

Section One

Vision and Context



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Section One Vision and Context

1. Introduction

Sydney Airport is Australia’s premier international gateway. For more than 100 years, it has connected people, places and communities, supported the creation of new jobs locally and across Australia, and contributed to our thriving tourism and freight industries.

During the first century of airport operations from 1919 to 2019, Sydney Airport serviced a cumulative one billion passengers. We are working towards servicing our two-billionth passenger by 2050. We need to be prepared to meet this forecast demand, for the benefit of our communities, stakeholders, airlines, industry, and the NSW and Australian economies.

Master Plan 2045 outlines a clear strategic direction for the responsible growth of the airport over the next 20 years.

Master Plan 2045 is a flexible blueprint for Sydney Airport’s future that is adaptable to changing conditions in the economy and aviation industry. Development objectives for the airport are identified, exploring how development will sustainably meet the future needs of airlines, passengers and other airport users.

Responding to forecast aircraft and passenger numbers, the Master Plan outlines Sydney Airport’s existing and expected future contribution to the local, state and national economies, and the tourism and freight industries.

Master Plan 2045 includes our:

- Airport Environment Strategy 2025–2030
- 2045 Australian Noise Exposure Forecast (ANEF)
- 20-year Airport Development Plan (including a five-year Ground Transport Plan)
- Airport planning frameworks.

Master Plan 2045 is a key source of information for the local community, the Australian, NSW and local governments, aviation industry stakeholders, and the business community.

Reading Master Plan 2045

Future development options are variously described in Master Plan 2045 as “proposed”, “planned”, “potential”, “likely”, “possible”, and other terms with similar meaning. In each case, these terms are describing potential developments at the airport at various stages in the planning and approval process that may be implemented over the period of Master Plan 2045.

Timing for the delivery of these developments will be further subject to prevailing economic conditions, technological advancements, and consultation with key stakeholders and the broader community.

Legislative framework

Sydney Airport operates in accordance with Commonwealth legislation, governing its day-to-day operations, protection of airspace, future development, and environmental and aircraft noise management. Additionally, NSW legislation applies where no Commonwealth law exists, where the Commonwealth law operates concurrently with state legislation, or for freehold lands owned by Sydney Airport that are not part of the Commonwealth airport site.

Master Plan 2045 is a statutory document prepared in accordance with the *Airports Act 1996* (Airports Act) and our legislative obligations, illustrated in Figure 1-1.

Some legislation identified in Figure 1-1 applied after the draft Master Plan was submitted to the Minister for Infrastructure, Transport, Regional Development and Local Government for her consideration. In some cases, these regulations replaced the regulations that originally came into force in 1997.

Figure 1-1 Commonwealth legislative framework



Section One Vision and Context

1. Introduction

Requirements for an airport master plan

The Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts (DITRDSCSA) is responsible for administering the Airports Act and its associated regulations.

The Airports Act requires federally leased airports, including Sydney Airport, to have a master plan for the airport that has been approved by the Minister for Infrastructure, Transport, Regional Development and Local Government (the Minister).

Under Section 70 of the Airports Act, a master plan is required to:

- Establish the strategic direction for efficient and economic development at the airport over the planning period.
See Section 1 – Chapter 2 and Chapter 3
- Provide for the development of additional uses of the airport site.
See Section 2 – Chapter 10
- Indicate to the public the intended uses of the airport site.
See Chapters 7 to 13
- Reduce potential conflicts between uses of the airport site and ensure that uses of the airport site are compatible with the areas surrounding the airport.
See Section 3 – Chapter 13
- Ensure that all operations at the airport are undertaken in accordance with relevant environmental legislation and standards.
See Section 4 – Airport Environment Strategy 2025–2030
- Establish a framework for assessing compliance at the airport with relevant environmental legislation and standards.
See Section 4 – Airport Environment Strategy 2025–2030
- Promote continual improvement of environmental management at the airport.
See Section 4 – Airport Environment Strategy 2025–2030

Master Plan 2045 has been prepared in accordance with statutory requirements (see Appendix D for details) and following an extensive community and stakeholder consultation process (see Chapter 5).

Additionally, by way of the Aviation White Paper – Towards 2050, the Australian Government has announced that regulations will be amended to require airport master plans to address climate resilience, decarbonisation initiatives and disability access, which we have incorporated in anticipation of this change (see Chapter 4 and various strategies throughout Master Plan 2045).

Master Plan process

The preliminary draft version of Master Plan 2045, prepared following detailed initial technical and stakeholder engagement, was on public exhibition for 62 business days from Wednesday 17 September 2025 to Friday 12 December 2025.

All stakeholders and members of the local community were invited to make a submission during the exhibition period. After the public exhibition, Sydney Airport carefully considered all feedback and updated the preliminary draft version to create the draft Master Plan 2045. The draft Master Plan 2045 was then submitted to the Minister for consideration.

When the Minister approved the draft Master Plan 2045, it became the final Master Plan 2045.

For more information, see Chapter 5 Stakeholder and Community Engagement and Appendix J.

Figure 1-2 Developing Master Plan 2045

Key steps in the process of preparing a master plan



2. Vision for Sydney Airport

Our vision is to deliver long-term sustainable growth to Sydney Airport, making it a leading global airport and the most connected airport in Australia.

This Master Plan outlines our 20-year strategy to deliver this vision.



2. Vision for Sydney Airport

Key considerations

The Australian Government’s 2024 Aviation White Paper – Towards 2050 (the White Paper) identifies a series of key considerations for airport master plans:

- 

Accessibility
Precinct-wide, public transport, cars, and active transport
- 

Access for general aviation purposes
- 

Decarbonisation initiatives and climate resilience
- 

Community
Transparency and completeness of the Master Plan consultation process
- 

Management of aircraft noise

These considerations underpin the development objectives of our plan.

Development objectives

Master Plan 2045 has been prepared in accordance with the following objectives, which guide future development at Sydney Airport.

- 

Implement terminal upgrades to enhance experiences, safety and security of passengers and airport users

 - Safeguard the airport’s aviation operations through improvement and innovation, compete locally and abroad to grow aviation demand
 - Deliver timely, flexible, optimised infrastructure capacity and facilities to service new and existing international markets
 - Enhance user accessibility
- 

Implement innovative ground transport solutions to improve access to, from, and through the airport

 - Partner with the Australian, NSW and local governments to support increased public and active transport use
 - Deliver strategic infrastructure upgrades to optimise use of available space
 - Use advanced technology and demand management tools to enhance access and experiences
- 

Improve environmental performance by minimising the impacts of airport operations and development

 - Work cooperatively and proactively with regulatory agencies, airport stakeholders and business partners to prioritise environmental management
 - Deliver continual environmental improvement across pollution management, flora, fauna, heritage and sustainability
- 

Be an industry-leader in enabling aviation’s transition to lower emissions and improving climate resilience

 - Develop and implement decarbonisation initiatives
 - Advocate for and help drive the development of a local sustainable aviation fuel (SAF) industry
 - Strengthen resilience to the impacts of climate change
- 

Embed sustainability into airport decision making

 - Reduce the impact on, and seek opportunities to enhance, the natural and built environment
 - Reduce waste where possible and promote sustainable use of energy, water and materials
 - Ensure the application of the Built Environment Sustainability (BES) Standards to Sydney Airport infrastructure and building projects
- 

Effectively manage aircraft noise

 - Support the International Civil Aviation Organization’s Balanced Approach to aircraft noise management
 - Meet growing demand and maximise efficiency within existing operational restrictions
 - Continue to facilitate implementation of noise sharing under the Long-Term Operating Plan for Sydney Airport by maximising flights over Botany Bay rather than residential areas
- 

Upgrade the airfield to meet the expected growth in passengers, flights and air freight

 - Be flexible and adaptable in future planning
 - Improve the long-term efficiency of the airport, for optimal use of the airfield
 - Invest in terminal and airfield infrastructure
 - Utilise new technology
- 

Support the local community through inclusion, wellbeing and economic growth

 - Stimulate leisure and business travel to generate benefit and value for the economy
 - Maintain access arrangements for regional airlines
 - Facilitate the activities of businesses operating at the airport
 - Contribute to the growth of tourism, trade and jobs in the NSW and Australian economies
 - Support and invest in our local communities through established grant programs and the creation of local jobs
- 

Engage and communicate with stakeholders and listen to the local community

 - Consult the community transparently, regularly and genuinely, including through the Sydney Airport Community Forum
 - Constructively and proactively engage with elected officials representing the community, relevant Australian and NSW Government agencies, and local government
 - Communicate in a variety of ways so that important information is accessible for all stakeholders

Section One Vision and Context

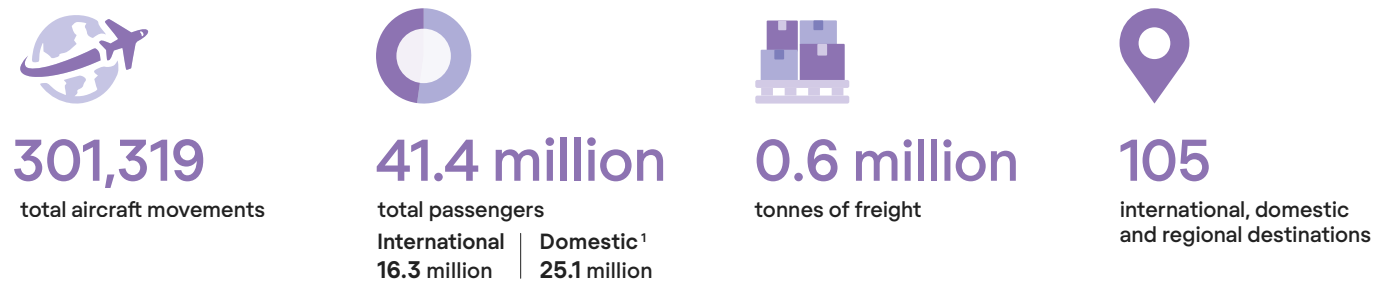
3. Strategic context and economic significance

Sydney Airport is one of Australia’s key infrastructure assets, connecting Sydney to over 100 regional, national, and international destinations.

Located 8 km from the Sydney CBD and major tourist destinations, Sydney Airport is an essential part of Australia’s transport network, contributing significantly to the local, state and national economies.

Master Plan 2045 is informed by the strategic objectives and planning frameworks of Bayside and Inner West councils and the NSW Government, and a broader range of macroeconomic, societal and industrial factors.

