,958	FY27 to FY40	0.3%	0.6%	0.3%

* Figures based on Financial year

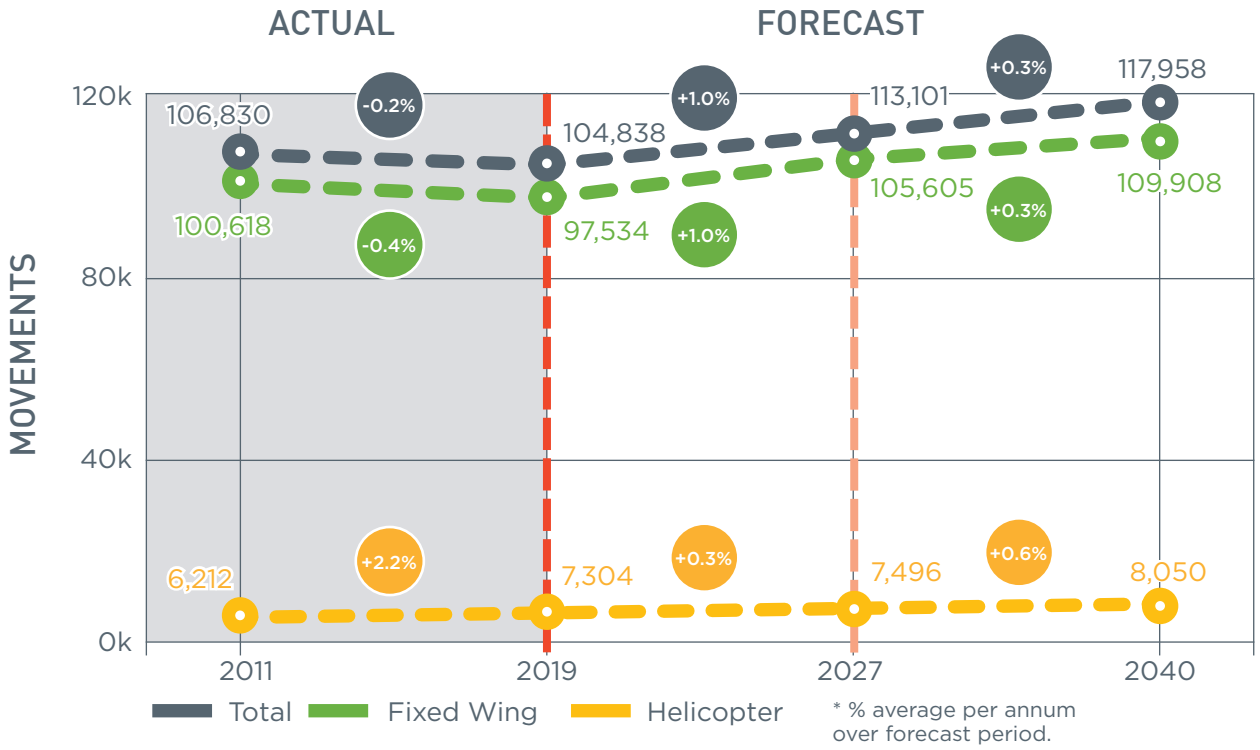


Figure 4.5: Aircraft Movements at Camden Airport (Actual FY2011 to FY2019, Projects from FY2020) (Source: TFI 2019)

General Aviation continues to be the predominant form of aviation activity at Camden Airport and is forecast to grow by 1.0% per annum from 2019 to 2027. This is reflected in the commitments that current operators at Camden Airport will be maintained, with minor growth.

For the remainder of the Master Plan period, general aviation growth is forecast to slow down to 0.3% annual growth.

Helicopter operations are forecast to have minimal growth in the eight year period (0.3% per annum), growing more steadily within the remainder of the planning period to 0.6% per annum.

Further growth in global pilot training and potential expansion of such activities at Bankstown Airport may have a flow-on effect for growth at Camden Airport.

The future Western Sydney Airport is likely to impact on operations at Sydney, Bankstown and Camden Airports in the longer term. Impacts on airspace and potential competition for general aviation traffic in the Greater Sydney Region may exert pressure (both positive and negative) on general aviation. The forecast and projections in this Master Plan have not factored in the impact of Western Sydney Airport, which is scheduled to commence operating in 2026.

5.0

AIRCRAFT NOISE

5.1 OVERVIEW

AIRCRAFT NOISE IS CONSISTENTLY IDENTIFIED AS ONE OF THE MAJOR ENVIRONMENTAL IMPACTS FROM AIRPORT OPERATIONS. CAL WORKS ACTIVELY WITH AIRPORT USERS, GOVERNMENT AGENCIES AND COMMUNITY REPRESENTATIVES ON A RANGE OF INITIATIVES TO MANAGE NOISE IMPACTS FROM AIRCRAFT OPERATIONS.

THIS MASTER PLAN SHOWS A REDUCTION IN THE NUMBER OF RESIDENTIAL PROPERTIES LIKELY TO BE AFFECTED BY AIRCRAFT NOISE OVER THE 20-YEAR PLANNING PERIOD. THIS IS DUE TO QUIETER AIRCRAFT LIKELY TO BE USING THE AIRPORT IN THE FUTURE.

The most effective means for reducing the impact of aircraft noise is through the proper planning of land use for areas adjacent to the Airport. CAL works closely with Camden Council in relation to the application of land use planning controls surrounding the Airport. This is further addressed in Chapter 6.0.

Aside from land use planning, other noise mitigation measures include the use of alternative runway alignments, flight paths, restrictions of aircraft movements and aircraft operational procedures aimed at reducing noise.

The Airports Act requires this Master Plan to forecast noise levels resulting from the operation of the Airport. The Australian Government has specified the use of a computer-based noise modelling, the Aviation Environmental Design Tool (AEDT), which produces Australian Noise Exposure Forecast (ANEF) contours for the prediction of exposure to aircraft noise. ANEF contours assist to determine aircraft noise impacts on surrounding land and communities and assist planning authorities to regulate land use and future development around Airports.

The modelling of noise generated by aircraft movements in the Master Plan provides the most accurate estimates of noise exposure to surrounding communities. The forecasts indicate minor changes in the level of noise generated by aircraft activity compared with the 2015 Master Plan.

5.2 AIRCRAFT NOISE

Aircraft noise is complex and varies according to a range of factors, including:

- Aircraft type (including age of the aircraft, number and type of engines, weight)
- Aircraft altitude
- Thrust settings and speed
- Pilot performance
- Weather conditions.

Aircraft noise is present during all phases of flight but is most significant during take-off and landing, due to the aircraft's close proximity to the surface. During take-off, the weight and throttle settings are at their highest point, and therefore the noise is generated through engine noise. In contrast, during landing, throttle settings are varied, and landing gear and control surfaces are extended, with greater noise being generated by airframe noise.

For operational and safety reasons, aircraft land and take-off into the wind, or with a minimal tailwind. The wind direction determines the mode of runway operation in use and flightpath designation. At Camden Airport, Airservices assigns the runway direction and flight route depending on the wind direction and speed, runway conditions and visibility.

Camden Airport does not have a curfew, however, circuit training is restricted to the following hours:

- Monday to Friday from 7.00am until 10.00pm (10.30pm during daylight savings)
- Saturdays and Sundays from 7.00am until 8.00pm.

These procedures are designed to reduce the impact of night time aircraft noise on the surrounding community.

5.3 THE AUSTRALIAN NOISE EXPOSURE FORECAST SYSTEM

The Airports Act requires an Airport Master Plan to include forecasts of noise levels resulting from the operation of the Airport. The Australian Government has specified the use of the computer-based noise modelling, the Aviation Environmental Design Tool (AEDT), which produces ANEF contours for the prediction of exposure to aircraft noise. Section 5.5 provides a description of the AEDT computer-based noise simulation software.

Australian Noise Exposure contours have been based on the following data and assumptions:

- Australian Noise Exposure Index (ANEI) – defines noise exposure based on the actual operations of the Airport and uses an analysis of actual aircraft movements over a twelve-month period. It represents the best estimate of the actual noise exposure for a particular period rather than a forecast future scenario. An ANEI is primarily used to establish a 'base case' from which the ANEF and ANEC can be developed
- ANEF – estimates noise exposure based on a forecast of aircraft movements and fleet mix for a defined future horizon. The ANEF provides an indication of the change in noise emissions over time, and is used for planning the use of land affected by aircraft noise.

An ANEF is a plot of estimated noise exposure based on a forecast of aircraft movements and fleet mix for a defined future horizon. The ANEF provides an indication of the change in noise emissions over time and is used for developing appropriate land use zoning of areas affected by aircraft noise.

ANEF contour plots are plans of the Airport and surrounding areas on which contours of equal noise exposure (usually 20, 25, 30 and 35 ANEF units) have been superimposed, with the level of noise exposure increasing as the ANEF unit value increase.

The following factors of aircraft noise are taken into account in calculating the ANEF:

- The intensity, duration, tonal content and spectrum of audible frequencies of the noise of aircraft take-offs, landings and reverse thrust after landing (the noise generated on the Airport from ground running of aircraft engines or taxiing movements is not included for practical reasons)
- The forecast frequency of aircraft types and movements on the various flight paths
- The average daily distribution of aircraft arrivals and departures in both daytime (7.00am to 7.00pm) and night time (7.00pm to 7.00am) hours. Night time movements are represented with a six decibel adjustment in the ANEF calculation
- The topography of the area surrounding the Airport.

All forecast movements are allocated to runways and flight paths on an average basis taking into account the existing and forecast air traffic control procedures at the Airport.

The total ANEF at any point on the ground around the Airport is comprised of all individual noise exposures produced by each aircraft type operating on each path over the period of one average day. These calculated values do not take account of any background noise such as road or rail activities.

There can be only one ANEF plot for any Airport at any one time. This is the ANEF endorsed by Airservices and incorporated into the latest Airport Master Plan. Australian Standard (AS) 2021:2015 Acoustics – Aircraft Noise Intrusion – Building Siting and Construction (AS2021:2015) provides an assessment of potential aircraft noise exposure around Airports based on the ANEF system. This is widely referred to in guiding strategic land use planning in the vicinity of Airports. This standard provides guidance on the siting and construction of new buildings against aircraft noise intrusion and on the adequacy of existing building in areas near Airports and aerodromes to protect against noise.

The assessment of potential aircraft noise exposure at a given site is based on the ANEF system. The standard also provides guidelines for determining the type of building construction necessary to provide a given noise reduction.

Table 5.1: AS2021-2015 Table of Building site Acceptability Based on ANEF Zones*

Building Type	ANEF Zone of Site		
	Acceptable	Conditionally Acceptable	Unacceptable
House, home unit, flat, caravan park	Less than 20 ANEF (Note 1)	20 to 25 ANEF (Note 2)	Greater than 25 ANEF
Hotel, motel, hostel	Less than 25 ANEF (Note 1)	25 to 30 ANEF	Greater than 30 ANEF
School, university	Less than 20 ANEF (Note 1)	20 to 25 ANEF (Note 2)	Greater than 25 ANEF
Hospital, nursing home	Less than 20 ANEF (Note 1)	20 to 25 ANEF	Greater than 25 ANEF
Public building	Less than 20 ANEF (Note 1)	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		

* To be read in conjunction with the guidance notes

There are a number of guidance notes associated with the above table. They refer to tables and appendices in AS2021:2015. For clarity, the following is a summary of key elements of a number of guidance notes (refer to the AS2021:2015 for the full detail):

Guidance Note 1: The actual location of the 20 ANEF contour is difficult to define accurately, mainly because of variation in aircraft flight paths.

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

Guidance Note 4: This Standard does not recommend development in unacceptable areas designated as unacceptable. However, where the relevant planning authority determines that any development may be necessary within existing built-up areas designated as unacceptable, it is recommended that such development should achieve the required Australian Noise Rating (ANR).

The ANEF for Camden Airport assists the Camden Council and NSW Department of Planning, Industry and Environment (DPIE) in land use planning and decisions involving potential future development which could be affected by noise from current or forecast aircraft operations at the Airport.

Land use zones surrounding Camden Airport (as shown in Figure 8.3) generally reflect the intentions espoused in AS2021:2015, with land to the north-east and south-west of the main runway (Runway 06/24) being zoned Primary Production and Large Lot Residential, respectively.

5.4 RESPONSIBILITY FOR MANAGING AIRCRAFT NOISE

The responsibility for aircraft noise management is shared between airlines and aircraft operators, air navigation service providers, Airports, federal government agencies and state and local governments. Such responsibilities are highlighted in Table 5.2.

Table 5.2: Responsibility for Managing Aircraft Noise

Aircraft Noise Responsibility	Aircraft Noise Responsibility
Airservices Australia	• Maintaining technology used by the industry for navigation and surveillance and aircraft noise monitoring • Major role in managing aircraft noise and distributing information about aircraft noise management • Maintains a focus on safety and works closely with Airports and airlines to ensure, wherever possible, that flight departures and arrivals avoid residential areas and that noise-abatement principles are implemented
Civil Aviation Safety Authority (CASA)	• Independent statutory authority with responsibility for the regulation of civil aviation operations in Australia and the operation of Australian aircraft overseas • CASA gives overriding consideration to air safety, consideration of the environmental effects of the activities it regulates are secondary to its safety-related obligations • Responsible for airspace regulation
Department of Infrastructure Transport Regional Development and Communications	• Advises government on the policy and regulatory framework for Australian Airports and the aviation industry • The Department also provides policy advice to the Minister on the efficient management of aircraft noise, including regulatory oversight of: - Curfews which apply to night time aircraft operations at Sydney, Adelaide, Gold Coast and Essendon Airports - The Air Navigation (Aircraft Noise) Regulations 2018 as they apply to aircraft which do not meet Australian aircraft noise standards
Aircraft Noise Ombudsman (ANO)	• The aviation industry works closely with the independent office of the ANO to improve the way in which it can respond to community concern about the impact of aviation on communities
Airports	• Airports ensure that noise-generating activities, such as ground running and helicopter take-offs, take place as far away as possible from residential areas
State/territory governments and local councils	• State governments determine planning frameworks for areas around Airports to ensure that inappropriate developments are avoided where aircraft noise is (or could be in the future) particularly high • Local councils are responsible for implementing these frameworks

5.5 AVIATION ENVIRONMENTAL DESIGN TOOL

Studies of aircraft noise impacts presented for Camden Airport were prepared using the Environmental Design Tool (AEDT) version 2d. AEDT is a software system that models aircraft performance in space and time to estimate fuel consumption, emissions, noise, and air quality consequences. AEDT is a comprehensive tool that provides information to stakeholders on each of these specific environmental impacts. AEDT facilitates environmental review activities by consolidating the modelling of these environmental impacts in a single tool. These environmental consequences are evaluated within an AEDT study through metrics, many of which are defined by regulatory standards. AEDT includes a database of over 3,000 airframe-engine combinations and runway information for over 30,000 airports around the globe. AEDT is designed to model individual studies ranging in scope from a single flight at an airport to scenarios at regional, national and global levels.

5.6 FLIGHT MOVEMENT FORECASTS

The flight movement forecasts for Camden Airport are discussed in detail in Chapter 4.0. The flight movements used in the noise modelling are the 'Base Case' scenario for 2040 (20-year horizon). This scenario estimates the maximum potential noise impacts from the Airport and provides a safety margin for future planning.

5.7 FLEET MIX

The future fleet mix of aircraft likely to be operating from Camden Airport in 20 years or more cannot be defined precisely. The future fleet mix can only be estimated from the current fleet mix and discussions on future operations which include:

- Intentions of flight training facilities
- Information from operators about future aircraft acquisitions
- Impending retirements of aircraft in the 20-year period.

The commencement of operations at Western Sydney Airport may also impact on the operational arrangements within the Sydney Basin.

Table 5.3 shows the predicted fleet mix and aircraft movements for Camden Airport in 2040. The aircraft fleet mix generally reflects the types of aircraft currently using the Airport. The fleet mix is not anticipated to change significantly in the future but new generation quieter aircraft such as electric aircraft are anticipated to be part of the future fleet mix.

Table 5.3: Expected Fleet Mix in 2040

AEDT Code	Aircraft Type	Total Annual Movement	
Fixed Wing Aircraft			**% of Total Fixed Wing Aircraft**
BEC58P	General Aviation	1,120	1.0%
CNA441		560	0.5%
PA30		196	0.2%
PA31		176	0.2%
CNA172		6,816	6.2%
GASEPF		9,058	8.2%
CNA206		518	0.5%
CNA208		736	0.7%
GASEPV		3,218	2.9%
CNA182	Gliding (Tow Aircraft)	7,000	6.4%
BEC58P	General Aviation Training	5,198	4.7%
CNA500		92	0.1%
CNA172		29,760	27.1%
GASEPF		36,146	32.9%
CNA206		92	0.1%
CNA208		182	0.2%
GASEPV		9,040	8.2%
Total Fixed Wing Aircraft		**109,908**	
Helicopters			**% of Total Helicopters**
R22	General Aviation	734	9.1%
R44		230	2.9%
EC130		704	8.7%
B206B3		146	1.8%
B430		210	2.6%
R22	Helicopter Training	3,198	39.7%
R44		2,152	26.7%
EC130		400	5.0%
B206B3		166	2.1%
B430		110	1.4%
Total Helicopters		**8,050**	
Total – All Aircraft		**117,958**	

5.8 RUNWAY UTILISATION

As described in Section 7.2, the Airport has four runways orientated in the 06/24 and 10/28 direction. Table 5.4 details the runway usage, and how it has changed since the previous Master Plan.

The *Manual of Standards* Part 139 (MOS139) requires that where runways are provided essentially for light aircraft operations, the maximum permissible cross-wind component to be used for determining runway usability is to be 10 knots where *ab initio* flying (Latin term meaning "from the beginning") is carried out.

As small aircraft flying training is the major activity at the Airport, warnings are provided at eight knot wind speeds and above. In practice, the actual usage of the runway system will depend on a number of factors such as wind, taxiing distance, destinations, runway availability and maintenance.

There is minimal seasonal variation to the use of runways at Camden Airport. However, during September, afternoon winds are generally westerly winds, resulting in a change in directional use to Runway 24 (and Runway 28 for the glider strip runway).

Table 5.4: Runway Utilisation

Runway		Percentage use 2020 Master Plan	Percentage use 2015 Master Plan	Percentage Change 2015 - 2020
Sealed Fixed Wing Runway	06	31.3%	33.0%	-1.7%
	10	14.2%	15.5%	-1.3%
Grass Fixed Wing Runway	24	24.8%	26.1%	-1.3%
	28	10.4%	11.4%	-1.0%
Gliding Strip Runway	06	3.2%	1.9%	1.3%
	10	1.6%	1.0%	0.6%
	24	2.6%	1.6%	1.0%
	28	1.6%	1.0%	0.6%
Helicopter	H	10.4%	8.5%	1.9%

5.9 FLIGHT PATHS

The majority of aircraft operating at the Airport are used for pilot training and recreational aviation. These aircraft operate under Visual Flight Rules (VFR). This rule-set requires the pilot to ensure visual reference is made to the ground during flight.

Flights using precision-based technology, such as satellites (e.g. GPS), are mainly limited to larger charter aircraft, privately-owned aircraft, and a small percentage of training aircraft. Precision-based navigation allows for a more precise route to be followed.

While a large majority of flights using precision-based technology will generally follow the normal routes, some may be slightly off the centreline of the standard track. The impacts of aircraft noise will be greatly affected by the flight paths that are used by aircraft approaching the Airport or after take-off. Flight paths are determined by the runway and the destination or purpose of the flight. Generally, the tracks used by aircraft have been chosen to limit the impact of noise on surrounding land uses, but within the bounds of operational guidelines and safety standards imposed by Airservices and CASA.

The existing and proposed flight paths used in producing the 2018 ANEI and 2040 ANEF have been included in Figure 5.1 to Figure 5.4. The positioning and spread of the existing flight paths used in preparing the 2018 ANEI were derived from Airservices AvCharge data supplied by Airservices and represent the tracks generally used during the year.

The flight paths used for preparing the 2040 ANEF had several significant assumptions:

- The hours of darkness use of the main runway (Runway 06/24) for night flying activity, as this is the only runway fitted with lights
- Flight paths align with operational requirements as outlined in Airservices document En-Route Supplement Australia (ERSA) and the Visual Terminal Chart (VTC)
- No change in the flight paths for Camden Airport once Western Sydney Airport is operational.

The prepared flight paths have been confirmed against Airservices AvCharge data and in consultation with local air traffic control. They represent the tracks generally flown during 2019. The flight paths for the local area movements (general aviation, fixed-wing and helicopter) have been arranged according to type and direction of the active runway.

Night flying has also been included in the modelling as it is an essential component required to achieve a night VFR and Command Instrument Rating, and an important element in advanced flight training.

5.10 ARRIVALS AND DEPARTURES

Whilst arrivals and departures at an Airport can be from anywhere within the entire 360 degree radius of the Airport, operational requirements restrict the directions of flight available at Camden Airport.

Arrivals and departures for Camden Airport, for both fixed wing aircraft and helicopters, are shown in Figure 5.1 to Figure 5.4.

ARRIVALS

Arrivals for fixed wing and helicopters are processed primarily from five VFR inbound reporting positions. Once aircraft transit over these areas they are provided instruction by air traffic control for the runway in use.

Aircraft that are conducting an arrival to the Airport via an Instrument Approach Procedure, will normally track directly to the Airport from the south-west (adjacent The Oaks), descending in accordance with the procedure.

At night, aircraft will remain at a minimum safe altitude until established within the circuit area of the Airport.

Helicopters enter the Camden Airport airspace during both daylight and night in the same manner as a fixed wing aircraft.

DEPARTURES

Departures for both fixed wing and helicopter aircraft are the same for both daylight and night time operations. Pilot will advise ATC or broadcast to other pilots outside tower hours, their intention prior to entering the runway and depart the Airport on climb to 1,300 feet Above Mean Sea Level (AMSL). Departure tracks may be amended to a different direction if required by air traffic control for safe operating requirements.

At night, all aircraft will climb to the minimum safe altitude over the airport (3,400ft AMSL) before continuing onto their intended destination.

5.10.1 CIRCUITS

Circuits are an essential part of pilot training. A typical circuit is made up of the following basic components:

- Take off into the wind and commence climb
- Turn cross wind at 500 feet or more above ground level and continue climb
- Level at 1,000 feet and turn downwind
- Turn base (cross wind) and commence descent
- Turn final and land, touch and go or full stop.

Operations conducted at night, including helicopters, use the main runway (Runway 06/24) only. A typical fixed wing aircraft circuit is illustrated in Figure 5.5. These circuits have been produced using the training aircraft types and forecasts for Camden Airport. Flight parameters were set following CASA circuit guidelines. Aircraft climb to 500 feet above aerodrome level before commencing first turn and continue until levelling flight at 1,000 feet above the Airport level.

The actual circuits that are flown will vary from the figure for many reasons including, but not limited to, the following:

- Inherent variation of aircraft
- Differing turning circles and cruise speeds of aircraft
- Wind direction and strength
- Atmospheric pressure
- Air temperature
- Performance of different training aircraft types
- Human variation
- Amount of traffic in the circuit and the need to maintain safe separation
- Training requirement to fly different circuits and landing techniques which involve varying angles of descent
- Instructions from air traffic control (such as to alter path to allow for other circuit traffic or traffic departing or arriving at Camden Airport).

5.10.2 HELICOPTER CIRCUITS

Helicopter circuits at Camden Airport have been developed in liaison between the helicopter flight training school and Airservices, following CASA guidelines. The circuit paths are designed to reduce overflight of residential areas as much as practicable. Tracks, as shown in Figure 5.6, predominantly overfly agricultural, farming and open space areas to reduce the impact of circuit flying on resident areas surrounding the Airport. Helicopters continue to climb after take-off until levelling out at 700 feet above the Airport.

Helicopter night circuits can only operate on the main runway (Runway 06/24) as the helipad is not lit for night operations.

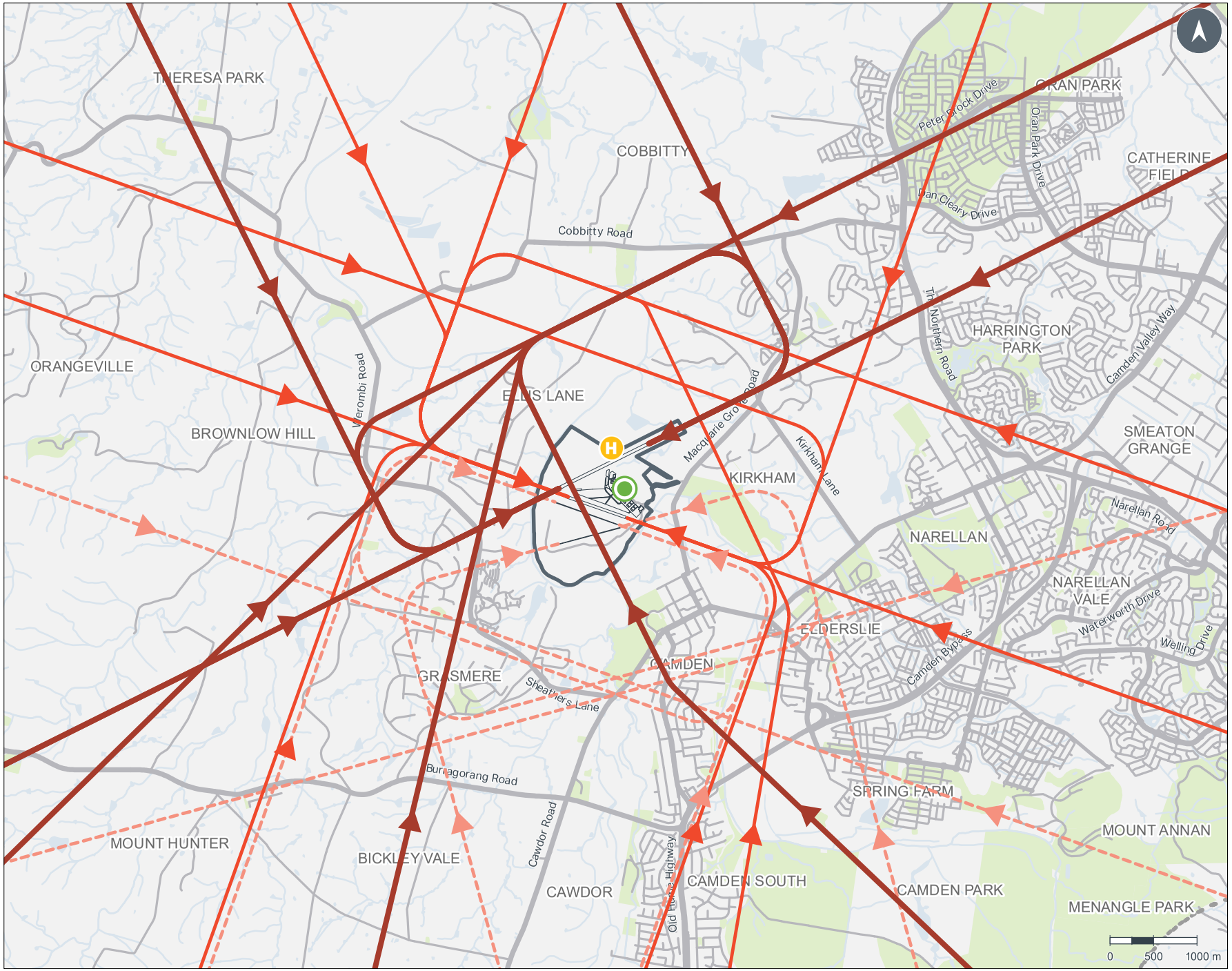


Figure 5.1: Flight Paths – Fixed Wing Arrivals

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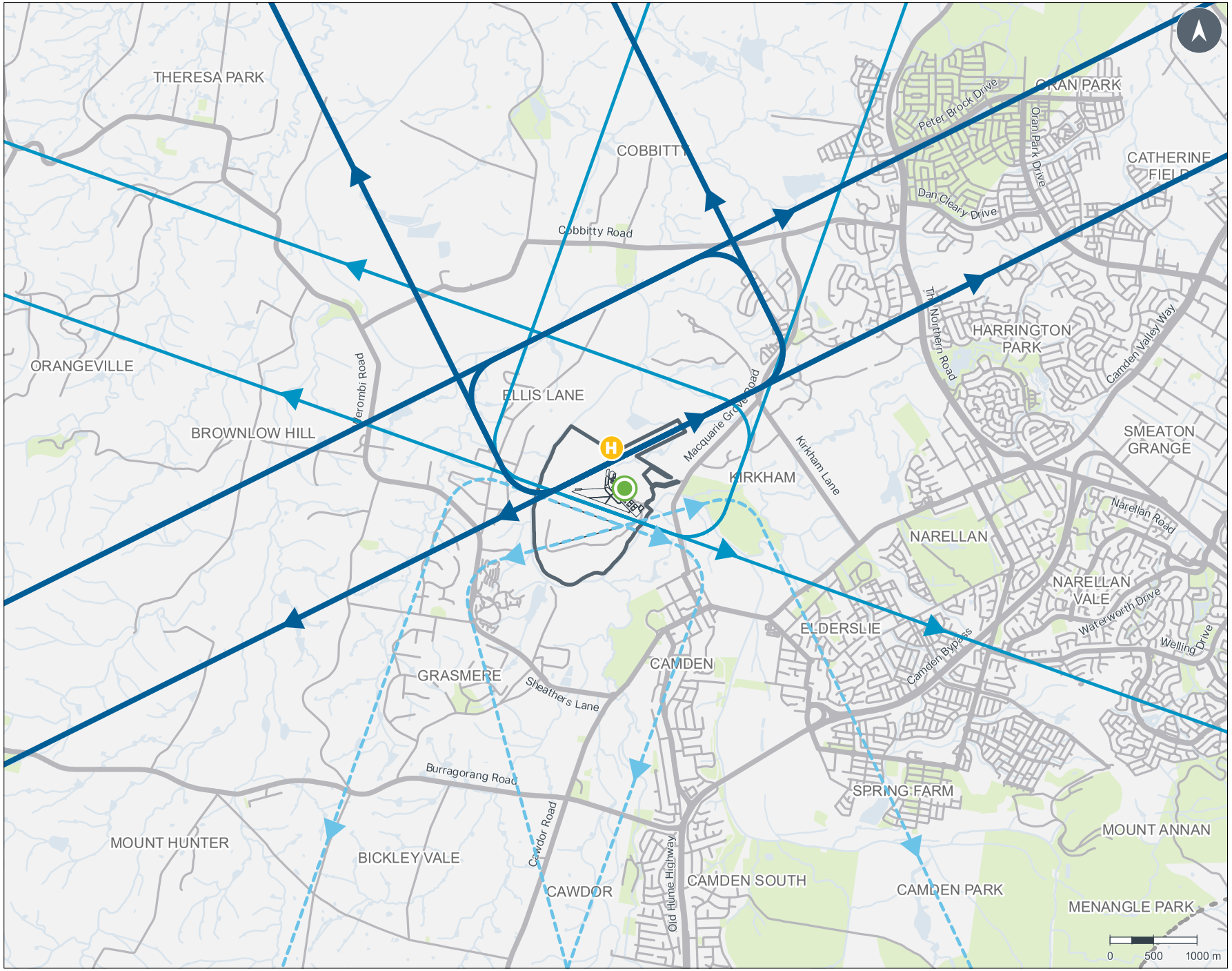

Figure 5.2: Flight Paths – Fixed Wing Departures

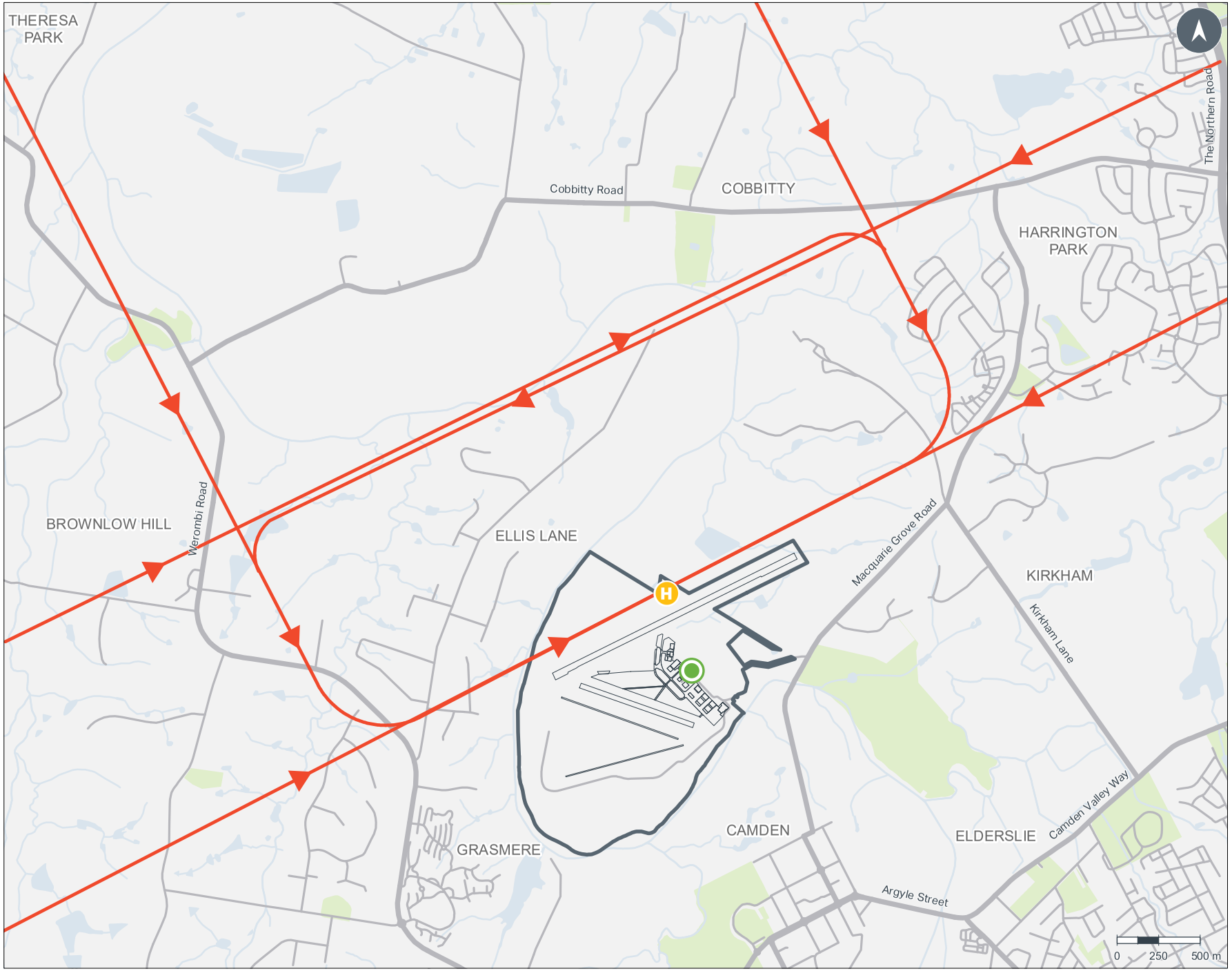

Figure 5.3: Flight Paths – Helicopter Arrivals

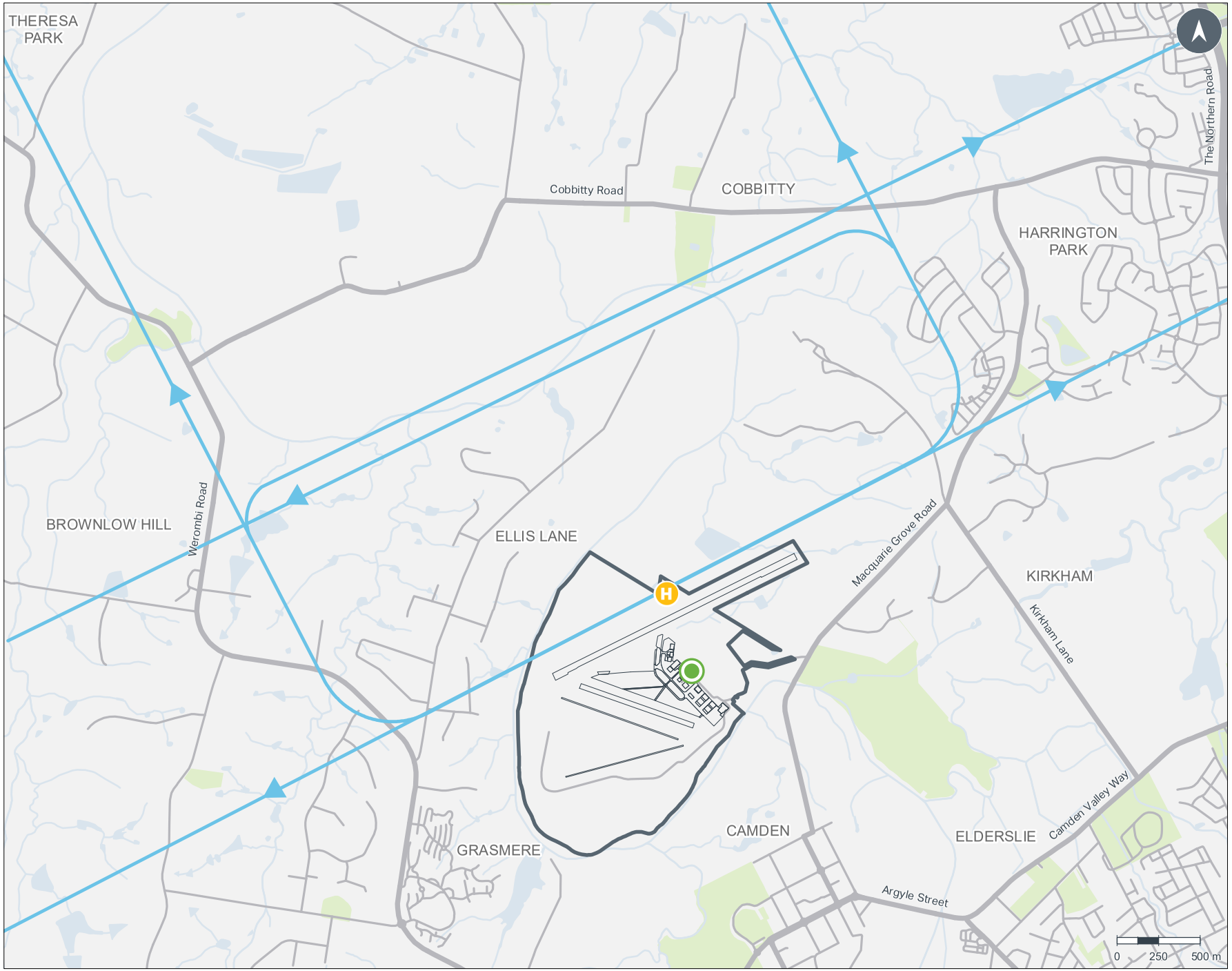

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Figure 5.4: Flight Paths – Helicopter Departures

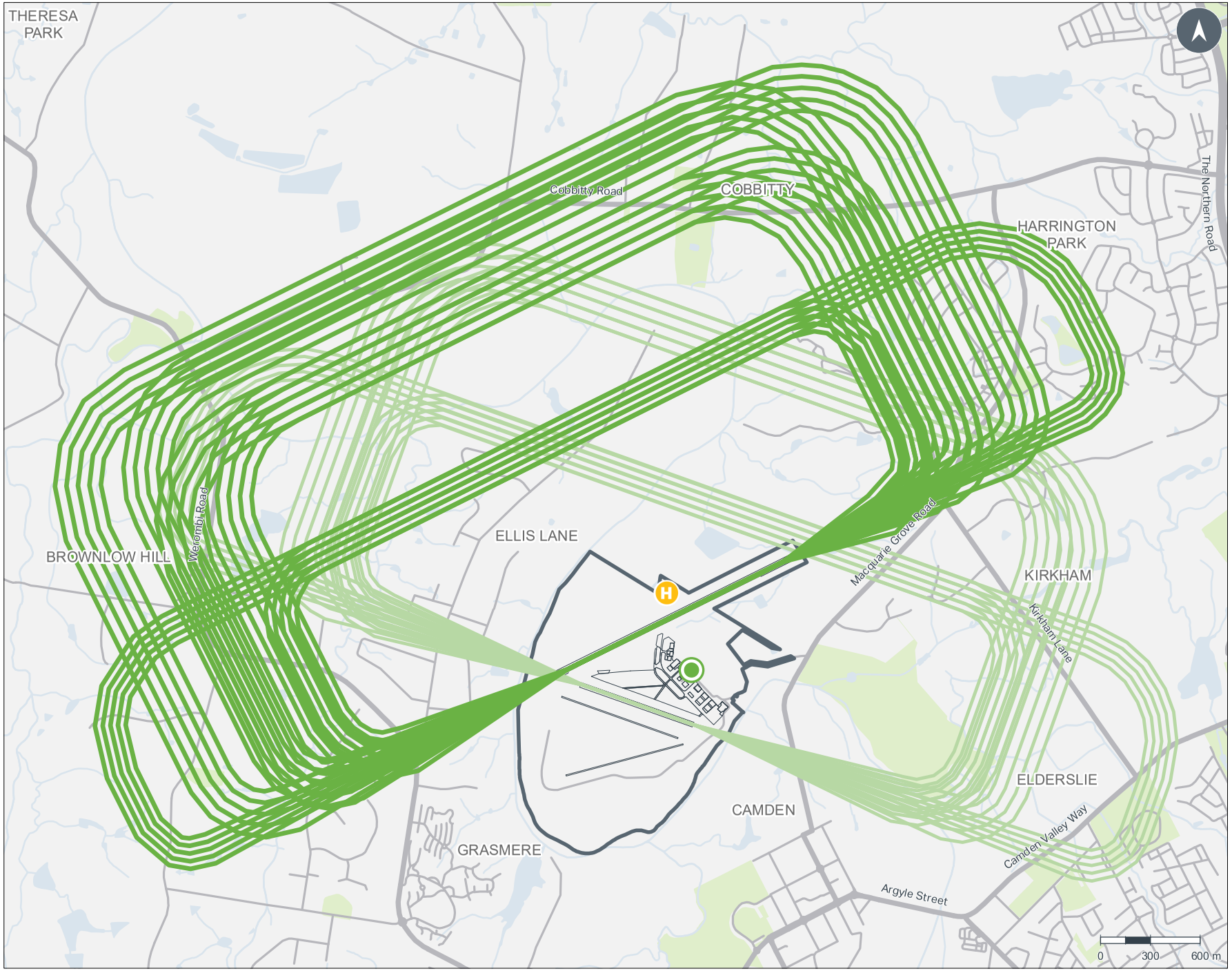
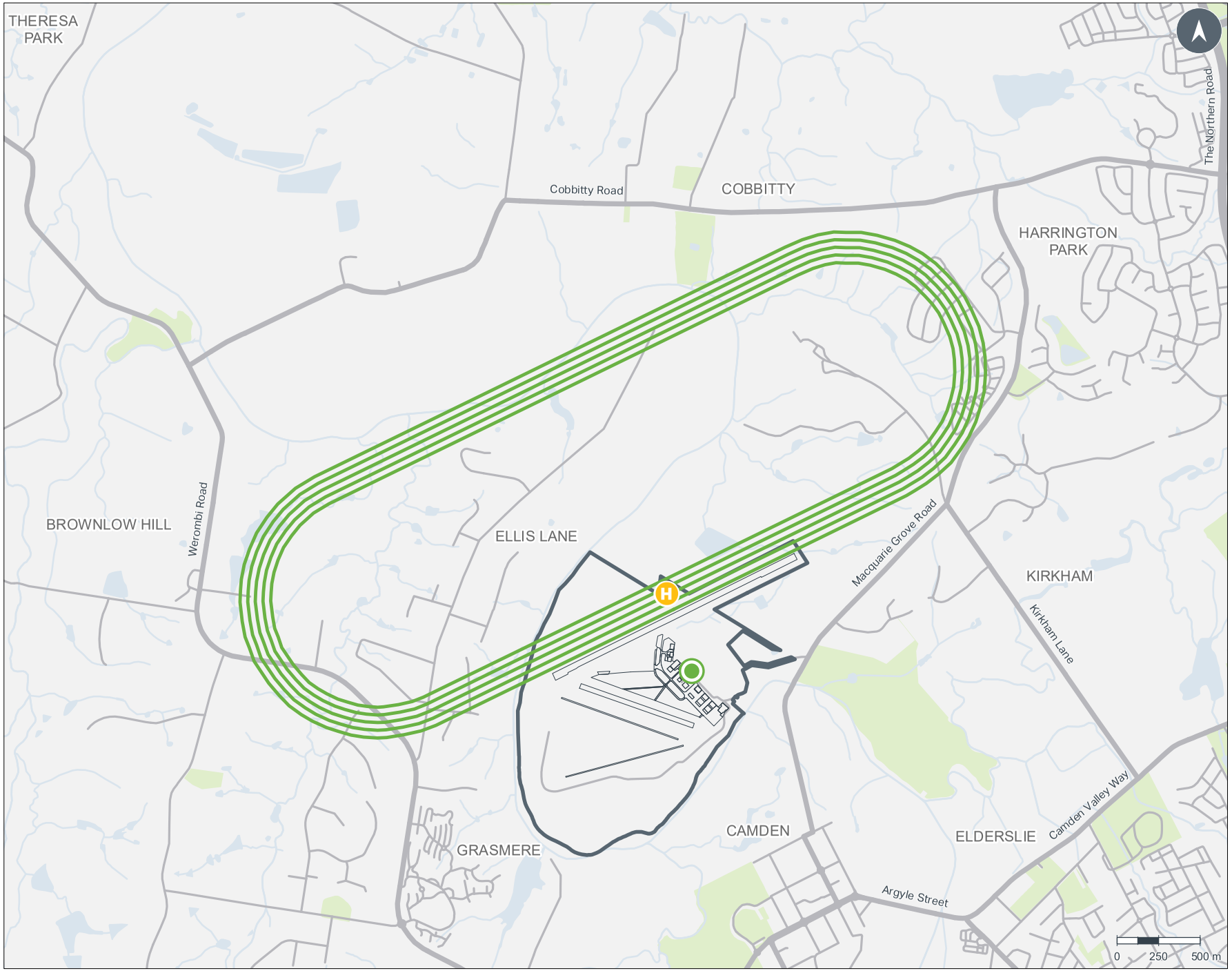


Figure 5.5: Flight Paths – Fixed Wing Circuit Training



PRELIMINARY DRAFT

Figure 5.6: Flight Paths – Helicopter Circuit Training

5.11 AIRCRAFT NOISE MITIGATION

The 2018 ANEI for Camden Airport is included in Figure 5.7. The 2040 ANEF for Camden Airport is included in Figure 5.8.

A comparison between the 2018 ANEI and the 2040 ANEF for Camden Airport is provided in Figure 5.9. Figure 5.10 provides a comparison between the 2034/35 ANEF (contained in the 2015 Master Plan) and the 2040 ANEF. The comparison shows a reduction in the ANEF contours, resulting in less residential properties affected by aircraft noise. This is due to limited growth in the air traffic forecast and the quieter aircraft likely to be using the Airport in the future.