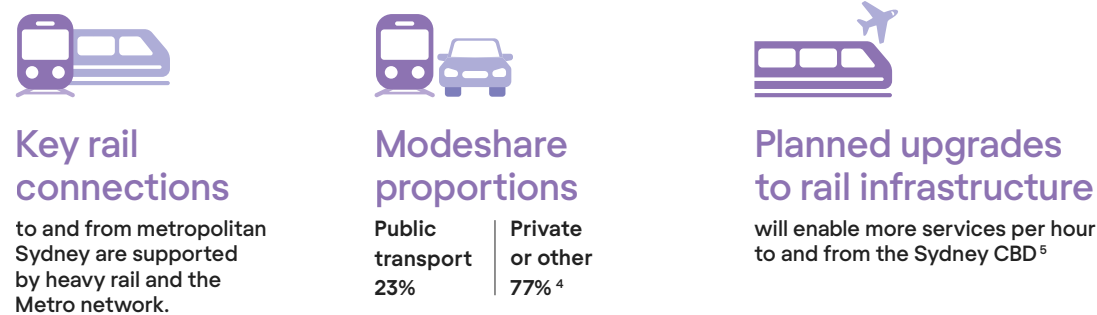
Sydney Airport in 2024



In 2024, Sydney Airport directly and indirectly supported or facilitated:

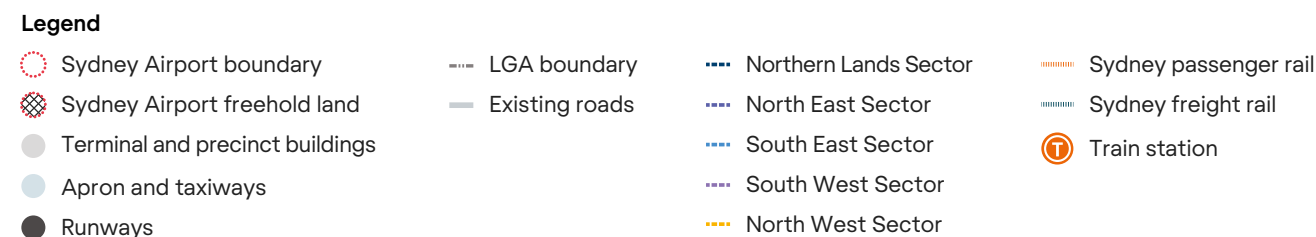


Transport connections



1. Domestic, including regional.
2. Representing 1.5% of Australia’s gross domestic product (GDP) – 2024 Deloitte Access Economics.
3. Including 35,500 direct jobs at the airport and 49,100 indirect jobs – 2024 Deloitte Access Economics.
4. 2024 AECOM.
5. TfNSW – Rail Service Improvement Program.

Map 3-1 Sydney Airport context and existing facilities



Section One Vision and Context

3. Strategic context and economic significance

Strategic context

Our previous master plan established a solid planning framework for the development of Sydney Airport over the 20-year planning period. Master Plan 2045 builds upon this framework, considering economic, social and industrial factors, accounting for changes to Sydney Airport’s operating environment over the intervening period and into the future.

Such factors include:

- Travel and tourism industry trends, such as changing airline business strategies, technological advancements, and the impacts of unforeseen geopolitical and market events.
- Planning for the opening of Western Sydney International Airport (WSI) in 2026.
- Changes to how people access Sydney Airport, including mode share, public transport connectivity and infrastructure delivery (such as the new Sydney Gateway, linking the airport’s passenger terminal precincts to Sydney’s motorway network).
- Increased awareness of behaviours that shape environmental and sustainability outcomes, and the importance of climate resilience of the transport sector.

Relevant government strategies and plans

The NSW Government has recognised the economic importance of Sydney Airport to facilitate growth and prosperity. State strategic documents address how future planning will improve the airport’s accessibility and promote economic activity.

Local environmental plans (LEPs), local strategic planning statements (LSPS), Greater Sydney Region Plan (recently superseded), and The Sydney Plan, acknowledge the importance of enhancing and protecting the functions and roles of international trade gateways, Port Botany, Sydney Airport, and Western Sydney International Airport.

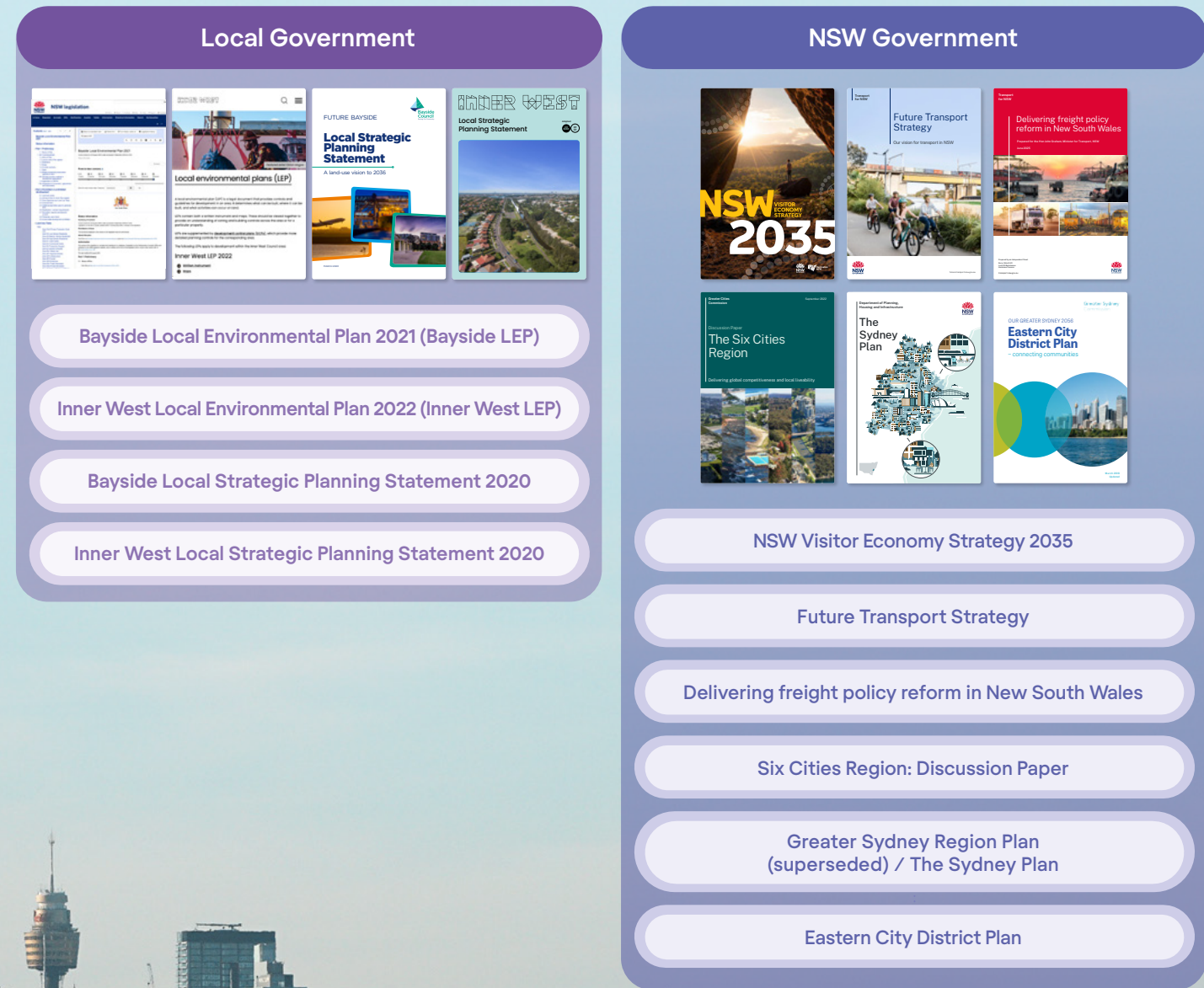
Importantly, once finalised, The Sydney Plan will replace the Greater Sydney Regional Plan – A Metropolis of Three Cities (2018) and associated District Plans.

These strategies lay out a roadmap for collaboration between government and industry, to enable growth and improve efficiency and safety. Across these documents (see Figure 3-1), a range of common themes emerge for Sydney Airport, including:

- The airport will continue to play a key role in realising a prosperous NSW of the future.
- The protection and growth of Sydney Airport, while minimising negative impacts on urban amenity, is vital. Key priorities include preventing inappropriate developments or incompatible land uses in areas near the airport, retaining and managing employment and urban services land, minimising land use conflicts, and protecting airspace.
- The increase in the number of jobs in the region will promote economic growth, improve people’s lives and help to provide equitable access to employment opportunities.
- The freight logistics and handling sector is a critical economic enabler, with freight moving through Sydney Airport forecast to increase significantly over the planning period.
- There is a need for improved infrastructure and strengthened connections between Sydney Airport, the Sydney CBD, Greater Parramatta, WSI and beyond, to support regional and local supply chains that attract investment, grow businesses, and the efficient movement of people, and goods and services for a world-class travel experience.

Master Plan 2045 is informed by and responds to the strategic objectives and planning frameworks of the NSW and local governments. For more on how Master Plan 2045 aligns with planning schemes, laws and regulations, see Chapter 13 Land Use Planning and Appendix E.

Figure 3-1 Relevant government strategies and plans



3. Strategic context and economic significance

Economic contribution of Sydney Airport

Sydney Airport is Australia’s largest transport and logistics hub. Substantial investments by airlines and other nearby businesses, and the presence of established route networks, provide invaluable strategic economic and commercial advantages to Sydney, NSW and Australia.

With each flight providing significant economic contributions, sustainable growth of the airport is critical to achieving the NSW Government’s targets for visitor growth and employment in nearby local government areas.

Sydney Airport will invest in flexible long-term planning to support ongoing economic contribution while accommodating the aviation industry’s volatility and uncertainty.

In 2020, the implementation of lockdowns and border closures at the start of the COVID-19 pandemic led to a sharp and immediate decline in flight and passenger numbers, with total passengers dropping by 71% across Australia and 75% at Sydney Airport.

The aviation sector started to recover strongly in 2022 and by the end of 2024 the total number of passengers passing through Sydney Airport had reached 93.2% of pre-pandemic levels.

Figure 3-2 demonstrates the significant number of daily flights at the airport, the impacts of unforeseen global events, and the industry’s ability to recover.

Annual contribution
of a typical daily
international service

\$

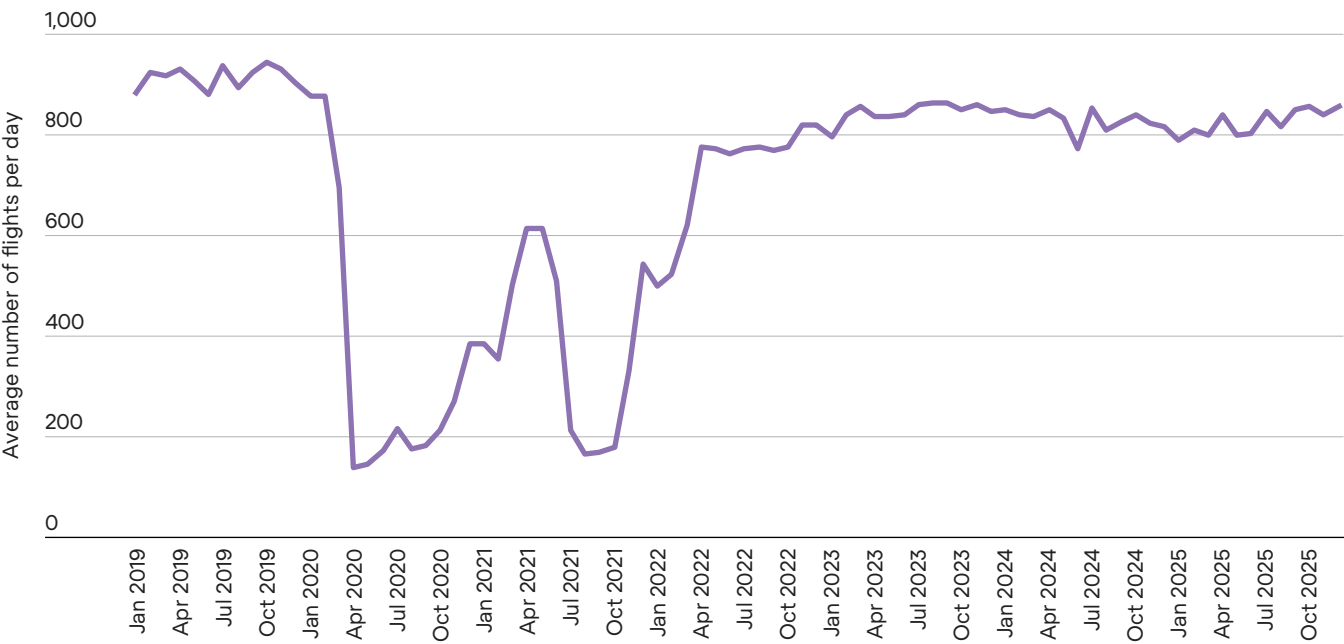
\$172m

to the economy¹
(\$329m for a daily A380
service from Singapore)

1,100 jobs

direct + indirect¹
(2,000 for an A380)

Figure 3-2 Average number of daily flights at Sydney Airport, 2019 to 2025



1. 2024 Deloitte Access Economics.