In terms of significant 2040 ANEF contours, the 30 and 35+ ANEF contours are contained entirely within the boundary of the Airport. There are no additional residential properties within the 30+ ANEF contour.

The 25 ANEF contour is contained mainly within the Airport boundary.

The 20 ANEF contour extends to include a portion of the adjacent suburb, Ellis Lane, to the east of the Airport and a portion of the adjacent land to the north-west and south-west zoned as Primary Production.

Table 5.5 highlights the changes in residential properties affected by the ANEF contours.

Australian Standard 2021:2015 Table of Building Site Acceptability Based on ANEF Zones indicates that dwellings (i.e. houses, home units, flats and caravan parks) are conditionally acceptable in the 20 to 25 ANEF, with the land use authority having the opportunity to include requirements for noise control features in the construction of new dwellings.

CAL will work collaboratively with Camden Council to ensure that any future development will recognise the 2040 ANEF and that any developments within the significant ANEF contours will be constructed to meet AS2021:2015.

Whilst Camden Airport operates on a 24-hour basis, it has in place industry working arrangements for circuit training. CAL further proposes to conduct consultative meetings with the airport operators and Airservices to maximise the use of the movement area infrastructure and to minimise the impacts on the community.

Table 5.5: ANEF Residential Contour Comparison - ANEF 2035 and ANEF 2040

Contour	ANEF 2035	ANEF 2040	Change
20	233	170	- 53
25	43	2	- 41
30	1	0	- 1
35	0	0	0

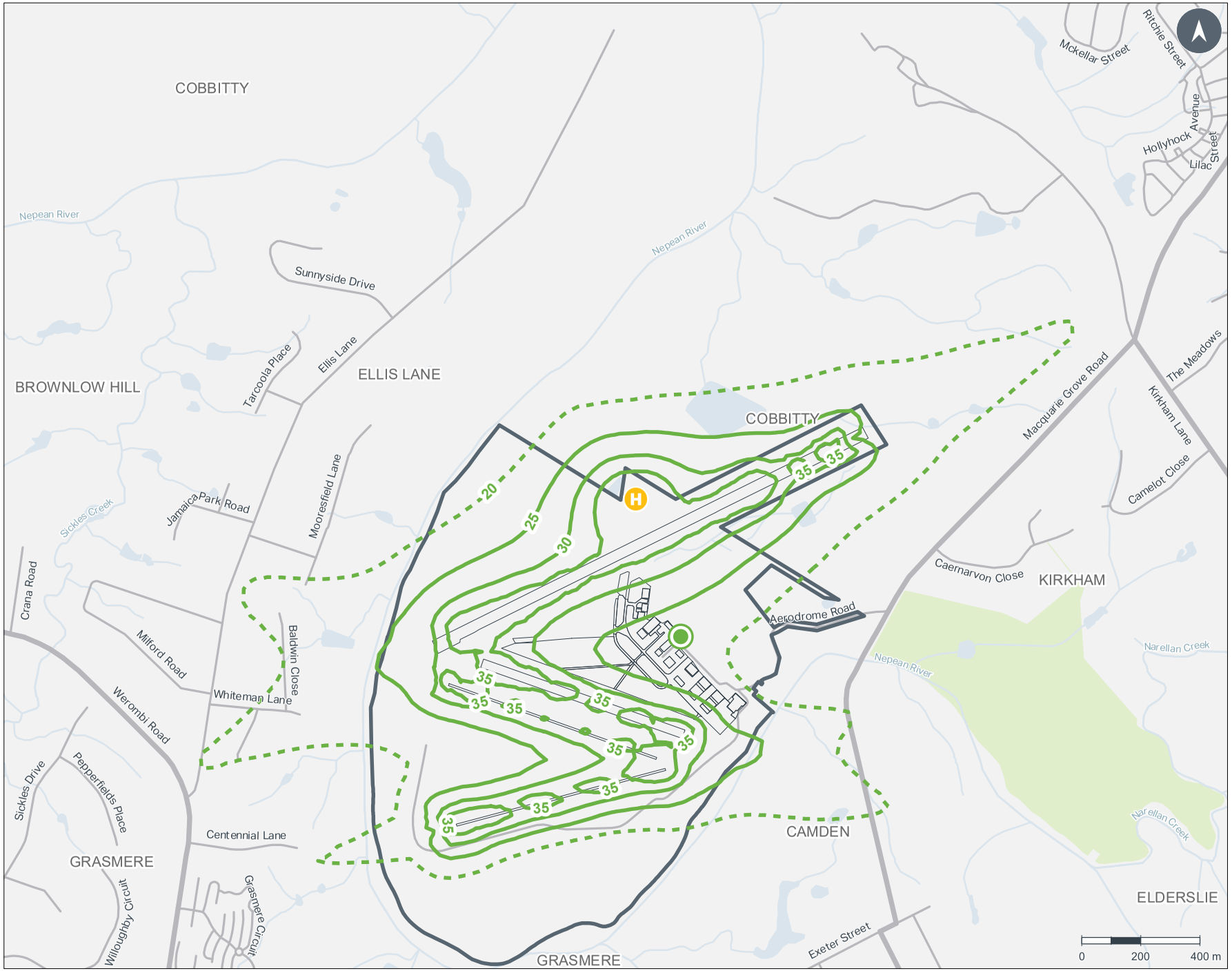


Figure 5.7: 2018 ANEI

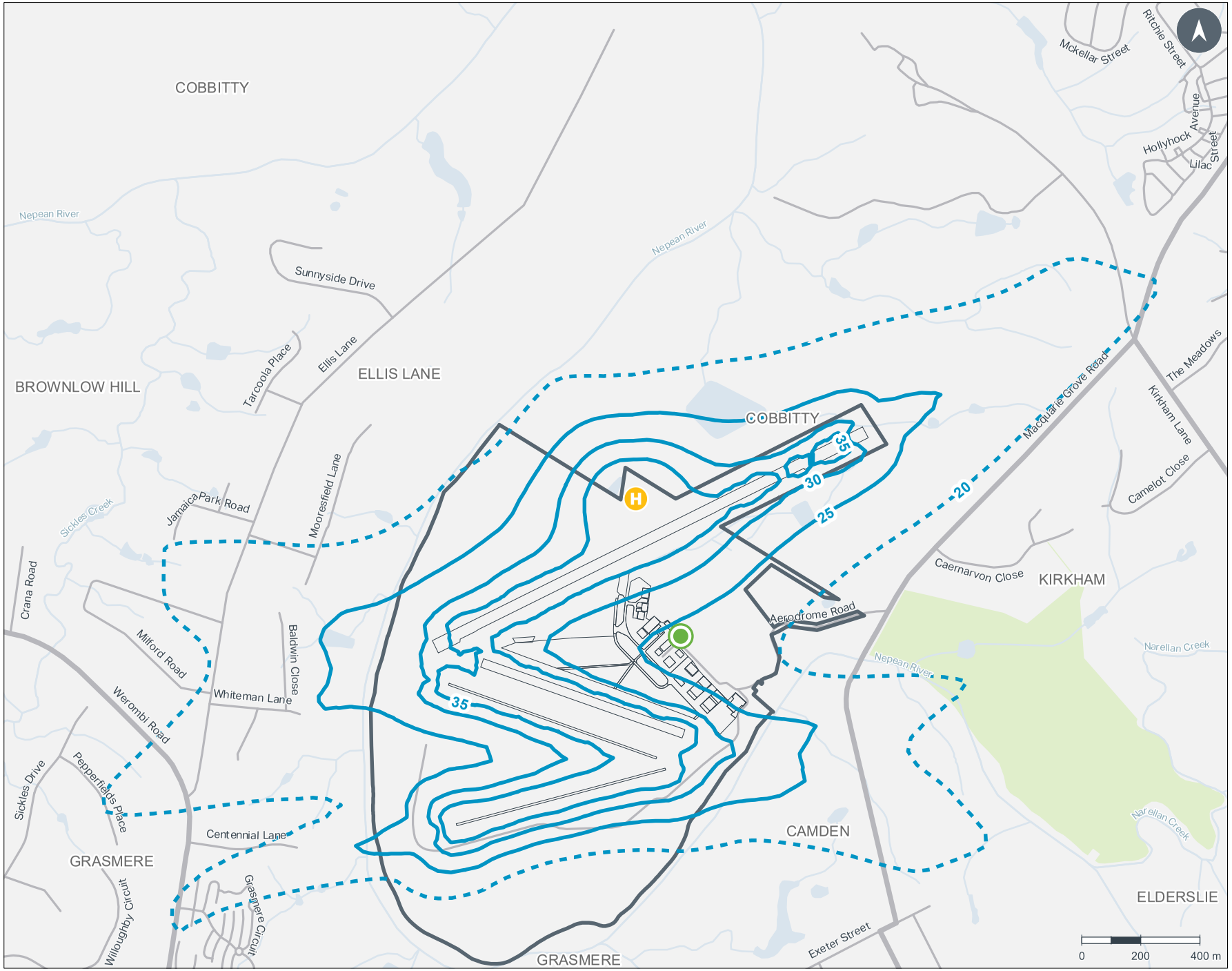


Figure 5.8: 2040 ANEF

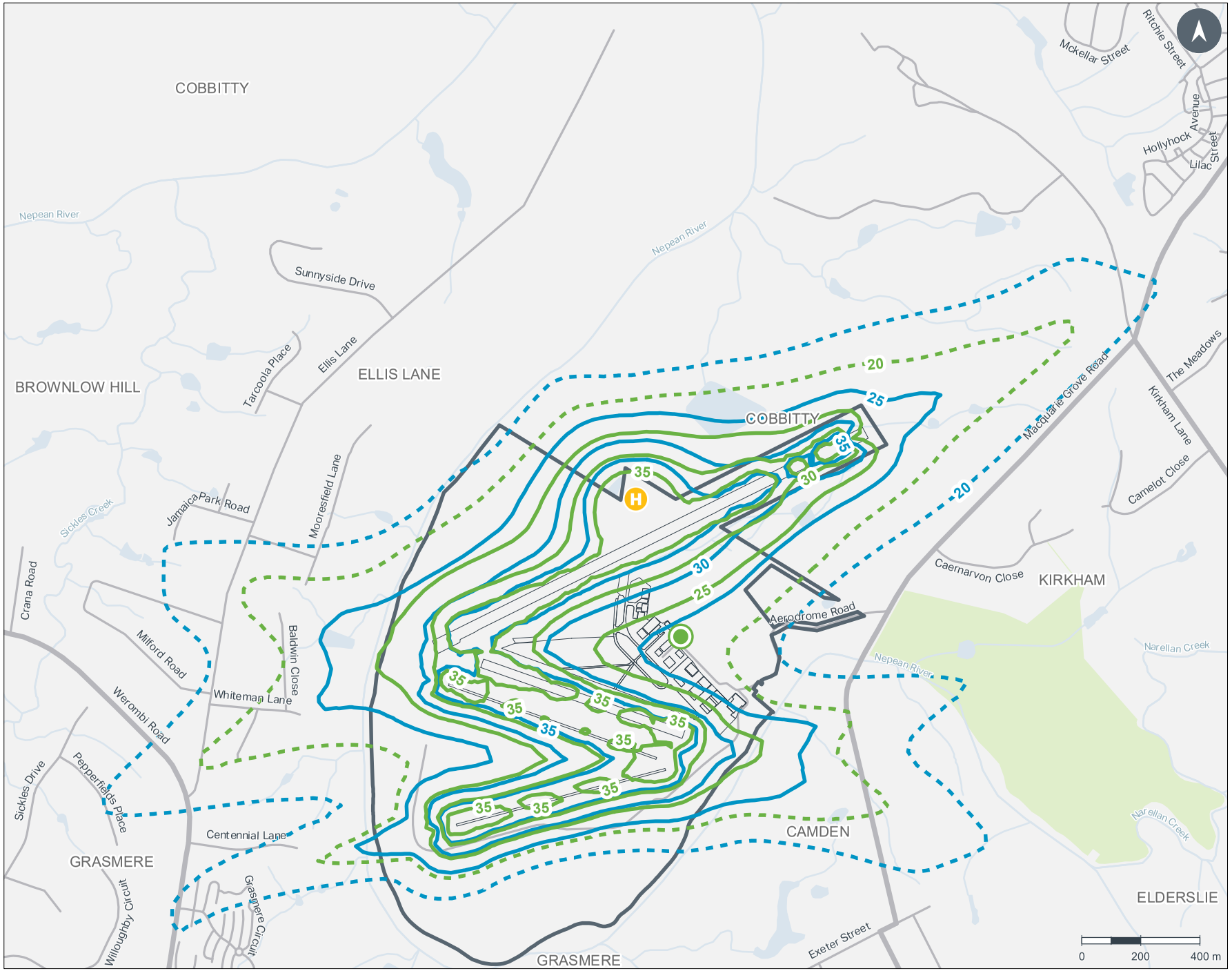


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Figure 5.9: Comparison between 2040 ANEF and 2018 ANEI

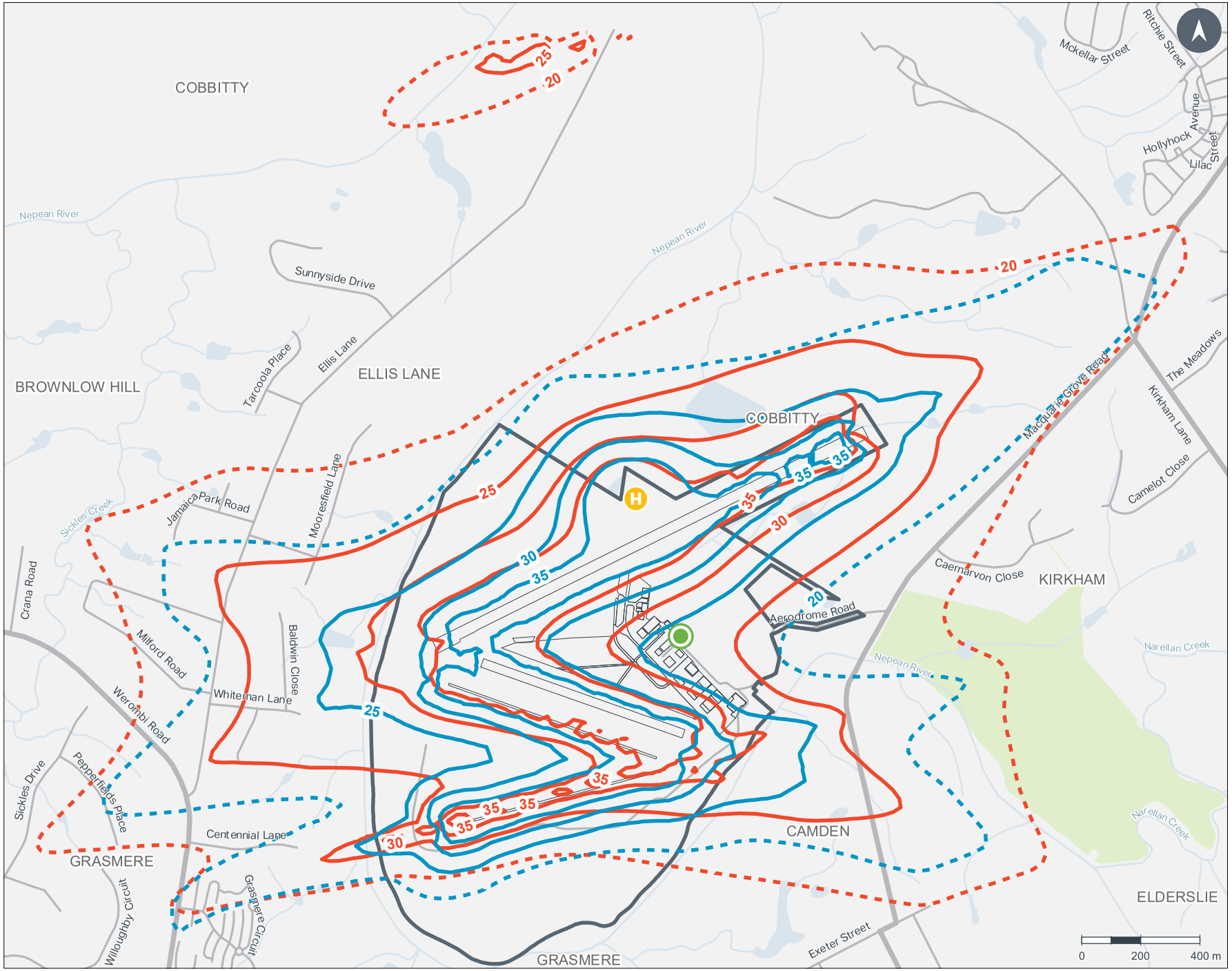

Figure 5.10: Comparison between 2040 ANEF and 2034/35 ANEF

PRELIMINARY DRAFT

5.12 OTHER AIRCRAFT NOISE DESCRIPTORS

The ANEF system is recognised as having limited application for general aviation airports in Australia with large numbers of flights by training aircraft. This is because ANEF forecasts do not accurately define areas of surrounding lands which may be affected by aircraft noise.

CAL is committed to providing the public and other stakeholders with the most relevant, accurate and easily understood information on aircraft noise impacts. 'Number above' (N-contour) maps have been prepared for this Master Plan.

N-contour maps are prepared with reference to a specified decibel level and a specified time period (e.g. 24 hours) and a specified period of the year (e.g. a season, or the full year).

The following N-contours have been prepared:

- N70 – 24 hours, full 2040 year (Figure 5.12)
- N60 – 24 hours, full 2040 year (Figure 5.13).

N70 and N60 modelling provides maps of areas that are likely to experience a predicted number of noise events from aircraft flying overhead. N70 and N60 noise modelling calculates the number of noise events, greater than 70 dB(a) and 60 dB(a), respectively, on an 'average day' over particular areas. It is calculated as the number of noise events, over a one year period, averaged per day.

Sound waves from aircraft noise travel in all directions. As the sound waves travel away from the source, the intensity decreases as the energy is dispersed over a greater area. This further reduces the power of the sound waves. The impact of the soundwaves can vary due to several factors which include sound wave directivity, atmospheric absorption and ground attenuation.

Sound is measured in decibels (dB) and the A-weighted sound level, expressed in dB(A) indicates the relative loudness of sound in the air as it is perceived by the human ear. In a typical environment with general noise, a three decibel change represents the threshold of detection of a change in noise. A noise level change less than three decibels is not likely to be noticeable.

Atmospheric conditions influence the spread of aircraft noise and intensity of sound levels on an hourly, daily and seasonal basis. The main influences are attributed to temperature, atmospheric pressure, humidity, average headwind, elevation and terrain.

The N70 contours represent external noise levels of 70 dB(A). This corresponds to a 60 dB(A) internal noise level specified in AS 2021:2015, the indoor design sound level for normal domestic areas in dwellings. An external single event noise will be attenuated by approximately 10 dB(A) by the fabric of a house with open windows.

An internal noise level of 60 dB(A) is the sound pressure level of a noise event that is likely to interfere with conversation or with listening to the radio or the television.

Similarly, the N60 represents an external noise level of 60 dB(A). This corresponds to a 50 dB(A) internal noise level, which is the sleep disturbance level specified in AS2021:2015.

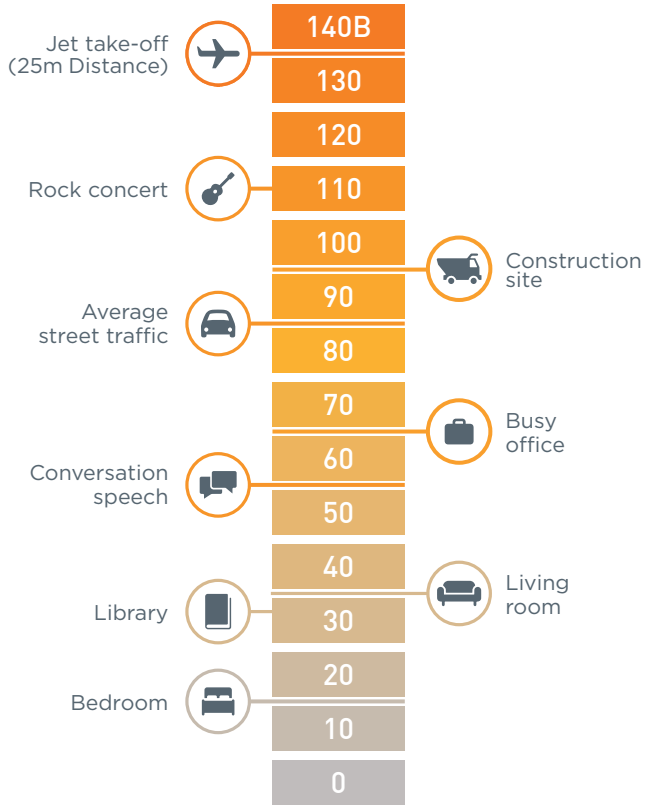

Figure 5.11: Typical Sound Level Thresholds

A selection of typical sound levels that most people would experience regularly is illustrated in Figure 5.11.

The N70 and N60 maps provide an indication of which areas around the Airport will be overflown by aircraft.

N70 and N60 maps for the area around Camden Airport are included as Figure 5.12 and Figure 5.13. They are based on the number of aircraft forecast to be operating at the Airport in 2040, as described in Chapter 4.0.

The N70 contours represents external noise level of 70 dB(A). This corresponds to a 60 dB(A) internal noise level specified in AS 2021:2015, the indoor design sound level for normal domestic areas in dwellings. An external single event noise will be attenuated by approximately 10 dB(A) by the fabric of a house with open windows.

An internal noise level of 60 dB(A) is the sound pressure level of a noise event that is likely to interfere with conversation or with listening to the radio or the television.

Similarly, the N60 represents an external noise level of 60 dB(A). This corresponds to a 50 dB(A) internal noise level, which is the sleep disturbance level specified in AS2021:2015.

5.13 FLY NEIGHBOURLY PROCEDURES

CAL recognises that aircraft noise is a very important issue to the community, especially to people living close to the Airport or under flight paths. The Airport has an established voluntary Fly Neighbourly Procedures program. The program was established some years ago and is a joint program between CAL as the airport operator and the aviation community based at the Airport.

The Fly Neighbourly Procedures program contains neighbourly procedures for pilots to consider. It outlines flight procedures for fixed-wing aircraft and helicopters that will assist with noise-related airport issues. This includes aircraft noise from airborne and ground-based activities, such as aircraft maintenance.

A copy of the Fly Neighbourly Procedures program is provided in Appendix H.

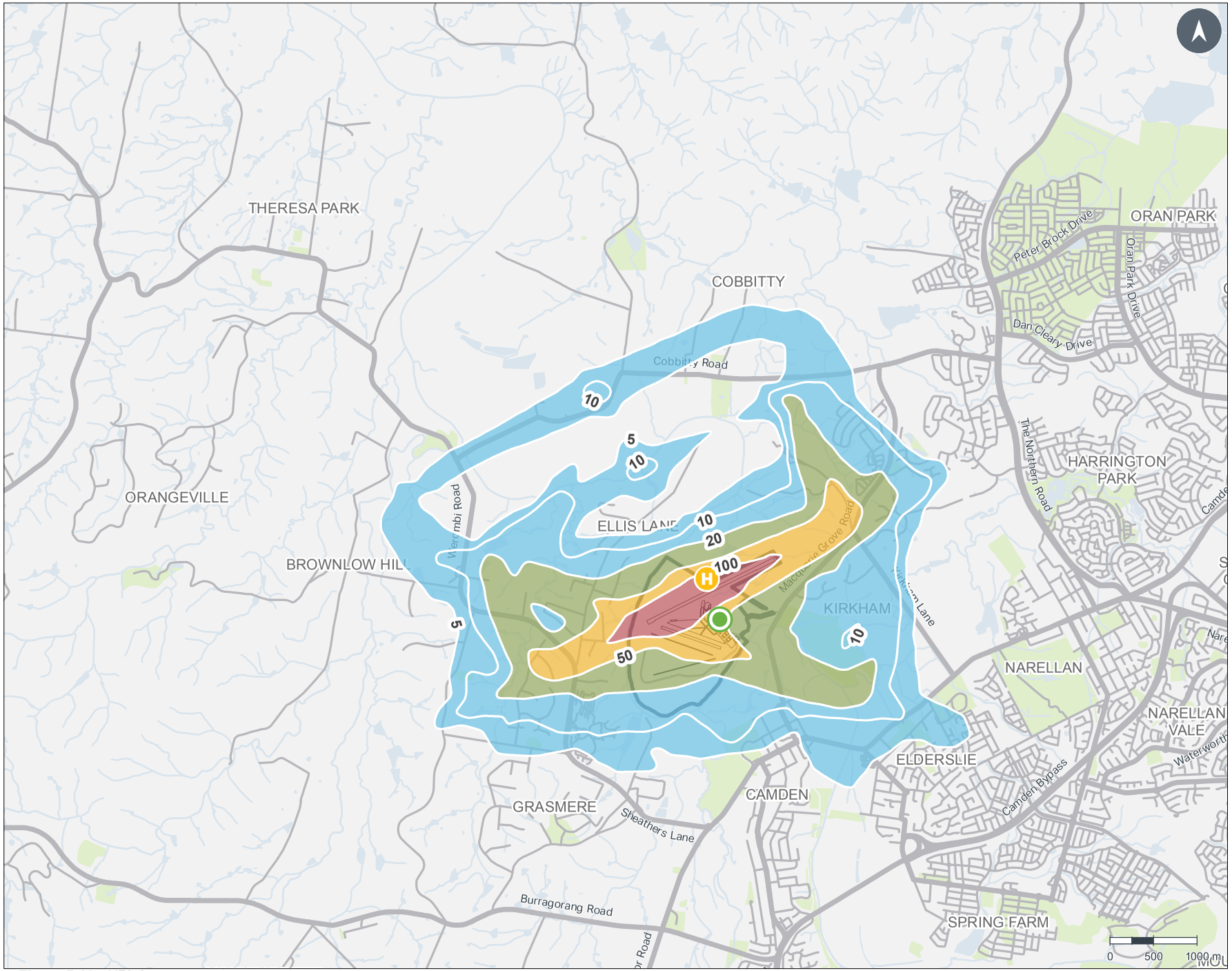

Figure 5.12: N70 Contours

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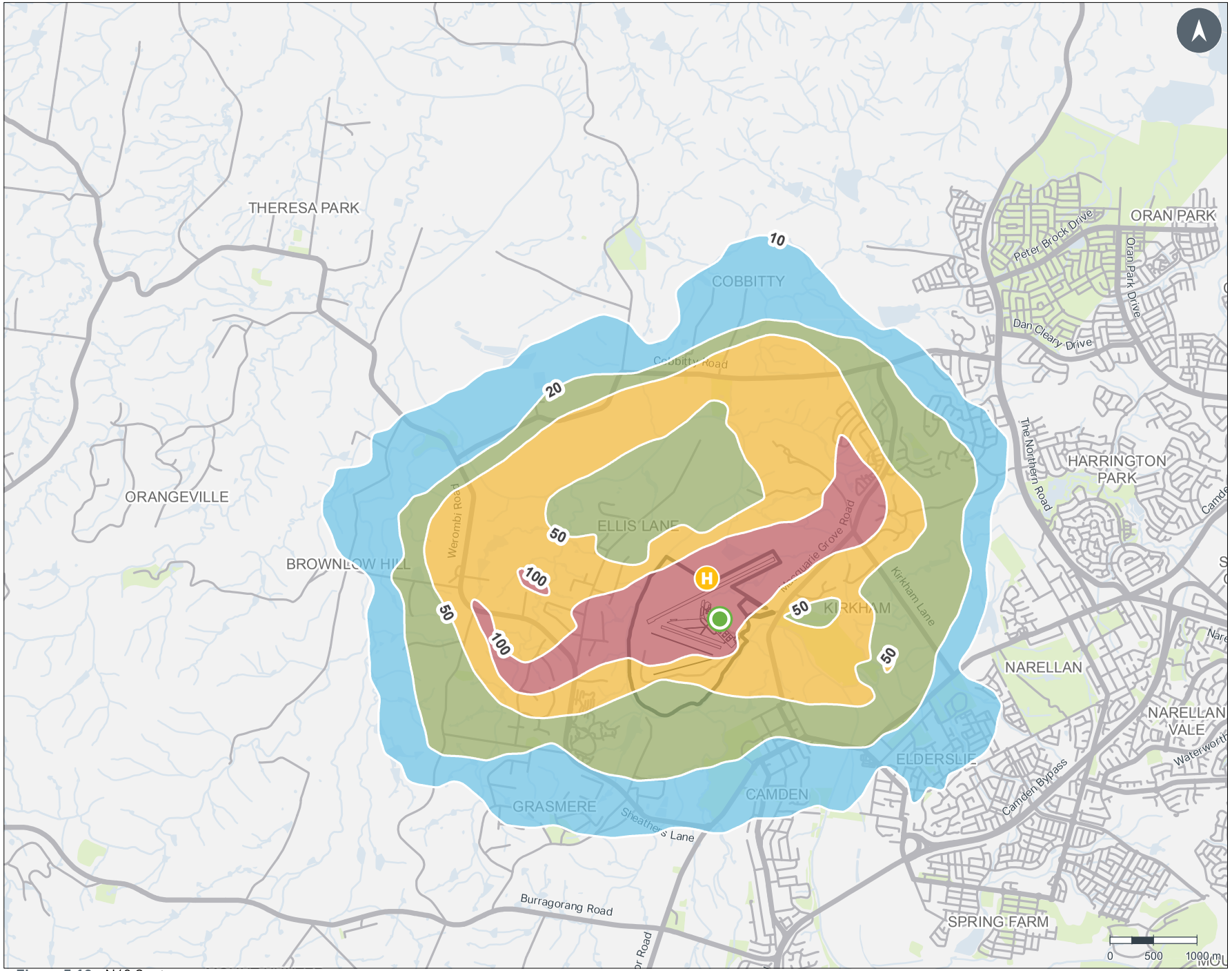


Figure 5.13: N60 Contours

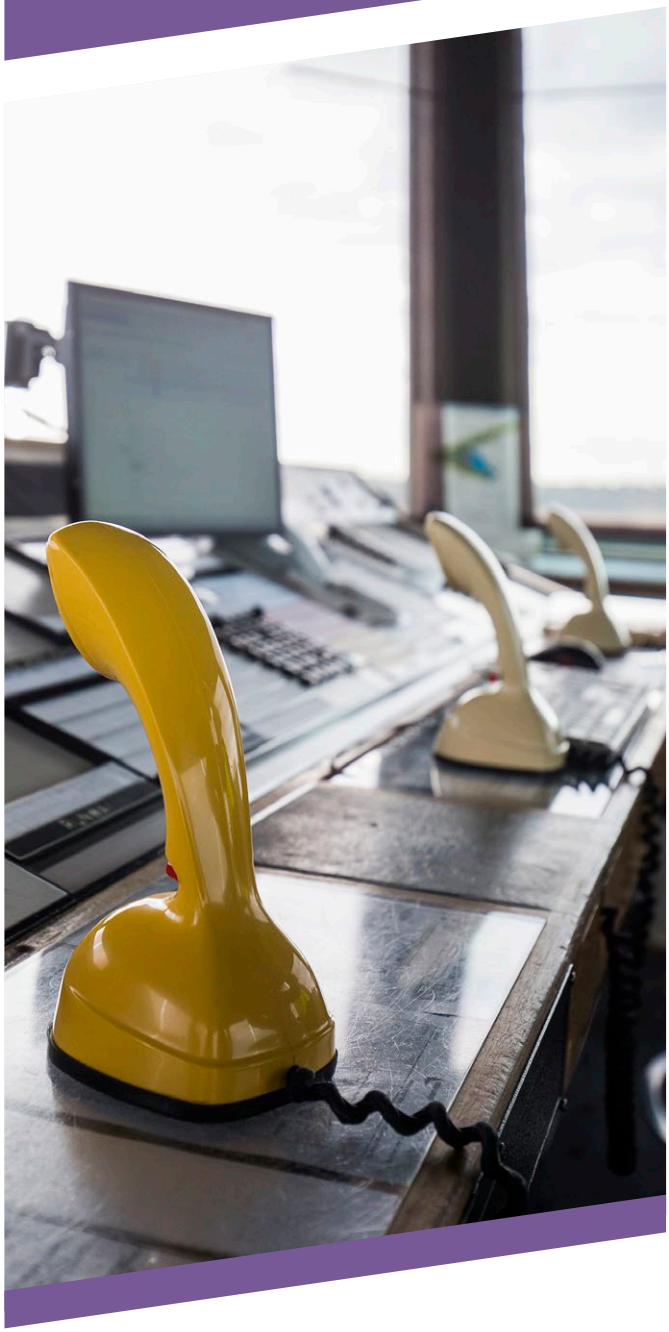

FIRE
EXTINGUISHER
CHIEF
WARDEN
CO2
YSCN

6.0

AIRPORT SAFEGUARDING AND AIRSPACE PROTECTION

6.1 AIRPORT SAFEGUARDING AND AIRSPACE PROTECTION

AIRPORTS REPRESENT SIGNIFICANT LONG TERM INFRASTRUCTURE WHICH NEED TO BE PROTECTED TO ENSURE THEIR ONGOING OPERATION, POTENTIAL TO GROW FOR CHANGING AVIATION NEEDS, AND TO DELIVER THE SOCIAL AND ECONOMIC BENEFITS TO THE WIDER COMMUNITY.



6.1.1 OVERVIEW

The capacity of an Airport to operate and respond to growth in the aviation sector is directly impacted by what occurs on and surrounding the Airport.

Long-term and effective protection and safeguarding of Camden Airport is critical to ensuring ongoing aviation operations and safety. Consideration therefore needs to be given to:

- Land use planning around the Airport, to minimise development which may be impacted by aircraft noise and operations
- Siting, location and design of buildings and structures which may impact windshear and turbulence, affecting aircraft operations
- Managing wildlife on and surrounding the Airport
- Minimising impacts from ground lighting that may distract or confuse aircraft pilots
- Protecting the airspace surrounding the Airport from buildings and structures, which may impinge on the safe arrival and departure of aircraft
- Protecting aviation facilities from development encroachment
- Protecting areas at the end of runways, through public safety areas.

The National Airports Safeguarding Advisory Group (NASAG), consisting of representatives from the Commonwealth, State and Territory Governments, and the Australian Local Government Association, has produced the National Airports Safeguarding Framework (NASF).

6.2 NATIONAL AIRPORTS SAFEGUARDING FRAMEWORK

The aim of the NASF is to improve:

- Safety outcomes by ensuring aviation safety requirements are recognised in land use planning decisions
- Community amenity by minimising noise sensitive developments near Airports
- Aircraft noise-disclosure mechanisms.

The NASF includes nine guidelines for the operation of Airports and related land use planning measures associated with Airports in Australia (see Figure 6.1).

While CAL can control development on Airport land and consider the requirements of NASF, development outside of the Airport involves external agencies and authorities, and needs to be managed cooperatively. This means working with the NSW Government and local councils to insert the NASF into planning policies.

The *Greater Sydney Region Plan* (see Section 3.5.2) supports the implementation of NASF, stating:

"Managing the interfaces of industrial areas, trade gateways and intermodal facilities by ... recognising and giving effect to the National Airports Safeguarding Framework, incorporating noise, turbulence and wildlife safety measures."

The Greater Sydney Commission has indicated in the Greater Sydney Region Plan that a State-wide approach to implementing NASF is being developed by the NSW Department of Planning, Industry and Environment. Appropriately integrating NASF Guidelines with relevant State and local planning instruments is expected to occur as part of this process.

The remainder of this chapter discusses current airport safeguarding policies and controls protecting the Airport, having regard to the above NASF Guidelines.

Figure 6.1: NASF Guidelines

6.3 NASF GUIDELINES

6.3.1 GUIDELINE A – AIRCRAFT NOISE

Aircraft noise can negatively impact on community amenity and may result in constraints on airport operations.

Flight paths and aircraft noise at Camden Airport are set out in Chapter 5.0, which includes the ANEF noise contours and other measures for assessing noise impacts associated with the Airport.

CAL works closely with Camden Council in relation to the application of land use planning controls surrounding the Airport. This ensures that any future development does not unnecessarily constrain Airport operations or negatively impact community amenity.

6.3.2 GUIDELINE B – WINDSHEAR AND TURBULENCE

Building-induced windshear may adversely impact on aviation operations where structures are situated close to airport runways. Further, discharge from vent stacks can significantly impact aviation operations.

The development approval process requires consideration of NASF Guideline B and building-generated windshear issues when considering on-airport development. NASF Guideline B presents a layered risk approach to the siting and design of buildings near airport runways to reduce the risk of building-generated windshear and turbulence.

The *Airports (Protection of Airspace) Regulations 1996* provides for protection of airspace against stack and vent exhaust plumes, which may impact on aviation operations.

Currently there are no specific off-airport planning controls requiring consideration of building-generated windshear for off-airport developments. CAL continues to work with the NSW Government and the Camden Council in addressing this issue.

The Airport's windshear assessment envelopes, based on Guideline B, are shown in Figure 6.2.

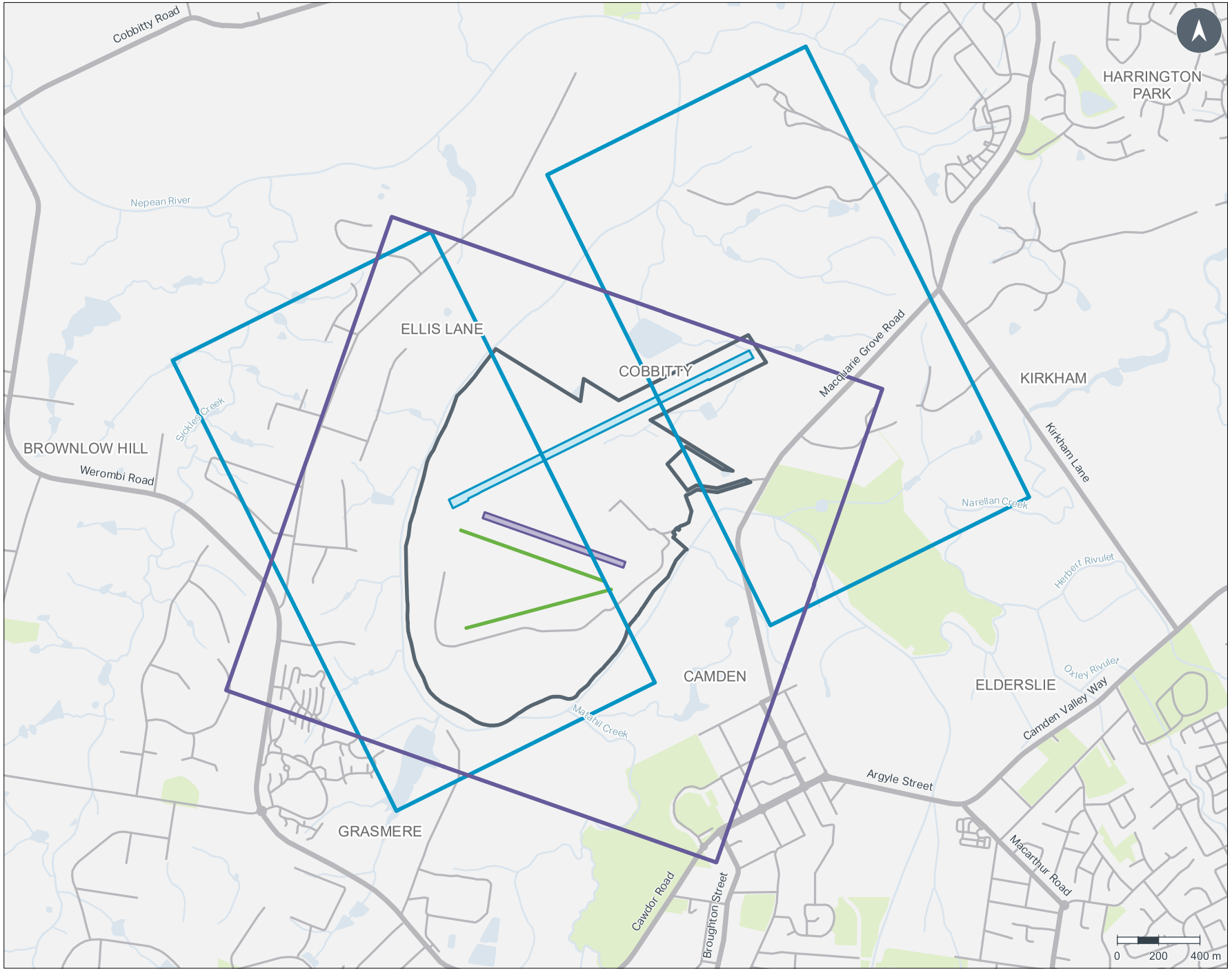


Figure 6.2: Potential windshear assessment envelopes

6.3.3 GUIDELINE C – WILDLIFE STRIKES

Wildlife strikes can cause major damage to aircraft and/or compromise aircraft safety. The Airport, like many other Airports, is surrounded by areas that are attractive to wildlife, especially birds.

The Airport and CASA have well-established safety requirements for wildlife management on-airport. In collaboration with CASA, the Airport has prepared a Wildlife Hazard Management Plan (WHMP).

A key aspect of reducing the wildlife hazard risk is building design, appropriate waste management strategies, and ensuring that new landscaping is designed and plant species are selected that reduce the attractiveness of the Airport to bird species.

The development approval process assesses and manages such wildlife management risk. The Airport also implements a series of escalating processes to deter birds.

In addition, the Airport also works with the Camden Council and land owners in the vicinity of the Airport to manage and reduce the risk of wildlife hazards.

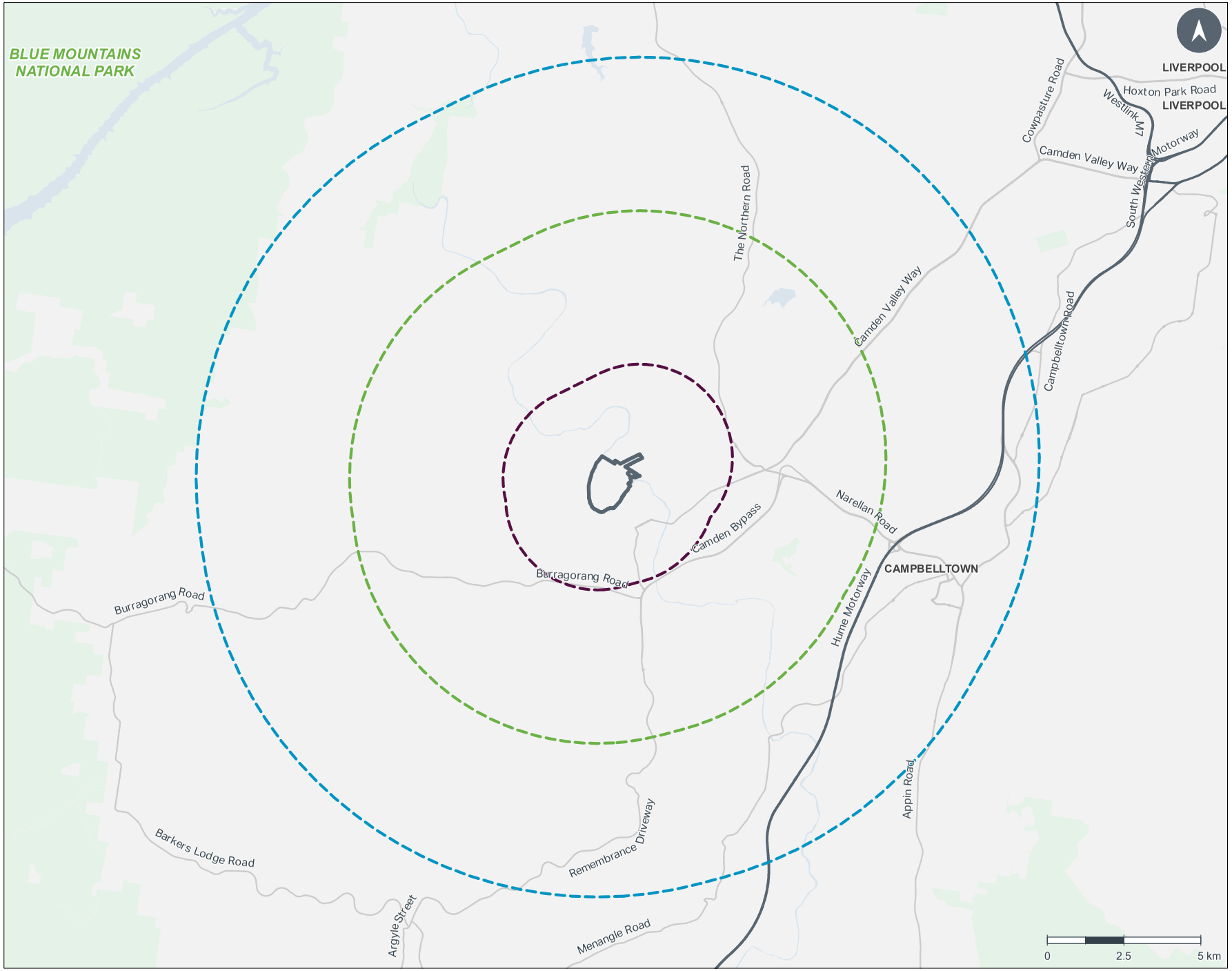
Figure 6.3 identified the buffer zones as outlined in Guideline C. Buffer are split into three categories: Area A (3km radius), Area B (8km radius) and Area C (13km radius). The radius is taken from each runway end.

6.3.4 GUIDELINE D – WIND TURBINE FARMS

Wind turbines can constitute a risk to low-flying aviation operations, for example, agricultural operations and can be expected to continue to develop as a renewable energy option.

Wind turbines are not considered to be a significant issue for the Airport.

NASF Guideline D provides advice on location and safety management for wind turbines and other similar structures. In addition, the NSW planning system includes off-airport planning controls relating to wind turbine farms. These require any nearby Airports to be considered.



KEY

- Site Boundary
- **Wildlife Buffer Zone**
- 3km buffer zone
- 8km buffer zone
- 13km buffer zone

Figure 6.3: Wildlife buffer zones

6.3.5 GUIDELINE E – LIGHTING DISTRACTIONS

Pilots rely on specific patterns of aeronautical ground lights during inclement weather, low light and at night. Aeronautical ground lights, such as runway lights and approach lights, play a vital role in enabling pilots to align their aircraft with the runway in use. They also enable the pilot to land the aircraft on the appropriate part of the runway. Adverse impacts from ground lighting can often be associated with outdoor advertising displays, sports field lighting and street lighting.

The development approval process requires NASF Guideline E to be considered when planning on-airport development.

The Camden Airport Lighting Plan (see Figure 6.3) has been prepared to highlight the maximum lighting intensities in areas surrounding the Airport. There are currently no adverse impacts from ground light emissions around the Airport.