Key indicators

A 2024 Deloitte Access Economics study found Sydney Airport generated 1.5% of Australia’s GDP and 3% of national full-time equivalent jobs in 2023. Figure 3-3 compares these 2024 figures with the contribution expected by 2045.

Figure 3-3 Key indicators of Sydney Airport’s economic contribution

In 2024 there were:

84,600

full-time equivalent jobs
directly and indirectly supporting
Sydney Airport’s operations

- 35,500 of which directly support operations
- Approximately 11,000 of these workers live within 10 km of the airport, with another 11,000 living within 20 km of the airport

354,800

full-time equivalent jobs
supported or facilitated by Sydney Airport

Total economic activity
\$45.3 billion

Expected by 2045:

105,700

full-time equivalent jobs
directly and indirectly supporting
Sydney Airport’s operations, representing
an increase of 25%

- 44,500 of which directly support operations

559,000

full-time equivalent jobs
supported or facilitated by Sydney Airport

Total economic activity
\$70.6 billion



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3. Strategic context and economic significance

Connectivity

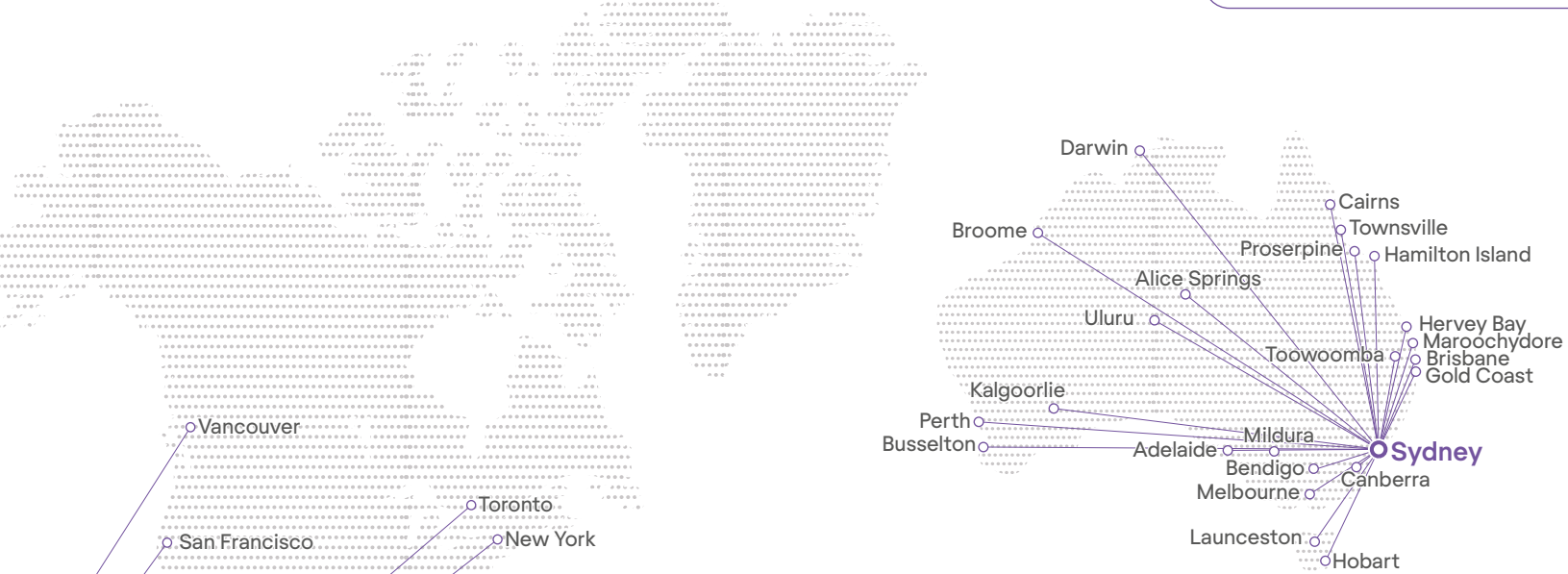
Over 50 international, domestic, and regional airlines, serving 31 countries and 105 destinations from Sydney Airport (see Map 3-2).

Map 3-2 Sydney Airport destinations

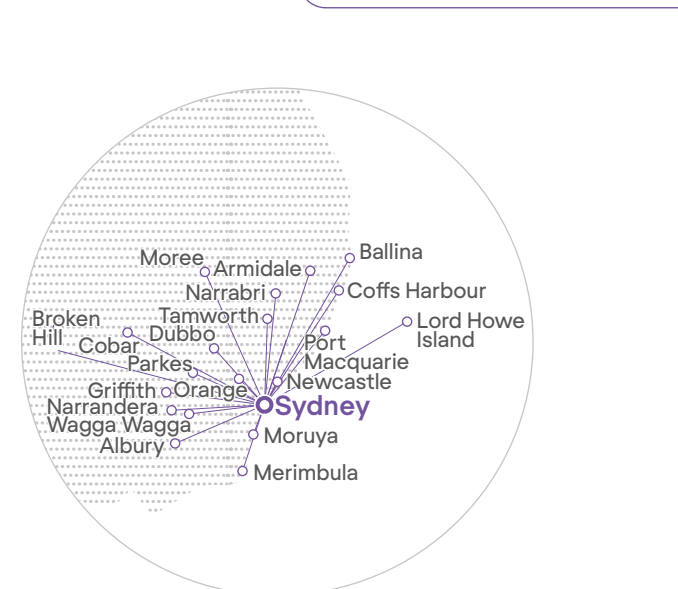
International destinations



Domestic destinations



Regional destinations



Section One Vision and Context

3. Strategic context and economic significance

Connecting regional NSW

Sydney Airport's extensive regional route network (see Map 3-2) connects 20 NSW communities to Sydney and onward destinations, providing access to vital resources such as health and education.

Most communities are well-served in peak periods, with the Australian Government supporting the continuation of regional services during peak times via guaranteed slot allocation protections provided by the *Sydney Airport Demand Management Act 1997*. These are expected to remain in place through the Master Plan 2045 planning period.

In response to increased demand, airlines have commenced up-gauging of aircraft across some service routes. This trend is expected to continue, enabling future growth in regional air travel. Sydney Airport has and will continue to support these important regional services at its domestic terminals.



4. Decarbonisation initiatives and climate resilience

Sustainability is integral to our business strategy, long-term success, and the delivery of our purpose: to be a leading global airport connecting Australia.

Our environmental, social and governance (ESG) framework is focused on three strategic pillars:



Being a responsible business



Advancing a more sustainable future



Supporting our people and communities

Decarbonisation initiatives and climate resilience present a significant opportunity to achieve our growth ambitions and long-term business resilience.

Master Plan 2045 addresses:

- Climate resilience of the aviation sector, the Australian Government’s White Paper, and how Sydney Airport will work with industry to progress climate resilience strategies.
- SAF and the potential of a domestic renewable fuels industry.
- Application of the BES Standards (launched in 2024) to Sydney Airport infrastructure and building projects.
- Sustainability trends in ground transport.
- Opportunities for decarbonisation and climate resilience initiatives.

Sustainability considerations in this Master Plan are informed by recent achievements and commitments, including:

- In May 2025, Qantas and Sydney Airport signed an MoU to support Australia’s domestic SAF industry.
- The largest ever commercial importation of SAF into Australia made by Sydney Airport, Qantas, Ampol and a coalition of organisations in May 2025.
- Participation in the Australian Airports Association (AAA) Sustainability Working Group identifying changes required to airport operations and infrastructure that will support decarbonising aviation.
- From November 2025, Sydney Airport is the airport representative on the Australian Jet Zero Council.
- Significant investment into our energy efficiency program from 2022.
- As of 1 January 2025, Scope 2 market-based emissions have been reduced to zero by purchasing 100% renewable electricity and surrendering large-scale generation certificates which match Sydney Airport’s consumption. The elimination of Scope 2 market-based emissions in 2025 contributed to a 93% reduction in emissions against the target baseline year (2019).
- Earning Airport Carbon Accreditation Level 4 in May 2025.

Net zero Scope 1 and 2 emissions by 2030

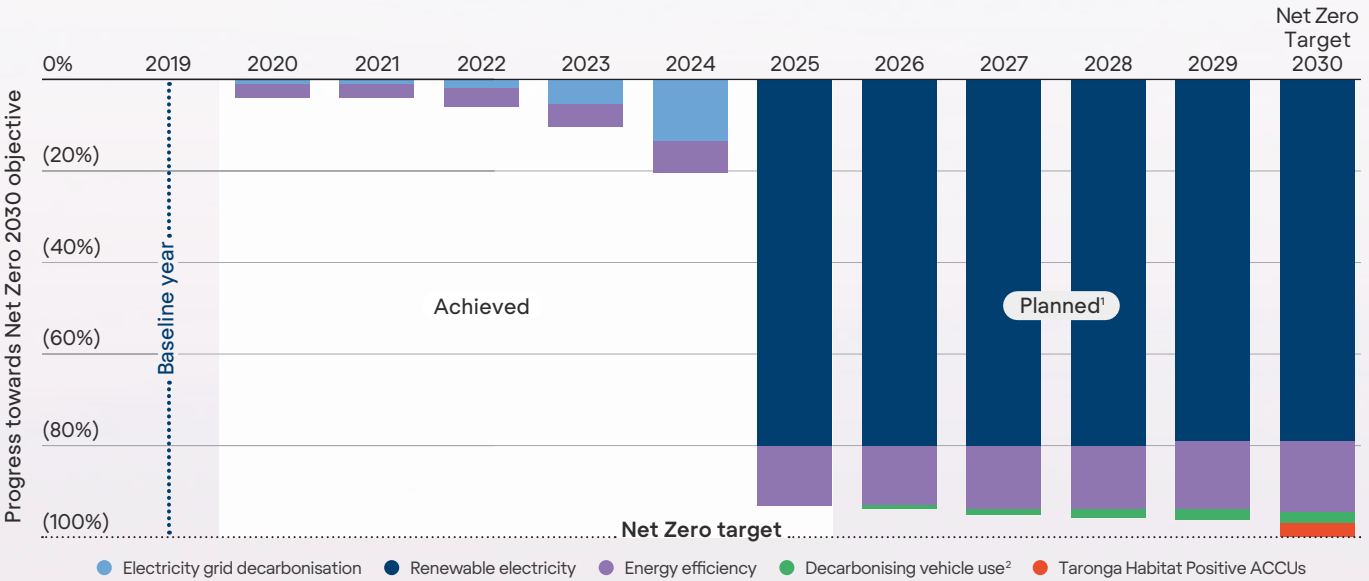
In 2021, Sydney Airport announced its commitment to achieve net zero for emissions under its operational control (Scope 1 and Scope 2 emissions) by 2030.

We have developed a detailed roadmap (Figure 4-1) to support this commitment, which the board of Sydney Aviation Alliance Holdings Pty Ltd (SAAHPL) approved in 2023. This roadmap details the key initiatives planned to reduce and eventually eliminate our emissions (where practicable) and the estimated timing and potential emissions savings from these initiatives.

Net zero initiatives 2026–2029

- Projects designed to be energy efficient to reduce baseload electricity consumption.
- Gas efficiency initiatives and exploring options to degasify or contract renewable gas supply through renewable gas certificates.
- Converting light service vehicles to electric alternatives where feasible.
- Converting landside and airside bus fleets to electric alternatives where feasible.
- Remaining emissions to be offset using nature-based carbon removal credits under the Australian Carbon Credit Unit (ACCU) Scheme from 2030 onwards. These credits have been sourced via an exclusive offtake agreement with Taronga Habitat Positive from a NSW reforestation (environmental plantings) project.

Figure 4-1 Net zero 2030 roadmap – Scope 1 and 2 emissions (tCO2e) savings



1. Planned as at March 2026.
2. Subject to business case and approvals.

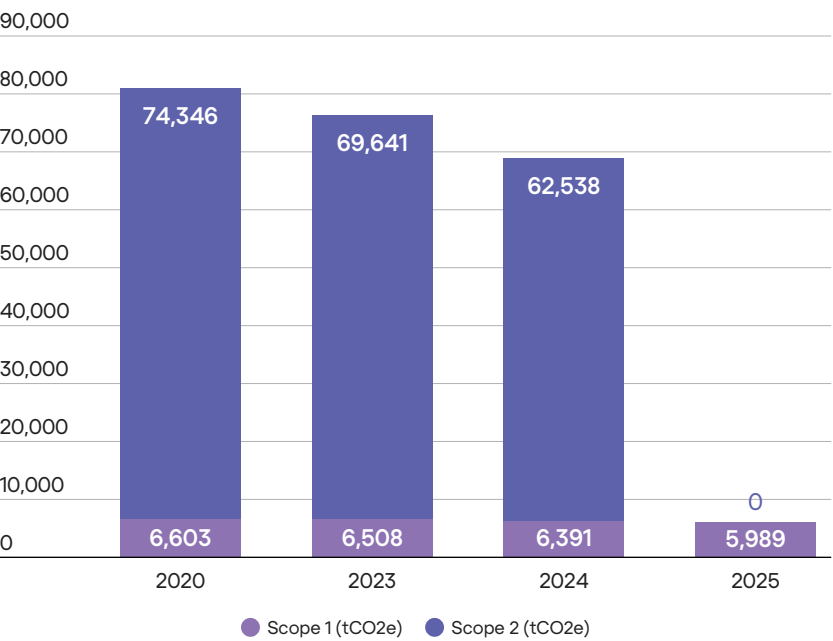
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4. Decarbonisation initiatives and climate resilience

Emissions under Sydney Airport’s operational control

In 2025, Sydney Airport’s total absolute gross greenhouse gas emissions were 61,633 tCO2e. This included 5,989 tCO2e Scope 1 and 55,644 tCO2e Scope 2 (location-based) emissions. Sydney Airport’s total market-based emissions during 2025 were 5,989 tCO2e. This is because Scope 2 market-based emissions have been reduced to zero by purchasing 100% renewable electricity and surrendering large-scale generation certificates which match Sydney Airport’s consumption. Refer to Figures 4-2 and 4-3 for Scope 1 and 2 emissions trends and data.

Figure 4-2 Sydney Airport’s Scope 1 and 2 emissions, year-on-year (tCO2e)



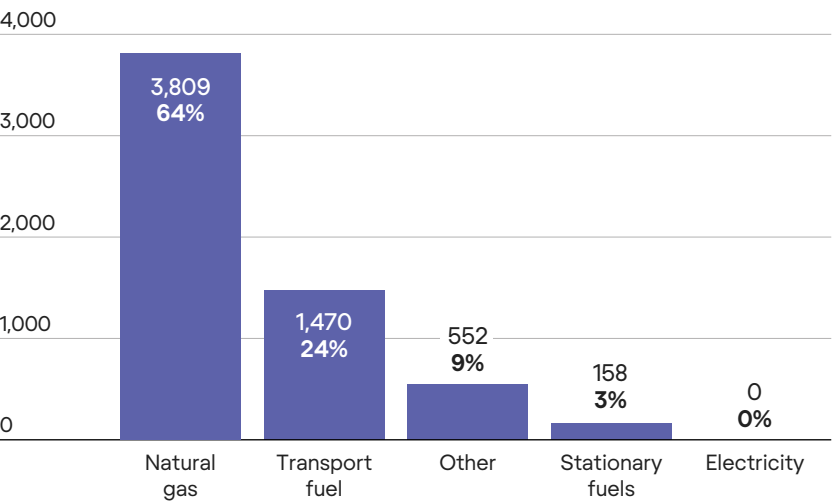
Scope 1

Sydney Airport’s 2025 Scope 1 emissions were primarily made up of natural gas used for thermal heating (64%) and transport fuels used by Sydney Airport and contractor vehicles across the precinct (24%). Scope 1 emissions reduced compared to 2024 (~6% decrease), driven by a reduction in natural gas consumption through optimisation of HVAC systems.

Scope 2

Sydney Airport’s location-based Scope 2 emissions in 2025 were 55,644 tCO2e, driven by electricity usage across the airport precinct (excludes tenant electricity use). However, Scope 2 market-based emissions were reduced to zero in 2025 by purchasing 100% renewable electricity and surrendering large-scale generation certificates which match Sydney Airport’s consumption. Therefore, market-based Scope 2 emissions in 2025 were 0 tCO2e.

Figure 4-3 Sydney Airport’s Scope 1 and 2 emissions, (market-based) emissions 2025 (tCO2e)



Scope 1 5,989 tCO2-e from natural gas, transport fuel, stationary fuels, other.
Scope 2 0 tCO2-e from electricity.

Sydney Airport’s Scope 3 value chain emissions

Scope 3 emissions represent indirect emissions across Sydney Airport’s value chain, including upstream and downstream activities.

Sydney Airport’s Scope 3 emissions for 2025 were 8,602,037 tCO2e. Upstream categories represent approximately 1% of Scope 3 emissions and include purchased goods and services (23,769 tCO2e), capital goods (46,245 tCO2e), fuel and energy related activities (3,997 tCO2e), waste generated in operations (8,231 tCO2e), business travel (329 tCO2e), and employee commuting (2,106 tCO2e). Downstream categories account for around 99% of Scope 3 emissions, primarily arising from use of sold products including aircraft-related operations (8,314,561 tCO2e), passenger-related surface access (160,590 tCO2e) and downstream leased assets (42,209 tCO2e).

Over the long term, if the climate impacts of aviation are not reduced, the Scope 3 emissions profile for Sydney Airport is expected to increase as passenger numbers increase. The Scope 3 Strategy aims to decouple passenger growth from emissions growth. It prioritises initiatives with the largest potential emissions reduction impact, while considering where Sydney Airport can have the strongest level of influence.

Opportunities to reduce Scope 3 emissions

By definition, Scope 3 emissions are outside Sydney Airport’s control.

Sydney Airport is exploring ways we can influence operational improvements to aircraft, airfield and airspace efficiency, the use of SAF, decarbonisation of ground operations, and non-aviation changes that would result in low-impact emissions reduction (see Table 4-1). It is our long-term ambition for 50% of fuel uptake at the airport to be SAF by 2050, although we recognise that this will require the right policy settings by government and the development of a domestic SAF industry.

Figure 4-4 Sydney Airport’s Scope 3 footprint and total carbon footprint 2025

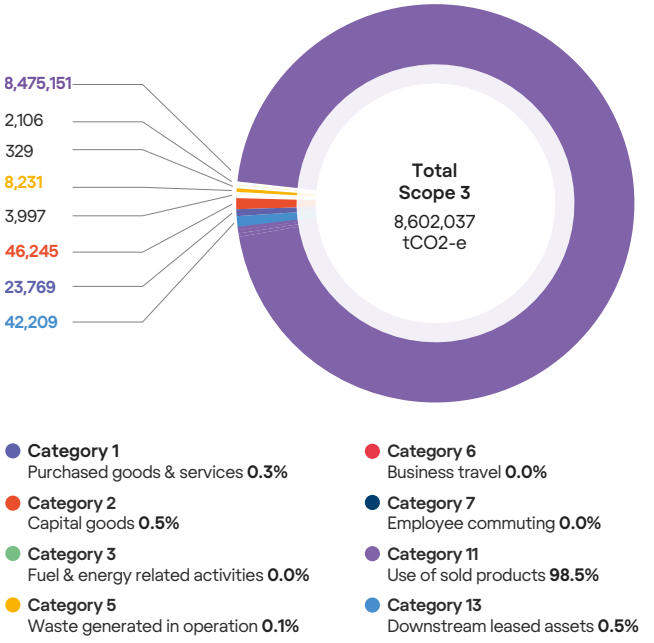


Table 4-1 Scope 3 reduction opportunities

Aviation emissions			Airport emissions
Cleaner aircraft and fuel	Airfield and airspace optimisation	Airfield decarbonisation and efficient taxiing	Non-aviation levers
– Influence use of fuel-efficient aircraft – Advance a domestic SAF industry – Advocate at all levels of government for a SAF market that minimises price impacts to passengers	– Support improvements to airfield efficiency – Advocate to improve airspace efficiency	– Drive increased utilisation of ground power units (GPU)/preconditioned air (PCA) systems – Enable decarbonisation of GSE fleet – Collaborate to decarbonise aircraft taxiing	– Drive reduction in construction emissions – Enable reduction in tenant energy use – Improve recycling rates in terminals – Facilitate increase in airport staff public transport mode share – Enable higher electric vehicle penetration in car rental fleet

4. Decarbonisation initiatives and climate resilience

Aviation sector decarbonisation trends

Currently, aviation contributes around 2% of global human-induced GHG emissions¹. Through various industry associations – such as the International Civil Aviation Organization (ICAO), International Air Transport Association (IATA) and Air Transport Action Group (ATAG) – the global aviation industry has committed to achieving net zero by 2050.

Unlike some other industries, there is no clear pathway for the aviation sector to transition to a net zero future. Decarbonisation will require significant improvements in airfield and airspace efficiency, new propulsion technologies, and more fuel-efficient aircraft.

SAF is widely recognised as the primary pathway for aviation to credibly decarbonise in the medium-long term.² This is particularly true in Australia, where our large landmass, geographical isolation and dispersed population make us heavily reliant on air travel with limited viable alternatives.

In its White Paper,³ the Australian Government provides actual and projected future Australian domestic and international aviation emissions forecasts through to 2050 under different scenarios (Figure 4-5).

For domestic aviation, it forecasts a continued rise in emissions if nothing changes except improvements in aircraft fuel efficiency (the fixed technology scenario). Legislated Safeguard Mechanism reforms could help to reduce emissions (BAU scenario incl. Safeguard Mechanism), while the use of SAF could see a significant decline in emissions (BAU plus SAF/biofuels).

Similarly, for international aviation the White Paper forecasts a sharp increase in emissions in the fixed technology scenario (see Figure 4-6).

The White Paper utilises the ICAO Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) in its BAU scenario forecasts, which also show an increase in emissions from Australian international aviation to 2050.

The most promising international aviation scenario assumes an increased supply and uptake of SAF and could see Australia’s relevant emissions continue to increase to 2040 (but at a much slower pace) and then fall to around 2018–2019 levels by 2050, resulting in a carbon neutral growth scenario from a 2019 baseline.

Australia could become a major global producer of SAF and other renewable fuels, but clear government policy is needed now to build a local market and attract private investment. This would help decarbonise aviation and position Australia as a world leader in SAF production.

For more on how Sydney Airport can accommodate SAF in its jet fuel infrastructure (JFI), see Chapter 9 Airfield Development Plan.