There are no specific off-airport planning controls relating to dangerous lighting around the Airport. Under Regulation 94 of the *Civil Aviation Regulations 1988*, however, CASA has the authority to extinguish or modify lights which may cause confusion, distraction or glare to personnel who are operating aircraft.

6.3.6 GUIDELINE F – PROTECTED AIRSPACE

The operational airspace of Airports is the volume of airspace above a set of imaginary surfaces, the design of which is determined by criteria established by the International Civil Aviation Organisation.

These surfaces are established with the aim of protecting aircraft from obstacles or activities that could be a threat to safety, in particular, high-rise buildings.

Under the Airports Act and the *Airports (Protection of Airspace) Regulations 1996*, the airspace around specific Airports may be declared as Prescribed Airspace. This protects the airspace to allow aircraft to arrive and depart safety.

Prescribed Airspace is the airspace above either an Obstacle Limitation Surface (OLS) or Procedures for Air Navigational Services – Aircraft Operations (PANS-OPS) surface, as defined in Table 6.1, or may address stack and vent exhaust plumes.

Under Section 182 of the Airports Act, activities that result in intrusions into an Airport's Prescribed Airspace are called 'controlled activities' and cannot be carried out without approval. The airport operator or DITRDC must assess applications for controlled activities, and may impose conditions on approval. It is an offence to carry out a controlled activity without approval, or to breach a condition of a controlled activity approval.

NASF Guideline F provides advice for planners and decision makers about working within and around protected airspace, including OLS and PANS-OPS intrusions, and how these can be better integrated into local planning processes.

Under the Airports Act, local councils with boundaries that fall within Camden Airport's protected airspace are required to review all building and development applications received for any Prescribed Airspace infringements.

Figure 6.4: Lighting Plan

CAMDEN AIRPORT OLS

The Airport OLS is required and defined under the CASA MOS Part 139 – Aerodromes, Section 7.3. These are established in accordance with International Civil Aviation Organization (ICAO) specifications. The Airport OLS is included as Figure 6.5.

The OLS comprises a series of imaginary surfaces in the airspace surrounding the Airport, which must be kept free and clear of obstructions that could be hazardous to aircraft during take-off or landing. It is intended that these surfaces prevent development of obstructions within the airspace, which could adversely impact air navigation or Airport usability.

Height restrictions imposed by the OLS are determined based on the following factors:

- The intended use of the runway, such as take-off, landing or both
- The runway code, as determined by the runway length and type of aircraft using the runway
- The type of approach, either non-instrument or non-precision, or precision instrument approach.

The OLS standards define both a 'take-off climb' surface and an 'approach surface' for landing extending from the end of each runway. Where take-offs and landings occur in both directions along a runway, more restrictive surfaces should be used to determine obstacle height restrictions.

Surrounding the runway pavement is the Runway Strip. Runway Strip dimensions determine where the OLS surfaces begin and are defined based on the width of the runway pavement, type of aircraft using the runway and approach capability available. The Runway Strip is a defined area which includes the runway and stop way. According to Airservices, this aims to reduce the risk of damage to aircraft running off the runway surface, and protects aircraft flying over during take-off or landing.

The following surfaces, when connected together, make up the entire OLS:

- Take-off surface
- Approach surface
- Transitional surface
- Inner Horizontal Surface
- Outer Horizontal Surface
- Conical Surface.

Table 6.1: Definition of Prescribed Airspace Surfaces

OLS and PANS-OPS Definitions	
Obstacle Limitation Surfaces (OLS)	This surface is usually the lowest of the two surfaces that make up Prescribed Airspace and is designed to provide protection for when the pilot is flying by sight.
Procedures for Air Navigational Services – Aircraft Operations (PANS-OPS)	This surface is usually higher than the OLS and is designed to provide protection for when the pilot is flying by instruments. These surfaces may also protect airspace around the navigational aids that are critical for instrument flying.

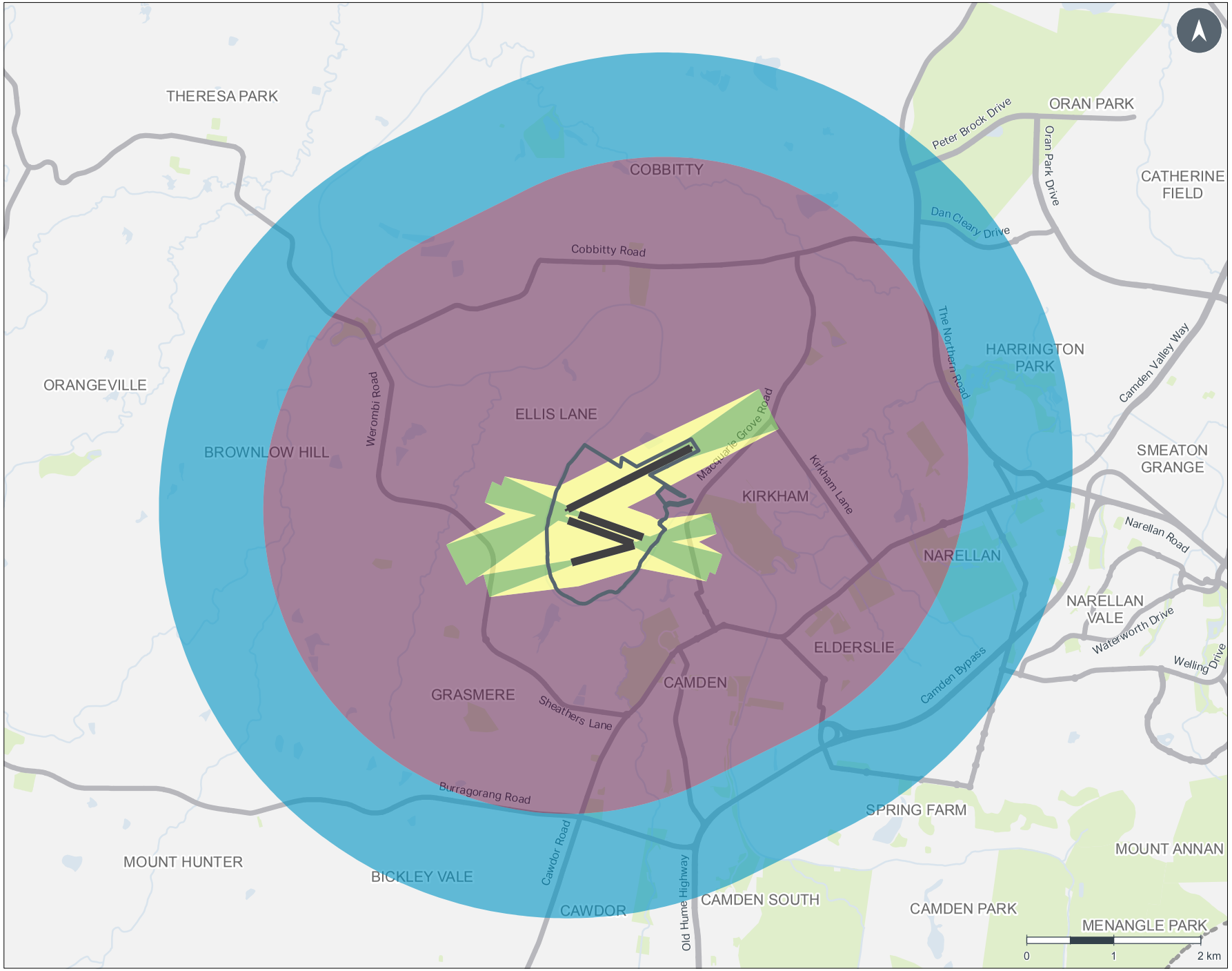


Figure 6.5: Camden Airport OLS

CAMDEN AIRPORT PANS-OPS

The PANS-OPS surfaces cover the current approaches which is based on GNSS RNAV for the Airport. A future GNSS RNAV precision and non-precision approach surface has also been identified for protection.

The Airport PANS-OPS is included as Figure 6.6 which reflects changes as advised by Airservices in 2016. The changes are in relation to the obstacle assessment areas associated with the Instrument Approach Procedures at Camden Airport after the Non Directional Beacon (NDB) was decommissioned by Airservices.

Any precision approach is determined by Airservices, taking into consideration the interface with the Airport airspace and the schedule, fleet mix and aircraft type.

The new Master Plan includes future development in aviation, which is subject to demand and aircraft requirements and CASA announced changes to MOS 139. Such development includes:

- Continued development of an airport maintenance plan to ensure all airside areas of the Airport are maintained to a compliant standard.
- Amending the categorisation of the Airport from a registered aerodrome to a certified aerodrome, and implementing all associated changes.

For future aviation-related developments at the Airport, CAL will work with Airservices to:

- Undertake a detailed review of the current and future navigational system needs.
- Undertake air traffic control planning
- Review technical standards and critical zones/siting criteria.

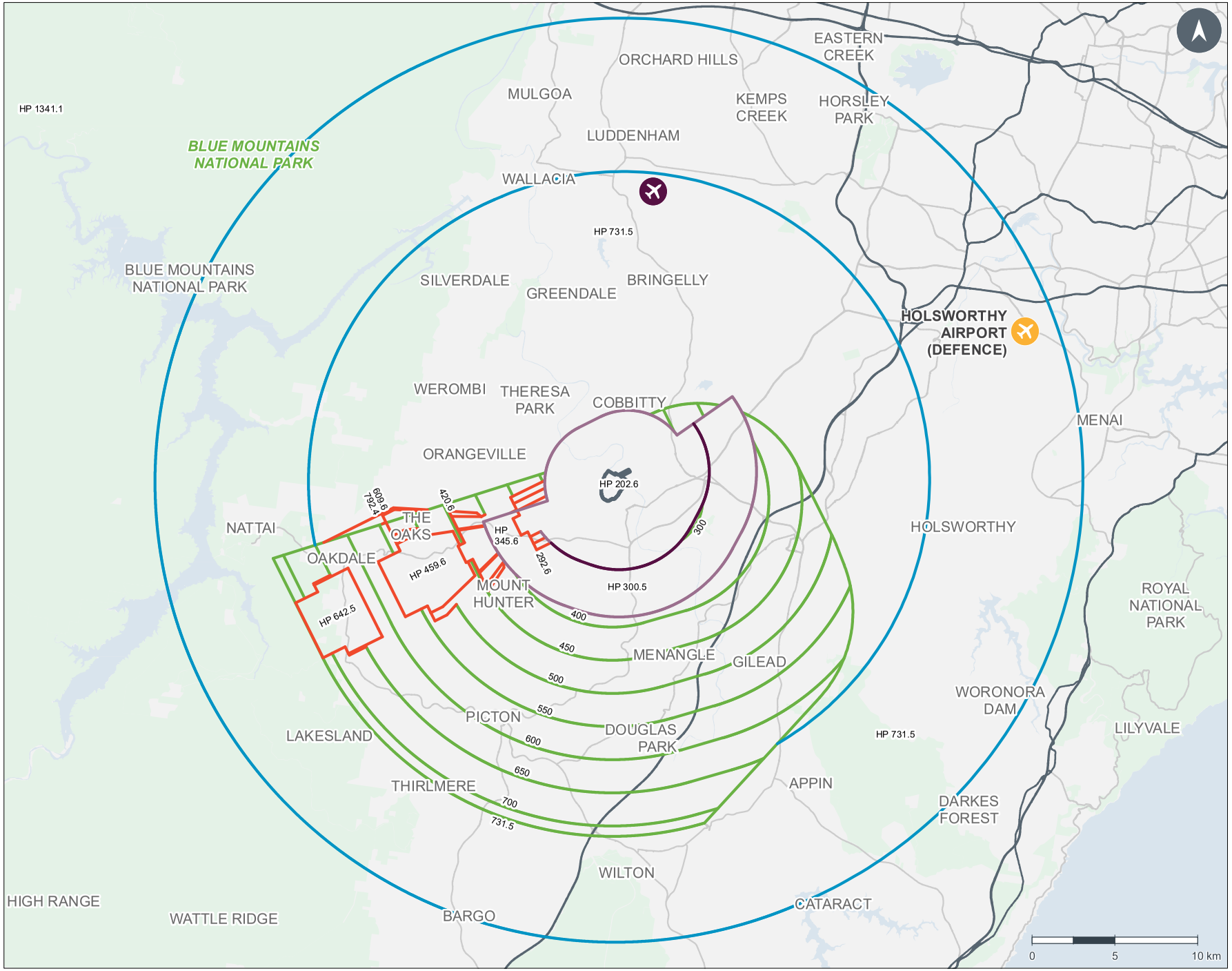


Figure 6.6: Camden Airport PANS-OPS

REGIONAL AIRSPACE

In 1998, the then Minister for Transport and Regional Development advised Airservices that Sydney Airport operations should be given priority over operations of all other Airports in the Sydney region which includes Camden Airport. Since that time, airspace and air traffic management procedures have given precedence to accommodating traffic at Sydney Airport.

Control Zones (CTR) for each of the three existing Airports in the Sydney Basin (see Figure 6.7) extend from the surface to a specified altitude. The three CTRs within the Sydney Basin are located at Sydney, Bankstown and Camden.

Airspace within the Sydney Basin is currently dominated by the Sydney Airport Control Zone (Sydney CTR) due to the requirement to efficiently manage large volumes of domestic and international aircraft movements in and out of Sydney Airport.

Control areas extend upwards from a specified altitude. The CTAs within the Sydney Basin are Class C airspace. These CTAs make up the Sydney Terminal Control Area (TMA) which is controlled by Airservices Air Traffic Control.

The Sydney Airport Control Area (Sydney CTA) is comprised of a series of controlled airspace blocks ascending in vertical steps and extending out to a maximum radius of 45 nautical miles at its greatest dimension. The Airservices Sydney Terminal Control Unit (Sydney TCU) provides traffic management and separation within the Sydney CTA, CTR and also guidance to pilots in the airspace surrounding Camden CTR which is classed as uncontrolled airspace.

Airservices has established a Lane of Entry (LOE) to the Bankstown CTR, which allows aircraft access to and from the Airport without requiring entry into Control Zones surrounding RAAF Richmond or Sydney Airport. The LOE is a corridor of airspace, and runs between the Airport and Patonga, and has a ceiling height of 2,000-2,500 feet. Additionally, the LOE may also be used by smaller aircraft wishing to transit from north of Sydney to areas south and south-west of the city.

There are three flying training areas within the Sydney Basin as shown in Figure 6.8. These areas are encompassed by a line extending from the western boundary of the Bankstown CTR to the Richmond CTR then to the Blue Mountains, Camden Airport, and back to the Bankstown CTR. The training areas are designated (Class G) uncontrolled airspace, which extends from the surface up to the base of the overlying CTA step at 2,500 and 4,500 feet. Bankstown Airport and Camden Airport are the predominant source of flying training activity using this area.

Over the period of this Master Plan, airspace within the Sydney Basin will be further reviewed to take account of the proposed Western Sydney Airport, scheduled to commence operations in 2026.

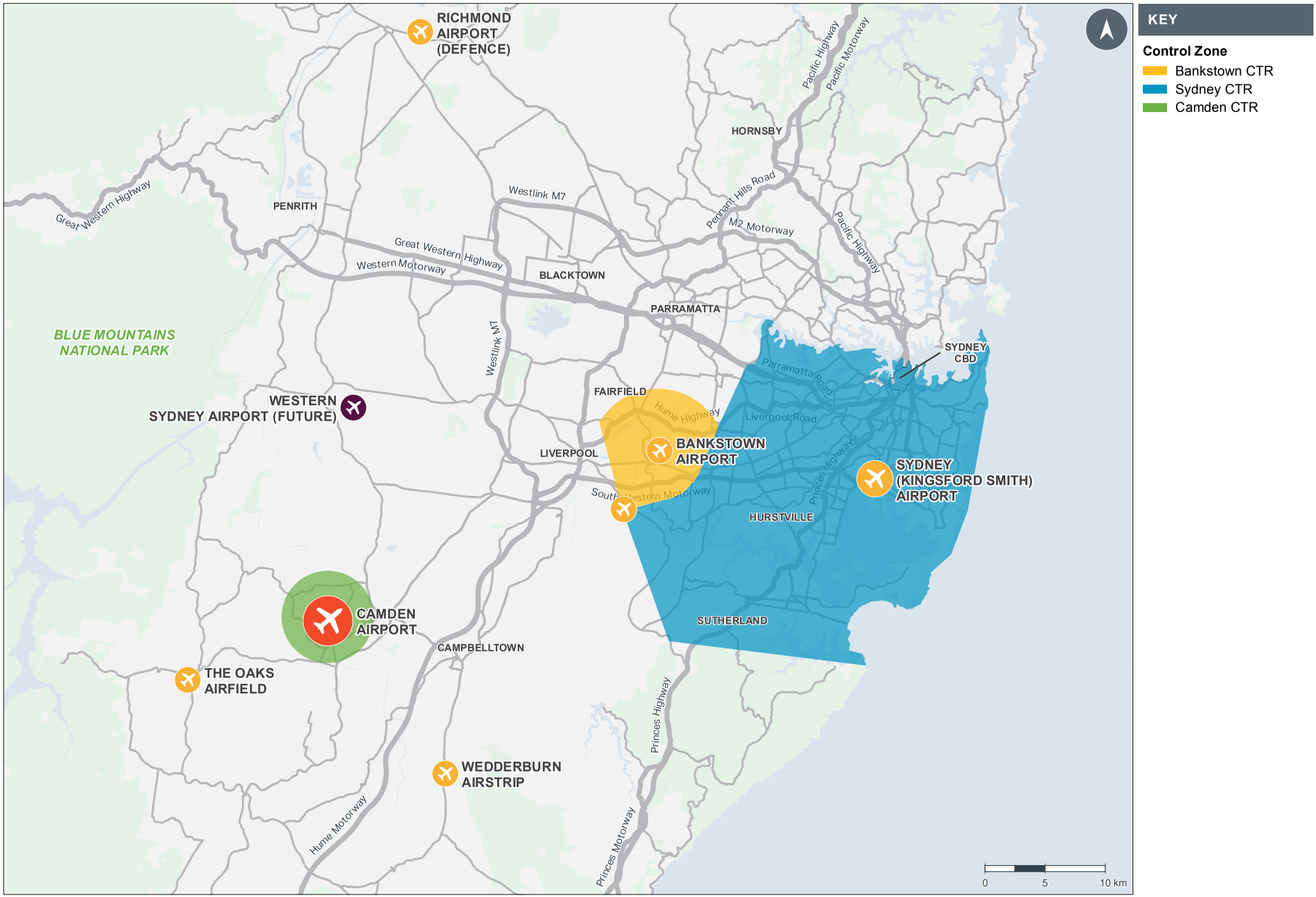


Figure 6.7: Control Zones in the Sydney Basin (Source: Sydney VTC, Airservices May 2014)

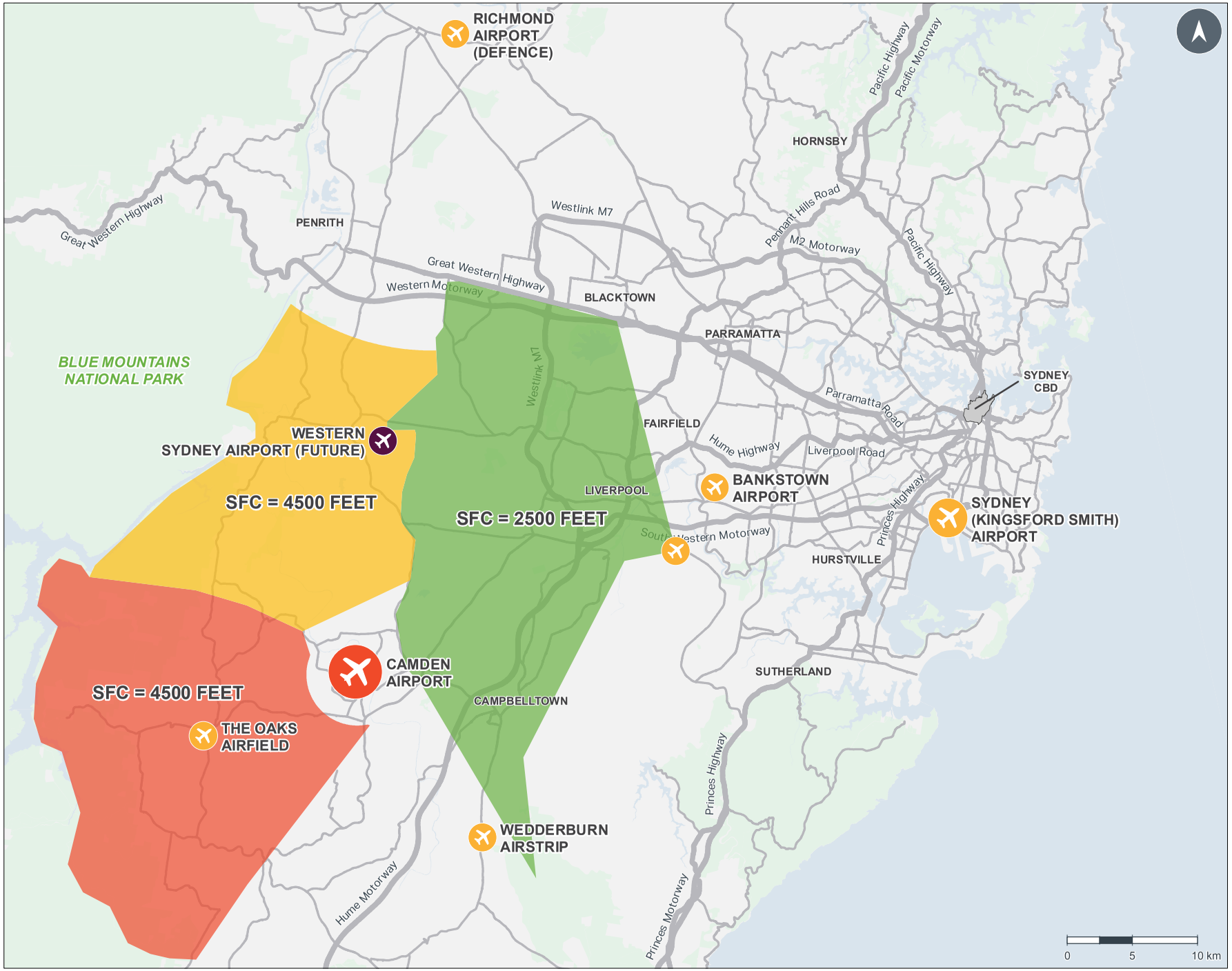


Figure 6.8: Sydney Basin Airspace Training Areas

LOCAL AIRSPACE

The Airport operates under Class D Airspace Procedures with a vertical limit of 2,000 feet and a radius of approximately two nautical miles.

VISUAL FLIGHT RULES

There are five designated visual flight rules (VFR) approach points, and these inbound tracks are identified in the Airservices En Route Supplement Australia (ERSA) associated with the Airport, and the Visual Terminal Chart:

- Mayfield to the Northwest, on a track of 134 degrees magnetic
- Bringelly to the north, on a track of 187 degrees magnetic
- Menangle to the south, on a track of 319 degrees magnetic
- Picton to the south, on a track of 011 degrees magnetic
- The Oaks to the south-west, on a track of 056 degrees magnetic.

The Airport also has an inbound approach path specifically for aircraft operating under Instrument Flight Rules (IFR). This approach is classed as non-precision approach, with a minimum decision height of 830 or 1,250 feet depending on the classification of the aircraft. Over time, predicted technological advancements should allow for greater flexibility with the use of satellite navigation, giving safe curved instrument approaches into the Airport. This will improve airspace efficiencies, and allow for greater airspace flexibility when considering other existing or proposed Airports in the Sydney Basin.

AIR TRAFFIC CONTROL OPERATIONS

The Air Traffic Control Tower (ATCT) at the Airport operates from 8.00am to 6.00pm Monday through Sunday.

Aircraft entering the Camden CTR must first obtain a clearance from Airservices prior to entry. Outside tower hours the CTR reverts to a Common Traffic Advisory Frequency (CTAF). During this period, pilots must follow rules and procedures published by CASA to allow for the safe flight of aircraft.

The preferred runway direction is in the Runway 06 direction.

At night or in instrument conditions, all operations are generally processed through the main runway (Runway 06/24).

CIRCUIT TRAINING

Circuit training at the Airport involves repetitious operations and is directed to the main runway (Runway 06/24) and the grass runway (Runway10/28). Aircraft overfly primarily open spaces and some residential developments. Circuits are conducted at 1,000 feet above ground level. Aircraft departing the Airport do so by extending the upwind, crosswind or downwind leg of the circuit, tracking clear of the inbound Approach Points, and their associated flight paths.

Arriving aircraft enter the Camden CTR at 1,500 feet above ground level and maintain this altitude until Airservices issues a clearance to descend to the runway visually when it is safe to do so.

6.4 PUBLIC SAFETY AREAS

6.3.7 GUIDELINE G – PROTECTION OF AVIATION FACILITIES

Communication, navigation and surveillance facilities are crucial to the safety of aviation. Airservices and the Department of Defence rely on these to ensure the safety of civilian and military aircraft operations.

NASF Guideline G provides land use planning guidance to better protect such facilities. These include the control tower and wind indicators.

The Airport's development approval process ensures the location and efficiency of on-airport communication and navigational facilities are considered for on-airport developments.

There are currently no off-airport planning controls relating to the protection of communication, navigation and surveillance facilities.

Public Safety Areas are areas of land at the end of a runway within which development should be restricted to control the number of people on the ground at risk of death or injury in the event of an aircraft accident on take-off or landing. These generally cover an area where the risk per year resulting from an aircraft crash to a representative individual ('individual risk') is of the order of 1 in 100,000.

NASF Guideline I, Managing the Risk in Public Safety Areas at the Ends of Runways, has recently been endorsed. The Guideline suggests two methods suitable for a planning-led approach to the assessment of the PSA:

- UK NATS Methodology
- Queensland State Planning Policy.

Using the Queensland State Planning Policy method, the Airport has identified Public Safety Areas at the end of each runway (see Figure 6.9). This is one method of calculating Public Safety Areas, utilising an isosceles trapezoid for the end of each runway with the following dimensions:

- Width at the end of a runway – 350 metres
- Width at the end of a public safety area – 250 metres
- Length of a public safety area – 1,000 metres.

As part of the master planning process, and the ongoing on-airport development approval process, Camden Airport has regard to crash risk and public safety. Depending on the type of development being proposed, Camden Airport undertakes a safety case.

Off-airport land use zoning falls within the jurisdiction of the surrounding local government areas. No legislation or guidelines presently exist with respect to permissible off-airport land uses with respect to aircraft crash risk. Camden Airport will continue to work with the NSW Government and surrounding local government authorities on the implementation of NASF Guideline I.

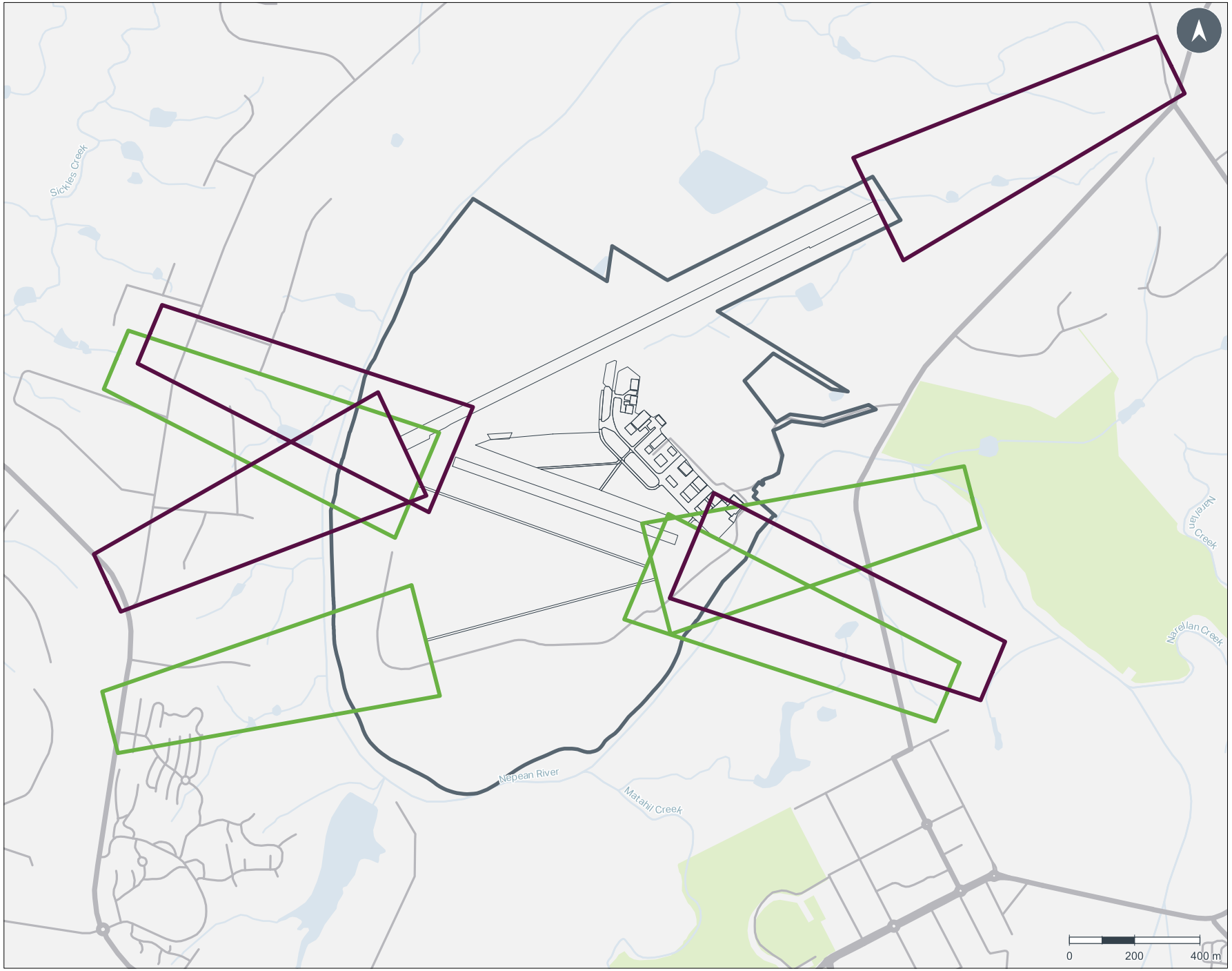


Figure 6.9: Camden Airport Public Safety Areas (QLD Model)


D

7.0

AVIATION INFRASTRUCTURE

7.1 OVERVIEW

The Airport has aviation infrastructure that includes:

- Runways
- Helicopter Landing Site (HLS)
- Taxiways
- Aircraft parking
- Airport Lighting
- Air Traffic Control Tower
- Communication systems.

This aviation infrastructure services a range of aviation operations including:

- Flight training and aviation studies
- General aviation, including service and maintenance facilities
- Gliding activities
- Multiple youth group associations.

Key aviation infrastructure is shown in Figure 7.1.

7.2 EXISTING INFRASTRUCTURE

7.2.1 RUNWAYS

Camden Airport consists of four runways, two fixed wing runways and two glider strips. The physical characteristics of each runway are summarised in Table 7.1.

RUNWAY 06/24

Camden Airport has one asphalt sealed runway with a length of 1,464 metres servicing flying training and general aviation arrivals and departures. This is a Code 2 runway.

Runway 06/24 is rated for aircraft with a maximum take-off weight (MTOW) 5,700 kilograms (kg) or less. Aircraft may exceed the 5,700 kg MTOW limitation, but CAL has only received a small number of these requests. Requests for weight dispensations have been primarily associated with emergency services. There are currently no plans to amend the weight restrictions associated with this runway over the period of this Master Plan.

Runway 24 has a displaced threshold due to the rising ground adjacent to the north-eastern perimeter of the Airport.

RUNWAY 10/28

Runway 10/28 is the Airport's secondary grass runway, servicing flying training and general aviation arrivals and departures. This is a Code 1 runway and can only be used during daylight hours under visual conditions.

GLIDER RUNWAY STRIPS

The two grass runway strips are the Airport's recreational gliding strips, servicing recreational gliders arrivals and departures. These are both Code 1 runways.

7.2.2 TAXIWAYS

The Airport has sufficient asphalt sealed and grass taxiways, allowing the access of aircraft to all runways. All taxiways have a maximum pavement strength of 5,700 kg, with a limited amount of exemptions above that weight.

Engine run-up bays are provided on Taxiways A and D.

As part of the 2015 Camden Airport Master Plan and Airport Environment Strategy, the following taxiway enhancements were completed to complement the existing taxiway infrastructure:

- Initiation of a taxiway naming protocol
- Placement of Movement Area Guidance Signs (MAGS).

Table 7.1: Runways at Camden Airport

Runway	Surface	Classification	Length (metres)	Width (metres)	Pavement Strength (kilograms)
Fixed Wing Runways					
Runway 06/24	Sealed	Code 2	1,464	30	5,700 kg
Runway 10/28	Grass	Code 1	723	30	5,700 kg
Gliding Strips					
Runway 06/24	Grass	Code 1	680	100	N/A
Runway 10/28	Grass	Code 1	680	100	N/A

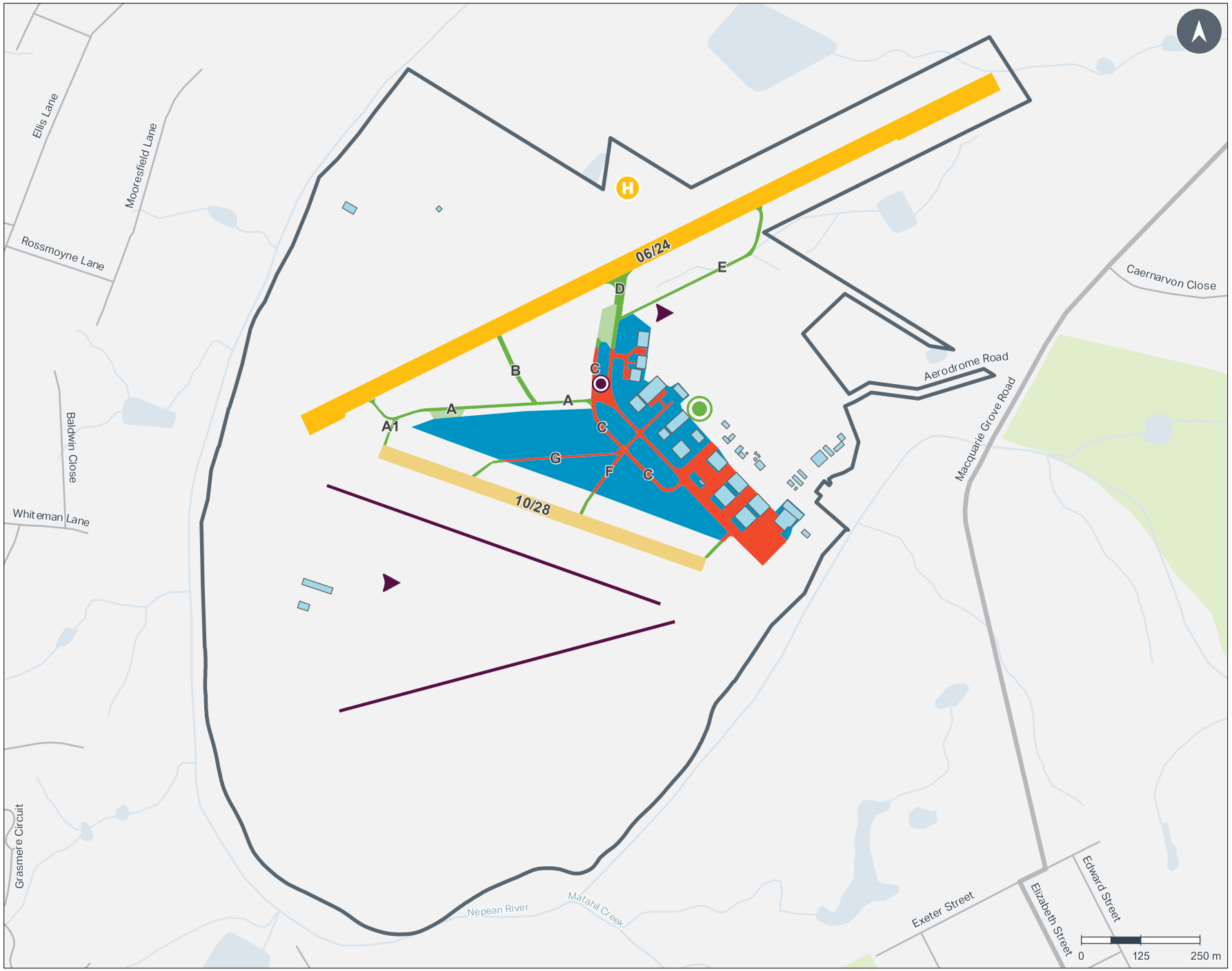


Figure 7.1: Existing runways and taxiways

7.2.3 HELICOPTER LANDING SITE

The Helicopter Landing Site (HLS) is located within the grass area on the northern side of the airfield within the Aviation Zone, north of Runway 06/24. This designated HLS will continue to meet the needs of the existing helicopter operators based at the Airport. Large helicopters can also arrive and depart from the runways as required.

Existing operational procedures associated with the HLS will continue to apply. There is no intention to amend the flight paths as defined in association with Airservices.

7.2.4 AIRCRAFT PARKING

Aircraft parking at the Airport is primarily grass parking, with a small amount of asphalt hardstand parking available at the south-eastern end of Taxiway D.

The outside aircraft parking area made available at the Airport is considered to be sufficient for both current and forecast activity at the Airport.

Approximately 16 hangar structures are located at the Airport. These are located to the south-east of the main runway, with access available off Taxiway D.

7.2.5 AIRPORT LIGHTING

Runway 06/24 is fitted with Low Intensity Runway Lighting, with the spacing between the runway edge light at 90 metres. The main taxiway (Taxiway D) is fitted with taxiway edge lighting.

The airport lighting system at Camden can be activated by the Air Traffic Control Tower, or by a pilot using the Pilot Activated Aerodrome Lighting (PAL) system.

7.2.6 COMMUNICATION AND NAVIGATION FACILITIES

The Air Traffic Control Tower, which is located on the southern side of the main runway, is operated by Airservices.

Camden Airport previously had a dedicated Non-Directional Beacon (NDB), however this was decommissioned in 2016 by Airservices as part of its Navigation Rationalisation Project.

There is an illuminated wind direction indicator situated on the southern side of Runway 06/24, and a secondary wind direction indicator located adjacent to the glider runway strips.

7.2.7 AVIATION FUEL FACILITIES

Camden Airport is serviced by a single refuelling facility. This facility is operated by Air BP–Skyfuel Australia Pty Ltd and is located adjacent to the main parking area.

7.3 AIRFIELD INFRASTRUCTURE DEVELOPMENT

7.3.1 RUNWAY CAPACITY

Camden Airport has a complex runway system due to the various users at the Airport. The runway system provides a combined estimated capacity of approximately 210,000 aircraft movements per year. With current activity approximately 105,000 movements annually (combined fixed-wing aircraft and helicopters), the runways have significant additional capacity available.

Based on the aircraft movement growth forecast (estimated at less than 118,000 movements annually by 2040), the runway capacity will not be realised within the 20-year planning horizon for this Master Plan.

7.3.2 RUNWAY PAVEMENT

It is anticipated that a complete review of the asphalt runway surface of Runway 06/24 will be conducted during the eight year planning period of this Master Plan. Once completed, this review will guide any runway pavement upgrade requirements, including addressing any compliance issues.

A grass runway maintenance program was developed as part of the 2015 Master Plan. This program outlines the required aspects associated with the care and ongoing maintenance of the grass runway and glider runway strips.

7.3.3 LIGHTING UPGRADES

The current airfield lighting system at the Airport is sufficient for both current and forecast aircraft movement levels. There are no plans to upgrade this system at the Airport.

The spacing between each runway side light is currently non-compliant with the CASA MOS 139 which requires runway edge spacing to be 60 metres. The current distance is 90 metres between each runway side light. If the airfield lighting system was to be upgraded, CAL would ensure that the new system would be fully compliant with the CASA MOS 139.

7.3.4 RUNWAY THRESHOLD UPGRADE

There are currently no plans to upgrade the runway threshold lighting associated with Runway 06/24.

7.3.5 RUNWAY END SAFETY AREAS

Due to the limited area available at the end of each runway, and the type of activity associated with the Airport, there are no plans to incorporate runway end safety areas at the Airport.

7.3.6 TAXIWAY IMPROVEMENTS

A new taxiway connecting the Potential Development Area (vacant land) of the Airport Business Zone with Runway 06/24 (via Taxiway C) is proposed in the Eight Year Development Program. This will lead to additional apron and hanger facilities.

7.3.7 HELICOPTER OPERATIONAL ARRANGEMENTS

There are no plans to amend the current operational arrangements associated with helicopter operations. However, consideration will be given to new helicopter facilities associated with the future development of the Potential Development Area.

7.3.8 FUTURE RUNWAY EXTENSION

There are no plans for a runway extension at Camden Airport. Both Runways 06/24 and 10/28 are considered to be sufficient for future forecast aircraft movement levels.

MOS 139 Changes

MOS 139 is a document that is made under regulation 139.015 of the *Civil Aviation Safety Regulations 1998* (CASR 1998) which outlines specific standards for registered, certified or other types of aircraft landing areas. It is a requirement of Camden Airport to ensure that the rules and guidelines stipulated in this document are followed.

MOS 139 was updated in September 2019, with many of the regulations being amended affecting Camden Airport. These changes include:

- A requirement to transition from its current form as a REGISTERED aerodrome to a CERTIFIED aerodrome
- A requirement for an official Aerodrome Operations Manual (AOM)
- A full Safety Management System (SMS) process
- Annual Aerodrome Technical Inspections
- A Wildlife Hazard Management Plan (WHMP)
- A new Aerodrome Emergency Plan
- An increase in our Aerodrome Serviceability Inspection requirements.

The Eight Year Development Program for Camden Airport (refer to Table 9.4) recognises the Airport's commitment to addressing the requirements of MOS 139.

8.0

LAND USE PLANNING

8.1 OVERVIEW

LAND USE PLANNING IS A CRITICAL ASPECT OF THE MASTER PLAN. THE LAND USE PLAN PROVIDES THE OVERALL PLANNING INTENT FOR CAMDEN AIRPORT RELATING TO LAND USE STRATEGIES AND OBJECTIVES FOR DEVELOPMENT. THE LAND USE PLAN CONSIDERS NSW STATE PLANNING POLICIES AND LOCAL PLANNING SCHEMES SURROUNDING THE AIRPORT.

The Land Use Plan represents a revision and update of the 2015 Master Plan. These changes ensure the Airport is positioned to meet evolving local and regional area needs. It provides a greater level of detail and visibility around the planned future for the Airport, and better aligns with the NSW planning system. The land use plan takes into account the following federal, NSW and local strategic and statutory planning policies:

- *Greater Sydney Region Plan (2018)*
- *Western City District Plan (2018)*
- *South West Growth Centre Plan 2006*
- *Camden Community Strategic Plan 2017*
- *Camden Draft Local Strategic Planning Statement 2019*
- *Camden Local Environment Plan 2010*
- *Airports Act 1996*
- *Environmental Planning and Assessment Act (1979)* (EP&A Act).

This Master Plan recognises that the Airport is a general aviation airport asset for NSW, meeting civil and recreational aviation needs within the Camden region.

Consistent with the NSW state planning system, the Airport has been divided into four land use 'zones'. The Camden Airport Zone Plan is included in Figure 8.1 and shows the area of each zone. A brief description of each zone is provided in Table 8.1.

The Land Use Plan for the Airport encourages aviation-related operations across the whole of the Airport site. Each zone provides for relevant objectives and a desired character statement to reflect land use differences across the Airport. The spatial locations of the different Airport areas influence the types of land uses that are suitable and possible, based on characteristics such as established airport infrastructure, accessibility and environmental characteristics.

Table 8.1: Camden Airport Zones

Zone	Area	Description
Aviation Zone	54 Ha	The Aviation Zone is a 'V' shaped spine of the Airport and is the location of the main runways, taxiways and aircraft parking areas.
Airport Business Zone	23.5 Ha	The Airport Business Zone is the 'centre' of airport activities, providing the interface between airside and landside development, accommodating aviation operations and related services, commercial and business activities.
Airport Support Zone	56.5 Ha	The Airport Support Zone includes land both to the north and south of the Aviation Zone. The Southern Airport Support Zone is the current hub for glider activities at Camden Airport. The Northern Airport Support Zone is utilised for farming and agricultural activities, along with aviation-related support activities.
Airport Riparian Zone	53 Ha	The Airport Riparian Zone is the portion of the Camden Airport Site with ecological and environmental importance adjacent to the Nepean River.

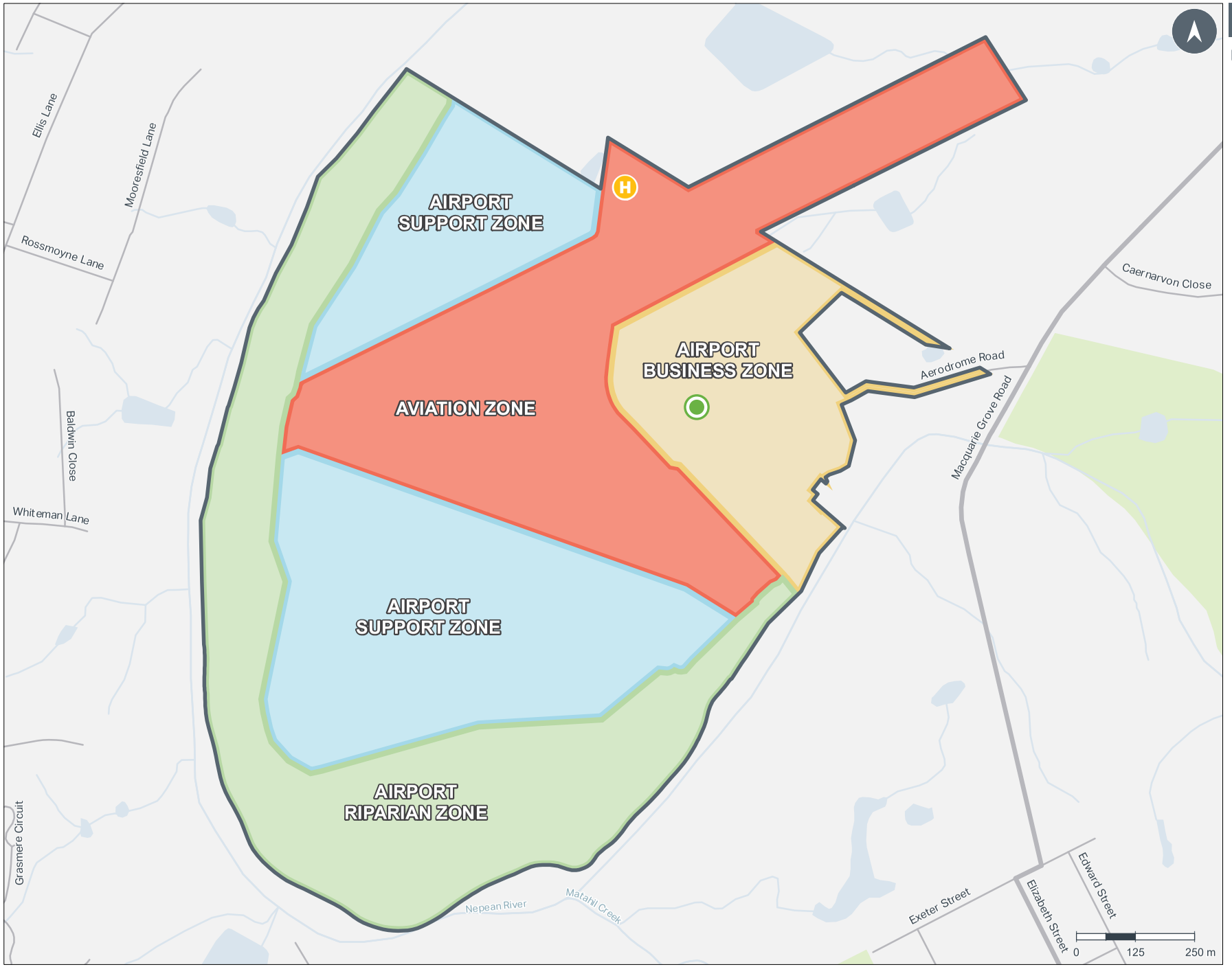


Figure 8.1: Camden Airport Zone Plan

PRELIMINARY DRAFT

8.2 COMMONWEALTH PLANNING CONTEXT

Camden Airport is a privately-leased Commonwealth Airport. As such, it is subject to the planning framework set out in the Airports Act.