Figure 4-5 Actual and projected Australian domestic aviation CO2e emissions under alternative scenarios

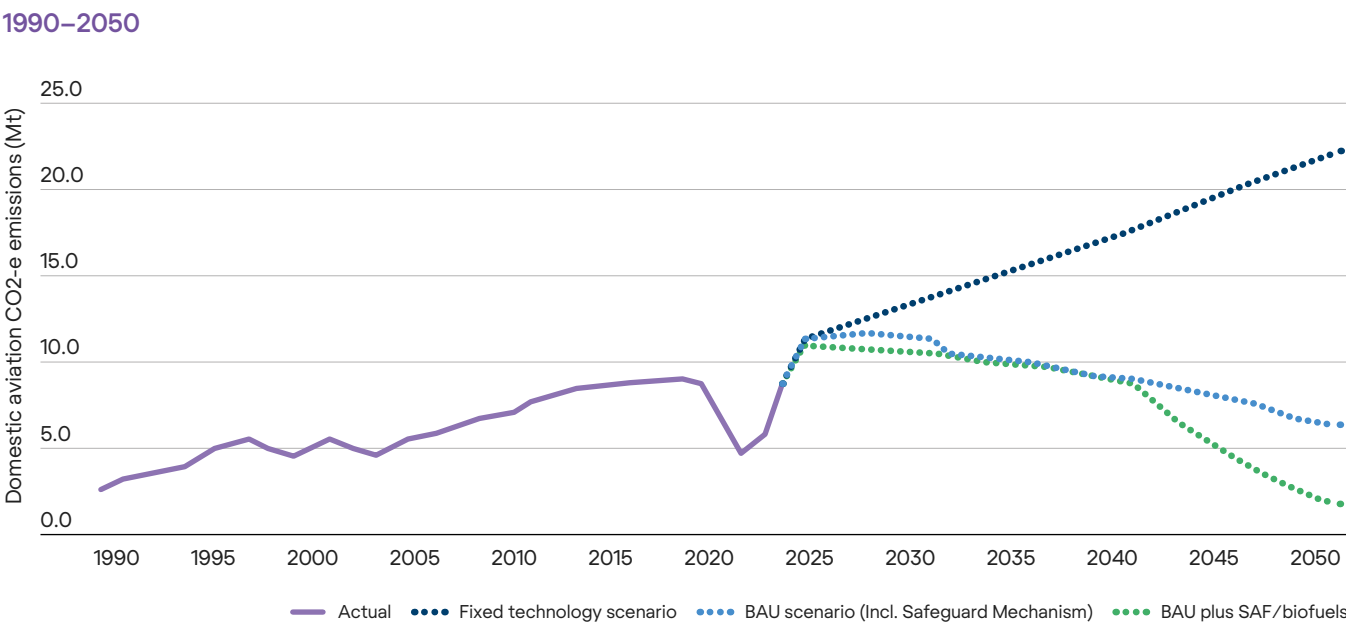
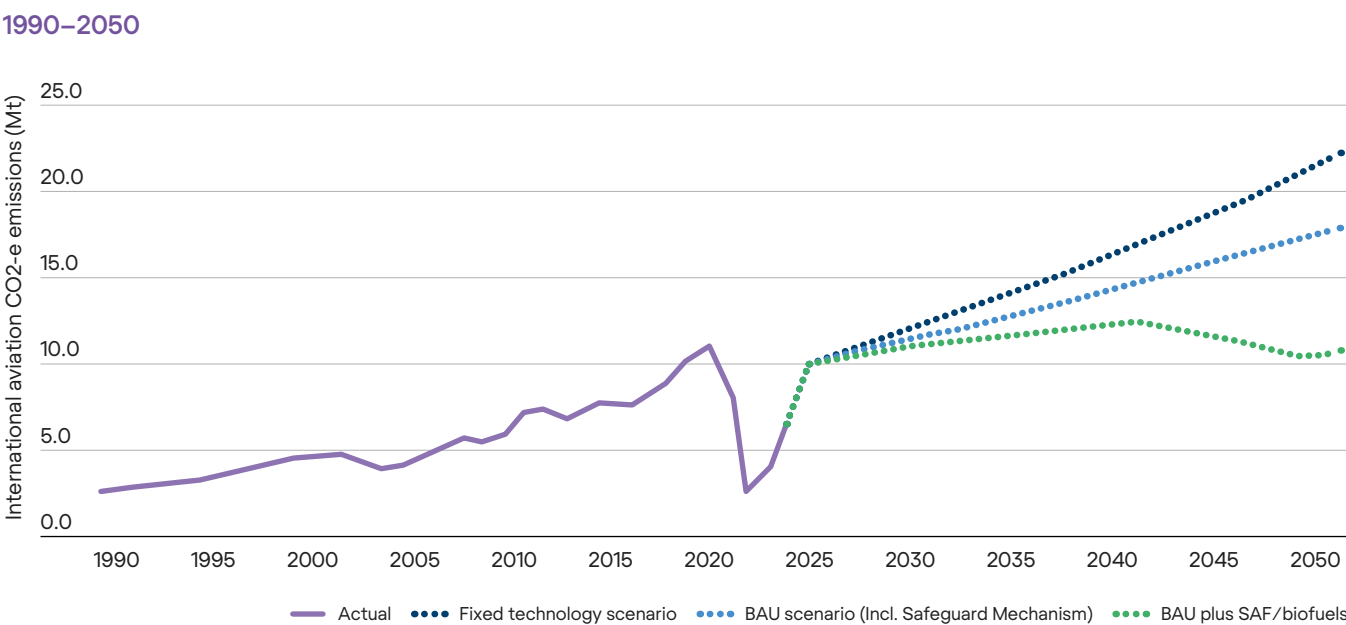


Figure 4-6 Actual and projected Australian international aviation CO2e emissions under alternative scenarios



1. Sydney Airport, 2023. *Sydney Airport’s Aviation Green Paper Submission*. [agp 2023-submission-c133-sydney-airport.pdf](#) (infrastructure.gov.au).

2. International Air Transport Association (IATA) Net Zero Roadmaps.

3. Commonwealth of Australia, 2024. *Aviation White Paper: Towards 2050*. Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts, Canberra.

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4. Decarbonisation initiatives and climate resilience

Climate resilience at Sydney Airport

Sydney Airport is an essential piece of regional and national infrastructure, supporting our communities’ mobility and economic growth.

Our operations deliver high levels of availability, reliability and resilience. We recognise that climate change has the potential to affect our business through physical and transition risks.

We are committed to maintaining the resilience of Sydney Airport against emerging physical and transition risks posed by climate change, to support continued operations and growth. We have modelled various scenarios to assess the impact of things like extreme heat, heavy rain and flooding. See Table 4-4 for current and planned adaptation measures to mitigate the impacts of these risks.

Climate scenario analysis

Climate scenario analysis is an important tool used by Sydney Airport in its climate-related risk process to strengthen the identification and assessment of climate-related risks and opportunities across a range of potential climate pathways. This includes both quantitative and qualitative factors and further informs the assessment of climate-related physical and transition risks and resilience of Sydney Airport over time.

Climate scenario analysis was last performed in mid 2025 using two climate scenarios: “Paris Aligned” and “Current Policy Trends”. These scenarios were constructed based on the Shared Socioeconomic Pathways (SSPs) and Representative Concentration Pathways (RCPs) used by the Intergovernmental Panel on Climate Change (IPCC) in the Sixth Assessment Report (IPCC AR6). Refer to Table 4-2.

The Current Policy Trends scenario was selected to understand resilience if current policy trends continue, and the Paris Aligned scenario was chosen to stress test resilience in a rapid decarbonisation scenario. Scenarios that represent the most extreme increase and reduction in greenhouse gas emissions¹ were not selected as it has become less likely that the world will follow these paths since the scenarios have been developed.

Table 4-2 Climate scenario overview

Scenario 1: Paris Aligned (1.5° C ²)	Scenario 2: Current Policy Trends (2.5° C ²)
Immediate, sustained decarbonisation, resulting in net zero global emissions by 2075, aligned with the goal of the Paris Agreement	Current policy, social, economic, and technological trends continue with emissions beginning to decline in 2050
Ref. scenario: SSP1-2.6	Ref. scenario: SSP2-4.5

1. SS1-1.9 and SSP5-8.5.
2. Approximate global temperature increase by 2100.

Summary of climate model projections for Sydney Airport’s relevant climate-related physical risks

Physical climate-related risks arise from the direct physical impacts of climate change. Both acute physical risks (short-term events like cyclones, floods, and bushfires) and chronic physical risks (long-term changes such as sea level rise, increasing temperatures, and prolonged droughts) were considered as a part of Sydney Airport’s most recent climate-related risk and opportunity assessment in mid-2025.

An indicator-based approach was used to evaluate how physical climate-related risks are projected to change under future climate scenarios. Selected indicators included maximum temperatures, flooding extent and depth, wind speed and direction, and convective storm frequency and intensity. The historical conditions and projected changes in these indicators were analysed based on literature including Sydney Airport flood and heat studies, publicly available historical weather data, climate change reports and studies developed by the NSW Government and City of Sydney, and other relevant peer-reviewed scientific literature.

The impact of these risks was assessed including the potential for operational disruption, asset damage and runway availability across the selected climate scenarios and time horizons (2030 and 2050). The selected time horizons best reflect Sydney Airport’s corporate planning horizons, including financial and capital planning, and master planning (long-term development) horizons.

Table 4-3 below sets out the physical characteristics across both scenarios, as through to 2050 climate conditions are expected to be nearly identical under each.

Table 4-3: Physical characteristics across both climate scenarios

Physical characteristics ¹	
Extreme heat ²	– Average and maximum temperatures and frequency of extreme heat days are projected to increase under both scenarios, as is the frequency and duration of heatwaves – By 2050, average annual maximum temperatures are expected to increase to 41-43°C under both scenarios (up from a historical baseline of 40°C) – By 2050, Sydney is expected to experience 2-5 more heatwaves per year on average, and the duration of heatwaves is expected to increase by 3-11 days
Precipitation and flooding ³	– By 2030, flooding extent and depth are not expected to change significantly for annual exceedance probability (AEP) events – By 2050, flooding impacts are not expected to change significantly for the 10% and 20% AEPs, however during rarer storm events (1% and 2% AEP), flood extents may encroach onto the northern end of Runway 16R/34L
High wind	There is significant uncertainty regarding whether wind speed will increase or decrease in the future. In general, studies indicate that wind speeds over southeastern Australia will remain approximately the same or decrease slightly under both scenarios, though there will still be considerable year-to-year variability. It is unclear how wind direction will change under both climate scenarios.
Convective (thunder) storms and lightning	It is unclear whether convective storms will become more or less frequent in the future and climate modeling studies provide mixed results regarding future convective storms in southeastern Australia. However, under both scenarios, convective storms are expected to bring heavy precipitation and more hail. Significant overtopping or flooding from marine events is unlikely before 2070, meaning risks are long-term rather than immediate.⁴

1. The historical baseline for projections from ICF’s ClimateSight tool is 1985-2014. Historical climate observations were drawn from a high-resolution reanalysis dataset which uses a model to interpolate observations to create spatially and temporally continuous information about past weather and climate conditions. Future climate projections were developed for two time frames: 2016-2045 and 2036-2065 (referenced as 2030 and 2050 throughout). For each Global Climate Model, the modelled historical baseline for 1985-2014 was compared with the observations from the Sydney Airport weather station for the same historical period. This allowed the determination of the difference between the climate model projections and real-world data for each Global Climate Model. The difference from the future (2030 and 2050) projections for each Global Climate Model was then subtracted to align future projections with the actual climate at Sydney Airport.

2. The annual maximum temperatures represent the highest temperatures occurring during the year. The 1-in-5 year extremes are the five-year return period values (i.e., the 20% annual probability). These values represent the highest temperatures occurring once every five years, which is relevant to understanding potential risk related to extreme heat events.