Land use, planning and building controls on privately-leased Commonwealth airport lands are regulated under Part 5 of the Airports Act and are summarised below:

- An Airport Master Plan is required for each Airport
- Major Development Plans are required for major airport developments (see Section 8.2.1)
- Building activities on airport sites require approval
- Buildings and structures must be certified as complying with the *Airports (Environmental Protection) Regulations 1997*.

Although state and local government land use planning systems do not apply to Commonwealth land, the Airports Act requires the Master Plan to describe the consistency with such planning schemes. It is expected that Airports should, to the greatest extent possible, be compatible with local planning regimes. An overview of the relevant state and local planning frameworks is provided in Section 8.3, and consistency with these local provisions are provided throughout this Master Plan. The remainder of Section 8.2 provides an overview of the Commonwealth planning policy relevant to land use planning at the Airport.

8.2.1 MAJOR DEVELOPMENT PLANS

Under the Airports Act, a Major Development Plan (MDP) must be prepared prior to commencing construction of any development classified as a 'Major Development'. Major Developments include, but are not limited to:

- Construction of new runways and runway extensions
- Major aviation construction works (including major terminal extensions)
- Major building projects valued over $25 million (monetary trigger reviewed every three years)
- Development with the potential for significant environmental impact or effects on the local or regional community
- Development that affects an area identified as 'environmentally significant' in the environment strategy
- Any 'sensitive' developments (see Section 8.2.2).

The Airports Act requires each MDP to be considered by the Minister following public comment and consultation. All developments are subject to formal building approval in accordance with the Airports (Building Control) Regulations 1996, taking into account the Airports EP Regulations (see Section 8.2.3).

Since privatisation, no MDPs have been prepared for Camden Airport and there are no MDPs planned at this time.

8.2.2 SENSITIVE DEVELOPMENTS

The term 'sensitive development' is defined in Section 71A of the Airports Act as the development of, or a redevelopment that increases the capacity of any of, the following:

- Residential dwelling
- Community care facility
- Pre-school
- Primary, secondary, tertiary or other educational institution
- Hospital.

The following do not constitute sensitive developments:

- An aviation educational facility
- Accommodation for students studying at an aviation educational facility at the Airport
- A facility with the primary purpose of providing emergency medical treatment and which does not have in-patient facilities
- A facility with the primary purpose of providing in-house training to staff of an organisation conducting operations at the Airport.

Development that falls under the definition of 'sensitive development' is prohibited, except in exceptional circumstances. These must be demonstrated before the Minister agrees to an MDP being prepared.

There are no 'sensitive developments' existing or envisaged at Camden Airport at this time.

8.2.3 BUILDING ACTIVITY APPROVALS

In its capacity as the Airport Lessee Company, CAL must provide consent before any approval can be given for building activity at the Airport. In considering its consent, which may be granted with conditions, CAL must ensure that proposed building activities are consistent with this Master Plan, include the land use planning objectives and principle of development control (see Section 8.4),

In addition, the Airports Act requires building activity approvals to also be obtained from the Airport Building Controller (ABC), which is appointed by the Secretary of DITRDC. The ABC functions as the building certifier to ensure compliance with the Building Code of Australia and other relevant legislation and standards.

CAL has established an environmental management regime in accordance with the Airports Act. An Airport Environment Officer (AEO) has been appointed by DITRDC to ensure the Airport and its customers comply with the Airports Regulations and operate in accordance with good environmental practices outlined in Chapter 12.0 – Airport Environment Strategy. The AEO has several specific statutory functions under the Airports Act and Airports Regulations.

8.3 STATE AND LOCAL GOVERNMENT PLANNING CONTEXT

The following sections describe the NSW state and local government strategic and statutory planning frameworks relating to Camden Airport. These outline how the land use plan has been developed to align with such plans.

A high level comparative analysis between airport planning and the NSW state and local government planning system is provided in Figure 8.2, demonstrating the similar levels of control and consultation across each justification.

Figure 8.2: Comparison of Airport, NSW State and Local Government Planning

8.3.1 STATE PLANNING CONTEXT

Section 3.5 provides a detailed description of the Greater Sydney Region Plan and the Western City District Plan, both prepared by The Greater Sydney Commission in 2018. This section provides an overview of the strategic context of the plan to Camden Airport, along with a review of the strategic policy documents, including the Camden Draft Local Strategic Planning Statement.

Greater Sydney Region Plan

The Greater Sydney Region Plan states that it is important to protect the Airport's operational activities and notes that a state-wide approach to implementing the National Airport Safeguarding Framework is being developed by the NSW Department of Planning, Industry and Environment. The National Airport Safeguarding Framework is detailed in Chapter 6.0 and highlighted in Chapter 3.0.

Western City District Plan

The Airport is located within the Western City District of Greater Sydney. The Western City District Plan acknowledges Camden Airport as an important general aviation facility in the district. However, the primary aviation focus for the district is the Western Sydney Airport.

The Western City District Plan published by the Greater Sydney Commission in 2018 is a 20-year plan to manage growth in the context of economic, social and environmental matters to achieve the 40-year vision for Greater Sydney. It is a guide for implementing the Greater Sydney Region Plan and a bridge between regional and local planning. As with the Greater Sydney Region Plan, in undertaking strategic planning processes, and preparing or considering Planning Proposals to amend LEPs, planning authorities must give effect to the District Plan.

8.3.2 LEGISLATIVE FRAMEWORK

The planning legislative framework within NSW primarily comprises the EP&A Act, the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation) and four key instruments that are made under the EP&A Act:

1. State Environmental Planning Policies (SEPPs)
2. Local Environment Plans (LEPs)
3. Section 117 Local Planning Directions
4. Development Control Plans (DCPs)

These instruments are outlined in this section.

Environmental Planning and Assessment Act

The statutory planning framework in NSW is provided through the EP&A Act. The New South Wales Government and relevant local councils administer the EP&A Act and planning instruments created under it. The objects of the EP&A Act are:

a. *To encourage:*
   i. *The proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages, for the purpose of promoting the social and economic welfare of the community and a better environment*
   ii. *The promotion and co-ordination of the orderly and economic use and development of land*
   iii. *The protection, provision and co-ordination of communication and utility services*
   iv. *The provision of land for public purposes*
   v. *The provision and co-ordination of community services and facilities*
   vi. *The protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats*
   vii. *Ecologically sustainable development*
   viii. *The provision and maintenance of affordable housing*

b. *To promote the sharing of the responsibility for environmental planning between the different levels of government in NSW*
c. *To provide increased opportunity for public involvement and participation in environmental planning and assessment.*

Environmental Planning and Assessment Regulation

While the EP&A Act provides the overarching framework for the NSW planning system, the EP&A Regulations support day-to-day system requirements. The EP&A Regulations contain key operational provisions for the NSW planning system, including environmental impact statements, building regulations, subdivision certification and development contributions.

State Environmental Planning Policies

Prepared under Part 3 of the EP&A Act, State Environmental Planning Policies (SEPPs) deal with issues determined to be significant to NSW. SEPPs are administered by the Minister for Planning and Environment as statutory environmental planning instruments that require consideration in the development assessment and environmental assessment process. SEPPs apply across NSW and can allow or prohibit certain types of development in an area even where local controls may not. A SEPP may identify the type of development where the Minister is the decision maker (consent authority).

Consideration has been given to provisions set out in relevant SEPPs (including Sydney Regional Environmental Plans which are now deemed to be SEPPs) in the development of this Master Plan, as detailed in Appendix D.

Local Environmental Plans

Prepared under Part 3 of the EP&A Act, LEPs provide the local planning controls for a Local Government Area (LGA). The Airport is located within the Camden LGA.

The Camden LEP 2010 identifies the Airport site as being zoned Special Purpose 2 Zone – Infrastructure (Air Transport Facility) as shown in Figure 8.3. The objectives of this zone are to provide for infrastructure and related uses as well to prevent development that is not compatible with or that may detract from the provision of infrastructure.

It is noted that the Nepean River acts as the boundary of the Airport along the western, southern and eastern edge. In the Camden LEP 2010, the land immediately to the north and south of the Airport is zoned Primary Production, whilst the land to the west and a small area to the east is zoned Large Lot Residential.

The objectives of the Primary Production Zone are:

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base
- To encourage diversity in primary industry enterprises and systems appropriate for the area
- To minimise the fragmentation and alienation of resource lands
- To minimise conflict between land uses within this zone and land uses within adjoining zones
- To permit non-agricultural uses which support the primary production purposes of the zone
- To maintain the rural landscape character of the land.

The objectives of the Large Lot Residential Zone are:

- To provide residential housing in a rural setting while preserving, and minimising impacts on, environmentally sensitive locations and scenic quality
- To ensure that large residential lots do not hinder the proper and orderly development of urban areas in the future
- To ensure that development in the area does not unreasonably increase the demand for public services or public facilities.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.

Consideration has been given to the relevant zones and provisions of the Camden LEP 2010 in preparing the Master Plan, as detailed in Appendix E.

Local Planning Directions Issued by The Minister

In accordance with section 117(2) of the EP&A Act, the NSW Minister for Planning and Infrastructure is authorised to direct a local council to do or have regard to certain things when exercising its functions. These directions generally apply to all local councils unless a direction is area specific.

The current local planning directions, the majority of which were issued on 1 July 2009, have been considered in drafting this Master Plan (see Appendix E for details).

Development Control Plan

Prepared under Part 3 of the EP&A Act, DCPs perform the role of guiding implementation of provisions set out in an LEP. DCPs provide detailed planning and design guidelines to support the planning controls of an LEP; however, the controls included in a DCP are not statutory requirements for the purposes of considering a development application.

The DCP relating to the land surrounding the Airport site is the Camden DCP 2019. The Camden DCP 2019 came into force on 16 September 2019, effectively rescinding the previous Camden DCP 2011.

Table 8.2: Objectives of Zones Surrounding Camden Airport

Zone	Zone objectives
B2 Local Centre	• To provide a range of retail, business, entertainment and community uses that serve the needs of people who live in, work in and visit the local area • To encourage employment opportunities in accessible locations • To maximise public transport patronage and encourage walking and cycling
B4 Mixed Use	• To provide a mixture of compatible land uses • To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling.
E2 Environmental Conservation	• 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.
R2 Low Density Residential	• To provide for the housing needs of the community within a low density residential environment • To enable other land uses that provide facilities or services to meet the day to day needs of residents.
R5 Large Lot Residential	• To provide residential housing in a rural setting while preserving, and minimising impacts on, environmentally sensitive locations and scenic quality • To ensure that large residential lots do not hinder the proper and orderly development of urban areas in the future • To ensure that development in the area does not unreasonably increase the demand for public services or public facilities • To minimise conflict between land uses within this zone and land uses within adjoining zones.
RE1 Public Recreation	• To enable land to be used for public open space or recreational purposes • To provide a range of recreational settings and activities and compatible land uses • To protect and enhance the natural environment for recreational purposes.
RU1 Primary Production	• To encourage sustainable primary industry production by maintaining and enhancing the natural resource base • To encourage diversity in primary industry enterprises and systems appropriate for the area • To minimise the fragmentation and alienation of resource lands • To minimise conflict between land uses within this zone and land uses within adjoining zones.
SP1 Special Activities	• To provide for special land uses that are not provided for in other zones • To provide for sites with special natural characteristics that are not provided for in other zones
SP2 Infrastructure	• To provide for infrastructure and related uses • To prevent development that is not compatible with or that may detract from the provision of infrastructure.

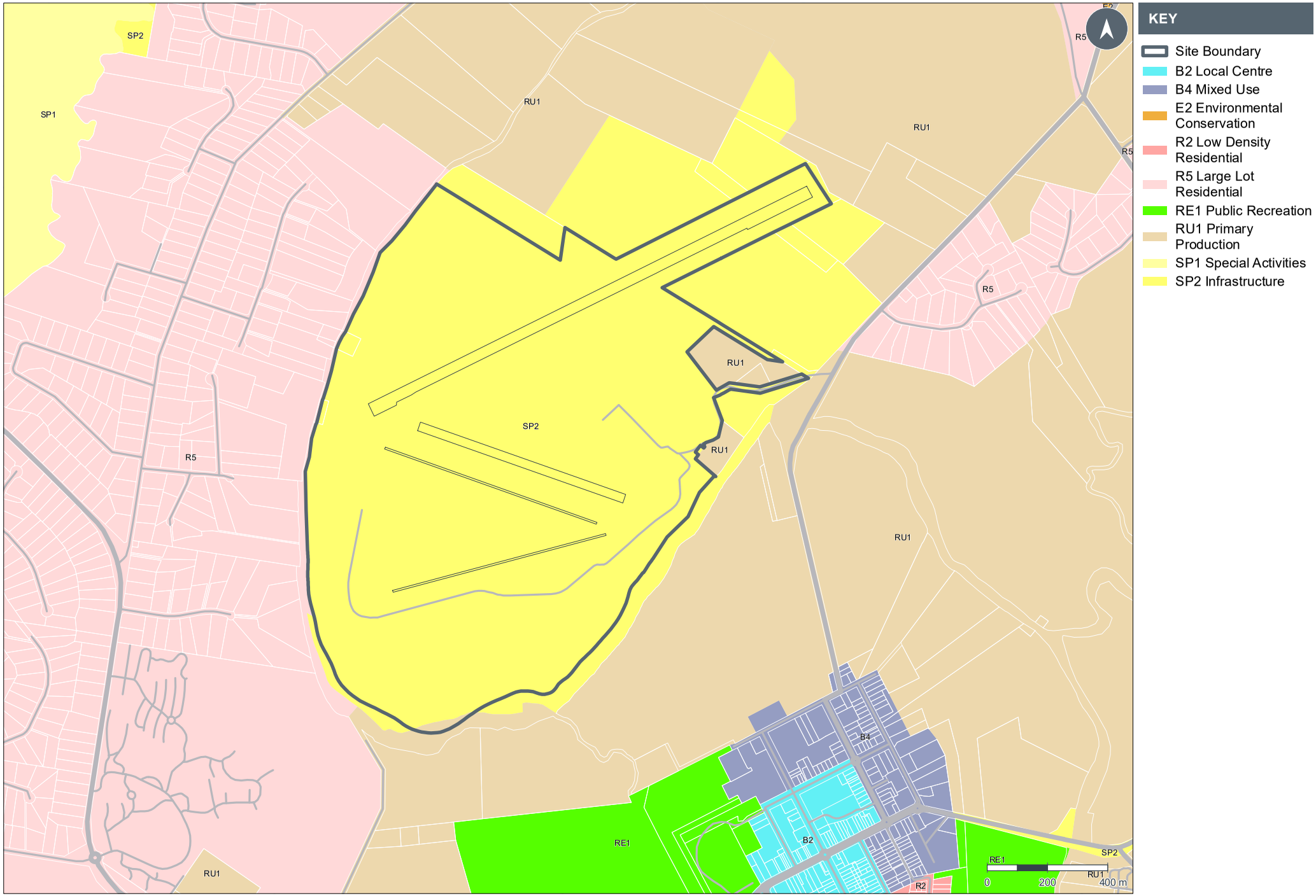


Figure 8.3: Zoning Map (Source: Camden LEP 2010)

8.4 LAND USE PLAN

8.4.1 INTRODUCTION

The Master Plan establishes four main land use zones, as shown in Figure 8.1:

- Aviation Zone
- Airport Business Zone
- Airport Support Zone
- Airport Riparian Zone.

The Master Plan contains Objectives, Desired Future Character statements and Permitted and Sensitive/ Prohibited uses for each zone. The Objectives, Desired Future Character statements and Permitted Land Uses, collectively, provide general guidance as to the forms of development envisaged within each zone.

The concept of creating a number of distinct 'zones' at the Airport, with specified land uses within each, aligns directly with the zoning system in place under the EP&A Act and demonstrated in the Camden LEP 2019. Under the EP&A Act (and in the Camden LEP 2019), zones are used to locate compatible uses together through specifying how the land within the zone can be used. These establish the land uses that are permissible (with or without consent) or prohibited in a particular location in the form of a land use table. Objectives are also set out for each zone to further guide the types of desired development.

A Concept Plan has been developed for the Airport Business Zone to provide an overview of the envisioned activities within this zone (refer to Figure 8.7).

This Master Plan contains definitions of land use types, which are detailed in Appendix D. Definitions align with the Standard LEP Template, where practical. However, not all Standard LEP Template definitions are suitable, and other airport-specific definitions have been included.

8.4.2 CHANGES TO THE LAND USE PLAN

The Land Use Plan features a number of updates to the 2015 Master Plan. These changes ensure the Airport meets evolving local and regional area needs and provides a greater level of detail and visibility around the planned future for the Airport.

Key influences on such updates include strategic directions set out by the New South Wales Government for the Camden LGA, the Airport's relationship to Sydney's South West Growth Centre to the north, and the future development of a new Western Sydney Airport at Badgerys Creek.

Key changes to the Land Use Plan from the 2015 Master Plan are summarised as follows:

- **Reconfiguring and re-labelling of zones**
  Land use zones have been revised to reflect the new Master Plan vision. The names of the zones have also been amended to reflect the nature of activities (current and envisaged).
- **Simplified land uses and related definitions**
  A number of land uses are considered as 'ancillary' to the primary land uses (e.g. civil works, flood mitigation works and car parking). Accordingly, these ancillary land uses have been removed from land use definitions included in the 2015 Master Plan. In addition, some land uses have been consolidated to simplify groupings (e.g. 'aircraft and airport maintenance and storage facilities', 'aircraft engine testing areas' and 'airport terminal and support facilities' are now provided for under one land use – 'airport-related support industries'.
- **Updated development decision-making process**
  The development decision-making process has been updated to better align with the NSW and local government planning assessment processes and to ensure consistency utilised by Sydney Metro Airports for Bankstown Airport. Detailed guidance on the development decision-making process has been provided to create greater transparency.

8.4.3 DEVELOPMENT DECISION MAKING PROCESS

Figure 8.5 provides an overview of the development decision-making process at the Airport.

Developments are classified as Permitted, Merit, Sensitive or Prohibited, depending on the proposed land use. Descriptions of each of these classifications are provided in Figure 8.4. Land uses that apply to each of these categories within each zone are listed in each zone.

PERMITTED

Land uses that have been determined to be permissible as they align with the objectives of a particular zone. These land uses are permitted subject to approval.

MERIT

Land uses that are not classified as Permitted, Sensitive or Prohibited can be assessed based on merit. These land uses are subject to approval.

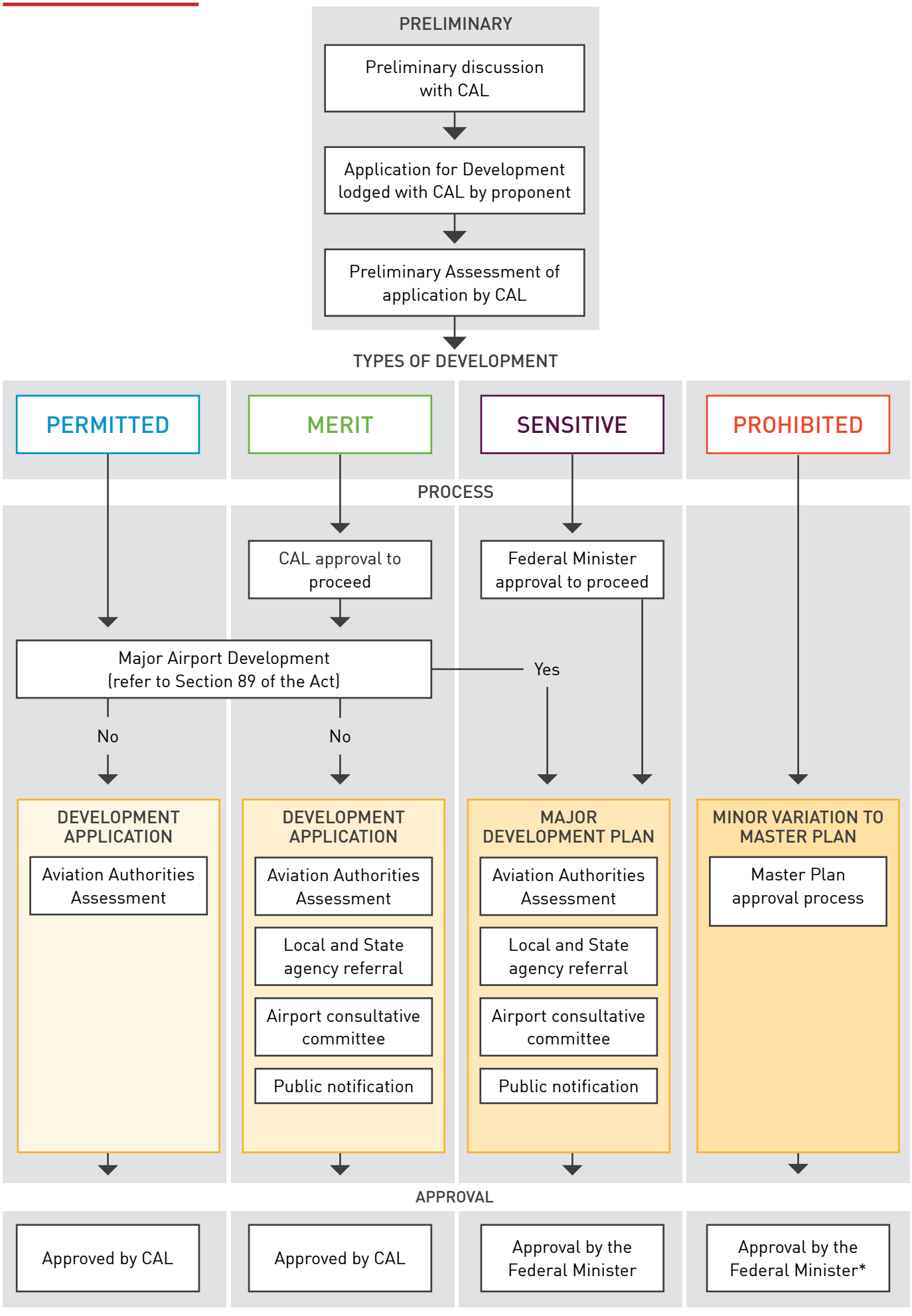
SENSITIVE

Land uses that are deemed sensitive (pursuant to the *Airports Act 1996*). These uses are prohibited except in exceptional circumstances and require approval from the Minister (refer Section 8.2.2).

PROHIBITED

Land uses that are not permissible within a given zone as they are not aligned with the zone objectives. A prohibited land use can only be approved by obtaining a variation to the Master Plan.

Figure 8.4: Development Classification



**Subsequent to the approval of a minor variation to the Master Plan, the proposed development will then be assessed in accordance with the relevant type of development (Permitted, Merit or Sensitive).*

Figure 8.5: Development Approval Decision-Making Process

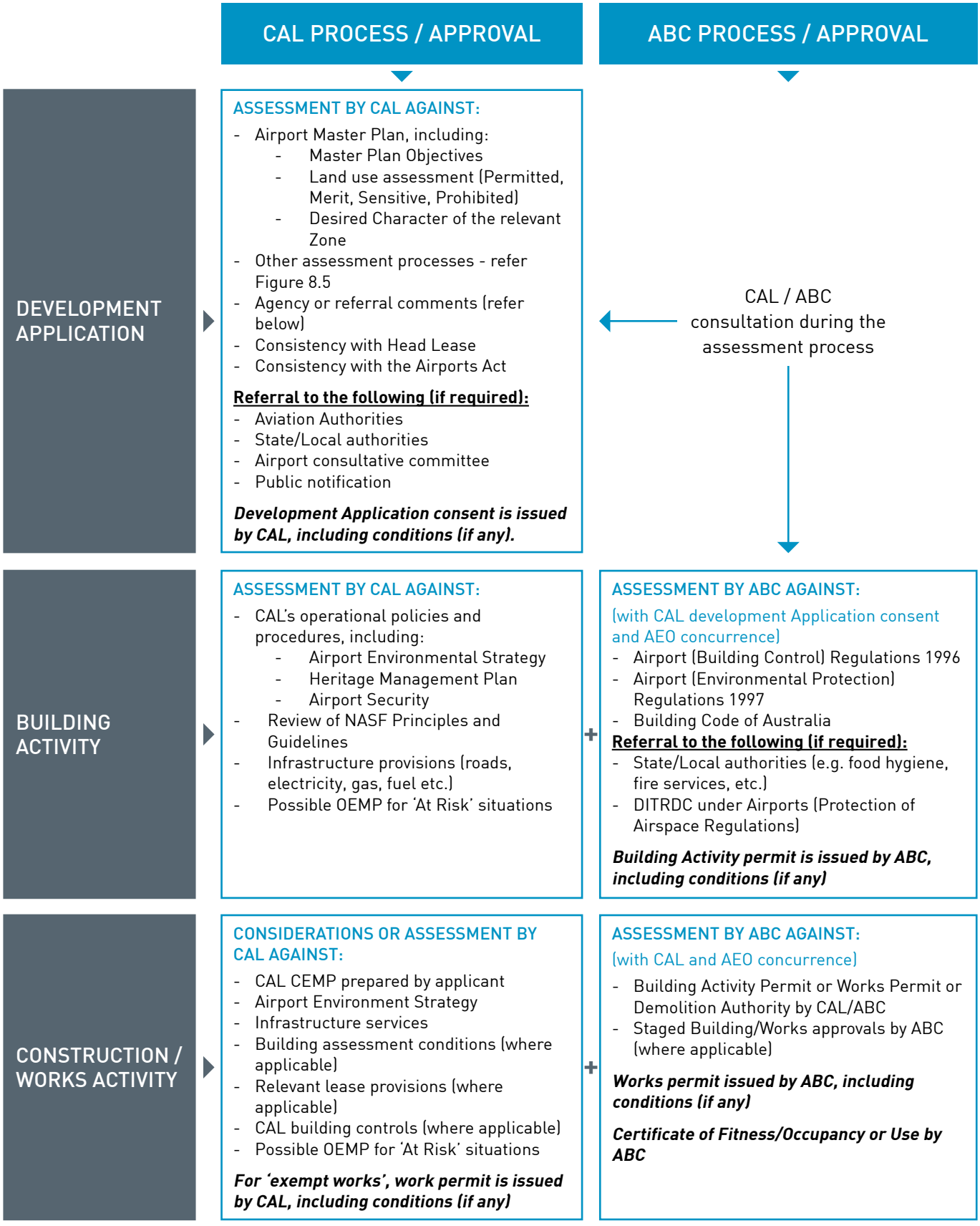
8.4.4 CAL DEVELOPMENT AND BUILDING APPLICATION PROCESS

All development on Airport land is subject to building approval – consistent with the provisions in the *Airports (Building Control) Regulations 1996*, a process similar to the building approval process under NSW legislation. An outline of the development and building approvals application process at the Airport is provided at Figure 8.6.

8.4.5 GENERAL LAND USE DEVELOPMENT OBJECTIVES

The overarching general land use development objectives for the Airport are to:

- Ensure that development promotes the role of the Airport as a general aviation and recreational airport and a bespoke commercial and employment hub for the Camden region
- Ensure development is designed to facilitate safe and efficient aviation operations
- Foster and sustain a high level of innovation, economic activity and create employment opportunities
- Encourage creative contemporary design that aims to develop the most effective and efficient use of the site
- Promote sustainable design principles through waste minimisation, promotion of energy efficient buildings, and enhancing the efficiency and use of water resources
- Maintain a high standard of landscaping throughout the Airport, focusing on native and water-wise species, while minimising wildlife attraction
- Protect and conserve heritage items, and ensuring the Airport's ongoing operational and development requirements
- Undertake development in accordance with the zone framework
- General duty to avoid polluting.



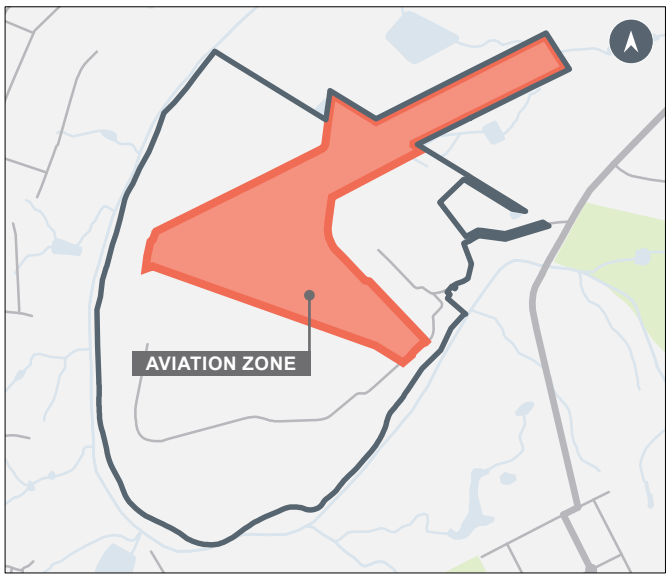
TERMS USED IN DIAGRAM:

ABC – Airport Building Controller
AEO – Airport Environmental Officer
CAL – Camden Airport Limited
CEMP – Construction Environment Management Plan
DITRDC – Department of Infrastructure, Transport, Regional Development and Communications
OEMP – Operational Environmental Management Plan

Figure 8.6: Development and Building Activity Application Process

8.4.6 AVIATION ZONE

The Aviation Zone is a 'V' shaped spine of the Airport. It includes the main runways, taxiways and aircraft parking areas.



Objectives

The objectives for Aviation Zone are:

- To provide an area accommodating safe aircraft landing, take-off and taxiing operations for fixed wing and rotary aircraft
- To protect aircraft operations, ensuring controlled access and secure operational areas
- To accommodate aircraft navigational aids, radar and communications equipment.

Desired Future Character

The Aviation Zone will continue to be developed for the operation and movement of aircraft and associated activities.

Development within the Zone will continue to focus on the aviation needs of the Airport, with ancillary and related support facilities developed to enhance Airport operations. This will involve continued maintenance and improvement of aviation infrastructure.

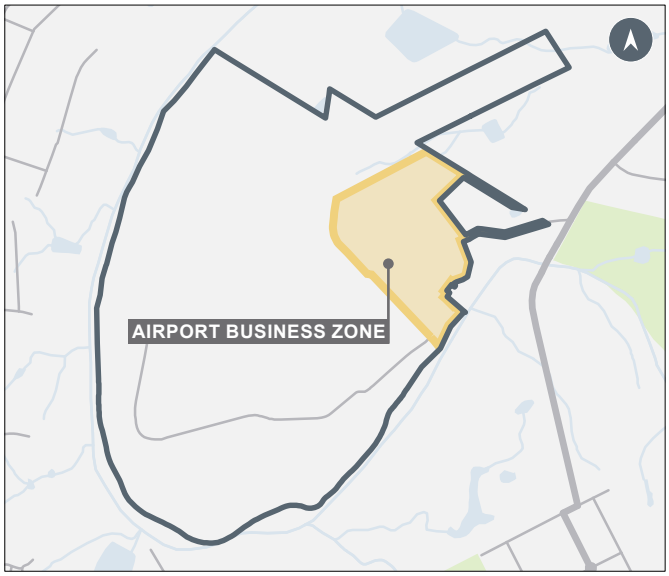
Table 8.3: Land Use Table: Aviation Zone

Land Use Zone: Aviation Zone	
1. PERMITTED	**AVIATION** - Airport-related support industries - Aviation educational facilities - Fixed base operations - Runway related activities/facilities **COMMERCIAL** - Business premises - Research and development facilities - Temporary uses and structures **INDUSTRIAL** - Depots - Vehicle storage **INFRASTRUCTURE** - Earthworks or engineering works - Renewable energy generation facilities **COMMUNITY** - Club - Emergency services facilities - Recreational facility - Recreational facility (major) **OTHER** - Ancillary* - Environmental protection works - Roads
2. MERIT	Any other development not listed in items 1,3 or 4
3. SENSITIVE	Any items listed in *Section 71A of the Airports Act 1996*
4. PROHIBITED	- Residential dwellings - Industry

**Ancillary uses relate to subordinate uses to Permitted Uses included in the respective zone. Ancillary uses are defined in Appendix D.*

8.4.7 AIRPORT BUSINESS ZONE

The Airport Business Zone is the 'centre' of airport activities, located on the eastern side of the Aviation Zone. The Zone provides the interface between airside and landside development, accommodating aviation operations and related services, commercial and business activities.



The Airport Business Zone includes the entrance in to the Airport, main hangar facilities and a future development area to the north-east.

Objectives

The objectives for Airport Business Zone are to provide accommodation for:

- Aviation operations and aviation-related support activities
- Commercial and business activities
- Safe and convenient access to the Airport.

Desired Future Character

The Airport Business Zone will continue to develop as the 'centre' of activities at Camden Airport, providing the interface between airside and landside development, accommodating aviation operations, and related services, commercial and business activities.

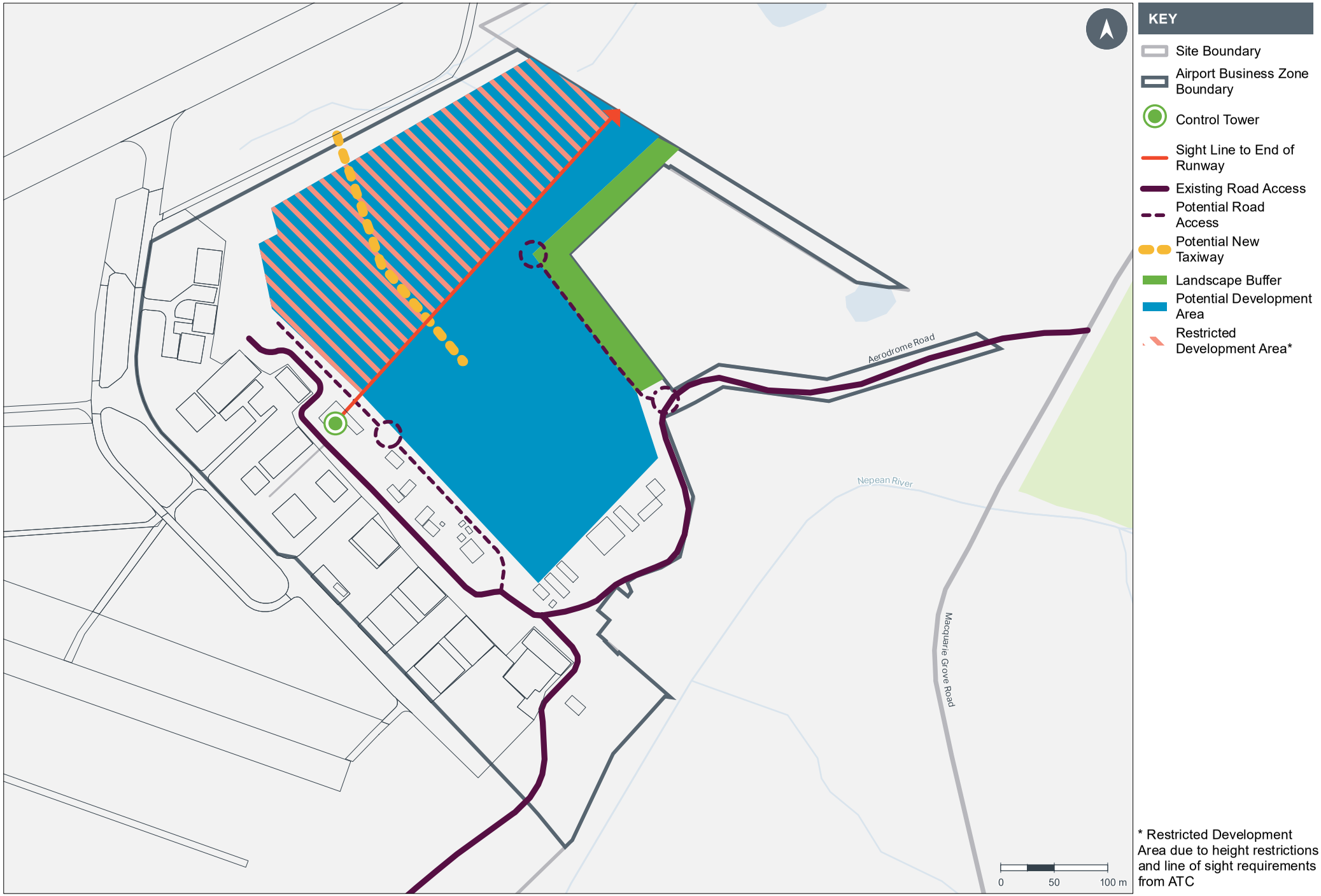
Development within the Zone will consist of a high level of amenity and quality built form.

Development within the Airport Business Zone will be undertaken in accordance with the Airport Business Zone Concept Plan (see Figure 8.7).

Table 8.4: Land Use Table: Airport Business Zone

Land Use Zone: Airport Business Zone	
1. PERMITTED	**AVIATION** - Accommodation for students studying at an aviation educational facility at the Airport - Airport related support industries - Aviation educational facilities - Fixed base operations - Instrument approach procedure - Runways related activities / facilities **COMMERCIAL** - Advertising structures - Business premises - Commercial premises - Communications facility (non-aviation) - Function centre - Hotel or motel accommodation - Office Premises - Research and development facility - Retail premises - Temporary uses and structures **INDUSTRIAL** - Depot - High technology industry - Light industry - Vehicle storage - Warehouse or distribution centres **INFRASTRUCTURE** - Earthworks or engineering works - Communications facilities (non-aviation) - Public utility undertaking - Renewable energy generation facility **COMMUNITY** - Club - Emergency services facilities - Recreation facility - Recreation facility (major) **OTHER** - Ancillary* - Agriculture - Car park - Environmental protection works - Roads
2. MERIT	Any other development not listed in items 1, 3 or 4
3. SENSITIVE	Any item listed in *Section 71A of the Airports Act 1996*
4. PROHIBITED	Residential dwellings

** Ancillary uses relate to subordinate uses to Permitted Uses included in the respective zone. Ancillary uses are defined in Appendix D.*



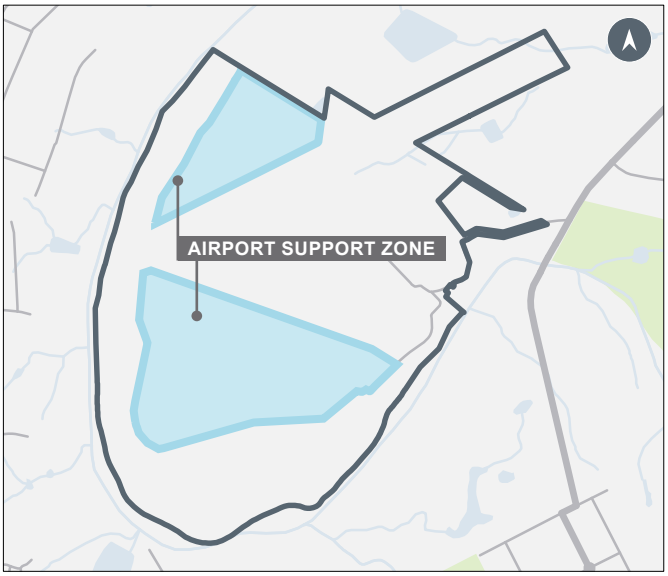
* Restricted Development Area due to height restrictions and line of sight requirements from ATC

PRELIMINARY DRAFT

Figure 8.7: Airport Business Zone Concept Plan

8.4.8 AIRPORT SUPPORT ZONE

The Airport Support Zone includes land both to the north and south of the Aviation Zone. The Southern Airport Support Zone is the current hub for glider activities at Camden Airport. The Northern Airport Support Zone is utilised for farming and agricultural activities, along with aviation-related support activities.



Objectives

The objective for Airport Support Zone is:

- To provide an area accommodating the ongoing aviation operations and aviation-related support activities for Camden Airport.

Desired Future Character

The Southern Airport Support Zone will continue to be utilised for the ongoing glider activities at Camden Airport.

Airspace changes resulting from the future operations of Western Sydney Airport may impact on such activities. However, the development potential of the Southern Airport Support Zone is limited due to flooding.

The Northern Airport Support Zone will continue to be utilised for farming and agricultural activities, and associated aviation-related support activities.

Table 8.5: Land Use Table: Airport Support Zone

Land Use Zone: Airport Support Zone	
1. PERMITTED	**AVIATION** - Airport related support industries - Aviation educational facilities - Fixed base operations - Instrument approach procedure - Runways related activities / facilities **COMMERCIAL** - Research and development facility - Temporary uses and structures **INFRASTRUCTURE** - Earthworks or engineering works - Communications facilities (non-aviation) - Public utility undertaking - Renewable energy generation facility **COMMUNITY** - Club - Emergency services facilities - Recreation facility **OTHER** - Ancillary* - Agriculture - Car park - Environmental protection works - Roads
2. MERIT	Any other development not listed in items 1, 3 or 4
3. SENSITIVE	Any item listed in *Section 71A of the Airports Act 1996*
4. PROHIBITED	Residential dwellings

** Ancillary uses relate to subordinate uses to Permitted Uses included in the respective zone. Ancillary uses are defined in Appendix D.*

8.4.9 AIRPORT RIPARIAN ZONE

The Airport Riparian Zone is the portion of the Camden Airport Site with ecological and environmental importance adjacent the Nepean River.

Objectives

The objective for Airport Riparian Zone is provide an area accommodating:

- Open space, recreational and compatible uses which maintain and enhance the ecological and environmental aspects of the Zone
- Protection of ecological and environmentally significant areas
- On-going flood mitigation measures and river bank protection.

Desired Future Character

Allowing for recreational and compatible uses, whilst maintaining the ecological and environmental significance of the Zone.

Table 8.6: Land Use Table: Airport Riparian Zone

Land Use Zone: Airport Riparian Zone	
1. PERMITTED	**AVIATION** - Instrument approach procedure - Runways related activities / facilities **COMMERCIAL** - Temporary uses and structures **INFRASTRUCTURE** - Earthworks or engineering works **COMMUNITY** - Club - Community facility - Emergency services facilities - Recreation facility **OTHER** - Ancillary* - Agriculture - Environmental protection works
2. MERIT	Any other development not listed in items 1, 3 or 4
3. SENSITIVE	Any item listed in *Section 71A of the Airports Act 1996*
4. PROHIBITED	- Residential dwellings - Industry

** Ancillary uses relate to subordinate uses to Permitted Uses included in the respective zone. Ancillary uses are defined in Appendix D.*

8.5 OTHER PLANNING CONSIDERATIONS

8.5.1 PRE-EXISTING INTERESTS

There are several interests which existed prior to CAL taking over the management of the Airport. Thee continue to operate, and include:

- Easements registered on the title (as shown on Figure 8.8) relating to drainage, sewerage, electricity and rights of access (use of Aerodrome Road by adjacent property owners)
- Leases to Airservices.

In any proposals for future development on Airport land, CAL will act consistently with the obligations and interests that exist with pre-existing interests.

8.5.2 SURROUNDING LAND USES

The land immediately surrounding Camden Airport has a relatively open and rural character.

The Nepean River and Macquarie Grove Road generally acts as a buffer to the adjacent large lot rural living areas of Ellis Lane (to the west) and the surrounding primary production areas. The exception being the adjacent dwellings (on large allotments) immediately adjacent the eastern side of the Airport (and accessed via Aerodrome Road).

A major new regional sport and recreational facility, "Fergusons Land Premier Cricket Facility" is proposed immediately to the south of the Airport. Other projects adjacent the Airport include both residential and aged care facilities.

CAL will continue to monitor development surrounding the Airport. This will include the review of any proposed strategic plans, planning policies and master plans that may affect Airport operations.

CAL will also review and comment on any proposed development that may be of a sensitive use, within locations that may impact the Airport, public safety areas, or be of a height and scale which may impact on-airport operations (as detailed in Chapter 6.0 – Airport Safeguarding).

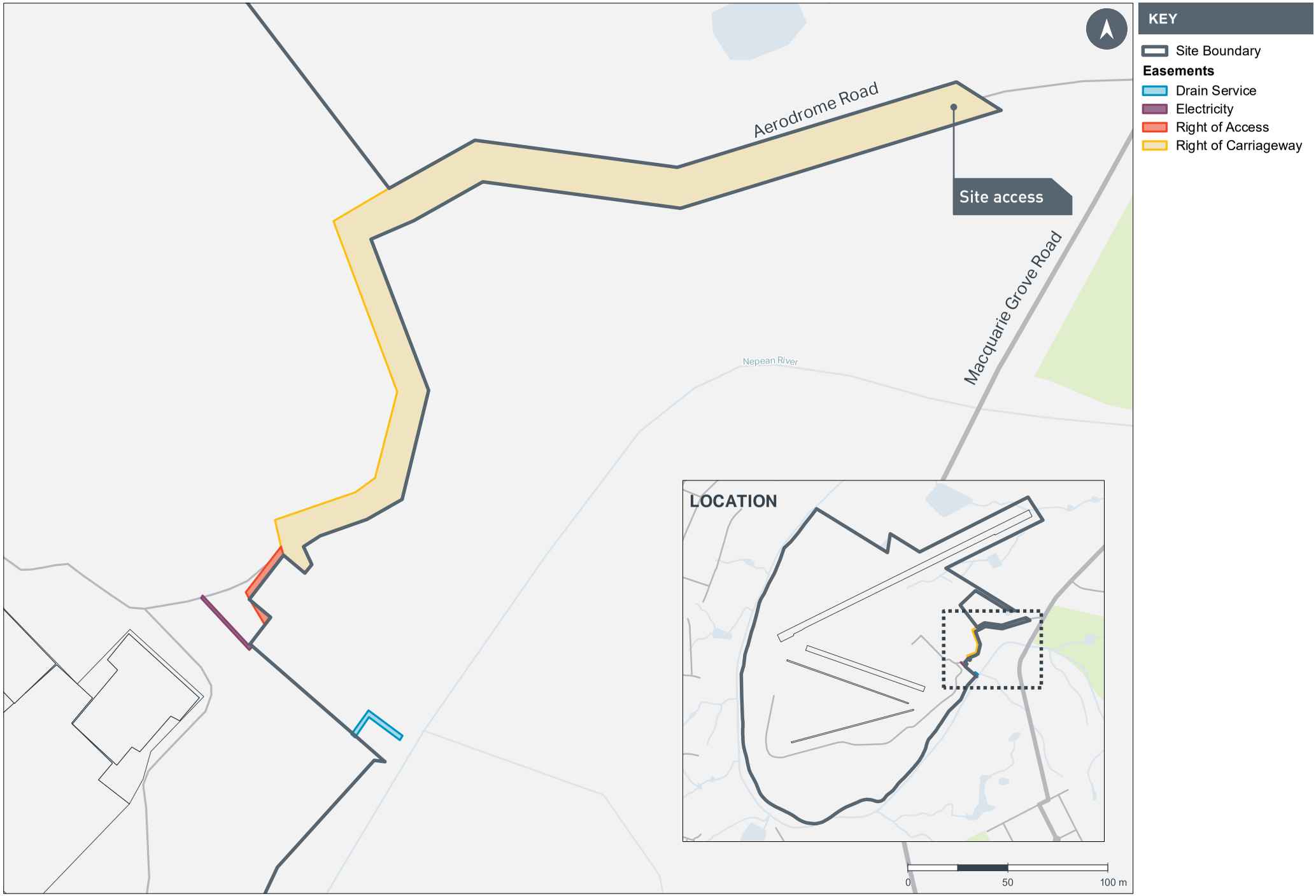


Figure 8.8: Airport Easements

9.0

DEVELOPMENT PROGRAM

9.1 OVERVIEW

TO ACHIEVE THE VISION FOR CAMDEN AIRPORT OF CONTINUING TO BE THE GENERAL AVIATION AND RECREATIONAL AIRPORT SERVICING THE SOUTH WEST GROWTH CENTRE OF SYDNEY AND A BESPOKE COMMERCIAL AND EMPLOYMENT HUB FOR THE CAMDEN REGION, THE FOLLOWING DEVELOPMENT PLAN WILL BE IMPLEMENTED.

This section has been prepared to guide future Airport development.

A number of potential future developments have been identified in the Master Plan. These are planned to be within the eight year planning horizon.

Development at the Airport will focus on:

- Supporting and growing on-going aviation operations, including new hangar facilities
- Low traffic generating warehousing and commercial development
- Agricultural/horticultural activities
- Potential renewable energy operations (i.e. solar farm).

Over the eight year planning horizon, the implementation of this Master Plan will increase the level of employment and economic activity generated at the Airport, creating jobs at a local, regional and State level. However, changes in market conditions may impact on aviation and non-aviation development, which in turn may influence infrastructure timing and delivery.

By 2027

Approximately 390 FTE
FTEs direct employees (almost 300% increase from 2019)

Almost $200 Million Economic Contribution
NSW economy (more than 180% increase from 2019)

9.1.1 MASTER PLAN ECONOMIC IMPACT

The implementation of this Master Plan will increase the level of employment and economic activity generated by the Airport.

Economic modelling commissioned by CAL indicates that by 2027 the Airport is likely to contribute (both directly and indirectly) more than $276 million annually to the NSW economy (Hudson Howells, 2019).

The current economic impact of the Airport and its potential future growth following the implementation of this Master Plan is provided in Table 9.1.

Table 9.1: Economic Contribution of Camden Airport Operations (Source: Hudson Howells 2019)

Economic Contribution	Current (2019)	2027
Direct On-airport	$42.3 m	$78.5 m
Camden Region	$84.5 m	$152.7 m
New South Wales	$110.0 m	$198.1 m

9.1.2 EMPLOYMENT IMPACT

The Airport currently provides direct employment (both on and off-Airport) for more than 200 people. By 2027, direct Airport employment is forecast to grow to approximately 390 FTE.

Such forecast employment growth will be achieved by new and expanded aviation operations, including new hangar facilities, along with commercial/warehousing development within the 'potential development area' (see Figure 8.7)

The forecast employment growth from activities at the Airport is provided in Table 9.2.

Table 9.2: Direct Employment in Air Transport Activities (Source: Hudson Howells 2019)

Direct Employment	Current (2019)	2027
Direct Employment in Air Transport Activities	209	268
Direct Employment in Other Activities	0	123
Total	**209**	**391**

This Master Plan will deliver a wider employment benefit within NSW, creating over 950 State-wide jobs over the eight year planning period to 2027, as shown in Table 9.3.

Table 9.3: Contribution to Regional Employment to 2027 (Source: Hudson Howells 2019)

Contribution to Regional Employment to 2027	Current (2019)	2027
Contribution to employment in the Camden Region (FTE)	409	740
Contribution to employment in NSW (FTE)	528	950

9.2 EIGHT YEAR DEVELOPMENT PROGRAM

Within the eight year planning horizon, a number of possible development projects have been identified at the Airport. These are categorised as Aviation Activity and Non-Aviation Activity.

AVIATION ACTIVITY

- Aviation activity will continue to generate revenue for the Airport over the eight year period of this Master Plan
- In the eight year planning period to 2027, additional aviation organisations (employing approximately 30 FTE), along with new hangar facilities, are anticipated to be the major focus of new aviation development at the Airport
- Under current conditions, the number of aircraft movements is forecast to grow from 104,838 to 113,101 in the eight year planning period to 2027.
- Development of the vacant land within the Airport Business Zone may be utilised for expansion of aviation operations (new taxiway, aprons and hanger facilities). The extent of such facilities will be dependant on aviation demand.

Aviation and non-aviation development at Camden Airport will be subject to commercial demand and market condition.

NON-AVIATION ACTIVITY

- Development of the vacant land within the Airport Business Zone will also consider new non-aviation development at Camden Airport. Such development to accommodate warehouse and commercial activities, will be subject to infrastructure improvements (e.g. site works, access roads and services infrastructure)
- Within the northern section of the Airport Support Zone, development is more limited. This is due to site access, services infrastructure and flood management. This section of Camden Airport could be developed for low traffic generating uses such as agriculture, horticulture, or potentially renewable energy operations (i.e. solar generation facilities).

A Development Concept for the vacant land is provided in Figure 9.1

POTENTIAL RENEWABLE ENERGY OPERATIONS (I.E. SOLAR GENERATION FACILITIES)

CAL is investigating the potential for small-scale solar generation facilities in the northern section of the Airport Support Zone. Such renewable energy facilities would aim to reduce reliance on external power sources for the Airport.

Consideration will be given to any impacts such a facility will have on aviation operations and safety.

Figure 9.1: Potential Development Area (Airport Business Zone) - Development Concept

Table 9.4: Eight Year Development Program

Zone	Potential Development	Trigger/Comment
AVIATION DEVELOPMENT		
Airport-wide	Responding to CASA MOS 139 - transition from a Registered to a Certified Aerodrome: • Updated Aerodrome Operations Manual • Updated Safety Management System process • Annual Aerodrome Technical Inspections • Wildlife Hazard Management Plan • New Aerodrome Emergency Plan • Additional Aerodrome Serviceability Inspection requirements	Legislative requirement
Airport Business Zone	New aircraft hangar development	Demand
Airport Business Zone	Hangar refurbishment program	2020-2022, and subject to ongoing leasing demand
Airport Business Zone	Taxiway and apron expansion (to service new hangars)	Demand
Airport Business Zone	New aircraft parking area	Demand
Airport Support Zone and Aviation Zone	Grass maintenance program for grass runways	Ongoing
Aviation Zone	Runway 06/24 – Review and upgrade of the asphalt runway surface	Review within eight years. Maintain and upgrade surface as required
NON-AVIATION DEVELOPMENT		
Airport Business Zone	Commercial development near Aerodrome Road – to facilitate new low traffic generating commercial and warehouse/storage development	Demand
Airport Support Zone (North)	Farming, agriculture and potential renewable energy facilities (solar farm)	Demand
Airport Support Zone (South)	Maintain use for gliding activities	As required

9.3 TWENTY YEAR DEVELOPMENT PROGRAM

Towards the end of the eight year planning period, Western Sydney Airport will be operational. This will likely impact aviation operations within the Sydney basin, including operations at Camden Airport.

As a result, it is difficult to predict the changes in aviation operational arrangements. However, it is forecast that aviation operation at Camden Airport beyond the eight year planning period to 2040, will continue to have limited growth (annual growth of approximately 0.3%), with the Airport continuing to service the general aviation, sporting and recreational aviation market.

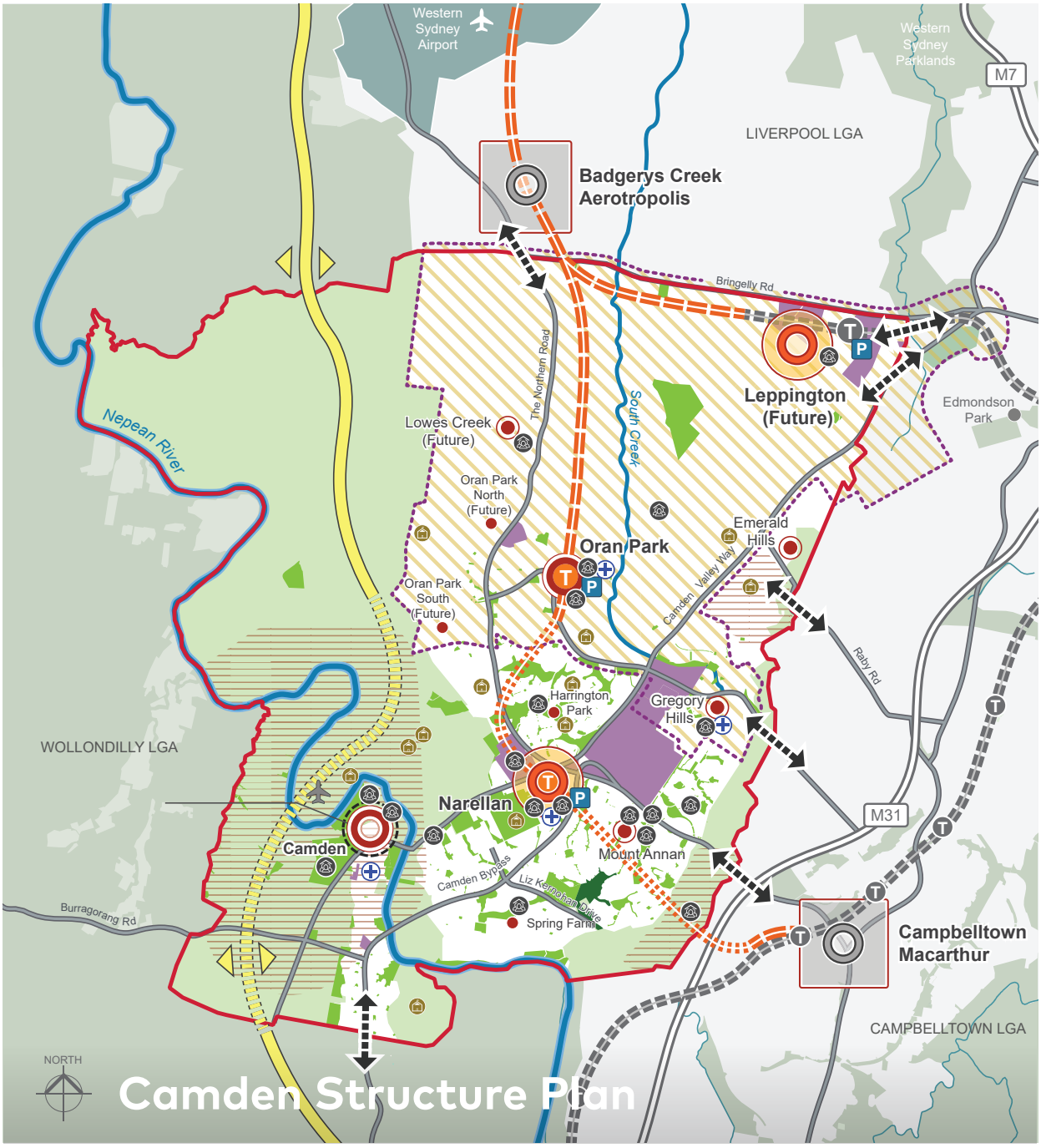
There are no major aviation improvements planned or proposed beyond the eight year planning period, accepting for the potential further development of the Potential Development Area of the Airport Business Zone. Camden Airport will continue to monitor the impacts of the commencement of operations at Western Sydney Airport, complimentary aviation opportunities with Bankstown Airport, and the potential to expand aviation emergency services activities at the Airport.

As a result of the limited land availability and development constraints at Camden Airport, it is anticipated that limited non-aviation development will be undertaken beyond the eight year planning horizon. Further redevelopment and intensification may occur.

Camden Airport will continue to monitor and be responsive to the anticipated population growth for the Camden Council Area, which is anticipated to grow by approximately 4.7% per annum between 2019 and 2036 (to almost 234,000 residents).

Figure 9.2 is an extract from the Camden Structure Plan (from the Camden Council Draft Strategic Statement 2019). This Plan recognises the proximity and setting of Camden Airport to the Camden Local Centre, the tourism region of the south-western section of the Council area, and the proposed M9 Alignment/Tunnel (indicated to traverse below the Airport site).

Camden Airport will continue to monitor and respond to such regional growth, ensuring that the Airport supports the general aviation and business needs of the region.



- Metropolitan Cluster
- Strategic Centre
- Town Centre
- Local Centre
- Neighbourhood Centre
- Art/ Culture/ Community Facility
- Medical
- State-listed Heritage Item
- Future Urban Area (SWGA) - Housing Capacity
- National Park
- Reserve/ Parkland
- Scenic Land (Metropolitan Rural Area)
- Scenic Viewscape
- Proposed M9 Alignment/ Tunnel
- Proposed M9 Entry/ Exit
- Proposed Train Line/ Tunnel
- Proposed Train Station
- Existing Train Station
- Proposed Commuter Carparking
- Key Transport Connection
- Tourism
- Existing Employment Area
- Camden LGA Boundary

Figure 9.2: Extract from the Camden Structure Plan (Source: Camden Council Draft Strategic Statement 2019)

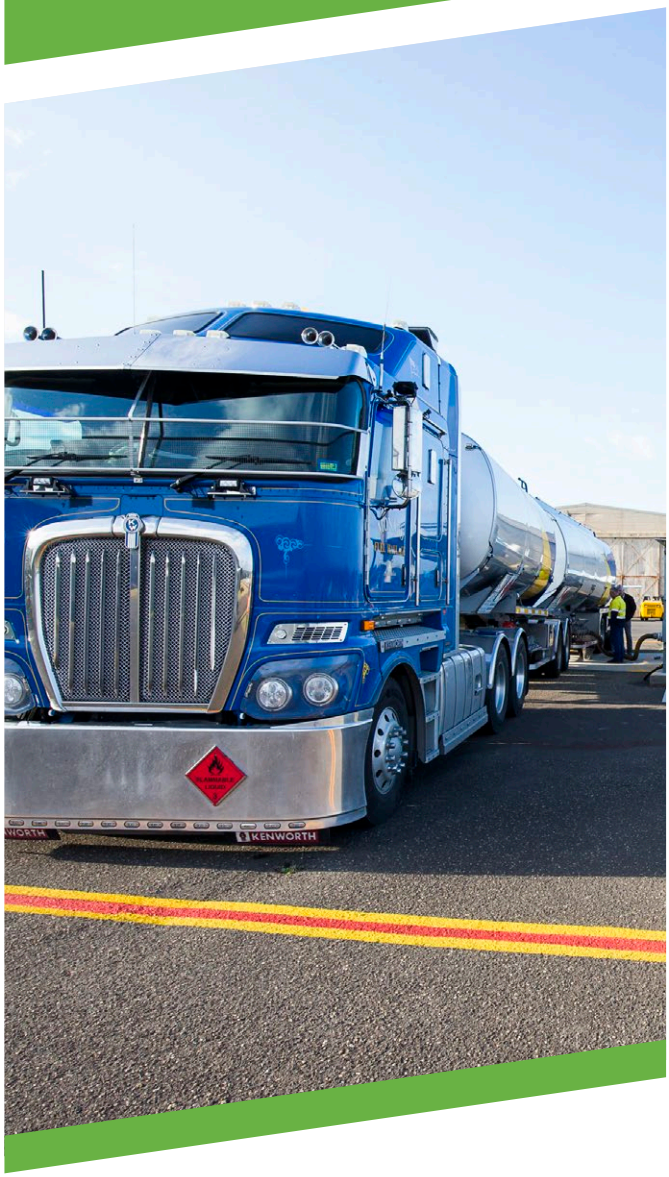

AIRPORT
OPERATIONS

10.0

GROUND TRANSPORT PLAN

10.1 OVERVIEW

THE GROUND TRANSPORT PLAN FOR 2020–2028 IS BASED ON THE CURRENT LANDSIDE ROAD NETWORK AND SURROUNDING ACCESS ROADS TO CAMDEN AIRPORT. MINIMAL CHANGE TO THE ROAD NETWORK IS CONTEMPLATED OVER THE NEXT EIGHT YEARS.



The Ground Transport Plan has been prepared to support the aims and objectives of Master Plan 2020. The Ground Transport Plan recognises that road access to Camden Airport is limited to Aerodrome Road, accessed off Macquarie Grove Road, with no public transport access.

The Ground Transport Plan has been prepared in collaboration with Transport for NSW (TfNSW) and Camden Council.

Whilst recognising such limited access, and limited ground transport demand to and from the Airport, the Ground Transport Plan considers the following:

- The Airport's relationship to existing ground transport links
- Vehicular traffic growth, as a result of proposed Airport development and organic growth
- State and local government plans and future considerations
- Potential transport disruptors and innovations
- The relationship between 2015 Master Plan and this Master Plan
- Any priority ground transport improvements identified in the eight year planning period for Master Plan 2020
- The 20-year vision for ground transport at the Airport.

10.2 GROUND TRANSPORT INFRASTRUCTURE

Camden Airport is located on a bend of the Nepean River within an area of the Camden Council that is primarily zoned for Large Lot Residential and Primary Production and has an open rural character. There is limited major road access within the region.

10.2.1 REGIONAL ROAD NETWORK

The M31 Hume Motorway is the closest motorway to Camden Airport, located approximately eight kilometres to the south-east of the Airport. The Hume Motorway is a major inter-city national highway connecting Sydney and Melbourne.

The closest major arterial road is the A9 Motorway Road (The Northern Road), approximately three kilometres to the east of the Airport. The A9 Motorway connects Penrith and the Western Growth Area of Sydney with Campbelltown and the South-Western Growth Area.

Camden Valley Way, located approximately four kilometres to the east of the Airport, is a State Road running from near the intersection of the M7 and M5 Motorways at Casula to Camden. Camden Valley Way meets Narellan Road at a signal controlled cross intersection.

Narellan Road is another State Road, running east west between Camden Valley Way and the M31 Hume Motorway. Narellan Road is a multi-lane, divided arterial road which meets the M31 Hume Motorway at a fully grade separated interchange.

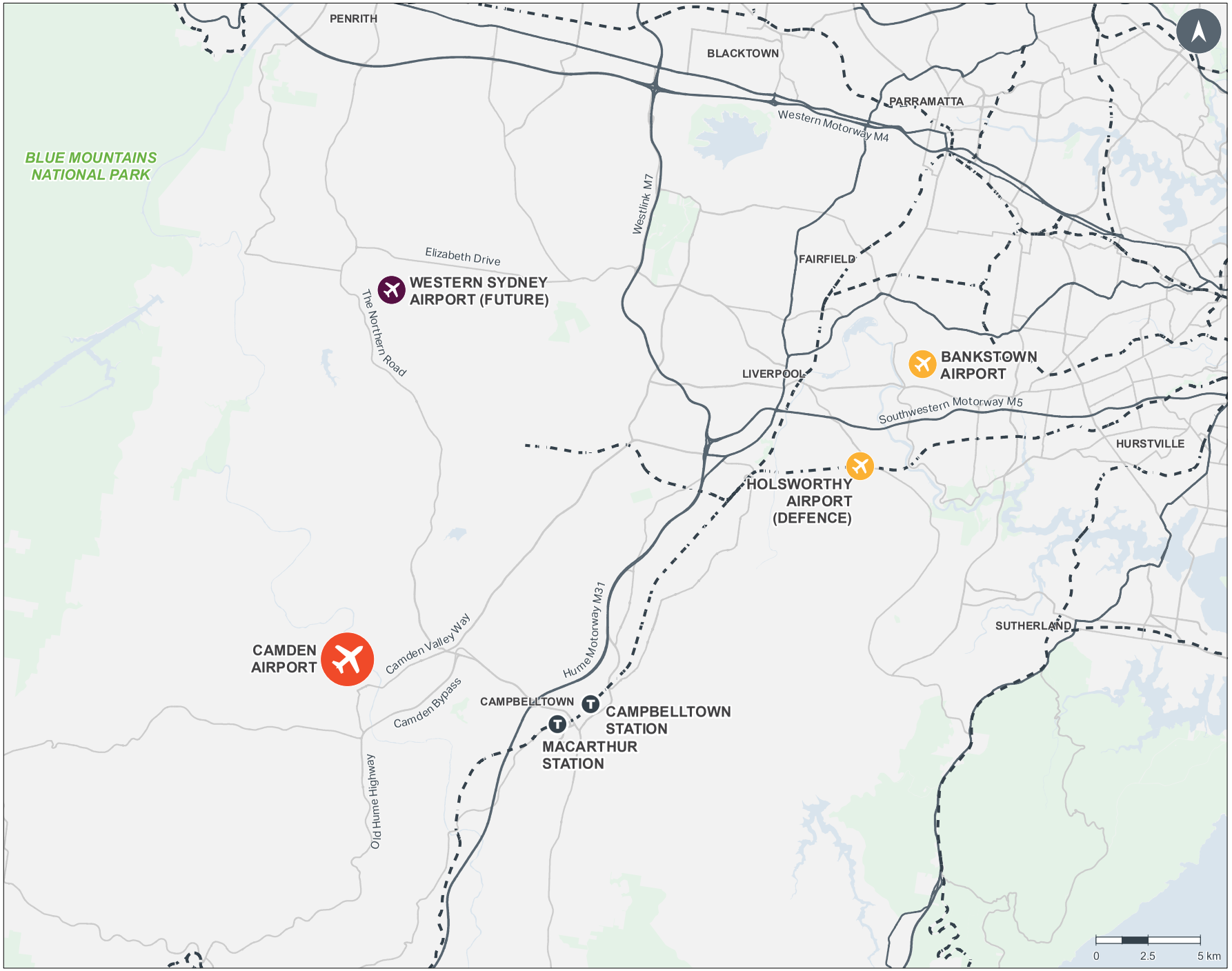


Figure 10.1: Regional Context

10.2.2 LOCAL ROAD NETWORK

There is only one access road into Camden Airport, Aerodrome Road. Aerodrome Road meets Macquarie Grove Road at a T-junction immediately to the east of the Airport. This intersection is controlled by a Stop sign for traffic exiting Aerodrome Road at this intersection.

Macquarie Grove Road is a local road under the care and control of Camden Council, and runs generally north-south between Camden town centre and Cobbity Road – a length of approximately 4.5 kilometres.

Macquarie Grove Road is a two-lane undivided road, rural in nature, with unsealed road shoulders and no kerbing or guttering. The bitumen road is generally 6.5 to 7.0 metres in width and is in good condition.

A two-lane concrete bridge over the Nepean River is located on Macquarie Grove Road approximately 150 metres south of the intersection with Aerodrome Road.

Macquarie Grove Road north of Aerodrome Road leads to Cobbity Road and The Northern Road to the north-east of the Airport.

10.2.3 AIRPORT ROADS

Aerodrome Road, located on the site of Camden Airport, is approximately 1.1 kilometres in length. Aerodrome Road provides the only vehicular access into the Airport, and services several residential properties that are situated adjacent the Airport.

Aerodrome Road is a two-lane undivided road with a marked broken centre line. The road varies in width between 5.5 and 6.5 metres, is bitumen sealed, with unsealed shoulders of varying width. To control traffic speed, two speed humps have been installed. Aerodrome Road is in fair condition.

Upon reaching the airport landside area, the road turns to the north-west and widens to facilitate parking and access to hangars and aviation-related buildings. The road terminates at a car park near the Phoenix Aero Club.

The Airport Perimeter Road runs from Aerodrome Road around the southern and western airside / landside boundary of the Airport to an airside access gate at the glider hangar area. The Airport Perimeter Road is bitumen sealed, approximately 3.0 metres in width and 1.7 kilometres in length. A landside compacted rubble vehicle track continues beyond the Airport Perimeter Road, providing vehicular access to the weir on the Nepean River.

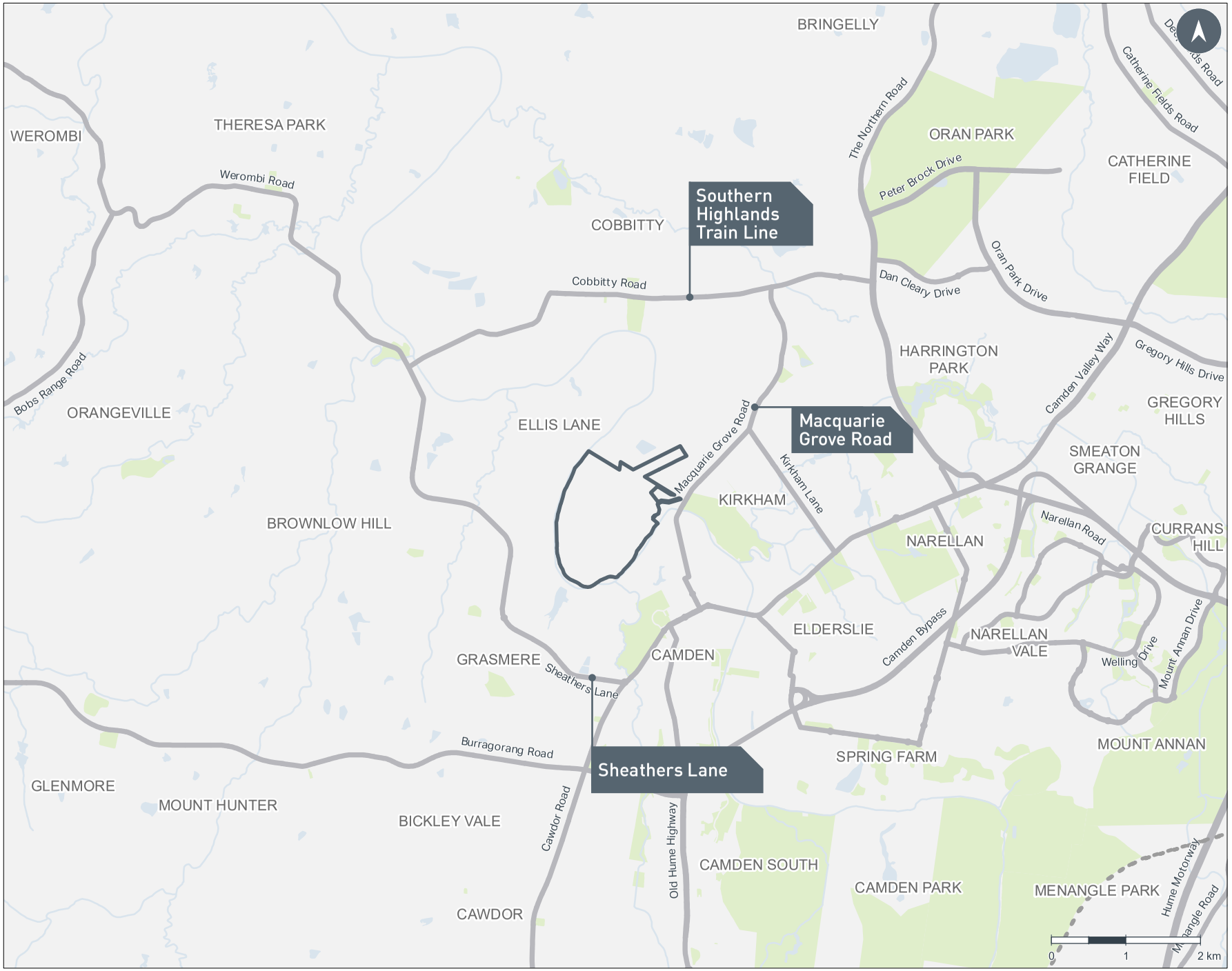


Figure 10.2: Local Context

10.2.4 HEAVY VEHICLE ACCESS

There are currently no aviation freight operations at Camden Airport, with no plans for any future aviation freight activities. Heavy vehicle access to the Airport is limited to low volumes of maintenance service vehicles and refuelling trucks.

There are no load limits on the external access roads or Aerodrome Road. Trucks that currently service the Airport do not experience any access or on-site manoeuvrability issues.

10.2.5 CAR PARKING

There are currently no demand pressures on car parking at Camden Airport.

There are approximately 200 formalised and informal car parking spaces in the Airport Business Zone (servicing the existing hangar and aviation facilities). In addition, there is an informal car parking area for glider operators, accessed from the Airport Perimeter Road.

10.2.6 PUBLIC TRANSPORT

Camden Airport's land access is entirely by road.

Currently, there are limited public transport services to Camden Airport available along Macquarie Grove Road (school buses excepted).

The closest public railway stations are the Campbelltown and Macarthur Stations on the Southern Highlands line, both located approximately 10 kilometres to the east of Camden Airport.

10.2.7 FOOTPATHS AND CYCLEWAYS

There are no cycling or walking facilities provided along Macquarie Grove Road, although there is nothing preventing cyclists using Macquarie Grove Road and Aerodrome Road for access. In practice however, the relative remoteness of the Airport, the ease of car access and good availability of on-site parking results in no known use of any alternate transport modes by staff or visitors to Camden Airport.

10.3 PROJECTED GROUND TRANSPORT DEMANDS

10.3.1 CURRENT TRANSPORT DEMANDS

Camden Airport is predominantly used as a general aviation, sporting and recreational airport, and the use of all developed buildings on the Airport is aviation related. Ground traffic volumes are quite light and are spread across daylight hours seven days per week, with weekends being slightly busier than weekdays.

To inform the Ground Transport Plan, a traffic survey was undertaken in September 2019. Traffic volumes for both Aerodrome Road (80 metres west of Macquarie Grove Road) and Macquarie Grove Road (at the Nepean River Bridge) were collected for this period, with the survey results shown in Table 10.1.

The seven day average of traffic movements on Aerodrome Road is higher than the weekday average, reflecting the expanded weekend activity at Camden Airport by flying schools and sporting and recreational aviation activity. The peak hour for traffic movements was identified as 12:00pm-1:00pm, with a two-way peak hour traffic flow on Aerodrome Road of 72 vehicles.

The average daily traffic volumes using Aerodrome Road have remained relatively unchanged since Master Plan 2015, with an annual growth of approximately 1.4% during this period (see Table 10.2).

Macquarie Grove Road has a higher weekday average vehicle movement, reflective of its role in servicing the surrounding low scale residential and primary production areas. Since Master Plan 2015, the average traffic volumes on Macquarie Grove Road have increased from 4,023 vehicles per day (2015), to 4,748 vehicles per day, representing an annual growth of approximately 4.2% (see Table 10.2). Such growth is reflective of recent developments within the region.

Table 10.1: Current Year (2019) Traffic Volumes

Location	Weekday Average	7 Day Average
Aerodrome Road 80 metres west of Macquarie Grove Road	479	522
Macquarie Grove Road at the Nepean River Bridge	5,120	4,748

Table 10.2: Regional Traffic Growth

Location	Average Daily Traffic Volume (ADT) (vehicles per day)		Per annum growth rate
	2015 ADT	2019 ADT	
Aerodrome Road turning movements	494	522	1.4%
Macquarie Grove Road through-movements	4,023	4,748	4.2%

10.3.2 FUTURE TRAFFIC DEMANDS

With only one vehicle access into the Airport, future traffic demand has focussed on the performance of the intersection of Aerodrome Road with Macquarie Grove Road. SIDRA intersection modelling was undertaken for two future year scenarios, 2028 and 2040.

Two external growth factors have been taken into consideration in anticipating future traffic demands:

- General regional population and employment growth (based on historic trends)
- Oran Park development, as part of the NSW Government's South West Growth Area Strategy.

These external growth factors are summarised below:

General regional population and employment growth

Forecast population growth for the Camden Council Area between 2019 and 2036 is anticipated to be approximately 4.7% per annum.

Oran Park Development

As discussed in Chapter 3.0, the NSW Government has announced a South West Growth Area Strategy to support opportunities for new jobs and homes around the planned Western Sydney Airport. In the Camden Council Area, such growth would largely be at Oran Park. The traffic impact consequences of such development at Oran Park will have negligible impacts on traffic volumes using Macquarie Grove Road (i.e. less than 7 additional vehicles per hour in peak periods).

A summary of forecast peak-hour traffic volumes for 2028 and 2040 are provided in Table 10.3 below.

Using the forecast 2028 and 2040 traffic volumes and taking account future development opportunities at Camden Airport within the eight year planning period of this Master Plan (as indicated in Figure 8.7 and Chapter 9.0), additional SIDRA modelling was undertaken to assess the future intersection performance for the Aerodrome Road / Macquarie Grove Road intersection.

The NSW Roads and Maritime Services publishes guidelines for intersection performance. Intersection performance is based on the Level of Service and Degree of Saturation of the intersection.

The Level of Service outputs indicate that, with the additional development proposed at Camden Airport, the Aerodrome Road / Macquarie Grove Road intersection will continue to operate satisfactorily in 2028 and 2040, with the current traffic control devices (i.e. Stop Sign) being acceptable.

The Degree of Saturation outputs indicate that the intersection is expected to have spare capacity in 2028 and 2040.

There have been no issues identified in relation to the safety of the Aerodrome Road/Macquarie Grove Road intersection. However, with future growth, an accident study of the intersection may be undertaken prior to 2040 (subject to demand).

Internal Road Network Improvements

As shown in Figure 8.7, internal road improvements are proposed to maintain vehicular access to the existing aviation infrastructure and to service the proposed 'potential development area' (aviation and commercial/ warehouse development).

Through the design and approval process, consideration will be given to the need (or otherwise) for a Major Development Plan to be prepared and approved for the project.

Table 10.3: Future Forecast Peak-Hour Traffic Volumes

Location	Peak Hour Demand (bi-directional)		
	Current (2019)	2028	2040
Macquarie Grove Road at the Nepean River Bridge	388	690	1,222
Aerodrome Road 80 metres west of Macquarie Grove Road	73	83	98

10.4 TRANSPORT PLANS AND OTHER FUTURE CONSIDERATIONS

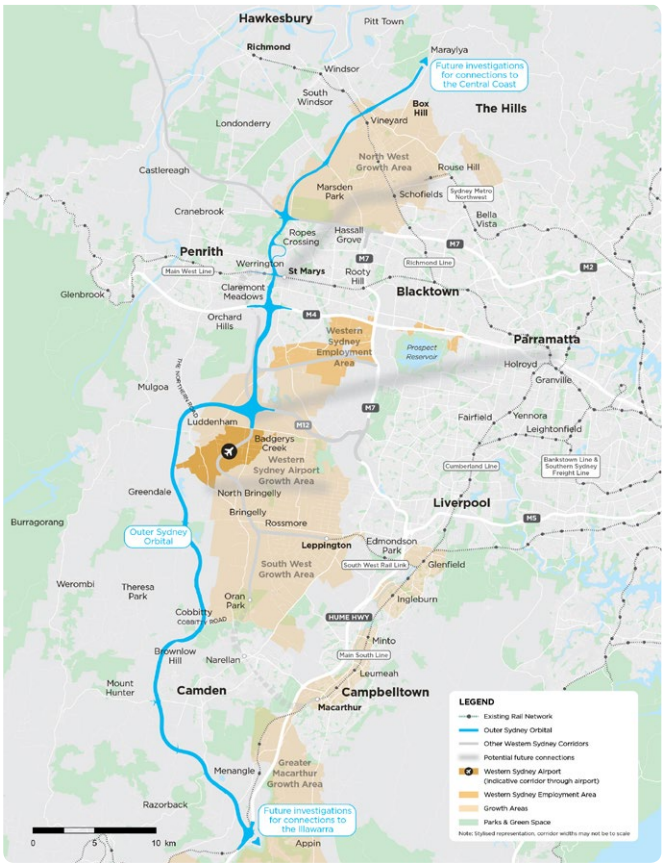
10.4.1 NEW SOUTH WALES GOVERNMENT TRANSPORT PLANS

As detailed in Chapter 3.0, the NSW Government has developed a broad strategic framework for population and employment growth and infrastructure development at the State, regional and local level.

From a ground transport perspective, the Greater Sydney Regional Plan identifies the importance of long-term transport and infrastructure corridors (see Figure 10.3), including the planning for the future Outer Sydney Orbital transport connection (future road and freight rail connection). This corridor is identified within close proximity of Camden Airport. The Western City District Plan and Future Transport Strategy 2056 provide greater detail in relation to the priority Growth Areas and the future Outer Sydney Orbital Investigation Corridor (see Figure 10.4).

Transport for NSW, in planning for the long-term transport needs of Western Sydney, has identified and is seeking to protect corridors of land that can be used to deliver transport infrastructure when needed in the future. The Future Western Sydney Corridors map is shown in Figure 10.3, with the section between Cobbity and the Hume Interchange shown in Figure 10.4.

The Cobbity and the Hume Interchange provides for a future tunnel of approximately 10 kilometres from north of Cobbitty Road, Cobbitty to south-east of Cawdor Road, Cawdor to minimise the impact of the Outer Sydney Orbital on communities at Cobbitty, Brownlow Hill, Grasmere and Ellis Lane.



Transport for NSW will continue working with the Greater Sydney Commission, Department of Planning and Environment, local councils, community and stakeholders to refine the recommended corridor.

Figure 10.3: Future Sydney Corridors

Future Western Sydney Corridors
Cobbitty to Hume Interchange

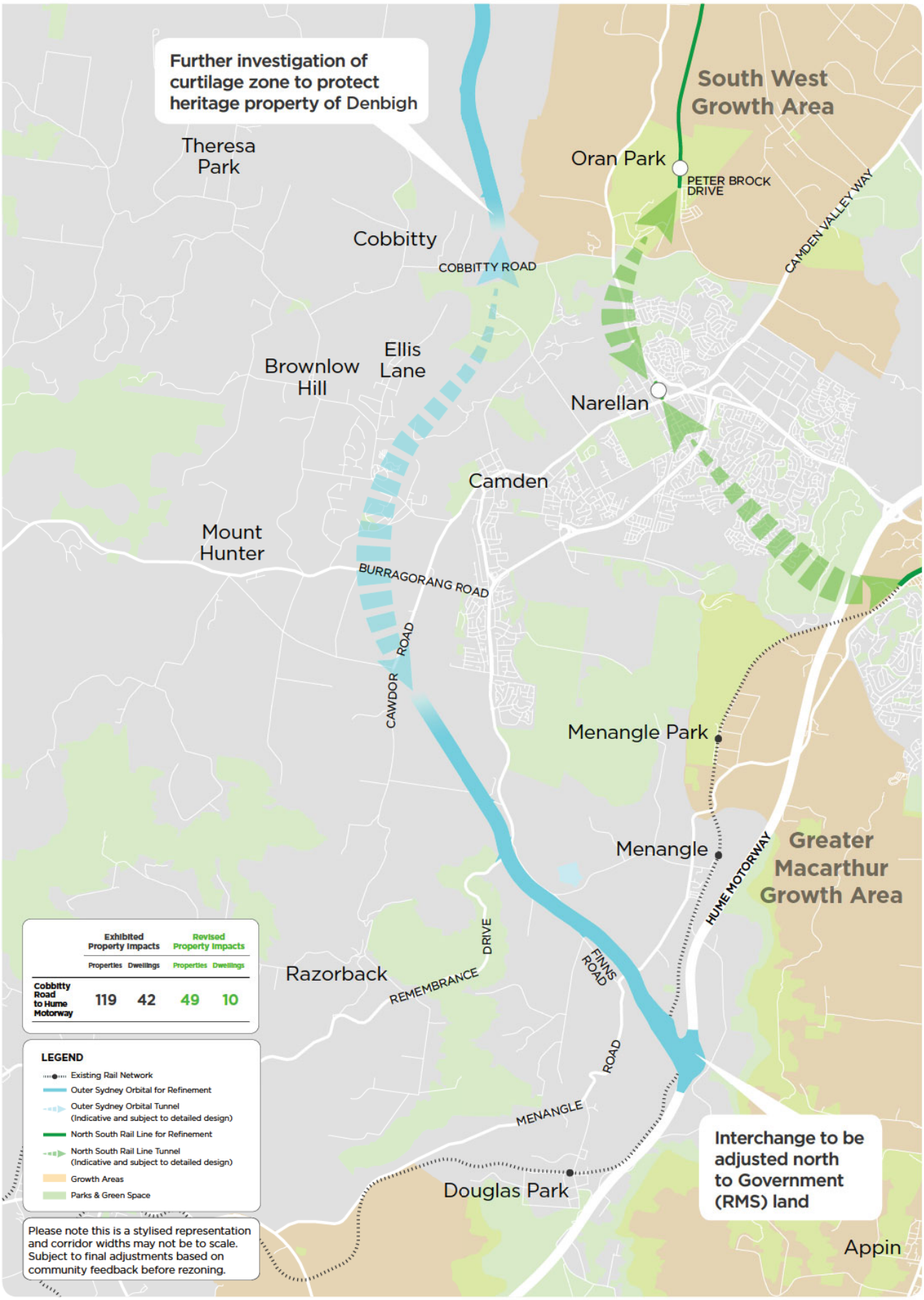


Figure 10.4: Future Sydney Corridors – Cobbity to Hume Interchange

10.4.2 CAMDEN COUNCIL TRANSPORT PLANS

The *Camden Community Strategic Plan 2019* also identifies the alignment of the proposed future Outer Sydney Orbital transport connection, noting that the *Camden Draft Local Strategic Planning Statement* identifies the future Outer Sydney Orbital as a road tunnel through or adjacent Camden Airport (see section 3.5).

As part of the Oran Park development, a new road is planned to the north off the intersection of Macquarie Grove Road and Cobbitty Road.

Camden Council has no known plans to upgrade the Aerodrome Road/Macquarie Grove Road intersection.

10.4.3 TRANSPORT DISRUPTION AND INNOVATION

Whilst emerging innovations in transport will have an impact on the way we live and move around our cities, the impact on Camden Airport operations is considered minimal, particularly over the eight year planning period of this Master Plan.

Emerging innovations include:

- Aviation drones
- Autonomous vehicles
- Mobility as a Service (peer-to-peer ride sharing and single payment on-demand trips)
- On-demand public transport
- Bike share schemes.

Due to the limited traffic volumes and public transport options to the Airport, such emerging innovations are unlikely to have a significant impact on operations at Camden Airport. The exception to this is the future development of aviation drones and 'Mobility as a Service', particularly with the likely introduction of aviation taxis (i.e. Uber Air).

Whilst minimal change is anticipated in the eight-year Ground Transport Plan, such emerging trends and technologies will continue to be monitored and responded to as necessary.

10.5 NEW GROUND TRANSPORT PLAN

Small scale expansion of aviation operations and limited commercial development is proposed at Camden Airport in the eight year planning period for this Master Plan.

The existing single road access into and out of Camden Airport, Aerodrome Road, will remain unchanged, with no justification for any further expansion of such access arrangements.

The Aerodrome Road/Macquarie Grove Road intersection is of an appropriate design and has sufficient capacity to meet the limited commercial growth planned for the Airport over the 20-year planning horizon for the Airport.

10.5.1 EIGHT YEAR GROUND TRANSPORT PLAN (2020-2028)

The focus for the eight year planning period is the development of the internal road network associated with within the Potential Development Area within the Airport Business Zone

Such internal road improvements are shown on the Concept Plan for the Airport Business Zone (see Figure 8.7). Any internal road improvements will be designed in accordance with the relevant Australian standards to accommodate anticipated heavy vehicle movements and ensure safe operations for the proposed facility. In addition, car parking associated with any commercial development will provide sufficient on-site car parking to the needs of the specific development requirements.

10.5.2 20-YEAR GROUND TRANSPORT STRATEGY

Transport infrastructure over the long-term cannot be predicted with certainty. However, the likely scale of development at Camden Airport, and the proposal to complete the commercial development identified within the Airport Business Zone within the eight year planning period, will result in limited changes to the ground transport plan in the 20-year planning horizon.

Camden Airport will continue to monitor the internal road network and work closely with Camden Council on any future upgrades of the intersection of Aerodrome Road with Macquarie Grove Road.


3
2

11.0

SERVICES AND INFRASTRUCTURE

11.1 OVERVIEW

CAMDEN AIRPORT OWNS AND MAINTAINS A NETWORK OF UTILITIES TO SUPPLY VARIOUS OPERATIONS AND FACILITIES ACROSS THE SITE INCLUDING POWER, WATER SUPPLY, SEWERAGE AND TELECOMMUNICATIONS. THESE UTILITIES ARE SUPPLIED FROM A RANGE OF EXTERNAL AUTHORITY NETWORKS. THE AIRPORT WORKS CLOSELY WITH AUTHORITIES TO ENSURE THAT ESSENTIAL SERVICES ARE AVAILABLE IN SUFFICIENT QUANTITY AND RELIABILITY TO SUPPORT AIRPORT OPERATIONS.

The Airport is committed to investing in services infrastructure with the objectives of:

- Improving reliability and redundancy in utility networks
- Improving the sustainability of the supply arrangements
- Continuing to support growth projected to occur at the Airport.

In line with forecasts and as various developments take place across the Airport, utilities will be provided to some areas for the first time, while in other areas they will be upgraded as required.

11.2 SERVICES

11.2.1 ELECTRICITY

EXISTING INFRASTRUCTURE

The local internal electrical reticulation network within the Airport is predominantly owned and managed by Camden Airport. The internal network is connected to the external Endeavour Energy 11kVA supply in Macquarie Grove Road at the intersection with Aerodrome Road. This Endeavour Energy supply originates at the Macarthur Bulk Supply Point.

The Endeavour Energy supply is connected to a padmount substation on the Airport, from which electricity is distributed via a CAL operated network to the various Airport facilities and tenants.

NETWORK DEVELOPMENT

Camden Airport proactively consults with Endeavour Energy to provide ongoing information on development proposals at the Airport to ensure that associated demands can be provided from the external network.