3. The historical baseline for Sydney’s flood study is 2021. The historical baseline for projections from the scientific literature is 1990-2009. While the intensity of severe rainfall events is not projected to change significantly at Sydney Airport in the future, local precipitation projections are generally more complicated and difficult to predict, resulting in a higher level of uncertainty for these projections.

4. Sydney Airport’s runways extend into Botany Bay, an embayment that offers more protection from ocean waves than the open coast. However, because the parallel runways project into the bay, they remain exposed to some risk of overtopping from storm surge and wave action. A 2023 assessment by Royal HaskoningDHV, undertaken as part of Sydney Airport’s Flood Study, examined storm tide and wave impacts on the runways. The analysis concluded that significant overtopping or flooding from marine events is unlikely before 2070, meaning risks are long-term rather than immediate; and local wind-driven seas, rather than large offshore swell, are the main driver of overtopping events due to the bay’s sheltered nature. Any remedial or protective works will be explored as required over time as part of Sydney Airport’s capital works program, and operational business continuity and emergency planning responses are in place to manage events which may result in operational disruptions.

4. Decarbonisation initiatives and climate resilience

Table 4-4 Climate risks and adaptation measures

Risk	Description	Adaptation measures
Heavy rain and flood events	An increase in frequency, intensity, and/or duration of flooding results in airside and landside operational disruptions and/or infrastructure damage.	Existing: – Flood modelling – Stormwater management resilience strategy – Airfield management serviceability procedures – Asset maintenance and upgrades – Operational business continuity planning and emergency planning – Safety and evacuation procedures and training Planned: – Future investments and upgrades to flood resilience measures
Extreme heat	Increases in extreme temperatures leads to: – Increased power demand resulting in higher rates of grid power failure and more frequent use of generators leading to increased operational costs. – Heat damage to assets and asset degradation. – Potential aircraft take-off impacts from heat.	Existing: – Heat mapping – Safety procedures and first aid training – Aircraft ground handling procedures Planned: – Heat safety mitigations on the aprons – Early engagement with airlines on potential aircraft take-off impacts
Lightning and convective storms	Increased frequency and likelihood of lightning storms and/or convective storms (strong winds, intense rainfall, strong tides) cause aviation safety risks and result in operational disruptions and/or equipment and infrastructure damage.	Existing: – Thunderstorm warning system – Asset maintenance and upgrades – Operational business continuity planning and emergency planning – Safety procedures and training
Wind	Increased likelihood of wind speeds exceeding defined thresholds leading to increased operational disruptions and capacity restrictions.	Existing: – Comprehensive weather event monitoring and operational planning controls to prepare for strong wind events – Use of the cross runway in high cross-wind events Planned: – Working with government to review SYD runway wind limits to align with global best practice and aircraft specifications

Sydney Airport’s BES Standards requires all airport-led building and infrastructure projects to address flood and heat resilience during design phase. The level of climate resilience built into the design of infrastructure is determined on a project-by-project basis per the requirements in Table 4-5 and based on the asset life, criticality and vulnerability.

Table 4-5 Flood and heat resilience in Sydney Airport’s BES Standards

Resilience	Requirement
Flood	– Comply with the flood immunity requirements in the Sydney Airport Services Masterplan – Buildings (no ponding above 0.3m of ground floor level, 1% Annual Exceedance Probability (AEP)); – Safeguard from future flooding by reviewing SYD flood modelling data, applying 2050 time horizon under Representative concentration pathways (RCP) 8.5, or 2050 time horizon under RCP 4.5 as appropriate for the project based on asset life, criticality, and vulnerability; and – Assess the project against the Development Framework for Flooding Considerations to address heavy rain and flooding impacts.
Heat	– Review current heat related risks as per SYD heat mapping data and identify mitigation measures as they apply to the project lifecycle; – New roofing must meet solar reflectance index (SRI) values to reduce the heat island effect; and – Safeguard from future extreme heat by reviewing SYD heat mapping data, applying the 2050 or 2090 time horizon as appropriate for the project based on its life, criticality, and vulnerability.

5. Stakeholder and community engagement

Sydney Airport is committed to developing and maintaining strong and positive relationships with the local community, their elected representatives in the Australian and NSW parliaments and local government, key aviation, business and tourism stakeholders, and the broader NSW community.

Sydney Airport’s approach to community engagement



Engage

We genuinely consult and engage with community, government and stakeholders about the operation of, proposed development at, and future planning for Sydney Airport.



Cooperate

We work cooperatively with all levels of government and other organisations that have roles and responsibilities involving or affecting Sydney Airport.



Communicate

We communicate relevant and accurate information about Sydney Airport in a timely manner, in a form that is easy to understand and in a way that reaches all stakeholders and community.



Listen

We listen to and genuinely consider feedback from the community and other stakeholders and, where practicable, resolve issues of concern.

Consultation and preparation of Master Plan 2045

Throughout the preparation of Master Plan 2045, we followed Sydney Airport’s *Community and Stakeholder Consultation and Engagement Strategy*, which is based on guidance from the International Association for Public Participation (IAP2).

To be sure everyone could contribute – regardless of age, education, language, cultural background and accessibility – Sydney Airport used a range of ways to engage with the community.

As required by the Airports Act, the preliminary draft version of Master Plan 2045 was formally exhibited for public comment for 62 business days from 17 September 2025 to 12 December 2025.

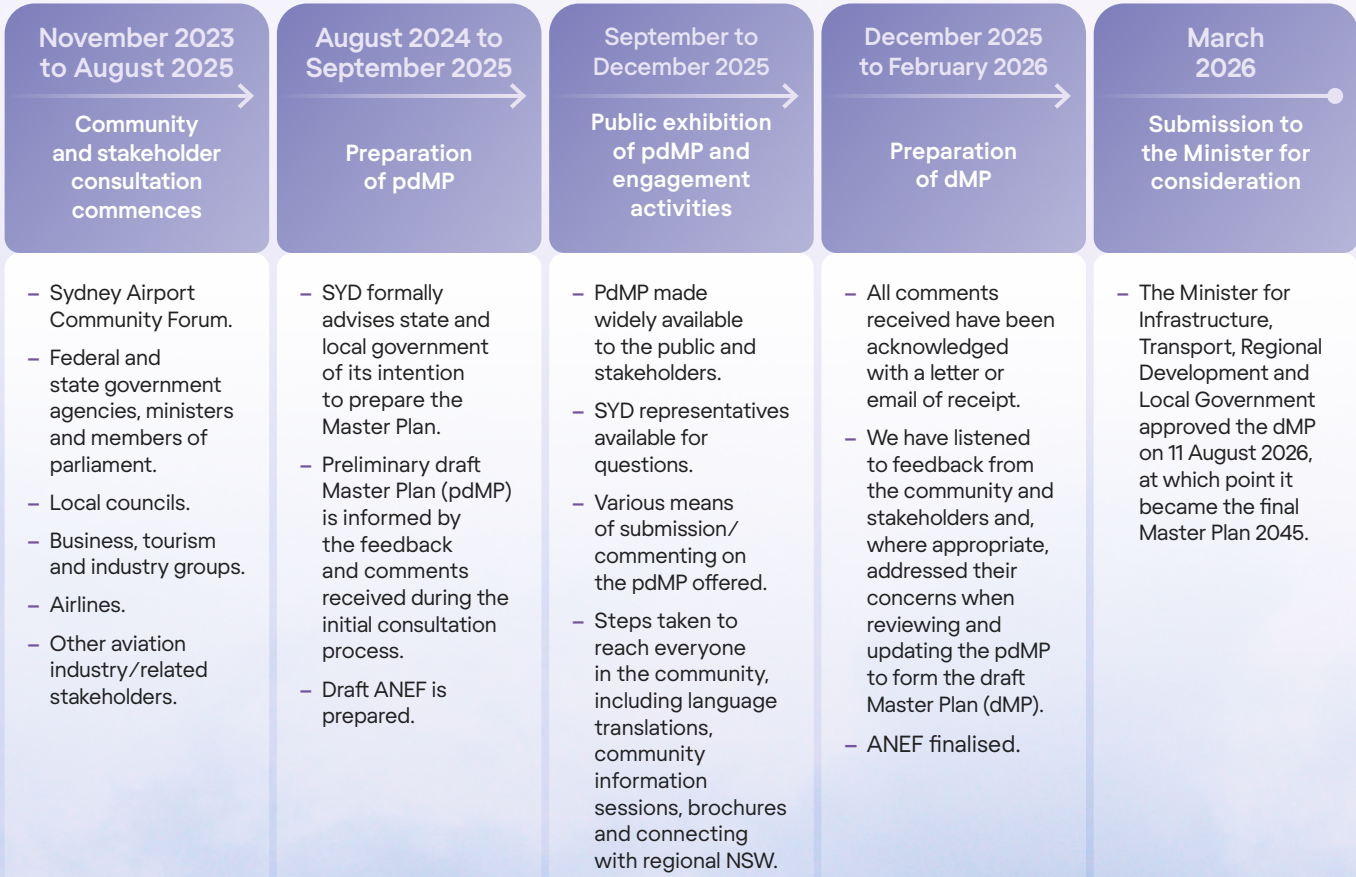
Throughout the public exhibition period, a range of stakeholder and community engagement activities were undertaken, including:

- Public notification in the Sydney Morning Herald and Daily Telegraph that Master Plan 2045 had been released for public comment.
- Public display of Master Plan 2045 in 29 locations around the airport, including council offices and public libraries.
- A dedicated Master Plan 2045 website, which resulted in ~34,000 hits and ~7,500 downloads of the interactive preliminary draft Master Plan 2045 document.

- Digital engagement.
- Direct notification to key stakeholders, including all NSW Members of Parliament in the NSW and Australian Parliaments, the Mayors and General Managers of every council in NSW, key the Australian and NSW Government agencies, members of the Sydney Airport Community Forum, airlines and other key aviation stakeholders.
- Community updates placed in a range of local community newspapers, including seven community language newspapers.
- 12 community drop-in sessions held in locations in the vicinity of Sydney Airport, including community markets and shopping centres and a community webinar.
- Master Plan 2045 Community Newsletter distributed directly to more than 400,000 households in the vicinity of Sydney Airport or underneath or near flight paths, which directly reached around one million local residents.
- Master Plan 2045 community information line and email.
- Briefings and presentations for key stakeholders during the public exhibition period.

A summary of the engagement approach for Master Plan 2045 and the issues raised during public exhibition is in Appendix J.

Figure 5-1 Master Plan 2045 preparation process



Section One Vision and Context

5. Stakeholder and community engagement

Stakeholder and community engagement for future development proposals

For all future development proposals outlined in this master plan – and especially for those requiring the preparation of a major development plan – Sydney Airport will closely follow its *Community and Stakeholder Consultation and Engagement Strategy*. This will include engagement with First Nations Peoples and, where a development may affect aircraft or airport operations, or otherwise have aircraft noise implications, Sydney Airport will also comply with Airservices Australia’s 2023 *Community Engagement Standard*.

Preparing the Airport Environment Strategy 2025–2030

In addition to the above stakeholder engagement and public exhibition processes, the *Airports Regulations 2024* require a specific consultation process to be undertaken when preparing the Airport Environment Strategy 2025–2030 (AES), which forms part of this dMP. This will include targeted consultation with airport tenants who, under the Airports Act, must take all reasonable steps to comply with the AES.

Communication of the AES

Once approved as part of the Master Plan, the AES will be publicly available on the Sydney Airport website.

All training information that includes AES requirements will be reviewed to determine if updates and retraining are required.

Tenants and operators will be provided with information on the revised AES, including where it can be accessed.

Sites of Indigenous significance

We partnered with the Gujaga Foundation to engage with the local First Nations community to determine if there are sites of Indigenous significance on the airport site. The Gujaga Foundation provided information on the significance of Botany Bay as a whole. This led to the production of a Connecting with Country report, which has been incorporated into the AES, in consultation with the Gujaga Foundation.

Environmental management

To identify activities at the airport that have the potential to impact the environment, and identify appropriate controls and action plans to reduce impacts, we consulted with:

- Department of Climate Change, Energy, the Environment and Water (DCCEEW)
- DITRDCA
- Australian Heritage Council
- Sydney Water
- NSW Government and associated agencies
- Airport tenants
- Airservices Australia

Key stakeholder workshops

Prior to development of the AES, we convened a deliberative engagement community panel. This panel, which comprised members of the local community, explored the topics in the AES to determine which aspects the community found most significant. The AES has been written to reflect the results of this engagement.



Section One Vision and Context

6. Air traffic forecasts

The proposed developments in Master Plan 2045 are informed by forecast passenger numbers, aircraft movements and freight volumes.

Growth forecasts are critical to establishing a robust foundation for planning, enabling us to continue to deliver benefits for the economy, community, passengers and other stakeholders.

Larger, quieter and more fuel-efficient aircraft will mean that passenger numbers are forecast to grow at a faster rate than aircraft movements, delivering positive economic outcomes while reducing community and environmental impacts.

In 2045, Sydney Airport expects to handle:



72.6 million annual passengers

- International passengers are the main driver of growth, forecast to increase from 16.3 million in 2024 to 36.4 million in 2045, contributing greatly to our state and national economies.
- Domestic and regional passenger numbers are forecast to increase from 25.1 million in 2024 to 36.2 million in 2045.



385,000 annual passenger aircraft movements¹



1.4 million tonnes of freight

- 133% increase from 2024, with passenger aircraft to account for approximately 80% of freight volume, providing a vital income stream for airlines.

1. TFI 2023.



Forecast approach

Aviation industry trends and assumptions

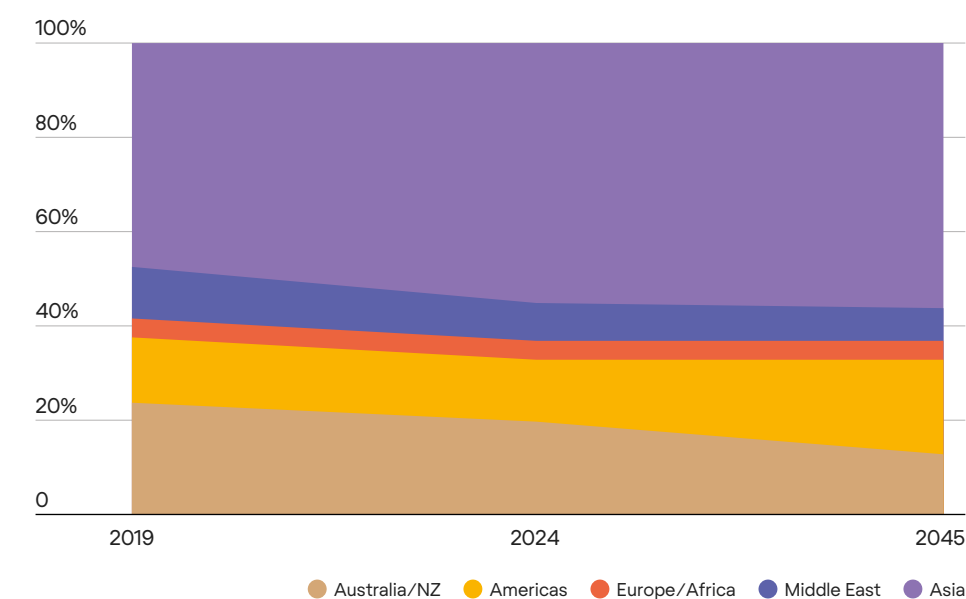
Over the 20-year planning period, Sydney Airport will continue to be influenced by ongoing and emerging trends in the aviation industry and the global economy.

Although some external factors can cause unpredictable disruptions, passenger numbers historically return to pre-event levels once the circumstances stabilise. For example, the pandemic caused a significant and sustained disruption to the aviation industry, where flight numbers took four years to return to pre-pandemic levels.

While our flexible approach to development planning will allow Sydney Airport to adapt to unforeseen changes, forecasts for Master Plan 2045 assume the following long-term growth trends will continue to 2045:

- Next-generation aircraft are larger, quieter, safer, more fuel-efficient and comfortable, reducing noise and environmental impacts. As airlines increase productivity and improve load factors, the average passengers per aircraft movement increases, providing a sustainable growth pathway without excessive aircraft movements.
- Passenger demand grows more rapidly than the general economy, with competitive airfares, low-cost carriers (LCCs) and changes to air rights increasing the number of leisure passengers.
- Shifts in airline alliances and partnerships account for changing passenger offerings and incentives.
- Strong economic growth in Asian and Middle Eastern markets, with airlines upgauging (increasing size of) aircraft and increasing their services to Sydney Airport.
- Scheduling changes, new direct services, maturation of routes and aircraft utilisation causes 'peak spreading' or the growth of off-peak aircraft movements.

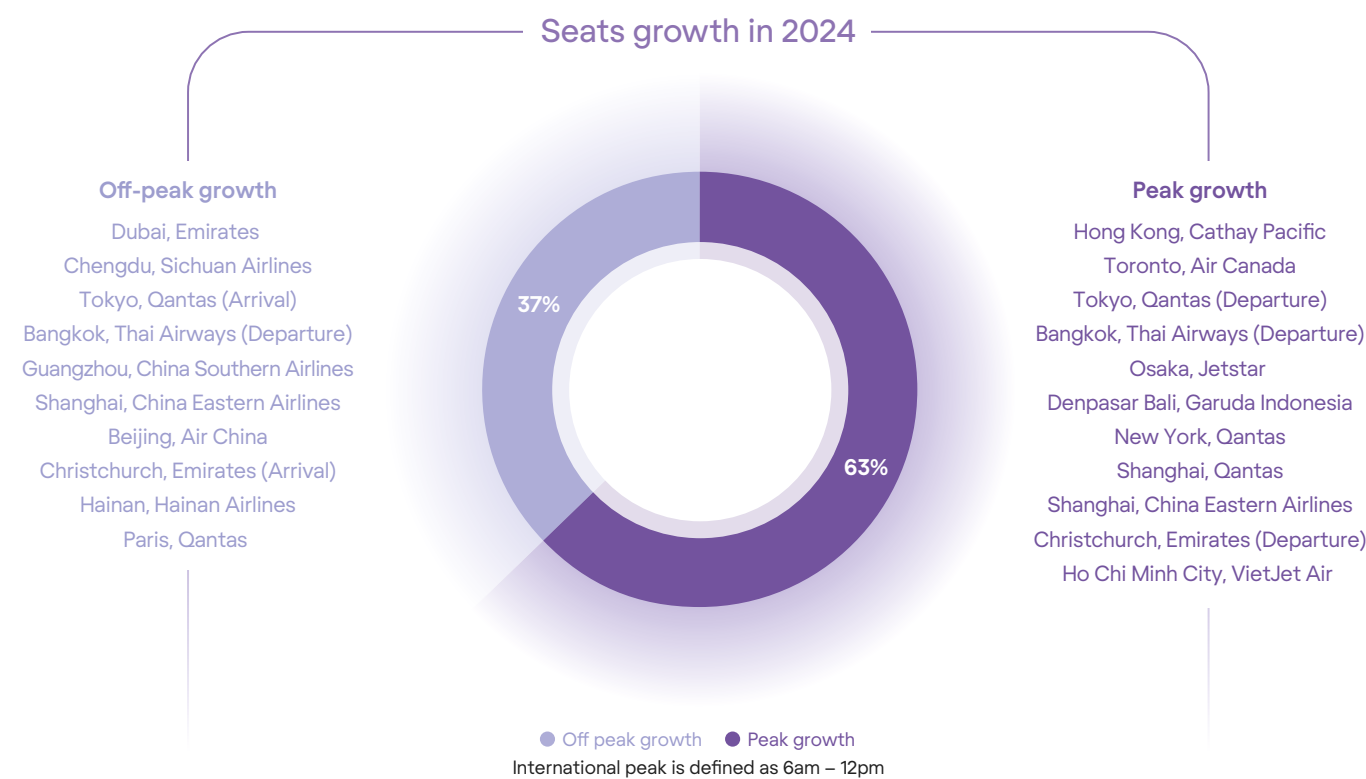
Figure 6-1 Proportion of international aircraft seats by region of airlines



6. Air traffic forecasts

Seats in 2024 experienced significant growth in comparison to 2023, with an increase of 10%. As highlighted in Figure 6-2, approximately two thirds of new seats commenced in 2024 were in the peak periods while the remaining 37% were outside peak periods.

Figure 6-2 Timing of seats commenced in 2024



Passenger and aircraft movement forecasting method

In consultation with major airlines and airline associations, forecasts used throughout Master Plan 2045 were prepared by aviation industry specialists, Tourism Futures International (TFI).

TFI's forecasting method:

- 1. Top-down econometric modelling**
considering GDP for Australia and visitor countries, NSW Gross State Product (GSP), Australian trade weighted index, and global exchange rates. Forecasts from the International Monetary Fund (IMF), Organisation for Economic Cooperation and Development (OECD), governments and central banks were used.
- 2. Development of segment-based forecast models**
for individual domestic routes and countries for the international market.
- 3. Review of the fleet orders of airlines and forecasts of aircraft type by aircraft manufacturers.**
- 4. Consultation with key airlines**
Virgin Australia, Qantas Group and Air New Zealand, and the Board of Airline Representatives of Australia (BARA). Meetings were held regarding the preparation of the draft forecasts.

- 5. Benchmarking of the outputs**
against other state, national and global forecasts by the:
 - Bureau of Infrastructure, Transport and Regional Economics (BITRE)
 - Tourism Forecasting Committee
 - Aircraft manufacturers
 - US Federal Aviation Administration
 - Eurocontrol
 - UK Department of Transport

TFI's modelling produced an overall Sydney Basin traffic forecast. Beyond 2026, when WSI commences operations, an assessment of Sydney Airport's estimated share was undertaken, considering its proximity to the Sydney CBD and network connectivity for international, domestic and regional travellers.

Following consultation with the airlines, aircraft movement forecasts were generated, corresponding to passenger forecasts and average passenger numbers per movement.

2045 forecasts

Passenger numbers

Total passenger numbers at Sydney Airport are forecast to increase by 75% from 41.4 million in 2024 to 72.6 million in 2045 (see Figure 6-3).



Table 6-1 Compound annual growth rate of passenger numbers

	2024 pax (m)	Percentage of total %	2045 pax (m)	Percentage of total %	CAGR %
International	16.3	39.4	36.4	50.1	3.9
Domestic and Regional	25.1	60.6	36.2	49.9	1.8
Total	41.4	100	72.6	100	2.7

Section One Vision and Context

6. Air traffic forecasts

Passenger aircraft movements

Total passenger aircraft movements at the airport are forecast to reach 385,000 in 2045 – a 1.8% (CAGR) increase from 2024 (see Table 6-2).