It is likely that any substantial proposed developments at the Airport will require an upgrade of the existing electrical supply which would be delivered in close consultation with Endeavour Energy.

Camden Airport recognises the significant potential for management of demand for additional electrical capacity through energy saving measures, alternative supply arrangements and other sustainability initiatives (e.g. solar). Camden Airport will consider these as part of future development on the Airport.

11.2.2 POTABLE WATER

EXISTING SERVICES

Potable Water is supplied to the Airport by Sydney Water from the Macarthur water delivery system, which comprises the Macarthur Water Filtration Plant (WFP) to the south of the site. The plant extracts raw water from Broughton pass weir along the Cataract River.

The Sydney Water supply to the site comprises a 90mm diameter main connected to the 100mm diameter main in Macquarie Grove Road. The Sydney Water assets terminate in Aerodrome Road, beyond which water is distributed to the various CAL assets and tenants by an Airport operated water distribution network.

NETWORK DEVELOPMENT

It is understood that there are capacity limitations within the existing water supply network and that upgrades would be required to meet any substantial additional demand. Any upgrades will be delivered in close consultation with Sydney Water.

CAL recognises the significant potential for management of demand for additional potable water supply through water saving measures and other sustainability initiatives and will consider these as part of future development on the Airport.

It is anticipated that part of the non-potable component of the water demand of new development can be met by providing on-site rainwater tanks or stormwater reuse. As part of network development at the Airport, emergency and firefighting requirements for all areas of the Airport will be accommodated.

WATER LICENSE

CAL holds a licence with the NSW Department of Industry to extract water from the Nepean River, within the Wallacia Weir Management Zone in accordance with the Greater Metropolitan Region Unregulated River Water Sources 2011 Management Plan. It is noted that licences and management plans are amended from time to time, therefore CAL will continue to comply with amended licences and/ or management plans.

11.2.3 WASTEWATER

EXISTING SERVICES

CAL operates an internal wastewater network servicing the various developments and tenants that discharges to a 150mm diameter Sydney Water rising main which crosses the Nepean River to the south of Aerodrome Road. The rising main runs along Macquarie Grove Road, discharging to Sydney Water Pump Station SP0120 to the north of the Camden Township.

This wastewater network ultimately discharges to the West Camden Water Recycling Plant, immediately to the south of the Nepean River. The plant provides tertiary treatment and nutrient removal prior to discharge to a tributary of Matahil Creek.

NETWORK DEVELOPMENT

It is likely that any substantial proposed developments at the Airport will require an upgrade of the existing wastewater network which would be delivered in close consultation with Sydney Water.

CAL recognises the significant potential for management of increased wastewater discharge through water saving measures and other sustainability initiatives and will consider these as part of future development on the Airport.

11.2.4 NATURAL GAS

EXISTING SERVICES

Natural gas is currently not available to the Airport. It is understood that the closest supplies are located with the townships of Grasmere and Camden to the south of the Nepean River.

NETWORK DEVELOPMENT

It is not anticipated that development at the Airport will require a Natural Gas supply, however if required, CAL will liaise with Jemena with regard to provision of the required network infrastructure.

11.2.5 TELECOMMUNICATIONS

EXISTING SERVICES

There is an extensive Telstra telecommunications network within the Airport which is supplied from Macquarie Grove Road. This Telstra network has been used to provide NBN supply to the site.

NETWORK DEVELOPMENT

It is understood that sufficient capacity is available within the existing fibre network to supply future development demand, however ongoing consultation with NBN Co will be undertaken to ensure that this remains the case.

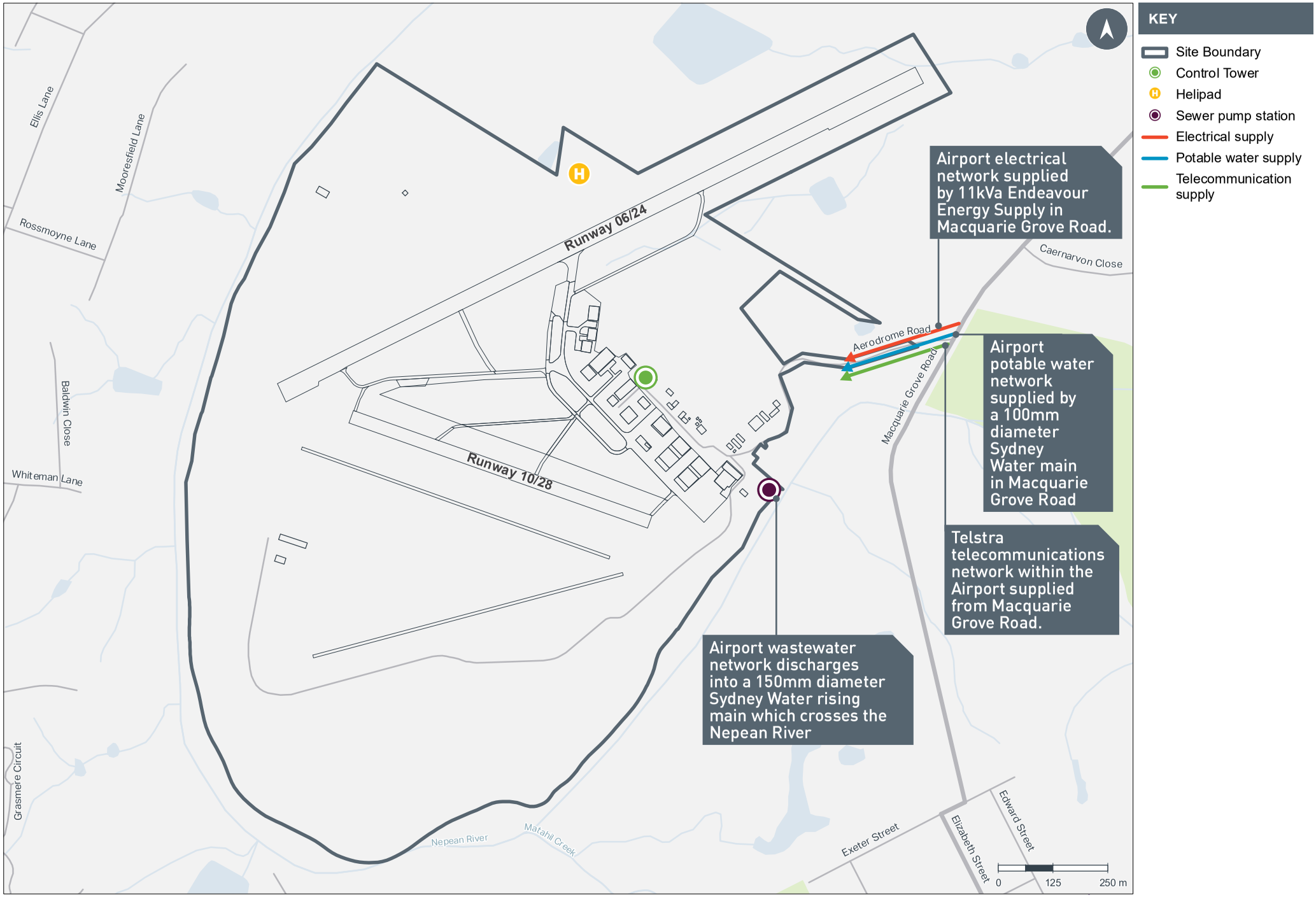


Figure 11.1: Services infrastructure at Camden Airport

11.3 FLOODING AND STORMWATER MANAGEMENT

11.3.1 EXISTING FLOODING CONTEXT

Camden Airport is surrounded on three sides by the Nepean River, close to the confluence with Narellan Creek and Matahil Creek. The catchment contributing to the Nepean River at the Airport is substantial, extending over 50km to the south towards Bowral and incorporating the catchments of the Avon, Cordeaux and Cataract Dams.

Camden Council completed the Nepean River Flood Study in 2015, which defines flooding behaviour within the Local Government Area and will be used to develop flood management measures as part of the subsequent Floodplain Risk Management Study and Plan (FRMS&P). Council has engaged a consultant to undertake the FRMS&P and this work is currently being completed.

Being low lying and adjacent to the Nepean River, the majority of the Camden Airport Site is impacted by flooding. Adjacent to the Airport the river flows from the east (upstream end of the site) to the west (downstream end of the site).

A Flood Certificate for the Airport site provided by Camden Council in October 2019 establishes that the majority of the Airport site is within the 1% Annual Exceedance Probability (AEP), meaning that the likelihood of a flood of a given size (or larger size) has a 1% chance of occurring in any one calendar year. The relevant flood levels being:

- 1% AEP 71.2m AHD at the upstream end of the site to 69.3m AHD at the downstream end of the site
- Probable Maximum Flood 74.8m AHD at the upstream end of the site to 73.2m AHD at the downstream end of the site.

The levels on the site vary from 65 to 66m AHD adjacent to the Nepean River to a small localised high point at 80m AHD in the North-East corner of the site. As shown in Figure 11.2, this results in the majority of the site being impacted by the 5% AEP flood and above.

With substantial flood depths and velocities across the peninsula formed by the Airport site, the majority of the flooded area is classified as high flood hazard (as shown in Figure 11.3). This flow of flood waters across the Airport, also means that a substantial proportion of the site is classified as Floodway, with the remainder of the flood impacted area classified as Flood Storage.

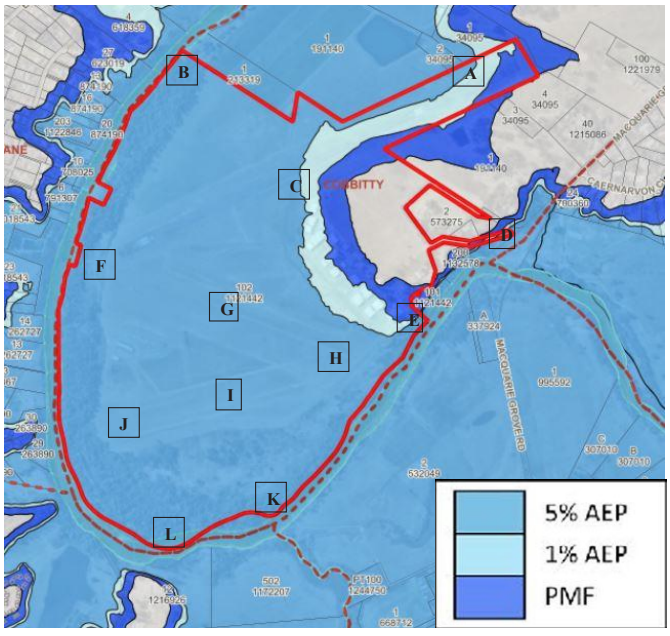


Figure 11.2: Flood Extent (Source Flood Certificate, Camden Council, October 2019)

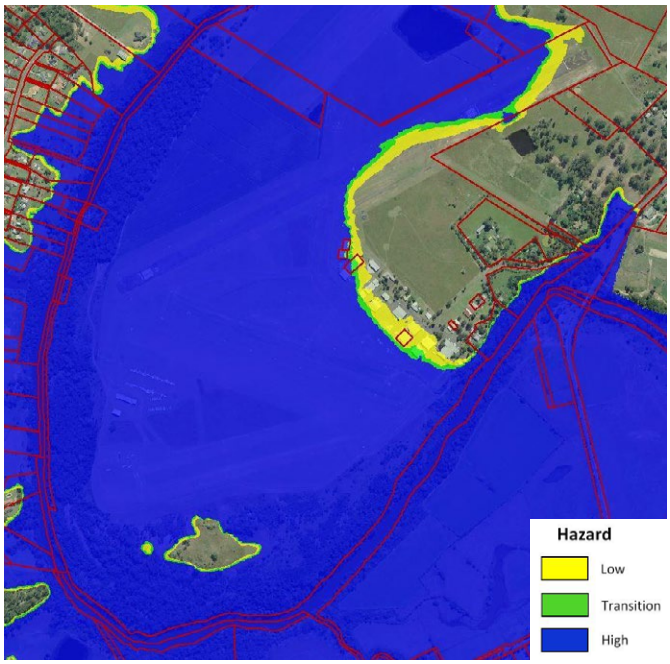


Figure 11.3: Flood Hazard (Source Flood Certificate, Camden Council, October 2019)

11.3.2 EXISTING STORMWATER CONTEXT

The Airport has limited formal stormwater management infrastructure to convey stormwater flows across the site and towards the outlets, generally relying on surface grading and open channels to shed water from the developed areas. Pit and pipe drainage is generally limited to the buildings and aprons around Aerodrome Road.

The open channel drainage ultimately discharges directly to the Nepean River at a number of locations.

11.3.3 FLOODING AND STORMWATER MANAGEMENT STRATEGY

Development on the Airport site will be constrained by the existing flooding context. Where development is proposed it will generally seek to comply with:

- Camden Council Flood Risk Management Policy
- Camden Council Development Control Plan: DCP 2019
- NSW Floodplain Development Manual 2005.

In line with the objectives of the Camden Council Development Control Plan (2019), development on the airport site will:

- Minimise the potential impact of flooding on development
- Limit changes in flow rate or flow duration within the receiving waterway as a result of development in order to reduce downstream flooding
- Adequately control and contain site generated flooding and prevent damage by stormwater to the built and natural environment
- Achieve relevant water quality objectives and adoption of Water Sensitive Urban Design (WSUD) principles to reduce the load of stormwater pollutants entering drainage lines downstream of the Airport.

Consistent with Camden Council's Flood Risk Management Policy, Camden Airport adopts a Flood Planning Level of the 1% AEP + 500mm freeboard. However, recognising that the majority of the development on the site will be commercial or industrial, development below the Flood Planning Level may be permissible subject to a merits based assessment of flooding, evacuation and environmental impacts.

Camden Airport will consider any proposal for the development of land below the 1% AEP flood level on its merits having regard to flooding, excavation, environmental and heritage factors. Any development of land below the 1% AEP flood level will be required to be constructed all such that habitable floor levels are above the Flood Planning Level Development on flood prone land, and will not result in adverse flood impacts or a net reduction of flood storage below the 1% AEP.

Filling operations will not be permitted below the 1% AEP flood level in floodways and flood storage areas.

Any development on the airport site will be provided with Erosion and Sediment Controls consistent with the requirements of Managing Urban Stormwater (Landcom, 2004).

11.3.4 WATER SENSITIVE URBAN DESIGN

Where appropriate, WSUD approaches will be adopted for future development at the Airport to achieve sustainability aspirations, reducing impacts on receiving waterways, and mitigating the increase in demand for potable water. It is anticipated that rainwater harvesting will be implemented in new developments where there is appropriate demand for non-potable water supply.

12.0

AIRPORT ENVIRONMENT STRATEGY

12.1 OVERVIEW

THIS AIRPORT ENVIRONMENT STRATEGY WILL HELP TO BUILD A CULTURE OF SHARED RESPONSIBILITY FOR ALL ASPECTS OF ENVIRONMENTAL MANAGEMENT ACROSS THE AIRPORT. CAL IS WORKING TO IMPROVE THE ENVIRONMENTAL PERFORMANCE OF THE AIRPORT AS IT BECOMES A CENTRE OF EXCELLENCE FOR AVIATION, COMMERCIAL AND INDUSTRIAL FACILITIES.

MOST OF THE AIRPORT HAS BEEN SIGNIFICANTLY MODIFIED SINCE IT WAS FIRST ACQUIRED AS AN AIRFIELD SITE IN 1939; HOWEVER IT CONTAINS AREAS OF ENVIRONMENTAL AND HISTORIC VALUE WHICH NEED TO BE CAREFULLY MANAGED.

12.1.1 PURPOSE

The purpose of this Airport Environment Strategy (AES) is to:

- Establish clear objectives for environmental management at the Airport and maintain and develop systems to achieve required outcomes
- Describe how CAL will fulfil the vision for the Airport, as set out in this Master Plan
- Ensure statutory requirements are complied with
- Build on achievements detailed in the 2015 Airport Environment Strategy (2015 AES).

12.1.2 KEY ENVIRONMENTAL ACHIEVEMENTS

Considerable progress has been made since the development of the 2015 AES in the following areas:

- The Airport undertook all required environmental monitoring and cooperated with relevant government agencies to define, monitor, manage and protect endangered and threatened species on the Airport
- The Environmental Management System (EMS) continued to develop to improve environmental performance across the Airport
- Vegetation maintenance and monitoring of threatened species Rufus Pomaderris (Pomaderris brunnea) and Camden White Gum (Eucalyptus benthamii)
- Bush regeneration works within the Airport Riparian Zone which is an area of environmental significance, which contains the River-Flat Forest Ecological Endangered Community (EEC)
- Registers to ensure that information is readily available for compliance purposes were maintained
- Engagement with Airport customers led to increased participation in the environmental auditing process
- The Metro-Flyer e-newsletter was used to communicate with all operators situated on the Airport to inform them of environmental obligations and achievements at the Airport.

12.1.3 CONSULTATION

Key stakeholders were consulted during preparation of this AES, as detailed in Section 2.4. They include the CACACG, Camden Council, the NSW Government, DITRDC and Department of Environment and Energy (DoEE). Consultation included a review of this AES by the Airport Environment Officer (AEO) appointed by DITRDC.

12.2 LEGISLATIVE AND POLICY FRAMEWORK

The Airports Act and *Airports (Environment Protection) Regulations 1997* (Airports Regulations) provide a system of regulation and accountability which requires operators of Commonwealth Government leased airports to manage the impacts of airport activities and promote improved environmental management practices. This AES has been prepared in accordance with these requirements:

AIRPORTS ACT

This AES includes the following information required by Section 71(2)(h) of the Airports Act:

- Identification of the current environmental status of the Airport, including areas of environmental significance
- Environmental management objectives for the Airport
- Sources of environmental impacts associated with the Airport operations
- Measures to prevent and minimise environmental impacts associated with the operation of the Airport
- Studies, reviews and monitoring of current and future activities including timeframes and reporting
- Details and outcomes of the stakeholder consultation undertaken to prepare this AES.

AIRPORTS (ENVIRONMENT PROTECTION) REGULATIONS

In addition to the Airports Act objectives, the Airports Regulations:

- Sets standards and imposes duties relating to environmental pollution
- Authorises the monitoring and remediation of breaches of environmental standards
- Requires continuous improvement in environmental performance of activities at the Airport.

While the Airports Regulations outline major obligations with respect to environmental matters on the Airport, they do not apply to pollution or noise generated by aircraft (except ground-based generated noise). The Commonwealth Government regulates these matters through the *Air Navigation (Aircraft Engine Emissions) Regulations 1995* and the *Air Navigation (Aircraft Noise) Regulations 2018* respectively.

OTHER LEGISLATION AND STANDARDS

The Airport is on Commonwealth Government land and is therefore subject to the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The EPBC Act details requirements for managing matters of national environmental significance, such as threatened flora and fauna species, heritage approvals of activities involving Commonwealth Government land and activities by Commonwealth Government agencies.

NSW Government legislation applies where Commonwealth Government legislation is silent. CAL will consider NSW legislation to achieve best practice environmental standards or where there is a risk to off-airport environment.

Industry codes of practice, Australian Standards, relevant national and state environment protection measures and other guidelines are also applicable to operators at the Airport.

12.3 ENVIRONMENT MANAGEMENT FRAMEWORK

The Environment Management Framework as illustrated in Figure 12.1 outlines the policies, programs and activities developed by the Airport to improve the environmental outcomes associated with Airport operations.

AIRPORT AND ENVIRONMENT LEGISLATION	Defines the mandatory environmental compliance requirements of all activities on the Airport, including CAL operators/customers at the Airport.	**SECTION** 12.2
▼ Commitment ▼		
ENVIRONMENT AND SUSTAINABILITY POLICY	A commitment by CAL to achieve continual improvement in environmental management.	**SECTION** 12.3.1
▼ Planning ▼		
MASTER PLAN	Twenty-year planning document to consider the forecast growth for the Airport, including aviation and non-aviation development and operations. Ensures an environmental management framework is in place and defines the Airport's environmental management framework strategy. This includes sources of environmental aspects and impact within the operations of the Airport, and sets out measures to prevent, control or reduce the environmental impact of operations at the Airport.	**THE MASTER PLAN INCLUDING THE AES**
▼ Implementation ▼		
ENVIRONMENTAL MANAGEMENT SYSTEM	The implementation mechanism for the commitments made through the Environment and Sustainability Policy and the Master Plan. A framework to implement environmental objectives and targets through day-to-day operations and management of the Airport. Includes roles and responsibilities, auditing and reporting.	**SECTION** 12.3.3

Figure 12.1: Environmental Management Framework

12.3.1 ENVIRONMENT AND SUSTAINABILITY POLICY

CAL is committed to meeting or exceeding compliance with its environmental management objectives through the application of its Environment and Sustainability policy. The policy is provided in Appendix F and is reviewed annually.

12.3.2 ENVIRONMENTAL PLANNING

CAL's objectives, goals and management actions associated with each environmental and sustainability aspect are detailed in this AES. These objectives, goals and management actions have been developed to ensure that CAL meets the commitments stated in the Environment and Sustainability Policy. Objectives and goals for each environmental aspect were developed with consideration of the following:

- The vision for the Airport
- Development objectives
- Environment and Sustainability Policy
- Statutory requirements
- Environmental risk
- Feedback from stakeholders and the community
- Timeframes and resources to undertake required works.

12.3.3 ENVIRONMENTAL MANAGEMENT SYSTEM

The EMS developed and maintained by CAL conforms to the requirements of AS/NZS ISO 14001:2016 Environmental management systems – Requirements with guidance for use. It provides a structure for managing environmental aspects on the Airport. An EMS review is undertaken annually and updated to ensure CAL complies with all applicable environmental legislation outlined inSection 12.2. Key elements of the EMS and how they support AES implementation are detailed in the following sections. The EMS consists of plans and procedures to manage the following:

- Inspections
- Monitoring
- Incidents, non-conformances and corrective actions
- Training
- Stakeholder engagement
- Records and document control
- Auditing
- Reporting
- Continuous environmental improvement.

INSPECTIONS

CAL undertakes regular inspections across the Airport to ensure that environment-related issues are identified and addressed in a timely manner. Records of inspections are maintained, and actions raised are completed within agreed timeframes. A responsible person is identified for completing the actions.

MONITORING

CAL undertakes monitoring to comply with statutory requirements, to understand trends, and identify areas where additional focus is required. The environmental monitoring program for the Airport is provided in Table 12.1, and the monitoring procedures are detailed in the EMS.

Monitoring associated with development is detailed in specific Construction Environmental Management Plans (CEMP) and/or Safe Work Method Statements (SWMS). Monitoring associated with customer operations is detailed in their Operational Environmental Management Plans (OEMP) and via the customer audit program. Monitoring undertaken by CAL is detailed in the relevant aspect-specific management plan.

Monitoring is undertaken by suitably qualified and experienced people. Sample analysis is undertaken by laboratories registered with the National Association of Testing Authorities (NATA) for the specific test method.

CAL reviews monitoring results to identify if any actions are required. Monitoring results are reported to DITRDC and other relevant Commonwealth and NSW Government departments.

The level of monitoring may change as a result of monitoring and changes that occur on or off the Airport.

Table 12.1: Frequency of Environmental Monitoring

Environment Aspect	Frequency
Surface water	Biannual (rainfall dependant)
Groundwater	Annual
Air quality	As required
Noise and vibration	As required
Wildlife (airside)	Daily
Endangered/Threatened species	As required
Vertebrate pests	As required
Soil and contamination	As required
Groundwater	As required
Resources	**Frequency**
Waste and recycling	6-monthly
Water	6-monthly
Electricity	6-monthly
Fuel	6-monthly
Customers/Tenants	**Frequency**
Audits	As required

INCIDENTS, NON-CONFORMANCES AND CORRECTIVE ACTIONS

Incidents (as defined in the Airport's Emergency Management Plan) that occur on the Airport are reported to the Airport Environment and Heritage Manager (AEHM). The AEHM maintains a record, investigates, determines if external notification is required, and followed up to ensure that any corrective actions have been completed.

Non-conformances identified in the course of audits, inspections, monitoring and incidents will be addressed within timeframes agreed between the AEHM and the person responsible for addressing the non-conformance. CAL will subsequently confirm the corrective action has been taken.

TRAINING

CAL provides training for employees in accordance with the Skills Training Matrix detailed in the EMP to ensure the Airport's obligations to comply with statutes and other regulatory requirements are understood, and better environmental outcomes are promoted. At a minimum, the following employee training is conducted:

- EMS awareness
- Applicable statutory and compliance requirements
- General environmental and sustainability awareness relating to the Airport
- Roles and responsibilities.
- CAL also provides guidance to Airport customers to ensure they promote better environmental and sustainability outcomes with their employees.

STAKEHOLDER ENGAGEMENT

CAL communicates proactively with stakeholders about environmental and sustainability matters associated with Airport operations and developments by:

- Reviewing and updating relevant EMS documents
- Undertaking monitoring and reporting to stakeholders
- Undertaking regular reviews of environmental and sustainability performance.

CAL has established a Camden Airport Community Aviation Consultation Group (CACACG), which includes representatives from a range of stakeholders including local environmental interest groups. This forum is a means of facilitating communication between the Airport and the community about environmental and sustainability issues.

RECORDS AND DOCUMENT CONTROL

CAL maintains a filing system to ensure that records and documents are controlled and stored in a secure and logical manner. This system encompasses the Environmental Site Register (as required by the Airports Regulations) which includes:

- Formal communications with the AEO
- Assessments and reports
- Monitoring results
- Environmental programs
- Details of contamination
- Details of heritage items
- Inspection and auditing records
- Incident reports
- Other environmental and sustainability records.

It is the responsibility of the AEHM to maintain the Environmental Site Register to ensure that all required documentation is readily available.

AUDITING

CAL undertakes two categories of audits, EMS audits and customer audits. The EMP sets out the annual EMS auditing schedule which the AEHM has responsibility for managing. The purpose of EMS audits is to ensure that compliance requirements are met, and that the EMS is effectively implemented and maintained.

Customers are assigned an environmental risk ranking (Tier 1, 2, 3 and 4) based on the potential for their business activities to cause environmental harm. The risk rankings, which determine the audit requirements of different customers, are defined in Table 12.2. Guidance is provided in the EMP on determining which tier classification applies to the tenant.

REPORTING

CAL prepares an Annual Environment Report which is submitted to DITRDC in accordance with the Airports Regulations. Information to be provided in the report is detailed in Regulation 6.03 and includes reporting on CAL's performance in achieving the targets identified in the AES.

CONTINUOUS ENVIRONMENTAL IMPROVEMENT

CAL continues to work closely with DITRDC and the AEO to improve environmental performance on the Airport by:

- Implementing the AES management actions and outcomes
- Working with the community and government agencies
- Implementing, reviewing and updating the EMS
- Continuing to identify and update environmental standards
- Undertaking monitoring
- Conducting regular reviews to identify opportunities for continuous improvement.

Table 12.2: Customer Environmental Risk Rankings Tiers

Customer Risk Rating	Definition	OEMP Mandatory	Audit Frequency
Tier 1	Potential to cause serious environmental harm	Yes	Annual
Tier 2	Potential to cause material environmental harm	Yes	Annual
Tier 3	Potential to cause environmental nuisance	No	Every 5 years
Tier 4	Operations pose negligible environmental risk	No	As required

12.3.4 RESPONSIBILITIES

CAL has a responsibility to ensure that Airport operations comply with the Airports Act and Airports Regulations to minimise environmental impacts. All CAL employees, customers and users of the Airport have a responsibility to minimise environmental impacts on the Airport, as defined in the EMP. To ensure the successful implementation of the AES, roles and responsibilities have been assigned and are detailed in Table 12.3.

Table 12.3: AES Roles and Responsibilities

Role	Responsibility
Chief Executive Officer (CEO)	• Overall environmental performance of the Airport • Reporting to DITRDC • Ensure that adequate resources are made available to manage environmental aspects • Ensure that CAL employees fulfil their environmental responsibilities
Environment and Heritage Manager (AEHM)	• Effectively lead and manage the development and implementation of the AES and EMS • All reasonable steps to be taken to achieve environmental compliance • Oversee environmental monitoring, inspections and audits • Oversee the investigation, corrective action and reporting of any environmental incidents or complaints (in conjunction with respective executive management) • Undertake environmental reporting • Produce any correspondence and documentation necessary for approvals and environmental and sustainability management • Identify and implement environmental training for CAL employees • Manage environmental and sustainability specialist consultants
General Manager - Property and General Manager - Aviation	• Integrate environmental requirements into daily operations • Manage of environmental issues associated with respective operations • Provide employee environmental awareness in consultation with the AEHM • Identify staff training needs in consultation with the AEHM
CAL employees	• Adhere to the EMS • Undertake activities on the Airport in accordance with applicable environmental legislation • Reporting of environmental incidents and complaints • Participation in environmental training and awareness
Customers and contractors	• Adhere to relevant EMS Procedures and management plans • Undertake work in compliance with applicable environmental legislation • Development and implementation of OEMP and CEMP/SWMS as required • Participate in site inductions and relevant environmental training and awareness programs • Report environmental incidents, and complaints
Airport Environment Officer (AEO)	• Is authorised under the Airports Act to exercise powers regarding environmental issues conveyed through the legislation • Ensure management of the Airport environment is in accordance with the Airports Act and Airport Regulations through regular monthly meetings, site inspections, monitoring and reporting

12.4 ENVIRONMENTAL ASPECTS AND IMPACTS

Camden Airport is a small general aviation airport supporting a range of aviation and non-aviation businesses that have the potential to cause environmental harm. Accordingly, CAL is responsible for ensuring that environmental impacts are minimised. While the Master Plan has a 20-year horizon, this AES focuses on the actions over the initial eight year period and considers the impacts that can reasonably be anticipated from implementing this Master Plan. The environmental aspects managed at the Airport is illustrated in Figure 12.2.

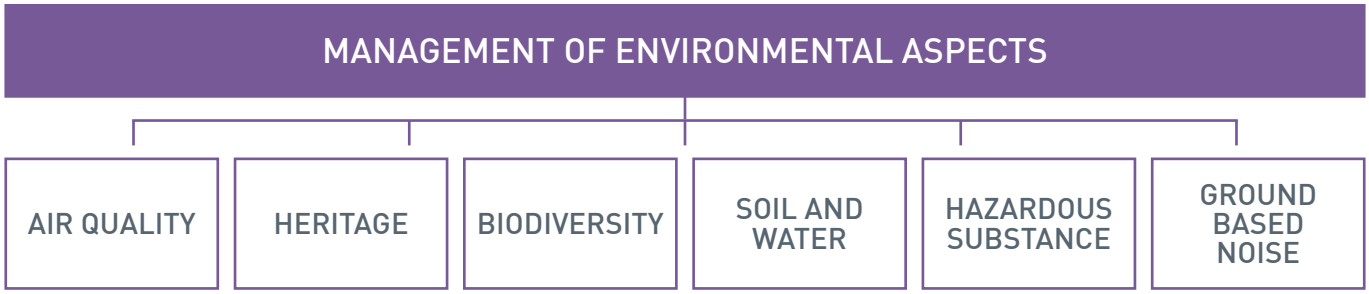


Figure 12.2: Management of Environmental Aspects

12.4.1 AIR QUALITY

Air quality requirements under the Airports Act apply to emissions from ground-based airport activities, such as fuel storage, stack emissions and engine running. Air emissions from flying, taxiing, landing and take-off are governed under the *Air Services Act 1995* and Air Navigation (Aircraft Engine Emissions) Regulations.

CAL has prepared an Air Quality Management Plan which details actions to improve air quality and is reviewed annually. The NSW Office of Environment and Heritage (OEH) also undertakes air quality monitoring on Camden Airport.

The Airport is situated in a semi-rural environment. Surrounding land uses include residential, agriculture and light commercial/ industrial. There are also a number of significant arterial roads, being the Northern Road and Narellan Road.

The main sources of emissions from the Airport relate to airport vehicles and dust associated with natural processes.

Typical pollutants that may be emitted from ground operations include carbon dioxide, carbon monoxide, nitrous oxides, sulphurous oxides, particulates (PM10 and PM2.5), volatile organic compounds and dust from construction.

National air quality standards are defined in the National Environment Protection (Ambient Air Quality) Measure (Air NEPM). The objective of the Air NEPM is to protect human health from poor air quality. The Air NEPM is implemented through the *Protection of the Environment Operations (Clean Air) Regulation 2010* and is administered by the OEH.

ACHIEVEMENTS

The following achievements have been made at the Airport relating to air quality since the release of the 2015 AES:

- Air Quality Management Plan has been implemented
- Ensured that customers comply with the Airports Regulations
- Prepared and implemented an Asbestos Management Plan and Asbestos Register.

IMPACTS

Activities with the potential to impact air quality at the Airport are listed in Table 12.4.

AIR QUALITY OBJECTIVES AND MANAGEMENT ACTIONS

Air quality goals and management actions for the Airport are listed in Table 12.5.

AIR QUALITY MONITORING REQUIREMENTS

Air quality is monitored as frequently as required.

Table 12.4: Activities and Associated Air Quality Impacts

Activities	Potential Impact
Construction and demolition works	• Air emissions, including greenhouse gases and potentially ozone depleting substances • Reduced visibility (mainly from dust) • Public nuisance or health issues • Offensive or concerning odours (e.g. fuel odours)
Vehicle, plant and equipment operation	
General aviation maintenance i.e. spray painting, workshop activities, cleaning etc.	
Fuel storage and refuelling operations	
Landscaping i.e. vegetation maintenance works	
Aircraft engine testing	
Auxiliary power units	
Exhaust stacks	

Table 12.5: Air Quality Objectives and Management Actions

Objectives	
• To comply with the requirements of the Airports Act and Airports Regulations • To appropriately manage Airport operations on developments to minimise impacts on the local air quality	
Management Action	**Timing**
CAL to ensure their plant and equipment is appropriately serviced and maintained	Ongoing
Continue to ensure CEMPs/SWMS incorporate measures to reduce potential adverse impacts to local and regional air quality associated with construction activities	Ongoing
Implement Air Quality Management Plan	Ongoing
Undertake air quality monitoring associated with known contaminated sites	As required

12.4.2 HERITAGE

The objective of the Heritage Management Plan 2020 (HMP 2020) is to assist CAL, customers and contractors to manage sites and structures which have heritage value.

CAL engaged specialist heritage professionals to prepare a new HMP 2020 for the Airport. This document supersedes the previous Heritage Management Strategy (HMS 2005). The HMP 2020 provides a comprehensive whole-of-airport strategy aligned with the objectives of this AES and is implemented as part of the EMS. The management of heritage assets in the context of aviation operations is a central part of the new HMP 2020.

LEGISLATIVE REQUIREMENTS

A Heritage Management Plan is required by Section 341S of the EPBC Act for places inscribed on the Commonwealth Heritage List (CHL). Schedule 7A of the EPBC Regulations specifies the content of a management plan for Commonwealth Heritage places. The HMP 2020 complies with the EPBC Regulations, which specify the content of a management plan for Commonwealth Heritage places.

Whilst the remainder of the Airport is not on the CHL, CAL recognises its heritage significance and is committed to managing the site in accordance with Commonwealth heritage management principles referred to in Section 341Y of the EPBC Act and Schedule 7B of the *Environmental Protection and Biodiversity Conservation Regulations 2000* (EPBC Regulations).

The Airport is listed on one statutory register, this being the *Camden Local Environmental Plan 2010* as item #198.

INDIGENOUS HERITAGE

The Airport has been modified since the Airport was constructed in 1935 by the Macarthur-Onslow family as a private aerodrome.

In 2009, an Aboriginal Archaeological Survey was undertaken as part of the flow restoration project undertaken by the Sydney Catchment Authority (SCA). The survey identified a number of small flacked stone artefacts scattered intermittently along an access track leading to the Nepean River. As a result of the finding, the site was registered on the NSW Office of Environment and Heritage Aboriginal Heritage Information Management System (AHIMS). This is the only AHIMS site registered as being located on the Airport. As part of SCA works, the artefacts were relocated off the access track under an Aboriginal Heritage Impact Permit. This was completed in consultation with the Aboriginal community including the Tharawal Local Aboriginal Land Council (LALC). The existence of this site is important tangible evidence of Aboriginal occupation in the Nepean River region, however Aboriginal representatives have indicated that it does not have specific cultural significance that would warrant its ongoing conservation.

Proposed future development may be subject to archaeological assessments where appropriate.

In particular, an 'Unexpected Heritage Finds Procedure (SMA-EN-SMA-MPR-000211)' is a requirement of all development applications. Should a relic be discovered during construction, the works will stop in the immediate area and the AEHM will ensure further investigations are undertaken.

NON-INDIGENOUS HERITAGE

The Airport was developed by the Macarthur-Onslow family in the 1930's. The Airport was used by the Royal Australian Air Force (RAAF) during World War II (WWII).

In addition to the Airport having historical significance as the location of a Royal Australian Air Force station during WWII, the Airport has transitioned through a number of significant phases including:

- Military period (1940-1945)
- Department of Civil Aviation (1946-1988)
- Federal Airports Corporation (1988-1998)
- Sydney Airports Corporation Limited (1998-2001)
- Privatisation from 1998 to present day.

Items of significant heritage have been identified in the HMP 2020 which provides for the conservation of these structures. Areas of heritage and environmental significance are shown in Figure 12.3. Table 12.6 also provides information on heritage areas of environmental significance.

Table 12.6: Heritage Areas of Environmental Significance

Heritage Aspect	Location	Significance
Area of Moderate Heritage Value (Administrative and Operations Area)	Airport Business Zone	Centre of administration area and heart of the WWII base complex. This area also includes the original pre-WWII Macarthur-Onslow hangars
Aerodrome Road	Airport Business Zone	Original alignment of the entrance to Macquarie Grove
Parade Ground	Airport Business Zone	The original Parade Ground was an important element in the administrative and operational functions of the WWII base complex

ACHIEVEMENTS

The following achievements have been made in relation to heritage since the release of the 2015 AES:

- The monitoring of the management by customers of the Airport properties with heritage value through customer environmental audits.
- CAL has ensured that buildings with heritage values have their heritage management requirements included in the OEMP's when they are leased to customers
- A new HMP 2020 was prepared for the whole of the Airport.

IMPACTS

Activities with the potential to impact on heritage at the Airport are detailed in Table 12.7.

HERITAGE GOALS AND MANAGEMENT

The heritage goals and management actions for the Airport are listed in Table 12.8.

Table 12.7: Activities and Associated Heritage Impacts

Activities	Potential Impact
Modifications to non-indigenous heritage items	• Damage to historic fabric • Loss of heritage value
Construction works impacting indigenous and non-indigenous heritage items	• Damage to unexpected heritage artefact • Loss of heritage value (e.g. impacts on site lines)

Table 12.8: Heritage Objectives and Management Actions

Objectives	
• To manage sites and structures of heritage significance in accordance with the requirements of the Airports Act, Airports Regulations and the EPBC Act • Ensure that historic sites and structures are managed appropriately	
Management Action	**Timing**
Implement the Heritage Management Plan 2020	2020
Undertake a detailed Aboriginal Heritage Assessment	2025
Deliver heritage awareness training for CAL employees and contractors	Ongoing
Prepare SWMS or CEMP for work on heritage structures and sites to address potential heritage impacts and detail management requirements	Ongoing
Ensure that customers leasing sites and structures having heritage value address the heritage management in their OEMPs.	Ongoing
Undertake environment audit of customers that occupy heritage sites and structures	Ongoing
Asset condition surveys and reporting for all CAL owned assets	Ongoing

12.4.3 BIODIVERSITY

The Airport is situated in a semi-rural environment. Surrounding land uses include residential, agriculture and light commercial/ industrial.

The Airport has largely been cleared of its original native tree vegetation except for the area of land within the Airport Riparian Zone adjacent to the Nepean River. Part of this remnant vegetation is regrowth following sand mining activities. Vegetation on the remainder of the Airport is limited to open grassed areas and formal landscaped areas.

Conservation works within the Airport Riparian Zone have been occurring for over a decade. Over this period both CAL and the NSW Government have made financial contributions. CAL have made the commitment to prepare a strategy to clearly define the required outcomes and guide future works within the Riparian Zone.

The Airport is home to a number of native and exotic bird species, reptiles, amphibians and mammals (see Table 12.9).

FLORA

There is one key area of the Airport, which has been identified as having environmental significance as defined in the Airports Regulations. This is the Airport Riparian Zone. This area is detailed in Figure 12.3 .

It has been identified from previous flora survey's the presence of Camden White Gums (*Eucalyptus benthamii*), which is listed as 'Vulnerable' under both the *Biodiversity Conservation Act 2016* (BC Act) and *Environment Protection Biodiversity Conservation Act* (EPBC Act). *Pomaderris brunnea* listed as 'Endangered' under the BC Act and 'Vulnerable' under the EPBC Act has also been identified within the Airport Riparian Zone.

A previous vegetation survey identified the Nepean River riparian vegetation as River-Flat Eucalypt Forest as an EEC under the BC Act. It is CAL's intention to update the vegetation survey in the near future.

Table 12.9: Areas of Environmental Significance

Species Name	Location	Significance
Camden White Gums (Eucalyptus benthamii)	Airport Riparian Zone: scattered through the existing vegetation Airport Business Zone	Listed as 'Vulnerable' under the BC Act and EPBC Act.
Pomaderris brunnea	Airport Riparian Zone: five locations identified	Listed as 'Endangered' under the BC Act and 'Vulnerable' under the EPBC Act
River-Flat Eucalypt Forest	Airport Riparian Zone	Listed as an EEC under the BC Act

KEY

- Site Boundary
- Buildings
- Area of moderate heritage value (Administration and Operations Area)
- Ecologically Sensitive Riparian Area

Historic Road Alignments

- Aerodrome Road
- Parade Ground

PRELIMINARY DRAFT

Figure 12.3: Areas of Heritage and Environmental Significance

FAUNA

Historic vegetation clearance over most of the Airport has reduced the vegetation cover (except for grasses) to the Nepean River and landscaped areas. This has had a significant impact on the fauna of the Airport.

The Airport Riparian Zone provides fauna habitat in the form of hollow tree limbs and trunks, a dense shrub layer, grass layers and aquatic habitat within drainage lines. These habitats favour smaller birds and ground dwelling mammals. A range of common birds, mammals, marsupials, reptiles and amphibians have been identified on the Airport.

Since 2007, volunteers have continued to undertake bird banding within the Airport Riparian Zone.

A Wildlife Management Plan has been prepared to reduce the interaction of birds and aircraft and its impact on aviation operations. CAL also implements a series of escalating procedures designed to deter birds on the Airport, these include:

- Disturbing birds that land near runways
- Firing loud but non-lethal blasts in the vicinity of birds
- In extreme circumstances, the use of lethal shots to remove one of the birds in a flock is used. This option is a last resort and is infrequently used.

ACHIEVEMENTS

The following achievements have been made at the Airport in relation to biodiversity since the release of the 2015 AES:

- CAL continued to build strong working relationships with external stakeholders regarding management of native flora and fauna at the Airport
- CAL continued to work co-operatively with relevant government agencies and volunteers to continue the bush regeneration works within the Airport Riparian Zone.

IMPACTS

Activities with the potential to impact biodiversity at the Airport are detailed in Table 12.10.

BIODIVERSITY OBJECTIVES AND MANAGEMENT

The biodiversity objectives and management actions for the Airport are listed in Table 12.11.

Table 12.10: Activities and Associated Biodiversity Impacts

Activities	Potential Impact
Vegetation removal due to: • Grounds maintenance activities • Construction associated with development • Weed control	• Impact on listed flora species • Loss or fragmentation of habitat • Loss or degradation of foraging or breeding habitat • Reduced native biodiversity • Introduction and spread of weed and animal pest species
Bushfire	Loss of native vegetation and fauna species
• Implementation of fauna management process to deter birds from the Airport • Animal pest control • Vehicle/aircraft movements	Injury to fauna species

Table 12.11: Biodiversity Objectives and Management Actions

Objectives	
• To protect areas of environmental significance • To minimise bird strike by aircraft • To manage areas of environmental significance in accordance with CAL's EMS and Government Permits/ Licences • To facilitate government efforts in preserving and facilitating research of native species identified on the Airport	
Management action	**Timeframe**
Prepare and implement a Vegetation Management Strategy for the Airport Riparian Zone	2022
Investigate bio-banking or entering a Conservation Agreement associated with the 54ha of land within the Airport Riparian Zone to enhance the biodiversity condition	2021
Prepare and implement an Airport-wide Flora and Fauna Management Plan that will encompass all current and future documentation to effectively manage biodiversity on the Airport	2023
Undertake vegetation mapping within the Airport Business Zone to facilitate vegetation maintenance and also tree replacement associated with development works	2020
Continue to manage areas of environmental significance in accordance with the EMS and Government permits/licences	Ongoing
Utilise Geographic Information Systems (GIS) to facilitate vegetation maintenance, development work and streamline monitoring and reporting requirements	2023
Implement the Wildlife Management Plan and incorporate it within the new Flora and Fauna Management Plan	2020
Undertake biodiversity assessments, where required as part of construction works to ensure biodiversity is managed	Ongoing
Prepare Tree Replacement Policy and implement as part of the new Flora and Fauna Management Plan	2020
Work cooperatively with relevant government agencies to facilitate access to the Airport and contribute through the review of management plans to protect species identified on the Airport that are listed as under both the EPBC Act and BC Act	Ongoing
Engage with government to investigate and implement animal pest species control within the Airport Riparian Zone	2020
CAL will work with the Airport customers to: • Provide further education on the importance of protecting the native species of fauna and threatened flora species located on the Airport • Inform them through the digital newsletter of works associated with protecting native species of fauna and threatened flora species located on the Airport • Inform them through the digital newsletter of works associated with protecting native species of fauna and threatened flora species located on the Airport	Ongoing

12.4.4 SOIL AND WATER

The Airport is situated within the Nepean River catchment, which is a major waterway. The Nepean River, boarders the eastern, southern and western boundaries of the Airport. The Nepean River flows into the Hawkesbury River.

Low density residential boarders the eastern side of the Airport and agricultural land boarders the northern boundary.

Generally, the existing soils at the Airport consist of a sandy loam topsoil, overlaying a sandy clay loam soil. These soils have been formed as a result of earthworks to shape runways and the Aviation Business Zone using natural alluvial soils from the local area. Soils are noted as having the following characteristics:

- Deep soil profiles, with excellent potential for root penetration
- Excellent soil drainage, with minimal potential for waterlogging (outside of flood-prone areas)
- Low water holding capacity (due to relatively high sand content)
- Poor structure (apedal)
- Prone to hard setting surfaces under traffic
- Low fertility (low Cation Exchange Capacity).

SOIL QUALITY

Any proposed development will require an assessment of its environmental impacts by CAL. This assessment includes a review of historical land uses, a contamination assessment, and any remediation required. A Site Contamination Register is maintained by CAL and comprises known, potential and remediated sites:

- 'Confirmed' contaminated sites consist of areas where environmental investigations have confirmed soil pollution
- 'Potential' contaminated sites are areas where contamination is suspected because historical activities frequently associated with contamination are known to have occurred, or environmental audits have identified the potential for soil pollution as a result of past practices
- 'Remediated' sites are those where the contamination has been addressed.
- Contamination prevention is achieved through activities including:
- **Lease terms:** leases at the Airport incorporate terms and obligations relating to environmental compliance
- **Development control:** all developments on the Airport are subject to an assessment by CAL, and approvals contain conditions to reduce the risk of potential contamination from construction activities
- **Audits and inspections:** The Airport's AEHM and the AEO inspect and assess all Customer sites on the expiry of the lease or a proposed change of land use. The AEO may inspect all tenancies as set out in Section 6.07 of the Airports (Environment Protection) Regulations. If there is reason to suspect soil contamination may have occurred during the Customer's occupation, a site assessment may be required
- **Reviews:** A lessons learnt exercise is undertaken following incident investigations.

WATER QUALITY

Current and historical activities at the Airport have the potential to impact water quality. The Airport, which comprises five indicative sub-catchments , is drained via a system of pipelines, culverts and open drains, which ultimately discharge off the Airport via overland flow paths towards the Nepean River or to adjacent properties via modified drainage lines. The catchments surrounding the Airport comprise of agricultural land.

A Water Quality Management Plan (WQMP) is implemented across the Airport. The purpose of the WQMP is to provide a broad framework to manage storm and ground water quality at the Airport in accordance with standards defined in the Airports Regulations. The WQMP includes strategies to monitor and manage pollution. Surface water monitoring is undertaken (rainfall dependent) to establish water quality levels of water flowing on and off the Airport.

It is also noted that there are enviro-waste water recycling systems on the Airport. These are present due to mains sewer infrastructure not installed throughout the whole Airport Business Zone. The enviro-cycle waste water treatment systems are regularly inspected in accordance with the manufactures requirements. It is the responsibility of the respective customers to maintain the systems. Water from the systems is sprayed onto airside away from stormwater drains

GROUNDWATER

Groundwater is not used for any purpose at the Airport.

The Airport is situated on Bringelly Shale, which is part of the Wianamatta Group of sedimentary rocks in the Sydney Basin. The characteristics of the Bringelly Shale determine the hydrological regime of the Airport area.

PER-AND POLY-FLURO ALKYL SUBSTANCE

Substances containing Per- and Poly-fluro Alkyl Substances (PFAS) have been detected at the Airport. Although less than 5% of PFAS is contributed to Fire Fighting foam it is one of the reasons it is found on the Airport. PFAS is understood to be in firefighting foams; mainly foams used by the NSW Fire Brigade but this has not been utilised since the early 2000's. Due to the widespread use of PFAS by industry, there is potential that PFAS found at the Airport are from other sources.

PFAS are a large group of compounds consisting of a fully fluorinated hydrophobic alkyl chain of varying length (typically four to 16 carbon atoms) and a hydrophilic end group. These are emerging contaminants and their sources, fate and transport and toxicity are still not well understood. Similarly, the regulatory framework for characterising, assessing and managing risks associated with PFAS is in its infancy.

A PFAS National Environmental Management Plan (PFAS NEMP) has been prepared by the Heads of EPA Australia and New Zealand (HEPA) and was endorsed by Environment Ministers on 16 February 2018. It provides guidance on:

- Identifying and implementing site and catchment specific risk management actions
- Assessing sites and methods to address contamination.

The PFAS NEMP also includes a program of future work to address key knowledge gaps relating to the impacts of PFAS on environmental and human health and management options, through longer-term research activities undertaken by HEPA Working Groups.

A number of soil, surface and groundwater investigations and monitoring programs have been undertaken at the Airport, including the analysis of PFAS. CAL will continue to assess and manage PFAS contamination in accordance with relevant government guidelines.

ACHIEVEMENTS

Considerable progress has been made since the development of the 2015 AES to manage impacts on soil and water quality:

- Biannual surface water monitoring was undertaken
- Camden Airport WQMP continued to be implemented
- Site Contamination Register was continually updated
- The development approvals process resulted in practices which had the objective of preventing soil and water contamination at the Airport.

IMPACTS

Activities with the potential to affect soil and water quality at the Airport are listed in Table 12.12.

SOIL AND WATER OBJECTIVES AND MANAGEMENT

The soil and water objectives and management actions for the Airport are listed in Table 12.13.

SOIL AND WATER QUALITY MONITORING AND REPORTING REQUIREMENTS

The water quality monitoring and reporting requirements at the Airport are listed in Table 12.14.

Table 12.12: Activities and Associated Soil and Water Impacts

Activities	Potential Impact
Aircraft operations including: • Aircraft operators • Aircraft fuel storage and refuelling • Chemical storage • Aircraft washing	Potential for spills entering the soil and stormwater system
Historical land use	Potential for continuing soil and water quality impacts
Construction	• Increase in impermeable areas causing increased run-off into the stormwater system • Spills from construction-related activities entering the soil and surface water
Chemical use (i.e. pesticides, herbicides)	Potential for overspray entering the stormwater system
Connections to stormwater	Water quality impacts
Fuel storage	Leakage from above ground and underground fuel storage tanks
Offsite spill entering stormwater system	Stormwater pollution

Table 12.13: Soil and Water Objectives and Management Actions

Objectives

- To comply with the requirements of the Airports Act and Airports Regulations
- Identify opportunities to improve water quality
- Minimise impacts on water quality from construction
- Prevent pollution from underground fuel storage tanks
- Develop strong working relationships with Government agencies
- Minimise soil pollution

Management Action	Timing
Ensure that opportunities identified to improve water quality are captured in customer audits	Ongoing
Ensure customers meet monitoring requirements	Ongoing
Customers are required to monitor underground fuel storage tanks in accordance with NSW Regulations	Ongoing
Pollution control devices are installed as part of new developments (where required)	Ongoing
Identify opportunities to install pollution control devices in existing stormwater infrastructure in accordance with the Flood Management Strategy, once developed.	2023
Install pollution controls in existing stormwater infrastructure	2026
Ensure that adequate detail is provided in CEMPs to minimise impacts on water quality	Ongoing
Work co-operatively with relevant government agencies to improve water quality not only on the Airport but areas adjacent to the Airport	Ongoing
Work co-operatively with the relevant Government agencies to manage historic contamination issues on the Airport	Ongoing
Manage the importation of fill material to ensure contaminated fill is not brought onto the Airport	Ongoing
Conduct relevant environmental site assessments for new developments and lease terminations	Ongoing
Work with customers to address contamination identified on their sites	Ongoing
Maintain the Site Contamination Register	Ongoing

Table 12.14: Water Monitoring Requirements

Aspect	Frequency
Surface water	Biannual (rainfall dependent)

12.4.5 HAZARDOUS SUBSTANCES

Hazardous substances are used at the Airport on a day-to-day basis and include aviation fuel, chemicals in manufacturing and vehicle fuels etc. The use of these substances is a potential risk to the environment and human health if not managed appropriately.

The Airport and its customers are required to ensure hazardous materials are appropriately managed in accordance with relevant legislation, standards and codes of practice. Airport customers are responsible for hazardous substances stored in individual premises.

Hazardous materials are managed in accordance with the *NSW Work Health and Safety Act 2011* and *Work Health Safety Regulation 2011*, and relevant standards and codes of practice, as they are not addressed by Commonwealth legislation.

An Asbestos Register is maintained of all buildings owned by CAL which contain asbestos. These buildings are regularly inspected, and materials are removed where they are of high risk or if proposed construction works provide an opportunity to remove the material. It is the responsibility of customers to manage asbestos in buildings owned by them.

IMPACTS

Activities undertaken at the Airport that are likely to involve hazardous materials are detailed in Table 12.15.

HAZARDOUS SUBSTANCE OBJECTIVES AND MANAGEMENT

The hazardous substance goals and management actions for the Airport are listed in Table 12.16.

12.4.6 GROUND-BASED NOISE

The Airports Act and associated regulations include requirements relating to noise generated from ground-based activities. Noise generated by aircraft while flying, or during landing, take-off or taxing is governed by the *Air Services Act 1995* and is addressed in Chapter 5.0.

The Airport implements the Aircraft Engine Ground Running Guideline for aircraft operators. The guideline identifies the times and locations where aircraft ground running are permitted. A copy of the guideline is available on CAL's website and is provided to relevant customers.

CAL has prepared a new Noise and Vibration Management Plan, which incorporates a noise impact assessment for ground-based activities at the Airport. A specialist acoustics professional was engaged to undertake noise monitoring and modelling to prepare the noise impact assessment. The assessment will be used to assess noise impacts from proposed future development.

The Airport also ensures that noise and vibration impacts associated with new construction are assessed in accordance with NSW EPA Industrial Noise Policy.

ACHIEVEMENTS

Considerable improvements have been made in the management of ground-based noise impacts at the Airport since the 2015 AES:

- The development assessment process ensured all planned construction activities addressed noise and vibration impacts, having regard to the Airports Regulations and the NSW Industrial Noise Policy
- The Complaint Register was maintained, and complaints were addressed in a timely manner
- A new Noise and Vibration Management Plan 2019 was prepared.

IMPACTS

Activities undertaken at the Airport that have the potential to generate noise and vibration impacts on surrounding receivers are listed in Table 12.17.

GROUND-BASED NOISE OBJECTIVE AND MANAGEMENT

The ground-based noise goals and management actions are listed in Table 12.18.

Table 12.15: Hazardous Substance Activities and Impacts

Activities	Potential Impact
Construction, earthworks and demolition	• Human health impacts • Release hazardous substances into the air, water and/or soil
General Airport operations, maintenance, landscaping, weed and pest control etc.	
Aircraft refuelling	
Aircraft and vehicle maintenance	
Manufacturing	

Table 12.16: Hazardous Substance Objectives and Management Actions

Objectives

- To comply with the requirements of the Airports Act and Airports Regulations
- Minimise the use of hazardous substances where practicable
- To ensure the storage, handling and use of hazardous materials is carried out in accordance with the applicable legislation, standards and codes of practice

Management Action	Timing
Monitor availability of up-to-date Safety Data Sheets at points of use during internal and customer audits	Ongoing
Review and update the Asbestos Management Plan and Register	2021
Continue to ensure CEMPs incorporate measures to minimise impacts associated with the storage, handling and use of hazardous materials associated with construction activities	Ongoing
As part of customer audits, work with customers to identify opportunities to replace and/ or minimise the use hazardous substances where practicable	Ongoing

Table 12.17: Noise and Vibration Activities and Impacts

Activities	Potential Impact
Construction and demolition works	Nuisance to receivers situated around the Airport including residents, occupants and visitors
Road traffic at the Airport	
Non-aviation industrial activities	
General maintenance activities at the Airport	
Aircraft servicing	
Aircraft ground running and idling on aprons	
General customer and operator activities	

Table 12.18: Ground-based Noise Objectives and Management Actions

Objectives

- To comply with the requirements of the Airports Act and Airports Regulations
- To minimise noise-related impacts on surrounding receivers from ground-based Airport activities

Management Action	Timing
Implement the new Noise and Vibration Management Plan	2020
Continue to implement the Aircraft Engine Ground Running Guideline for the Airport	Ongoing
Respond to noise-related complaints in a timely manner	Ongoing
Maintain an up-to-date Noise Complaints Register	Ongoing
Review and develop educational materials for customers on how to minimise noise impacts on surrounding receivers from their activities on the Airport	2021
Ensure all construction activities noise and vibration impacts during development planning having regard to the Airports Regulations and the NSW Industrial Noise Policy	Ongoing

12.5 SUSTAINABILITY

The Airport will prepare a Sustainability Strategy over the duration of this Master Plan to guide the minimisation of environmental impacts by Airport users and promote initiatives to reduce climate change. The Airport will continue to identify opportunities to be more sustainable by reducing the use of energy, fuel and water, and by minimising waste. The focus to date has been on identifying sustainability opportunities during:

- Construction/refurbishment activities
- Tenancy environmental audits.

Key elements of the sustainability strategy are illustrated below.

12.5.1 ENERGY AND CLIMATE CHANGE

The Airport is considering ways to minimise the use of energy and maximising its efficiency along with alternative energy supply options for maintenance and development works. The focus is on reducing energy consumption and greenhouse gas emissions from Airport operations. CAL will continue to work with customers to minimise their impact on the environment and community.

ACHIEVEMENTS

CAL is working towards reducing energy consumption at the Airport and has implemented the following measures:

- Sustainability guidelines were developed for the Airport which included measures to improve energy efficiency and reduce energy consumption
- Energy options for power generation on proposed developments were considered.

IMPACTS

Activities that have the potential to increase energy consumption at the Airport are listed in Table 12.19.

ENERGY OBJECTIVES AND MANAGEMENT

The energy goals and management actions for the Airport are shown in Table 12.20.

ENERGY MONITORING AND REPORTING REQUIREMENTS

The energy monitoring and reporting requirements are listed in Table 12.21.

Energy use associated with Airport activities will be tracked every six months and the information used to identify trends and opportunities to reduce its consumption.

Table 12.19: Energy Resource Activities and Impacts

Activities	Potential Impact
Operation of runway lighting	• Carbon emissions • Non-renewable resource depletion
Operation of CAL and tenant owned buildings (i.e. lighting, air conditioners, equipment, refrigeration etc.)	
Operation of electrical equipment	
Construction-related activities	

Table 12.20: Energy Monitoring Requirements

Aspect	Frequency
Energy usage from CAL activities will be tracked to identify trends and opportunities to reduce energy usage	6-monthly

Table 12.21: Energy Objectives and Management Actions

Objectives
• To conserve non-renewable resources through efficient use of energy • Identify and implement opportunities to reduce energy use

Management Action	Timing
Incorporate energy efficiency measures as part of refurbishment and new developments where practicable. For new developments where feasible, principles recognised by authorities on sustainability, for example, the Green Building Council of Australia Green Star rating scheme or National Australian Built Environment Rating System	Ongoing
Investigate opportunities to implement solar initiatives on the Airport	Ongoing
Undertake an energy and carbon audit of Airport operations	2023
Identify opportunities as part of maintenance works to replace lights with more efficient options	Ongoing
Ensure that CEMPs identify opportunities to reduce energy usage during construction-related activities	Ongoing
Educate CAL employees and customers of the importance of conserving energy and resources	Ongoing

12.5.2 WATER USE

The Airport is taking steps to reduce the use of water in operational activities such as manufacturing, aircraft washing, and general maintenance and construction activities.

ACHIEVEMENTS

The following initiatives have been used to manage the level of water consumption at the Airport:

- Development of a Water Savings Action Plan
- Encouraged customers to use CAL's Climate Change Handbook and adopt sustainable water use practices.

IMPACTS

Activities that have the potential to increase water consumption at the Airport are listed in Table 12.22.

WATER OBJECTIVES AND MANAGEMENT

Water goals and management actions for the Airport are listed in Table 12.23.

WATER MONITORING AND REPORTING REQUIREMENTS

The water monitoring and reporting requirements at the Airport are listed in Table 12.24.

Water use from Airport activities will be tracked every six months to identify trends and opportunities to reduce consumption.

Table 12.22: Water Resource Activities and Impacts

Activities	Potential Impact
Customer operations (i.e. toilet flushing, aircraft washing, cleaning, food preparation, manufacturing etc.)	Deplete the potable water resources
CAL operations (i.e. toilet flushing, vehicle washing, general water use, ground maintenance)	
Dust suppression during construction	

Table 12.23: Water Objectives and Management Actions

Objectives	
• To conserve potable water • Identify and implement opportunities to reduce water use	
Management Action	**Timing**
Incorporate water efficiency measures in new developments Where feasible, adopt principles set out recognised authorities on sustainability, for example, the Green Building Council of Australia Green Star rating scheme or National Australian Built ERating System	Ongoing
Investigate opportunities to capture and use rainwater on the Airport where practicable	Ongoing
Ensure CAL's of maintenance activities install efficient equipment to reduce water consumption	Ongoing
Ensure that CEMP's as part of development applications identify opportunities to reduce water usage during construction related activities	Ongoing
Educate CAL employees and customers of the importance of conserving water through inductions, auditing and general communication	Ongoing

Table 12.24: Water Monitoring Requirements

Aspect	Frequency
Water consumption from CAL activities will be tracked to identify trends and opportunities to reduce water consumption	6-monthly

12.5.3 WASTE

Waste is generated from day-to-day Airport operations, including construction activities. It is the responsibility of the waste generator to ensure their waste is managed and disposed of at an appropriately licensed facility in accordance with NSW legislation.

The Airport works pro-actively to address illegal dumping at the Airport.

The Airport has confirmed through tenancy audits that recycling is generally being implemented, and is working with customers to identify new ways to reduce waste and increase recycling.

The Airport prioritises waste management according to the resource management hierarchy embodied in the *Waste Avoidance and Resource Recovery Act 2001*. The waste management hierarchy is provided in Figure 12.4.

ACHIEVEMENTS

The following achievements have been made in relation to waste and recycling since the 2015 AES:

- Customers were encouraged to reduce, reuse and recycle their waste through correspondence, environmental audits and awareness programs
- The Airport has worked with the Sydney Regional Illegal Dumping Squad to minimise the frequency of illegal dumping at the Airport.

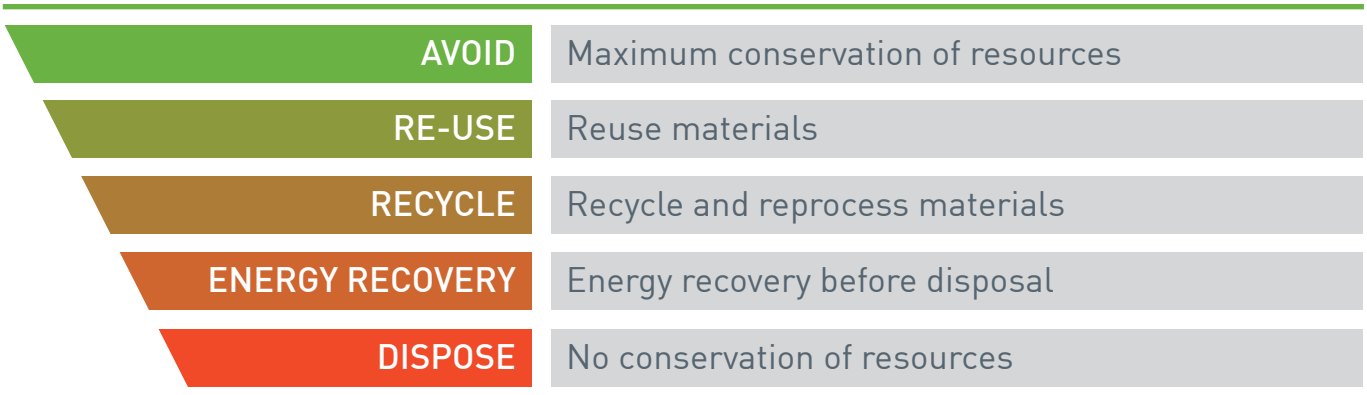


Figure 12.4: Waste Management Hierarchy

IMPACTS

Potential activities on the Airport that may generate waste streams are listed in Figure 12.5.

ACTIVITIES	WASTE STREAM
GENERAL AIRPORT MAINTENANCE	• Vegetation • Oils and grease • Electrical consumables (i.e. wiring, light globes etc.) • Oily rags • Mixed recyclables • Hazardous materials • Scrap materials
AVIATION MAINTENANCE	• Oil and grease • Electrical consumables (i.e. wiring, light globes etc.) • Broken parts • Mixed recyclables • Hazardous materials • Liquid waste (i.e. wash down, parts wash water)
AVIATION AND OTHER BUSINESSES	• Fuel samples • Mixed recyclables • General waste • Wastewater
CONSTRUCTION	• Demolition waste • Movement of contaminated spoil • Contaminated water • Asbestos • Off-cuts • Construction waste • Spoil from earthworks • Hazardous material
GENERAL OFFICE ACTIVITIES	• Paper/cardboard • Mixed recyclables • Ink cartridges • Putrescible (food) • Unused stationary • Electrical equipment and consumables • Wastewater

Figure 12.5: Potential Waste Streams

WASTE OBJECTIVES AND MANAGEMENT

Table 12.25 provides details on the waste goals and management actions for the Airport.

WASTE MONITORING AND REPORTING REQUIREMENTS

Waste generated by Airport activities will be tracked every six months to identify trends and opportunities to reduce waste being sent to landfill and increase recycling as outlined in Table 12.26.

Table 12.25: Waste Objectives and Management Actions

Objectives	
• Comply with the *NSW Protection of the Environment Operations Act 1997* and the *NSW Protection of the Environment Operations (Waste) Regulation 2014* with respect to waste management • To comply with the principles of the waste management hierarchy of avoid, reuse, recycle and dispose, where practicable • Review options for waste reduction, reuse and recycling and set targets where practicable	
Management Action	**Timing**
Encourage customers, through correspondence, environmental audits and awareness programs to reduce, reuse and recycle their waste	Ongoing
Ensure that CEMP's provide details on how to maximise the recycling of construction waste from development work	Ongoing
Hold a customer awareness campaign on the opportunities and benefits of effective green purchasing and waste management	2023
Maximise the reuse/recycling of non-hazardous construction/demolition waste for CAL developments on-Airport	Ongoing
Encourage company's undertaking construction works on the Airport to use resources in a sustainable manner to reduce resource use and waste	Ongoing
Investigate opportunities to further reduce, reuse and recycle waste associated with CAL's operations, and develop a Sustainable Procurement Guide for CAL's operations	2022
Ensure that CEMP's provide details on how waste will be managed, classified and disposed of at appropriately licensed waste facilities	Ongoing

Table 12.26: Waste monitoring requirements

Activities	Frequency
Waste quantities from CAL activities will be tracked to identify trends and opportunities to reduce waste being sent to landfill and increase recycling.	6-monthly

12.6 SOCIAL AND COMMUNITY

The Airport will continue to engage with its stakeholders about a wider range of environmental matters.

The CACACG is a particularly important mechanism for engaging with community groups to identify and address any issues and concerns. The forum is also an opportunity to provide information about this AES and CAL's commitment to responsible environmental management and sustainability.

Other important stakeholder groups include the local community, Camden Council, State and Commonwealth agencies.

ACHIEVEMENTS

CAL has engaged proactively and consistently with its stakeholders in the following ways:

- Environmental information was maintained on the website for customers and the wider community
- The Metro Flyer e-newsletter was produced to provide details on environmental issues and achievements
- CACACG met regularly to identify and discuss environmental matters
- An annual update on environmental activities at the Airport was provided in the Metro Flyer and made available on the Sydney Metro Airports website.

IMPACTS

Activities undertaken at the Airport that have the potential to impact on the community are listed in Table 12.27.

ENGAGEMENT WITH STAKEHOLDERS

Table 12.28 provides details on actions for the Airport to build a strong working relationship with its stakeholders through continued engagement activities.

Table 12.27: Aspects and Social Impacts

Activities	Potential impact
Aircraft movements	• Disturb residents located around the Airport • Damage environment
Vehicular traffic	
Construction works	
Maintenance activities	

Table 12.28: Social Objectives and Management Actions

Objectives

- Maintain strong working relationships with stakeholders to minimise community impacts
- To be open with stakeholders and the community regarding Airport operations
- Maintain strong relationships with customers to identify opportunities to minimise impacts associated with the operations on the community
- Maintain communication with stakeholders and the community

Management Action	Timing
Produce the Metro Flyer e-newsletter	Ongoing
Hold CACACG meetings	Ongoing
Undertake consultation with stakeholders and community on proposed major developments	As required
Produce and review environmental documentation to ensure that customers review their operations to minimise environmental impacts	Ongoing

A

APPENDIX
ABBREVIATIONS

ABBREVIATIONS

Abbreviation	Name in full
ABC	Airport Building Controller
AEHM	Airport Environment and Heritage Manager
AEO	Airport Environment Officer
AEP	Annual Exceedance Probability
AES	Airport Environmental Strategy
AHIMS	Aboriginal Heritage Information Management System
Air NEPM	National Environment Protection (Ambient Air Quality) Measure
Airports Act	Airports Act 1996 (Commonwealth)
Airports Amendment Act	Airports Amendment Act 2018 (Commonwealth)
Airports Regulation	Airports (Environmental Protection) Regulations 1997
ANEC	Australian Noise Exposure Concept
ANEF	Australian Noise Exposure Forecast
ATCT	Air Traffic Control Tower
BC Act	Biodiversity Conservation Act 2016 (NSW)
CACACG	Camden Airport Community Aviation Consultation Group
CACCF	Camden Airport Community Consultation Forum
CAGR	Compound Annual Growth Rate
CAL	Camden Airport Limited
Camden CTR	Camden Airport Control Zone
Camden Draft LSPS	Camden Draft Local Strategic Planning Statement 2019
CASA	Civil Aviation Safety Authority
CASR 1998	Civil Aviation Safety Regulations 1998
CBD	Central Business District
CEMP	Construction Environmental Management Plan
CEO	Chief Executive Officer
CHL	Commonwealth Heritage List
CHMP	Cultural Heritage Management Plan

Abbreviation	Name in full
CTAF	Common Traffic Advisory Frequency
CTR	Control Zones
DCP	Development Control Plan
DITRDC	Department of Infrastructure, Transport, Regional Development and Communications
DoEE	Department of Environment and Energy
DPIE	NSW Department of Planning, Industry and Environment
EEC	Endangered Ecological Community
EMS	Environmental Management System
EPA	Environment Protection Authority (NSW)
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2000 Act
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)
EPBC Regulations	Environment Protection and Biodiversity Conservation Regulations 2000
ERSA	En Route Supplement Australia
FAC	Federal Airports Corporation
FRMS&P	Floodplain Risk Management Study and Plan
FSR	Floor Space Ratio
FTE	Full time equivalent
GIS	Geographic Information System
HEPA	Heads of Environment Protection Authority Australia and New Zealand
HLS	Helicopter Landing Site
HMS	Heritage Management Strategy
HMP	Heritage Management Plan
HOB	Height of Buildings
ICAO	International Civil Aviation Organization
IFR	Instrument Flight Rules
ILS	Instrument Landing System
LALC	Local Aboriginal Land Council

Abbreviation	Name in full
LEP	Local Environment Plans
LGA	Local Government Area
LOE	Lane of Entry
MDP	Major Development Plan
MOS	Manual of Standards
MTOW	Maximum Take-Off Weight
NASAG	National Airports Safeguarding Advisory Group
NASF	National Airports Safeguarding Framework
NATA	National Association of Testing Authorities
NDB	Non-Directional Beacon
NFPMS	Noise and Flight Path Monitoring System
OEH	Office of Environment & Heritage (NSW)
OEMP	Operational Environmental Management Plans
OLS	Obstacle Limitation Surfaces
PANS-OPS	Procedures for Air Navigational Services – Aircraft Operations
PFAS	Per- and Poly-fluro Alkyl Substances
PFAS NEMP	PFAF National Environmental Management Plan
RAAF	Royal Australian Air Force
SACL	Sydney Airports Corporation Limited
SEPP	State Environmental Planning Policies
SWMS	Safe Work Method Statements
Sydney CTA	Sydney Airport Control Area
Sydney CTR	Sydney Airport Control Zone
Sydney TCU	Sydney Terminal Control Unit
TCU	Terminal Control Unit
VFR	Visual Flight Rules
VTC	Visual Terminal Chart
WHMP	Wildlife Hazard Management Plan
Western Sydney Airport	Western Sydney Nancy-Bird Walton Internation Airport
WSUD	Water Sensitive Urban Design
WQMP	Water Quality Management Plan


MAULE

B

APPENDIX
GLOSSARY OF TERMS

GLOSSARY OF TERMS

Term	Definition
Airport Master Plan	The principal planning document required under the Airports Act 1996, setting out a 20-year plan for each leased federal airport.
Aircraft throughput	Equals aircraft demand.
Airservices	The Commonwealth Government agency providing air traffic control management and related airside services to the aviation industry.
Airside	The aircraft movement area of an Airport, adjacent to land and buildings that is access-controlled.
Aircraft apron	The part of an Airport where aircraft are parked and serviced, enabling passengers to board and disembark and cargo to be loaded and unloaded.
Annual Exceedance Probability (AEP)	Means the chance of a flood of a given or larger size occurring in any one year, usually expressed as a percentage – for example a 1% AEP flood event has a 1% chance of occurring in any one calendar year.
Australian Noise Exposure Concept (ANEC)	A set of contours based on hypothetical aircraft operations at an Airport in the future. As ANEC maps are based on hypothetical assumptions and may not have been subject to review or endorsement, they have no official status and cannot be used for land use planning. However, an ANEC can be turned into an ANEF.
Australian Noise Exposure Forecast (ANEF)	A system developed as a land use planning tool aimed at controlling encroachment on Airports by noise-sensitive buildings. The system underpins Australian Standard AS2021 'Acoustics – Aircraft noise intrusion – Building siting and construction'. The Standard contains advice on the acceptability of building sites based on ANEF zones. ANEFs are the official forecasts of future noise exposure patterns around an Airport and they constitute the contours on which land use planning authorities base their controls.
Civil Aviation Safety Authority (CASA)	An independent statutory body responsible for regulating aviation safety in Australia and the safety of Australian aircraft overseas.
Instrument Landing System (ILS)	A precision instrument approach system which normally consists of the following electronic components: VHF Localiser, UHF Glideslope, VHF Marker Beacons.
Landside	The area of an Airport and buildings to which the public normally has free access.
Major Development Plan	A requirement under the Airports Act for airport lessee-companies to provide information to the Commonwealth Government and the public about significant planned development on leased federal airport sites.
South West Precinct	The South West Precinct is defined in the Bankstown Airport Master Plan 2014 as the south-western area of the Airport.
Taxiway	A path on an airport connecting runways with ramps, hangars, terminals and other facilities.
Terminal Instrument Flight Procedures (TIFP)	Procedures to govern flight under conditions in which flight by outside visual reference is not safe. This involves flying by reference to instruments in the flight deck and navigating by reference to electronic signals.

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C

APPENDIX
COMPLIANCE WITH AIRPORTS ACT

COMPLIANCE WITH AIRPORTS ACT

The Camden Airport Master Plan must be prepared in accordance with the requirements of the Airports Act and associated Regulations. This includes the recent changes to the Airports Act, as a result of the Airports Amendment Act.

The legislation specifies elements that are to be addressed within an Airport Master Plan. The tables below should be used to reference how each element of the legislation is addressed within the Master Plan.

Requirements under Part 5, Division 3, Section 70(2) Final Master Plans	Chapter Response
The purposes of a final master plan for an Airport are:	
a. to establish the strategic direction for efficient and economic development at the Airport over the planning period of the plan	Chapter 1.0
b. to provide for the development of additional uses of the airport site	Chapter 8.0
c. to indicate to the public the intended uses of the airport site	Chapters 8.0 and 12.0
d. to reduce potential conflicts between uses of the airport site, and to ensure that uses of the airport site are compatible with the areas surrounding the Airport	Chapters 6.0 and 8.0
e. to ensure that all operations at the Airport are undertaken in accordance with relevant environmental legislation and standards	Chapter 12.0
f. to establish a framework for assessing compliance at the Airport with relevant environmental legislation and standards	Chapter 12.0
g. to promote the continual improvement of environmental management at the Airport	Chapter 12.0

Requirements under Part 5, Division 3, Section 71(2) Contents of Draft or Final Master Plan	Chapter Response
a. the airport-lessee company's development objectives for the Airport	Chapter 1.0
b. the airport-lessee company's assessment of the future needs of civil aviation users of the Airport, and other users of the Airport, for services and facilities relating to the Airport	Chapters 4.0, 6.0, 7.0, 8.0, 9.0, 10.0 and 11.0
c. the airport-lessee company's intentions for land use and related development of the Airport site, where the uses and developments embrace airside, landside, surface access and land planning/zoning aspects	Chapters 7.0 and 8.0
d. an Australian Noise Exposure Forecast (in accordance with regulations, if any, made for the purpose of this paragraph) for the areas surrounding the Airport	Chapter 5.0 and Appendix E
da. flight paths (in accordance with regulations, if any, made for the purpose of this paragraph) at the Airport	Chapter 5.0
e. the airport-lessee company's plans, developed following consultations with the airlines that use the Airport and local government bodies in the vicinity of the Airport, for managing aircraft noise intrusion in areas forecast to be subject to exposure above the significant ANEF levels	Chapter 5.0 and Appendix E
f. the airport-lessee company's assessment of environmental issues that might reasonably be expected to be associated with the implementation of the plan	Chapter 12.0
g. the airport-lessee company's plans for dealing with the environmental issues mentioned in paragraph (f) (including plans for ameliorating or preventing environmental impacts)	Chapter 12.0

Requirements under Part 5, Division 3, Section 71(2) Contents of Draft or Final Master Plan	Chapter Response
ga. in relation to the initial period (see subsection (3A)) of the master plan – a plan for a ground transport system on the landside of the Airport that details: viii. a road network plan ix. the facilities for moving people (employees, passengers and other airport users and freight at the Airport x. the linkages between those facilities, the road network and public transport system at the Airport and the road network and public transport system outside the Airport xi. the arrangements for working with the State or local authorities or other bodies responsible for the road network and the public transport system xii. the capacity of the ground transport system at the Airport to support operations and other activities at the Airport xiii. the likely effect of the proposed developments in the master plan on the ground transport system and traffic flows at, and surrounding, the Airport	Chapter 10.0
gb. in relation to initial period (see subsection (3A)) of the master plan - detailed information on the proposed developments in the master plan that are to be used for: xiv. commercial, community, office or retail purposes xv. for any other purpose that is not related to airport services	Chapter 9.0
gc in relation to the initial period (see subsection (3A)) of the master plan - the likely effect of the proposed developments in the master plan on: xvi. employment levels at the Airport xvii. the local and regional economy and community, including an analysis of how the proposed developments fit within the planning schemes for commercial and retail development in the area that is adjacent to the Airport	Chapter 9.0
h. in relation to the initial period (see subsection (3A)) of the master plan - an environment strategy that details: xviii. the airport-lessee company's objectives for the environmental management of the Airport xix. the areas (if any) within the airport site which the airport-lessee company, in consultation with State and Federal conservation bodies, identifies as environmentally significant xx. the sources of environmental impact associated with airport operations xxi. the studies, reviews and monitoring to be carried out by the airport-lessee company in connection with the environmental impact associated with airport operations xxii. the time frames for completion of those studies and reviews and for reporting on that monitoring xxiii. the specific measures to be carried out by the airport-lessee company for the purposes of preventing, controlling or reducing the environmental impact associated with airport operations xxiv. the time frames for completion of those specific measures xxv. details of the consultations undertaken in preparing the strategy (including the outcome of the consultations) xxvi. any other matters that are prescribed in the regulations.	Chapter 9.0
i. such other matters (if any) as are specified in the regulations.	

Requirements under Part 5 Division 3, Section 71(3A) Initial period of the master plan	Chapter Response
(3A) The initial period of the master plan is: a. In the case of Sydney (Kingsford Smith) Airport, Sydney West Airport, Melbourne (Tullamarine) Airport, Brisbane Airport or Perth Airport – the first of years of the plan; or b. In the case of any other airport – the first 8 years of the plan.	
Requirements under Part 5, Division 3, Section 71A Draft or final master plan must identify proposed sensitive developments	**Chapter Response**
1. A draft or final master plan must identify any proposed sensitive development in the plan.	Chapter 8.0
2. A sensitive development is the development of, or a redevelopment that increases the capacity of, any of the following: a. a residential dwelling b. a community care facility c. a pre-school d. a primary, secondary, tertiary or other educational institution e. a hospital	Chapter 8.0
2A A sensitive development does not include the following: a. an aviation educational facility b. accommodation for students studying at an aviation educational facility at the Airport c. a facility with the primary purpose of providing emergency medical treatment and which does not have inpatient facilities d. a facility with the primary purpose of providing inhouse training to staff of an organisation conducting operations at the Airport	Noted
Requirements under Part 5 Division 3, Section 76(1A) New draft master plan to be submitted before expiry of old plan	**Chapter Response**
(1A) In connection with the airport-lessee company giving the Minister a draft master plan under subsection (1), the company: a. must obtain a new Australian Noise Exposure Forecast; and b. specify that new Australian Noise Exposure Forecast in that plan. The new Australian Noise Exposure Forecast must have been endorsed in the last 180 days of the period applicable under paragraph (1)(a) or (b).	Chapter 5.0 Appendix G

Requirements under Part 5, Division 3, Section 79 Public comment or advice to State etc.	Chapter Response
Advice to State etc.	
(1A) Before giving the Minister a draft master plan for an Airport under section 75, 76 or 78, the airport-lessee company for the Airport must advise, in writing, the following persons of its intention to give the Minister the draft master plan: (a) the Minister, of the State in which the Airport is situated, with responsibility for town planning or use of land; (b) the authority of that State with responsibility for town planning or use of land; (c) each local government body with responsibility for an area surrounding the Airport.	Commenced
(1B) The draft plan submitted to the Minister must be accompanied by: (a) a copy of the advice given under subsection (1A); and (b) a written certificate signed on behalf of the company listing the names of those to whom the advice was given.	Upcoming action

Requirements under Part 5, Division 3, Section 79 Public comment or advice to State etc.	Chapter Response
Public comment	
(1) After giving the advice under subsection (1A), but before giving the Minister the draft master plan, the company must also: a) cause to be published in a newspaper circulating generally in the State in which the Airport is situated, and on the Airport's website, a notice: (i) stating that the company has prepared a preliminary version of the draft plan; and (ii) stating that copies of the preliminary version will be available for inspection and purchase by members of the public during normal office hours throughout the period of 60 business days after the publication of the notice; and (iii) specifying the place or places where the copies will be available for inspection and purchase; and (iiia) in the case of a notice published in a newspaper—stating that copies of the preliminary version will be available free of charge to members of the public on the Airport's website throughout the period of 60 business days after the publication of the notice; and (iiib) in the case of a notice published in a newspaper—specifying the address of the Airport's website; and (iv) in any case—inviting members of the public to give written comments about the preliminary version to the company within 60 business days after the publication of the notice; and (b) make copies of the preliminary version available for inspection and purchase by members of the public in accordance with the notice; and (c) make copies of the preliminary version available free of charge to members of the public on the Airport's website: (i) in a readily accessible format that is acceptable to the Minister; and (ii) in accordance with the notice.	Upcoming action

(2) If members of the public (including persons covered by subsection (1A)) have given written comments about the preliminary version in accordance with the notice, the draft plan submitted to the Minister must be accompanied by: (a) copies of those comments; and (b) a written certificate signed on behalf of the company: (i) listing the names of those members of the public; and (ii) summarising those comments; and (iii) demonstrating that the company has had due regard to those comments in preparing the draft plan; and (iv) setting out such other information (if any) about those comments as is specified in the regulations.	Upcoming action
(3) Subsection (2) does not, by implication, limit the matters to which the company may have regard.	Upcoming action

Requirements under Part 5, Division 3, Section 80 Consultations	**Chapter Response**
(1) This section applies if: (a) an airport-lessee company gives the Minister a draft master plan under section 75, 76 or 78; and (b) before the publication under section 79 of a notice about the plan, the company consulted (other than by giving an advice under subsection 79(1A)) a person covered by any of the following subparagraphs: (i) a State government; (ii) an authority of a State; (iii) a local government body; (iv) an airline or other user of the Airport concerned; (v) any other person.	Upcoming action
(2) The draft plan submitted to the Minister must be accompanied by a written statement signed on behalf of the company: (a) listing the names of the persons consulted; and (b) summarising the views expressed by the persons consulted.	Upcoming action

Requirements under Regulation 5.02: Contents of Draft or Final Master Plan - general	**Chapter Response**
1. For paragraphs 71(2)(j) and (3)(j) of the Act, the following matters are specified in an environment strategy: a. any change to the OLS or PANS-OPS surfaces for the Airport concerned that is likely to result if development proceeds in accordance with the master plan b. for an area of an Airport where a change of use of a kind described in subregulation 6.07(2) of the Airports (Environment Protection) Regulations 1997 is proposed: i. the contents of the report of any examination of the area carried out under regulation 6.09 of those Regulations ii. the airport-lessee company's plans for dealing with any soil pollution referred to in the report.	Chapter 6.0
2. For section 71 of the Act, an airport master plan must, in relation to the landside part of the Airport, where possible, describe proposals for land use and related planning, zoning or development in an amount of detail equivalent to that required by, and using terminology (including definitions) consistent with that applying in, land use planning, zoning and development legislation in force in the State or Territory in which the Airport is located.	Chapter 8.0
3. For subsection 71(5) of the Act, a draft or final master plan must: a. address any obligation that has passed to the relevant airport-lessee company under subsection 22(2) of the Act or subsection 26(2) of the Transitional Act b. address any interest to which the relevant airport lease is subject under subsection 22(3) of the Act, or subsection 26(3) of the Transitional Act.	Noted

Requirements under Regulation 5.02A: Contents of Draft or Final Master Plan - to be specified in Environment Strategy	Chapter Response
1. For subparagraphs 71(2)(h)(ix) and (3)(h)(ix) of the Act, the matters in this regulation must be specified in an environment strategy.	Chapter 12.0
2. The environment strategy must specify any areas within the airport site to which the strategy applies that the airport-lessee company for the Airport has identified as being a site of indigenous significance, following consultation with: a. any relevant indigenous communities and organisations; and b. any relevant Commonwealth or State body	
3. The environment strategy must specify the airport-lessee company's strategy for environmental management of areas of the airport site that are, or could be, used for a purpose that is not connected with airport operations.	
4. The environment strategy must specify: a. the training necessary for appropriate environment management by persons, or classes of persons, employed on the airport site by the airport-lessee company or by other major employers; and b. the training programs, of which the airport-lessee company is aware, that it considers would meet the training needs of a person mentioned in paragraph (a).	Chapter 12.0

Requirements under Regulation 5.02B: Contents of Draft or Final Master Plan - to be addressed in Environment Strategy	Chapter Response
1. For subsection 71(5) of the Act, a draft or final master plan must address the things in this regulation.	Chapter 12.0
2. In specifying its objectives for the Airport under subparagraph 71(2)(h)(i) or (3)(h)(i) of the Act, an airport-lessee company must address its policies and targets for: a. continuous improvement in the environmental consequences of activities at the Airport b. progressive reduction in extant pollution at the Airport c. development and adoption of a comprehensive environmental management system for the Airport that maintains consistency with relevant Australian and international standards d. identification, and conservation, by the airport-lessee company and other operators of undertakings at the Airport, of objects and matters at the Airport that have natural, indigenous or heritage value e. involvement of the local community and airport users in development of any future strategy f. dissemination of the strategy to sub-lessees, licensees, other airport users and the local community.	Chapter 12.0
3. In specifying under subparagraph 71(2)(h)(ii) or (3)(h)(ii) of the Act, the areas within the airport site it identifies as environmentally significant, an airport-lessee company must address: a. any relevant recommendation of the Australian Heritage Council b. any relevant recommendation of the Department of Environment regarding biota, habitat, heritage or similar matters c. any relevant recommendation of a body established in the State in which the Airport is located, having responsibilities in relation to conservation of biota, habitat, heritage or similar matters.	Chapter 12.0
4. In specifying the sources of environmental impact under subparagraph 71(2)(h)(iii) or (3)(h)(iii) of the Act, an airport-lessee company must address: a. the quality of air at the airport site, and in so much of the regional airshed as is reasonably likely to be affected by airport activities b. water quality, including potentially affected groundwater, estuarine waters and marine waters c. soil quality, including that of land known to be already contaminated d. release, into the air, of substances that deplete stratospheric ozone e. generation and handling of hazardous waste and any other kind of waste f. usage of natural resources (whether renewable or non-renewable) g. usage of energy the production of which generates emissions of gases known as 'greenhouse gases' h. generation of noise.	Chapter 12.0

Requirements under Regulation 5.02B: Contents of Draft or Final Master Plan - to be addressed in Environment Strategy	Chapter Response
5. In specifying under subparagraph 71(2)(h)(iv) or (3)(h)(iv) of the Act the studies, reviews and monitoring that it plans to carry out, an airport-lessee company must address: a. the matters mentioned in subregulation 5.02A(2) and subregulations 5.02B(3) and (4); and b. the scope, identified by the airport-lessee company, for conservation of objects and matters at the Airport that have natural, indigenous or heritage value; and c. the approaches and measures identified by the airport-lessee company as its preferred conservation approaches and measures; and d. the professional qualifications that must be held by a person carrying out the monitoring; and e. the proposed systems of testing, measuring and sampling to be carried out for possible, or suspected, pollution or excessive noise; and f. the proposed frequency of routine reporting of monitoring results to the airport environment officer (if any) for the Airport, or to the Secretary.	Chapter 12.0
6. In specifying under subparagraph 71(2)(h)(vi) or(3)(h)(vi) of the Act, the measures that it plans to carry out for the purposes of preventing, controlling or reducing environmental impact, an airport-lessee company must address: a. the matters mentioned in subregulations (2) to (4); and b. the means by which it proposes to achieve the cooperation of other operators of undertakings at the Airport in carrying out those plans.	Chapter 8.0
7. An airport-lessee company, in specifying the company's strategy for environmental management under subregulation 5.02A(3), must address the matters in subregulations (2) to (6).	Chapter 12.0


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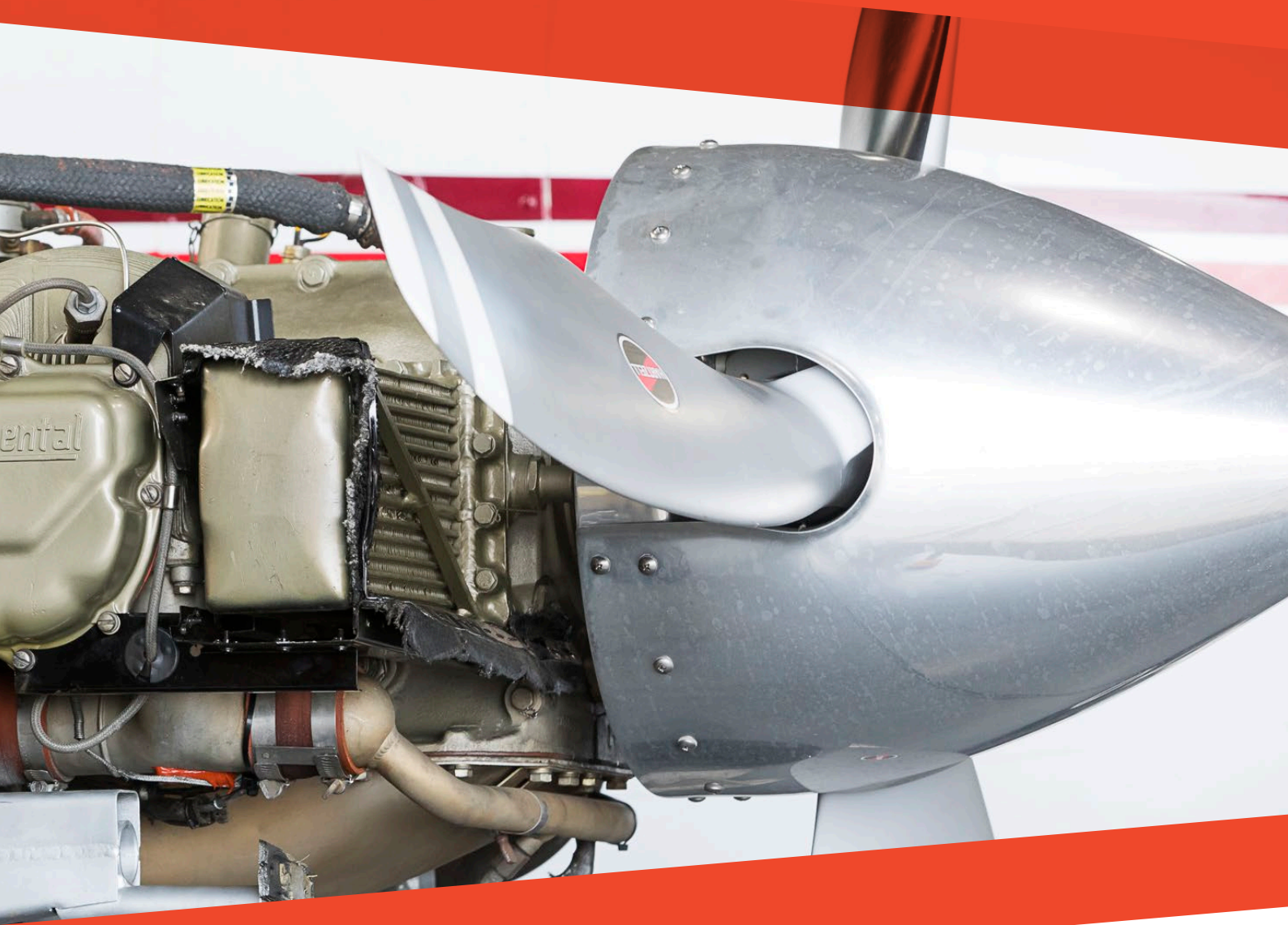
APPENDIX
LAND USE DEFINITIONS



LAND USE DEFINITIONS

CAL has adopted, wherever possible, the definitions used in the NSW Standard LEP Template. Where there are gaps for uses specific to that of an Airport, definitions have been provided by CAL.

Table D1.1 Land use definitions

Land use	Master Plan 2020 definition	Definition source/alignment
Advertising structures	A structure used or to be used principally for the display of an advertisement.	Standard Template definition applied.
Accommodation for students studying at an aviation educational facility at the Airport	A building or place used for accommodation purposes by students studying at an educational facility located at the airport site.	No Standard Template definition.
Airport-related support industry	A building, place or structure primarily used for the purpose of aircraft hangars, aircraft surveillance equipment, security control and screening points, transport terminals; car rental and valet facilities, car parking, fuel storage and distribution, hydrants, storage facilities, catering services, engineering support and maintenance activities, aircraft engine testing and passenger terminals.	No Standard Template definition.
Ancillary	Structures and/or uses that are subordinate or subservient to the dominant structure and/or use. If a component serves the dominant purpose, it is ancillary to that dominant purpose, whereas if a component serves its own purpose, it is not a component of the dominant purpose but an independent use on the same land (a dominant use in its own right). Examples of ancillary uses include: car parking, roads, driveways, utilities, civil works, fire safety equipment, fencing, lighting, landscaping, flood mitigation measures, security, surveillance, monitoring, signage, technical instruments (such as navigational aids and meteorological instruments), facilities with the primary purpose of providing in-house training to staff of an organisation conducting operations at the Airport and sleeping quarters / respite facilities (temporary accommodation associated with business operations).	No Standard Template definition.
Aviation educational facility	A building or place used for aviation related education purposes (including teaching), being: a. a school, or b. a tertiary institution, including a university or a TAFE establishment, that provides formal education and is constituted by or under an Act	Definition drawn from the Standard Instrument definition of 'educational establishment'.
Bulky goods premises	A building or place the principal purpose of which is the sale, hire or display of bulky goods, being goods that are of such size or weight as to require: a. a large area for handling, display or storage, and b. direct vehicular access to the site of the building or place by members of the public for the purpose of loading or unloading such goods into or from their vehicles after purchase or hire, and including goods such as floor and window supplies, furniture, household electrical goods, equestrian supplies and swimming pools, but does not include a building or place used for the sale of foodstuffs or clothing unless their sale is ancillary to the sale or hire or display of bulky goods Note: Bulky goods premises are a type of Retail Premises as defined in this table.	Standard Template definition applied.

Land use	2019 MP definition	Definition source/alignment
Business premises	A building or place at or on which: a. an occupation, profession or trade (other than an industry) is carried on for the provision of services directly to members of the public on a regular basis, or b. a service is provided directly to members of the public on a regular basis, but does not include an entertainment facilities, home business, home occupation, home occupation (sex services), medical centre, sex services premises or veterinary hospital. Note: Business premises are a type of commercial premises — see the definition of that term in this definitions table.	Standard Template definition applied with the exception of red highlighted text below which has been omitted as it is not relevant in the airport site context. A building or place at or on which: a. an occupation, profession or trade (other than an industry) is carried on for the provision of services directly to members of the public on a regular basis, or b. a service is provided directly to members of the public on a regular basis, and includes a funeral home and, without limitation, premises such as banks, post offices, hairdressers, dry cleaners, travel agencies, internet access facilities, betting agencies and the like, but does not include an entertainment facilities, home business, home occupation, home occupation (sex services), medical centre, restricted premises, sex services premises or veterinary hospital. Note: Business premises are a type of commercial premises—see the definition of that term
Car park	A building or place primarily used for the purpose of parking motor vehicles, including any manoeuvring space and access thereto, whether operated for gain or not.	Standard Template definition applied.
Child care facility	A building or place used for the education and care of children of Camden Airport users, customers or employees and that provides any one or more of the following: a. long day care b. occasional child care c. out-of-school-hours care (including vacation care) d. preschool care, or e. an approved family day care venue (within the meaning of the Children (Education and Care Services) National Law (NSW) Note: An approved family day care venue is a place, other than a residence, where an approved family day care service (within the meaning of the Children (Education and Care Services) National Law (NSW) is provided. Such a use is a 'Sensitive Use' under the Airports Act.	Definition based on the Standard Instrument definition of 'centre based child care facilities' however has been altered to support airport users and employees.
Club	A building used by persons associated, or by a body incorporated, for social, literary, political, sporting, athletic or other lawful purposes whether of the same or of a different kind and whether or not the whole or a part of such building is the premises of a club registered under the Registered Clubs Act 1976 (NSW).	No Standard Template definition.

Land use	2019 MP definition	Definition source/alignment
Commercial premises	Commercial premises means any of the following: a. business premises (see business premises in this land use definitions table) b. office premises (see office premises in this land use definitions table) c. retail premises (see retail premises in this land use definitions table).	Standard Template definition applied.
Communications facility (non-aviation)	Non-aviation communications facilities means: a. any part of the infrastructure of a telecommunications network, or b. any line, cable, optical fibre, fibre access node, interconnect point equipment, apparatus, tower, mast, antenna, dish, tunnel, duct, hole, pit, pole or other structure in connection with a telecommunications network, or c. any other thing used in or in connection with a telecommunications network.	Based on Standard Template Definition of 'telecommunications facility'.
Community facility	A building or place: a. controlled or operated by a public authority or non-profit community organisation, and b. used for the physical, social, cultural or intellectual development or welfare of the community, but does not include an educational establishment, hospital, retail premises, place of public worship or residential accommodation.	Standard Template definition applied.
Depot	A building or place used for the storage (but not sale or hire) of plant, machinery or other goods (that support the operations of an existing undertaking) when not required for use, but does not include a farm building.	Standard Template definition applied.
Earthworks or engineering works	Works associated with earthworks or engineering works such as flood mitigation works, land reshaping and filling and utility installation.	No Standard Template definition.
Emergency services facility	A building or place (including a helipad) used in connection with the provision of emergency services by an emergency services organisation.	Standard Template definition applied.
Entertainment facility	A theatre, cinema, music hall, concert hall, dance hall and the like, but does not include a pub or registered club.	Standard Template definition applied.
Environmental protection works	Works associated with the rehabilitation of land towards its natural state or any work to protect land from environmental degradation, and includes bush regeneration works, wetland protection works, erosion protection works, dune restoration works and the like, but does not include coastal protection works.	Standard Template definition applied.
Fixed base operations	A commercial business use providing aeronautical services such as fuelling, hangaring, tie-down and parking, aircraft rental, aircraft maintenance, flight instruction, passenger facilitation and passenger accommodation areas for general aviation operators and business charter operators. A fixed base operation is a primary provider of support services for general aviation operators at a public-use airport.	No Standard Template definition.
General industry	A building or place (other than a heavy industry or light industry) that is used to carry out an industrial activity.	Standard Template definition applied
Health services facility	A facility with the primary purpose of providing emergency medical treatment and which does not have in-patient facilities.	No Standard Template definition.
Heavy industry	A building or place used to carry out an industrial activity that requires separation from other development because of the nature of the processes involved, or the materials used, stored or produced, and includes: a. hazardous industry, or b. offensive industry. It may also involve the use of a hazardous storage establishment or offensive storage establishment. Note: Heavy industries are a type of industry—see the definition of that term in this definitions table.	Standard Template definition applied.

Land use	2019 MP definition	Definition source/alignment
High technology industry	A building or place predominantly used to carry out an industrial activity that involves any of the following: a. electronic or micro-electronic systems, goods or components b. information technology (such as computer software or hardware) c. instrumentation or instruments of a scientific, industrial, technological, medical or similar nature d. biological, pharmaceutical, medical or paramedical systems, goods or components e. film, television or multi-media technologies, including any post production systems, goods or components f. telecommunications systems, goods or components g. sustainable energy technologies h. any other goods, systems or components intended for use in a science or technology related field, but does not include a building or place used to carry out an industrial activity that presents a hazard or potential hazard to the neighbourhood or that, because of the scale and nature of the processes involved, interferes with the amenity of the neighbourhood. Note.High technology industries are a type of light industry—see the definition of that term in this Dictionary.	Standard Template definition applied.
Hotel or motel accommodation	A building or place (whether or not licensed premises under the Liquor Act 2007) that provides temporary or short-term accommodation on a commercial basis and that: a. comprises rooms or self-contained suites, and b. may provide meals to guests or the general public and facilities for the parking of guests' vehicles, but does not include backpackers' accommodation, a boarding house, bed and breakfast accommodation or farm stay accommodation.	Standard Template definition applied.
Industrial retail outlet	A building or place that: a. is used in conjunction with an industry, and b. is situated on the land on which the industry is located, and c. is used for the display or sale (whether by retail or wholesale) of only those goods that have been manufactured on the land on which the industry is located, but does not include a warehouse or distribution centre.	Standard Template definition applied.
Industrial training facility	A building or place used in connection with vocational training in an activity (such as forklift or truck driving, welding or carpentry) that is associated with an industry, rural industry, extractive industry or mining, but does not include an educational establishment, business premises or retail premises.	Standard Template definition applied.
Industry	Any of the following: a. general industry b. heavy industry c. light industry but does not include: d. rural industry, or e. extractive industry, or f. mining.	Standard Template definition applied.

Land use	2019 MP definition	Definition source/alignment
Light industry	A building or place used to carry out an industrial activity that does not interfere with the amenity of the neighbourhood by reason of noise, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit or oil, or otherwise, and includes any of the following: a. high technology industry b. furniture manufacturing c. clothing manufacturing d. food production e. plant growing / propagation. Note: Light industries are a type of industry — see the definition of that term in this definitions table.	Standard Template definition used as a base. The red highlighted text below has been omitted as it is not relevant in the airport site context and alternate more relevant examples have been added. A building or place used to carry out an industrial activity that does not interfere with the amenity of the neighbourhood by reason of noise, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit or oil, or otherwise, and includes any of the following: a. high technology industry b. home industry. Note: Light industries are a type of industry — see the definition of that term in this definitions table.
Office premises	A building or place used for the purpose of administrative, clerical, technical, professional or similar activities that do not include dealing with members of the public at the building or place on a direct and regular basis, except where such dealing is a minor activity (by appointment) that is ancillary to the main purpose for which the building or place is used. Note: Office premises are a type of commercial premises—see the definition of that term in this definitions table.	Standard Template definition applied.
Public utility undertaking	Any of the following undertakings carried on or permitted to be carried on by or by authority of any Public Service agency or under the authority of or in pursuance of any Commonwealth or State Act: a. railway, road transport, water transport, air transport, wharf or river undertakings b. undertakings for the supply of water, hydraulic power, electricity or gas or the provision of sewerage or drainage services, and a reference to a person carrying on a public utility undertaking includes a reference to a council, electricity supply authority, Public Service agency, corporation, firm or authority carrying on the undertaking.	Standard Template definition applied.
Recreation facility	A building or place used predominantly for indoor recreation, whether or not operated for the purposes of gain, including a squash court, indoor swimming pool, gymnasium, table tennis centre, health studio, bowling alley, ice rink or any other building or place of a like character used for indoor recreation, but does not include an entertainment facilities, a recreation facilities (major) or a registered club.	Definition based on the Standard Instrument definition of 'recreation facilities (indoor)'.
Recreation facility (major)	A building or place used for large-scale sporting or recreation activities that are attended by large numbers of people whether regularly or periodically, and includes theme parks, sports stadiums, showgrounds, racecourses and motor racing tracks.	Standard Template definition applied.

Land use	2019 MP definition	Definition source/alignment
Registered club	A club that holds a club licence under the Liquor Act 2007.	Standard Template definition applied.
Renewable energy generation facility	Includes wind turbines, field solar arrays, roof mounted solar panels and other renewable energy generation and storage facilities.	No Standard Template definition.
Research and development facility	A building or facilities used primarily for research, innovation and business development in science, technology and education including any storage or transportation associated with any such activity.	No Standard Template definition.
Retail premises	A building or place used for the purpose of selling items by retail, or hiring or displaying items for the purpose of selling them or hiring them out, whether the items are goods or materials (or whether also sold by wholesale), and includes any of the following: a. food and drink premises b. kiosks c. shops d. markets e. vehicle sales or hire premises f. plant nursery. Note: Retail premises are a type of commercial premises — see the definition of that term in this definitions table.	Based on the Standard Instrument definition with some of the examples omitted.
Roads	A public road or a private road within the meaning of the Roads Act 1993, and includes a classified road.	Standard Template definition applied.
Runway related activities / facilities	Activities and facilities include runways, taxiways, aprons, clearways, compass swing and engine run-up areas, glide path facilities, helicopter landing, parking and servicing, landing equipment, radar, communications and all aircraft navigational aids (visual and non-visual).	No Standard Template definition.
Service station	A building or place used for the sale by retail of fuels and lubricants for motor vehicles, whether or not the building or place is also used for any one or more of the following: a. The ancillary sale by retail of spare parts and accessories for motor vehicles b. The cleaning of motor vehicles c. Installation of accessories d. Inspecting, repairing and servicing of motor vehicles (other than body building, panel beating, spray painting, or chassis restoration) e. The ancillary retail selling or hiring of general merchandise or services or both.	Standard Template definition applied.
Temporary uses and structures	Temporary structures for private or community events, as well as the following specified temporary uses of land and buildings: a. Filming b. Tradeshows c. Tenant related activity d. Airport management related activity	No Standard Template definition.
Vehicle storage	A building or place used for the storage of operable or inoperable vehicles that may include charging facilities for electric vehicles.	No Standard Template definition.
Warehouse or distribution centres	A building or place used mainly or exclusively for storing or handling items (whether goods or materials) pending their sale, but from which no retail sales are made.	Standard Template definition applied.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APPENDIX
STATE ENVIRONMENTAL PLANNING POLICIES

STATE ENVIRONMENTAL PLANNING POLICIES

Table E1.1 State Environmental Planning Policies

State environmental planning policies	Response
State Environmental Planning Policy No 1— Development Standards	The purpose of this SEPP is to provide more flexibility to development standards. The SEPP allows an authority to approve a non-complying development proposal provided that they can show that the set standard is unreasonable or unnecessary. CAL manages a development assessment process pursuant to the aims and objectives of the Airports Act.
State Environmental Planning Policy No.19- Bushland in Urban Areas (pub. 1986-10- 24)	The aim of this SEPP is to protect and preserve bushland in urban areas. The Bushland area along the Nepean River on the Airport site (Airport Riparian Zone) and its management will be consistent with the SEPP.
State Environmental Planning Policy No. 21-Caravan Parks (pub. 1992-04-24)	Not relevant
State Environmental Planning Policy No. 30-Intensive Agriculture (pub. 1989-12-08)	Not relevant
State Environmental Planning Policy No. 33-Hazardous and Offensive Development (pub. 1992-03-13)	Not relevant
State Environmental Planning Policy No. 36-Manufactured Home Estates (pub. 1993-07-16)	Not relevant
State Environmental Planning Policy No. 50-Canal Estate Development (pub. 1997-11-10)	Not relevant
State Environmental Planning Policy No. 55-Remediation of Land (pub. 1998-08-28)	The Airports Act requires CAL to prepare an Airport Environment Strategy (AES) for the Airport. Any development of the land would have to consider this AES. Contaminated land sites are managed through this AES and are also subject to regulation by the Airport Environment Officer, a body appointed by the Commonwealth Government under the Airports Act to regulate environmental impacts at the Airport. CAL has developed internal processes to manage contaminated sites to achieve objectives similar to the broad aims and objectives of SEPP 55
State Environmental Planning Policy No. 62-Sustainable Aquaculture (pub. 2000-08-25)	Not relevant
State Environmental Planning Policy No. 64-Advertising and Signage (pub. 2001-03-16)	CAL acknowledges the aims and objectives of SEPP 64. CAL considers issues of amenity, character and finish through its development assessment process.
State Environmental Planning Policy No 65-Design Quality of Residential Apartment Development (pub. 2002-07-26)	Not relevant
State Environmental Planning Policy No. 70-Affordable Housing (Revised Schemes) (pub. 2002-05-01)	Not relevant

State environmental planning policies	Response
State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017 : Subject Land (pub. 2017-08-25)	The aim of this SEPP is to protect the biodiversity values of trees and other vegetation in non-rural areas of NSW and to preserve the amenity of these areas through the preservation of trees and other vegetation. This SEPP was one of a suite of Land Management and Biodiversity Conservation reforms that commenced in New South Wales on 25 August 2017. It works together with the Biodiversity Conservation Act 2016 and the Local Land Services Amendment Act 2016 to create a framework for the regulation of clearing of native vegetation in NSW. The SEPP ensures the biodiversity offset scheme (established under the Land Management and Biodiversity reforms) applies to all clearing of native vegetation that exceeds the offset thresholds in urban areas and environmental conservation zones that does not require development consent. The Master Plan is consistent with the provisions of this SEPP
State Environmental Planning Policy (Affordable Rental Housing) 2009 (pub. 2009-07-31)	Not relevant
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 (pub. 2004-06-25)	Any development will be developed having regard to the aims of the SEPP where relevant.
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 (pub. 2008-12-12)	Used as an assessment tool in the development assessment process, where relevant.
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 (pub. 2004-03-31)	Not relevant
State Environmental Planning Policy (Infrastructure) 2007 (pub. 2007-12-21)	The aim of this SEPP is to encourage a range of infrastructure works in NSW, by a consistent planning regime and appropriate consultation. The SEPP supports greater flexibility in the location of infrastructure and service facilities along with improved regulatory certainty and efficiency. The Master Plan is consistent with the SEPP's provisions for a robust development assessment regime.
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 (pub. 2007-02-16)	Not relevant
State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007 (pub. 2007-09-28)	The aim of this SEPP is to provide for the erection of temporary structures with consent across the State as well as require any development involving subdivision of land, erection of a building or demolition of a building, to only be carried out with development consent. The Master Plan is consistent with the SEPP's provisions.

SECTION 117 DIRECTIONS

Table E1.2 Section 117 Directions under the *Environment Planning & Assessment Act 1979*

Directions	Objectives/relevance/consistency
Employment and resources	
1.1 Business and Industrial Zones	The objectives of this direction are to encourage employment growth in suitable locations (such as the Airport), to protect employment land and support the viability of identified centres. The Master Plan seeks to provide areas for business and industrial uses.
1.2 Rural Zones	Not relevant
1.3 Mining, Petroleum Production and Extractive Industries	Not relevant
1.4 Oyster Aquaculture	Not relevant
1.5 Rural Lands	Not relevant
Environmental and heritage	
2.1 Environment Protection Zones	The Airport is not located within an Environmental Protection Zone. Figure 12.3 identifies areas of Environmental significance.
2.2 Coastal Protection	Not relevant
2.3 Heritage Conservation	The Airport Heritage Management Plan (HMP) 2020 is currently being finalised and identifies items with heritage significance. The HMP provides principles, policies and specific guidelines for managing the heritage values of items at the Airport during on-going operations and proposed future development.
2.4 Recreation Vehicle Areas	Not relevant
Housing, infrastructure and urban development	
3.1 Residential Zones	Not relevant
3.2 Caravan Parks and Manufactured Home Estates	Not relevant
3.3 Home Occupations	Not relevant
3.4 Integrating Land Use and Transport	The Master Plan enhances the Airport's position as a transport and employment area and integrates a variety of land uses in the one location.
3.5 Development Near Licensed Aerodromes	The objectives of this direction are: (a) to ensure the effective and safe operation of aerodromes; and (b) to ensure that their operation is not compromised by development that constitutes an obstruction, hazard or potential hazard to aircraft flying in the vicinity; and (c) to ensure development for residential purposes or human occupation, if situated on land within the ANEF contours of between 20 and 25, incorporates appropriate mitigation measures so that the development is not adversely affected by aircraft noise. These factors have been addressed in the Master Plan
3.6 Shooting Ranges	Not relevant
Hazard and risk	
4.1 Acid Sulfate Soils	No acid sulfate soils have been identified in the area. Notwithstanding, any development within areas affected by acid sulphate soils will be subject to the required development assessment process
4.2 Mine Subsidence and Unstable Land	Not relevant
4.3 Flood Prone Land	All development will be required to address the relevant principles and guidelines established by the NSW Floodplain Development Manual and the Camden Council Nepean River Flood Study 2015, which has been utilised to inform the Master Plan.
4.4 Planning for Bushfire Protection	Not relevant
Regional planning	
5.1 Implementation of Regional Strategies	Revoked 17/10/2017
5.2 Sydney Drinking Water Catchments	Not relevant

Directions	Objectives/relevance/consistency
5.3 Farmland of State and Regional Significance on the NSW Far North Coast	Not relevant
5.4 Commercial and Retail Development along the Pacific Highway, North Coast	Not relevant
5.5 Development in the vicinity of Ellalong, Paxton and Millfield (Cessnock LGA)	Revoked 18/06/2010
5.6 Sydney to Canberra Corridor	Revoked 10/7/2008
5.7 Central Coast	Revoked 10/7/2008
5.8 Second Sydney Airport: Badgerys Creek	The directions set out in the draft Greater Sydney Regional Plan with regard to the Western Sydney Airport at Badgerys Creek have been considered in the preparation of this Master Plan. Detailed implications of the impacts of the operations of the Western Sydney Airport on the operations at Camden Airport will be considered towards the end of the eight year planning period of this Master Plan.
5.9 North West Rail Link Corridor Strategy	Not relevant
5.10 Implementation of Regional Plans	The draft Greater Sydney Regional Plan has been considered in the preparation of this Master Plan.
Local plan making	
6.1 Approval and Referral Requirements	The Master Plan complies with the objective of this direction which is to ensure that zoning provisions encourage the efficient and appropriate assessment of development.
6.2 Reserving Land for Public Purposes	The site is currently zoned 'SP2 Infrastructure – Air Transport Facilities' in the Camden Local Environmental Plan 2010 and its continued use as an Airport is encouraged within the Master Plan.
6.3 Site Specific Provisions	The Master Plan complies with the objective of this direction which seeks to discourage unnecessarily restrictive site specific planning controls.
Metropolitan Planning	
7.1 Implementation of A Plan for Growing Sydney	The Master Plan complies with the objective of this direction which gives legal effect to the planning principles; directions; and priorities for sub-regions, strategic centres and transport gateways contained in A Plan for Growing Sydney. The Master Plan has been developed with consideration to A Plan for Growing Sydney.
7.2	Not relevant
7.3	Not relevant
7.4	Not relevant
7.5	Not relevant
7.6	Not relevant

LOCAL PLANNING INSTRUMENTS

Table E1.3 Local Planning Instruments

Camden LEP 2010 Provision	Details	Camden Airport MP response
Part 1 Preliminary	This section outlines a range of overarching aims for the Camden LEP 2010 being: a. to ensure Camden retains its valued traditional qualities, character and scenic landscapes while providing for sustainable urban growth, b. to ensure that new communities are planned and developed in an orderly, integrated and sustainable manner and contribute to the social, environmental and economic sustainability of Camden, c. to ensure natural assets within Camden are protected and enhanced, d. to minimise the impact on existing and future communities of natural hazards such as bush fires and flooding, e. to ensure that appropriate housing opportunities are provided for all existing and future residents of Camden at all stages of their lives, f. to ensure that the economic, employment and educational needs of all existing and future residents of Camden are appropriately planned for, g. to ensure the agricultural production potential of rural land, and prevent the fragmentation of agricultural holdings, h. to ensure that the recreation, cultural and social needs of all existing and future residents of Camden are appropriately planned for, i. to protect and restore the environmental values of land, including waterways and riparian land, as part of the natural systems, j. to conserve and enhance the built and landscape heritage of Camden.	The aims of the plan will be considered in the development assessment process.
Part 2 Permitted or prohibited development	This section sets out a variety of land use zones across the parts of the Camden LGA. There are objectives set out for each of these zones as well as a land use table that identifies permissible and prohibited development.	Master Plan 2020 sets out land use zones and land use tables similar to those utilised in the Camden LEP 2010. The area of Camden Airport is zoned SP2 Special Infrastructure – Air Transport Facility within Camden LEP 2010.
Part 3 Exempt and complying standards	This section outlines development that is considered exempt and complying.	The Exempt and Complying SEPP supersedes the provisions set out in this part of the Camden LEP 2010.
Part 4 Principal development standards	**Clause 4.3 Height of buildings (HOB)** This clause outlines the objectives of HOB being to ensure that the height of development is compatible with the character, amenity and landform of the area where it will be located, to provide appropriate height transitions and to define focal points.	Appropriate built form controls are considered within the development assessment process.
	Clause 4.4 Floor Space Ratio (FSR) This clause outlines the objectives of FSR being to regulate scale and bulk consistent with the character of the area.	Appropriate built form controls are considered within the development assessment process.
	Clause 4.6 Exceptions to development standards The objectives of this clause are to provide an appropriate degree of flexibility in applying certain development standards to particular development and to achieve better outcomes for and from development by allowing flexibility in particular circumstances. The clause sets out a range of provisions for when exceptions to developments standards may be granted.	These provisions will be considered in the development assessment process.

Camden LEP 2010 Provision	Details	Camden Airport MP response
Part 5 Miscellaneous provisions	**Clause 5.4 Controls relating to miscellaneous permissible uses** This clause outlines provisions for a variety of permissible uses including the following two of relevance to CAL: **Industrial retail outlets** If development for the purposes of an industrial retail outlet is permitted under this Plan, the retail floor area must not exceed: a. 40% of the gross floor area of the industry or rural industry located on the same land as the retail outlet, or b. 400 square metres, whichever is the lesser. **Kiosks** If development for the purposes of a kiosk is permitted under this Plan, the gross floor area must not exceed 30 square metres.	These provisions will be considered in the development assessment process.
	Clause 5.10 Heritage conservation This clause outlines objectives and for the protection of heritage items and their setting and states that consent is required for any alterations, works or changes to heritage items. Other provisions and objectives relate to development in the vicinity of heritage items, archaeological sites or potential archaeological sites and their setting.	The Airport is listed as a local heritage item.
Part 6 Additional local provisions	**Clause 6.1 Acid sulfate soils** This clause outlines that development consent is required for works on acid sulphate soils and lists various classes of works.	No acid sulfate soils have been identified in the area. Notwithstanding, any development within areas affected by acid sulphate soils will be subject to the required development assessment process
	Clause 6.2 Earthworks The objective of this clause is to ensure that earthworks for which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land. The clause outlines when development consent is required and a range of provisions to be considered when granting development consent.	The objective and provisions set out in this clause will be considered in the development assessment process for earthworks.
	Clause 6.3 Flood planning These clauses apply to land at or below the flood planning level and its objectives are to minimise the flood risk to life and property associated with the use of land, allow development on land that is compatible with the land's flood hazard and avoid significant adverse impacts on flood behaviour and the environment. The clause outlines when development consent is required and a range of provisions to be considered when granting development consent.	Any development on flood liable land will be the subject to the development assessment process.
	Clause 6.6 Development in areas subject to aircraft noise This objectives of this clause are to prevent noise sensitive development from being located near the Airport and its flight paths, to assist in minimising the impact of aircraft noise and to ensure that land use and development in the vicinity of the Camden Airport do not hinder or have any other adverse impacts on the ongoing, safe and efficient operation of Camden Airport. A range of provisions are set out in this clause that detail under what conditions development consent may be granted within specified ANEFs.	The Master Plan incorporates noise and OLS standards which are addressed in relevant sections of the Master Plan.
	Clause 6.8 Special provisions applying to centre based child care facilities This clause sets out additional provisions for centre based child care facilities being: Despite any other provision of this Plan, development consent must not be granted for the purpose of a centre-based child care facilities on land if the vehicular access to that land is from: a. a classified road, or b. a cul-de-sac road or a road where the carriageway between kerbs is less than 10 metres.	The objective and provisions set out in this clause will be considered in the development assessment process for child care facilities.

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APPENDIX
ENVIRONMENT AND SUSTAINABILITY POLICY

SYDNEY METRO AIRPORTS

BANKSTOWN & CAMDEN

Environment and Sustainability Policy

Bankstown Airport Limited and Camden Airport Limited form part of Sydney Metro Airports. Sydney Metro Airports is committed to providing a centre of excellence for aviation, commercial and industrial facilities. Sydney Metro Airports actively involve all employees, tenants, sub-contractors, suppliers and consultants to:

- Promote a culture of shared responsibility for environmental and sustainability outcomes
- Meet or exceed compliance with all applicable laws, regulations and statutory obligations
- Identify, assess and manage risk to the environment
- Improve our energy, water and resource efficiency, and take all reasonable and practical steps to minimise pollution and reduce waste and other adverse environmental effects
- Develop our people and provide resources to enable us to meet our objectives and performance requirements
- Value heritage and respect traditional land owner groups
- Engage with the Department of Infrastructure, Regional Development and Cities (DIRDC), the communities we work within and other stakeholders on sustainability and environmental matters
- Promoting sustainable practices within the decision making process
- Be transparent in the investigation of environmental incidents to identify all causal factors and actions taken to prevent recurrence and minimise environmental impact
- Regularly monitor, review and evaluate our performance to ensure continuous environmental improvement across our airports

Lee de Winton

Chief Executive Officer

Date: 4 April 2018

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APPENDIX
ENDORSED ANEF

ANEF

Table G1.0 2040 average daily aircraft movements

RUNWAY	AIRCRAFT	ARRIVALS		DEPARTURES		TRAINING		GRAND TOTAL	ANNUAL MOVEMENTS
		DAY	NIGHT	DAY	NIGHT	DAY	NIGHT		
06	BEC58P	0.496176	0.010127	0.496175	0.010126	7.787598	0.158930	8.959132	3,270
	CNA172	3.019581	0.061623	3.019581	0.061623	32.760458	0.668576	39.591442	14,451
	CNA206	0.229481	0.004683	0.229481	0.004683	0.101272	0.002064	0.571664	209
	CNA208	0.326059	0.006654	0.326058	0.006654	0.200352	0.004088	0.869865	318
	CNA441	0.248089	0.005063	0.248088	0.005063	0.000000	0.000000	0.506303	185
	CNA500	0.000000	0.000000	0.000000	0.000000	0.137832	0.002810	0.140642	51
	GASEPF	4.012819	0.081894	4.012818	0.081894	39.790312	0.812046	48.791783	17,809
	GASEPV	1.425619	0.029094	1.425618	0.029094	9.951432	0.203090	13.063947	4,768
	PA30	0.086830	0.001771	0.086831	0.001772	0.000000	0.000000	0.177204	65
	PA31	0.077970	0.001591	0.077971	0.001591	0.000000	0.000000	0.159123	58
06 TOTAL		9.922624	0.202500	9.922621	0.202500	90.729256	1.851604	112.831105	41,183
06G	CNA182	3.354822	0.068465	3.354822	0.068466	0.000000	0.000000	6.846575	2,499
06G TOTAL		3.354822	0.068465	3.354822	0.068466	0.000000	0.000000	6.846575	2,499
10	BEC58P	0.359352	0.007334	0.359351	0.007333	0.000000	0.000000	0.733370	268
	CNA172	2.186908	0.044632	2.186909	0.044630	12.065430	0.246220	16.774729	6,123
	CNA206	0.166200	0.003392	0.166200	0.003392	0.037302	0.000758	0.377244	138
	CNA208	0.236145	0.004820	0.236146	0.004820	0.073788	0.001504	0.557223	203
	CNA441	0.179675	0.003666	0.179676	0.003667	0.000000	0.000000	0.366684	134
	GASEPF	2.906254	0.059311	2.906253	0.059311	14.654474	0.299072	20.884675	7,623
	GASEPV	1.032494	0.021072	1.032493	0.021071	3.665044	0.074788	5.846962	2,134
	PA30	0.062886	0.001285	0.062887	0.001283	0.000000	0.000000	0.128341	47
	PA31	0.056469	0.001153	0.056470	0.001152	0.000000	0.000000	0.115244	42
10 TOTAL		7.186383	0.146665	7.186385	0.146659	30.496038	0.622342	45.784472	16,711
10G	CNA182	1.682109	0.034328	1.682110	0.034329	0.000000	0.000000	3.432876	1,253
10G TOTAL		1.682109	0.034328	1.682110	0.034329	0.000000	0.000000	3.432876	1,253
24	BEC58P	0.392430	0.008008	0.392429	0.008009	6.168666	0.125890	7.095432	2,590
	CNA172	2.388213	0.048739	2.388214	0.048740	25.968654	0.529972	31.372532	11,451
	CNA206	0.181498	0.003704	0.181499	0.003704	0.080276	0.001642	0.452323	165
	CNA208	0.257882	0.005263	0.257883	0.005263	0.158812	0.003238	0.688341	251
	CNA441	0.196213	0.004004	0.196215	0.004004	0.000000	0.000000	0.400436	146
	CNA500	0.000000	0.000000	0.000000	0.000000	0.109180	0.002234	0.111414	41
	GASEPF	3.173773	0.064770	3.173774	0.064771	31.541100	0.643694	38.661882	14,112
	GASEPV	1.127533	0.023010	1.127534	0.023011	7.888330	0.160990	10.350408	3,778
	PA30	0.068676	0.001402	0.068676	0.001401	0.000000	0.000000	0.140155	51
	PA31	0.061669	0.001257	0.061667	0.001259	0.000000	0.000000	0.125852	46
24 TOTAL		7.847887	0.160157	7.847891	0.160162	71.915018	1.467660	89.398775	32,631
24G	CNA182	2.687617	0.054849	2.687616	0.054849	0.000000	0.000000	5.484931	2,002
24G TOTAL		2.687617	0.054849	2.687616	0.054849	0.000000	0.000000	5.484931	2,002

RUNWAY	AIRCRAFT	ARRIVALS		DEPARTURES		TRAINING		GRAND TOTAL	ANNUAL MOVEMENTS
		DAY	NIGHT	DAY	NIGHT	DAY	NIGHT		
28	BEC58P	0.255605	0.005217	0.255606	0.005217	0.000000	0.000000	0.521645	190
	CNA172	1.555542	0.031747	1.555542	0.031746	9.109012	0.185896	12.469485	4,551
	CNA206	0.118218	0.002414	0.118218	0.002412	0.028152	0.000574	0.269988	99
	CNA208	0.167969	0.003428	0.167969	0.003428	0.055702	0.001140	0.399636	146
	CNA441	0.127803	0.002607	0.127802	0.002608	0.000000	0.000000	0.260820	95
	GASEPF	2.067209	0.042188	2.067209	0.042188	11.063644	0.225786	15.508224	5,661
	GASEPV	0.734408	0.014989	0.734409	0.014988	2.766984	0.056472	4.322250	1,578
	PA30	0.044730	0.000914	0.044731	0.000913	0.000000	0.000000	0.091288	33
	PA31	0.040167	0.000821	0.040167	0.000820	0.000000	0.000000	0.081975	30
28 TOTAL		5.111651	0.104325	5.111653	0.104320	23.023494	0.469868	33.925311	12,383
28G	CNA182	1.672713	0.034137	1.672712	0.034137	0.000000	0.000000	3.413699	1,246
28G TOTAL		1.672713	0.034137	1.672712	0.034137	0.000000	0.000000	3.413699	1,246
H1	B206B3	0.196000	0.004000	0.196000	0.004000	0.445699	0.009096	0.854795	312
	B430	0.281918	0.005753	0.281918	0.005753	0.295342	0.006027	0.876712	320
	EC130	0.945096	0.019288	0.945096	0.019288	1.073973	0.021918	3.024658	1,104
	R22	0.985370	0.020110	0.985370	0.020110	8.586411	0.175233	10.772603	3,932
	R44	0.308767	0.006301	0.308767	0.006301	5.777973	0.117918	6.526027	2,382
H1 TOTAL		2.717151	0.055452	2.717151	0.055452	16.179397	0.330192	22.054795	8,050
GRAND TOTAL		42.182957	0.860878	42.182961	0.860874	232.343203	4.741666	323.172539	117,958

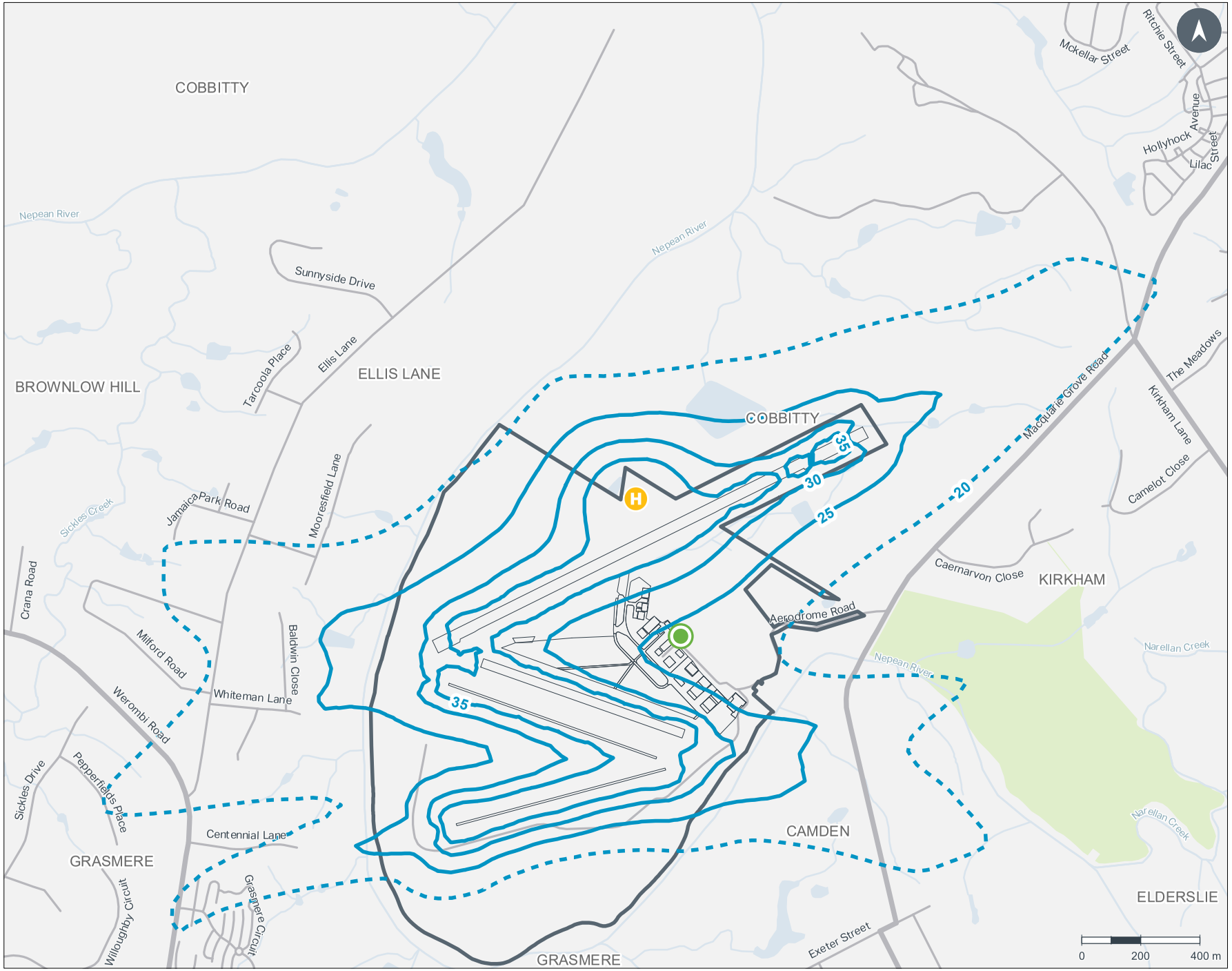

Figure G.1: 2040 ANEF

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APPENDIX
FLYING NEIGHBOURLY PROCEDURES PROGRAM

AIRCRAFT GROUND BASED NOISE

Sydney Metro Airport Camden processes and actions noise complaints associated with ground based activities. The Airport regularly communicates with its tenants about noise generation and the impact ground based noise has on the local community.

The Airport oversees the following processes and procedural concerns received from the local community in relation to these issues:

- Ground running of aircraft and aircraft servicing;
- Mechanical plant and equipment;
- Non-aviation industrial activities;
- On airport road traffic;
- Operation of fixed audible alarm or warning systems;
- On airport construction activities.

To register your concerns about ground based noise, please contact the Airport on 02 8709 9400.

WORRIED ABOUT AIRCRAFT NOISE?

Airservices is responsible for the monitoring of airborne aircraft noise. Issues regarding aircraft noise in relation to these aircraft movements, can be raised with Airservices on 1800-802-584.

REVIEW OF PROCEDURES

Sydney Metro Airport Camden is committed to regularly reviewing its aircraft and ground-based noise procedures.

EXEMPTIONS TO PROCEDURES

For operational requirements, emergency services (including NSW Police, NSW Fire, NSW Ambulance and search and rescue operations) and infrastructure monitoring may have to operate outside these procedures.

FLY NEIGHBOURLY PROGRAM

Sydney Metro Airport Camden has implemented the Fly Neighbourly Program with the support of the aviation community at the Airport. To ensure its success, the Airport must undertake regular and sustained communications with aircraft operators, the community and other interested parties.

Information contained in this publication does not remove the requirement for the pilot to comply with published procedures in AIP/ERSA or instructions given by ATC during TOWER hours.

SYDNEY METRO AIRPORT CAMDEN RECOGNISES THAT AIRCRAFT NOISE IS AN IMPORTANT ISSUE FOR THE COMMUNITY.

Australian airports are regulated by federal laws and regulations, and each airport must produce a range of documents such as Master Plans and Environment plans which govern their daily operations. As part of the Airport Environment Strategy (AES) we have produced a Noise Management Plan to assist the community to understand noise in general, noise at airports and noise management at Sydney Metro Airport Camden.

A key component of our Noise Management Plan is the Fly Neighbourly procedures. The Fly Neighbourly procedures are a voluntary Code of Conduct for pilots using Camden Airport.

Sydney Metro Airport Camden is committed to undertaking operations in a good neighbourly manner. We expect aircraft operating into and from Camden Airport to undertake operations in a manner which is considerate of local residents. The safe operation of an aircraft must be maintained at all times. Air traffic procedures, weather and safe separation requirements may preclude at times a pilots compliance with this programme but pilots are expected to make their best efforts to ensure compliance with the spirit of this procedure.

CODE OF CONDUCT

Pilots operating from Sydney Metro Airport Camden must comply with a range of regulations and procedures stipulated by Airservices Australia (AsA) and the Civil Aviation Safety Authority (CASA). These include the En Route Supplement Australia (ERSA), the Visual Pilot Guide and noise abatement procedures.

In addition to these requirements, Sydney Metro Airport Camden in consultation with a variety of airport users, AsA and the Camden Airport Consultation Aviation Community Group, has developed voluntary procedures to assist pilots to minimise their operational noise impact on the community. The implementation of these voluntary procedures is subject to safety and operational considerations of the aircraft.

As part of our Fly Neighbourly Code of Conduct, we ask pilots of fixed-wing aircraft and helicopters to endeavour to practice the following principles.

FIXED-WING AIRCRAFT PROCEDURES

- Adopt and maintain best rates of climb, to minimise noise over residential areas, as soon as possible after take-off;
- Maintain correct or ATC cleared tracks after take-off*;
- Reduce engine revs as soon as possible;
- Follow designated flight paths;
- Avoid flying over, residential areas, hospitals and schools when possible and, if this is not possible, try to be above 1000ft AGL or at the altitude assigned by Air Traffic Control (ATC);
- Only conduct circuit training:
  - Monday to Friday between 7.00am and 10.00pm (10.30PM during HDS)
  - Saturday to Sunday between 7.00am and 8:00pm
- Keep circuits as compact as possible – do not fly wide circuits;
- Use the preferred runway direction 06; and
- When simulating engine failure and recovery this should occur over the airfield.

* Note: In line with CASA and Airservices requirements

HELICOPTER PROCEDURES

- Adopt and maintain best rates of climb, to minimise noise over residential areas, as soon as possible after take-off;
- Maintain correct or ATC cleared tracks after take-off*;
- Always look ahead and select the least noise sensitive route (try to avoid hospitals, schools and residential areas);
- Circuit height is 700ft AGL during daylight hours, and 1,000ft AGL during hours of night;
- Maintain 1,000ft AGL minimum when flying over noise sensitive areas, unless at an altitude required by ATC;
- Avoid blade slap;
- Vary your flight path when accessing visual landmarks;
- Restrict low level training to designated and/or approved areas;
- Only conduct circuit training:
  - Monday to Friday between 7.00am and 10.00pm (10.30PM during HDS)
  - Saturday to Sunday between and 7.00am and 8:00pm

* Note: In line with CASA and Airservices requirements

AREA COVERED BY FLY NEIGHBOURLY PROCEDURES

These Fly Neighbourly Procedures correlate to an area which constitutes the Camden Control Zone (CTR). This area extends in a 2 nautical miles (3.7 kilometres) radius from the Airport Reporting Point, and includes the circuit training flying area.

However there are five approach points to the airport from all sides as well as several departure tracks (due to varying runway directions) where pilots should consider these procedures.

PRELIMINARY DRAFT