Figure 6-4 Historical and forecast aircraft movement growth, 2019 to 2045

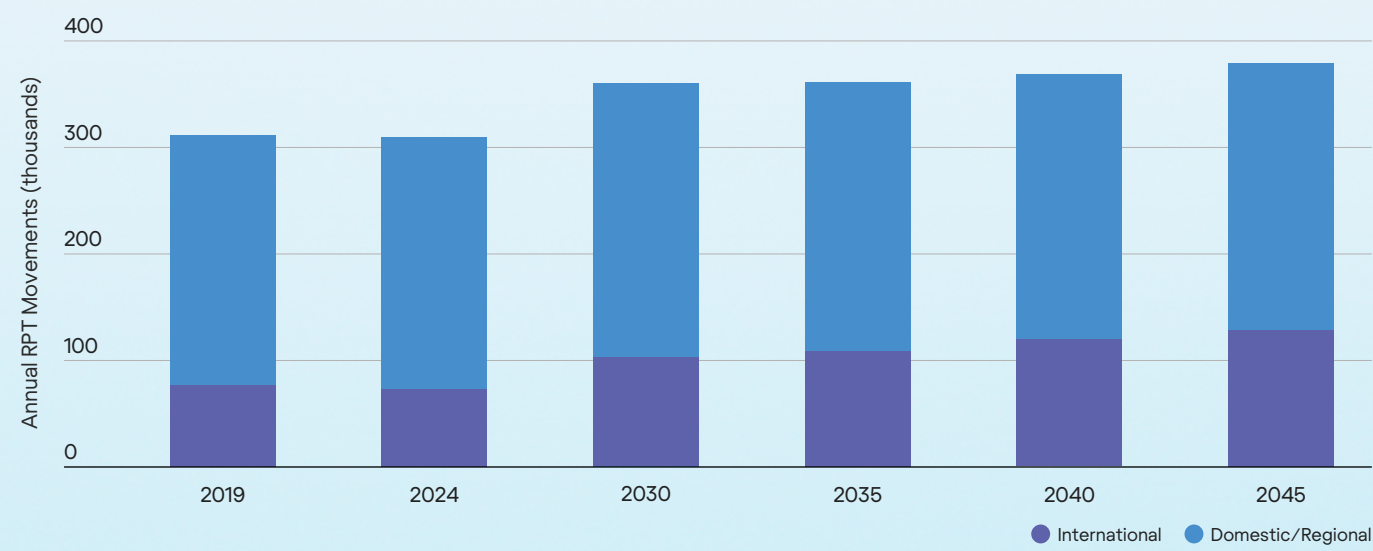


Table 6-2 Fixed wing aircraft movement forecasts

	2024	Percentage of total %	2045	Percentage of total %	Percentage of CAGR %
International	74,930	24.6	130,130	32.5	2.7
Domestic and Regional	212,245	69.8	254,870	63.8	0.9
Freight	12,235	4.0	10,848	2.7	(0.6)
GA/CA/other	4,755	1.6	4,156 ¹	1.0	(0.6710)
Movements total	304,165	100.0	400,004	100.0	1.4

1. GA/CA movements are allocated ad hoc slots on a first-come, first-served basis, subject to availability within the declared capacity constraints provided by the airport.

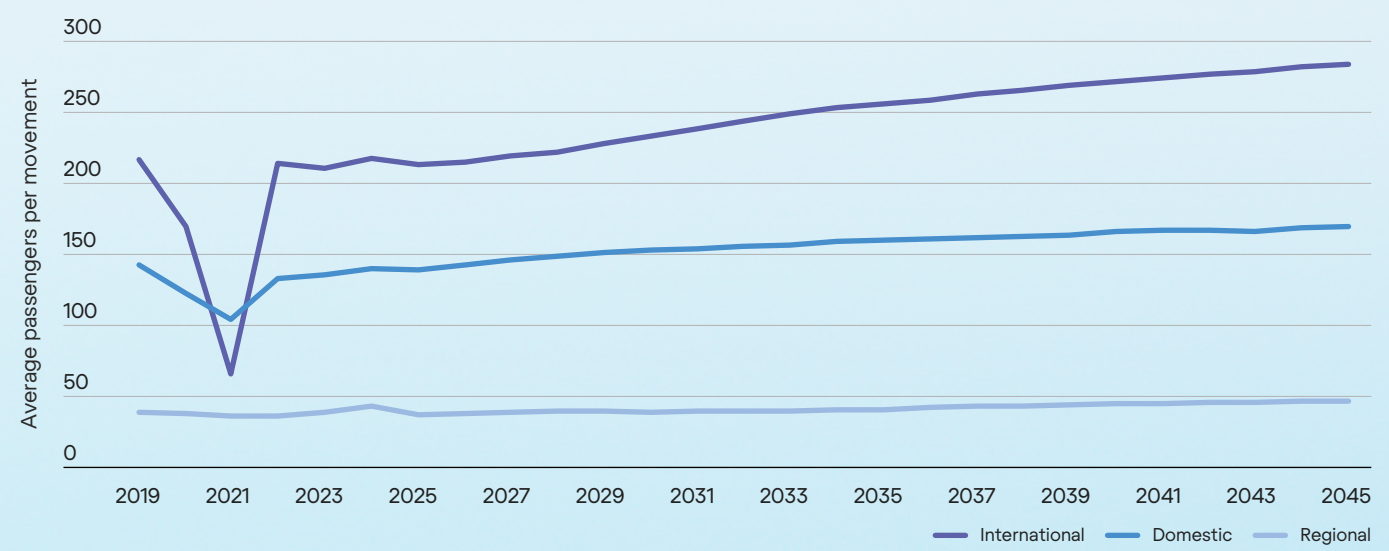
Note: Aeromedical/Emergency and VIP flights, are not subject to the declared capacity constraints. Due to the nature of these flights, forecast movements are estimates based on a historical range (5,915 in 2024, with estimated approx. 5,000 in 2045).

Average number of passengers per flight

Over the next 20 years, passengers per aircraft are expected to increase by 1.2% (CAGR).

The average number of passengers per flight on regional services is expected to increase from 36 in 2024 to 47 in 2045. Advances in aircraft technology means regional jets will not be louder than the turbo props they are expected to replace. The average number of passengers per flight is also expected to increase from 134 to 170 on domestic services and from 210 to 284 on international services (see Figure 6-5).

Figure 6-5 Historical and forecast average passengers per movement, 2019 to 2045



6. Air traffic forecasts

GA/CA and other aviation

Sydney Airport supports continued access for non-scheduled activity over the 20-year planning period. Consistent with Sydney Airport’s Head Lease with the Commonwealth, the airport will continue to provide access for international, interstate and intrastate air transport, including GA/CA operations, rotary wing, medical and emergency, military and government aircraft movements.

Methodology and assumptions

Given the volatility in the GA/CA sector, the recent decline in activity, and the segment’s relatively small market share, long-term demand has been assessed using a tailored methodology rather than conventional passenger-led forecasting. The assessment considers macroeconomic indicators, historical segment-level trends and the role of competing or alternative airports within the Sydney catchment.

GA/CA movement forecasts are indexed to economic and sector-specific demand drivers, including domestic and international economic conditions, geopolitical risk, operating cost escalation, fleet age and regulatory requirements. These factors have contributed to a structural reduction in private recreational and business flying across Australia.

Although national landing movements for non-scheduled commercial air transport by Australian-registered aircraft are declining, GA/CA activity at Sydney Airport remains resilient. This reflects Sydney Airport’s proximity to the CBD and the predominance of business aviation within non-scheduled slot movements.

Future user requirements

GA/CA movement forecasts (Figure 6-6) indicate a CAGR decline of -0.6% over the planning period; however, higher-value subsegments are forecast to retain share, with marginal growth in the upper business jet segment. GA/CA passenger forecasts decline by only 0.4% CAGR, implying increasing average passengers per movement. This reflects Sydney Airport’s business-oriented GA/CA demand profile and the progressive up-gauging of business jet aircraft using the airport.

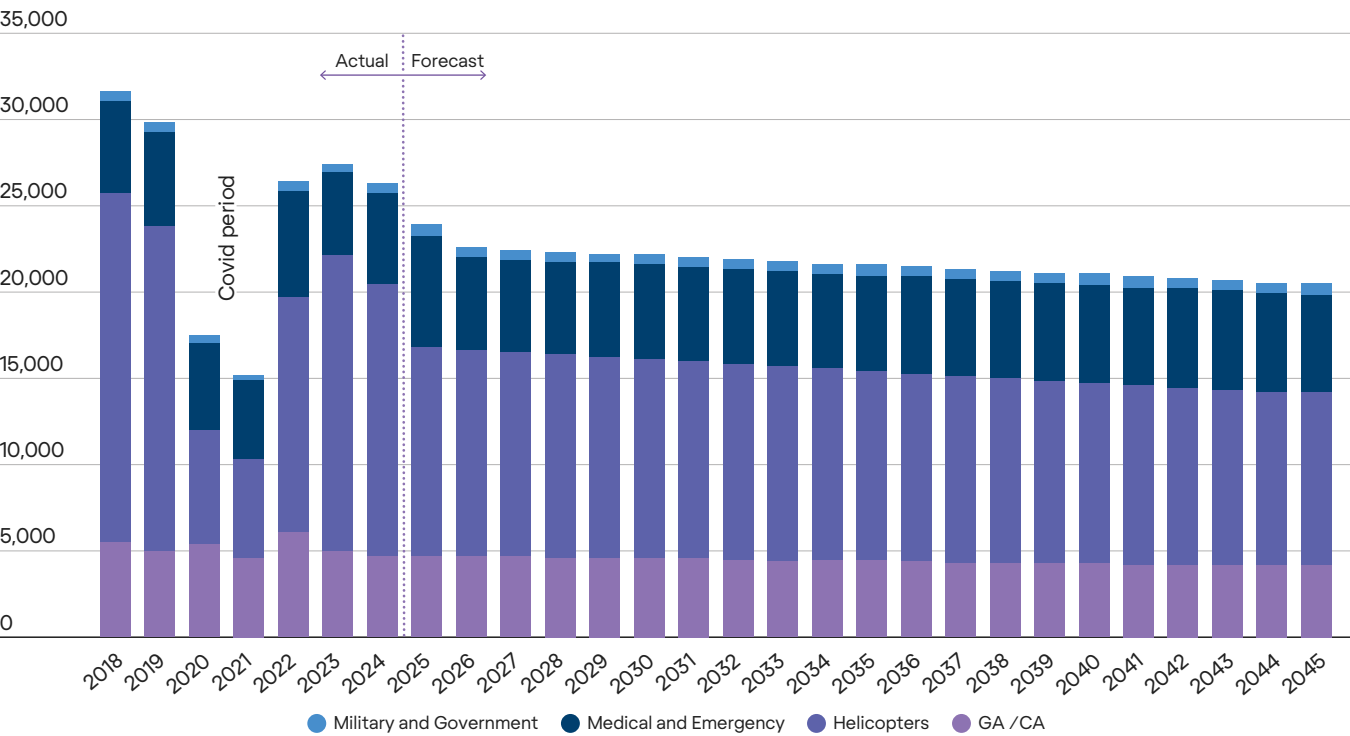
Over the forecast period, Sydney Airport assumes that between 11-13 slots per day are required to support our annual forecast of 4,156 GA/CA movements by 2045. Based on the forecast growth in RPT and slot demand over the period (2025-2045) there are a significant number of available slots (128 by 2045), exceeding the forecast GA/CA slot requirement over the master plan horizon. As the airport continues to grow the availability of slots during peak periods will reduce over the master plan period. Therefore, it is expected that the requested times for ad-hoc slots in peak periods may be allocated to non-peak periods to accommodate the request.

Military/government and medical/emergency movements, and associated infrastructure requirements, are expected to be maintained over the planning period. Whilst recent activity has been volatile, these movements have been held at near-term peak (2025) levels for forecasting purposes.

Rotary wing activity is primarily driven by tourism sightseeing operations. While this activity remains material, movements are forecast to decline over the planning period. In comparison, Bankstown Airport’s current master plan forecasts helicopter movements increasing from 46,343 in 2024 to 55,568 in 2039, representing 20% growth. Whilst these forecasts will be reviewed in Bankstown Airport’s next master plan process, Sydney Airport will continue to support helicopter operations through appropriate airside and landside infrastructure.

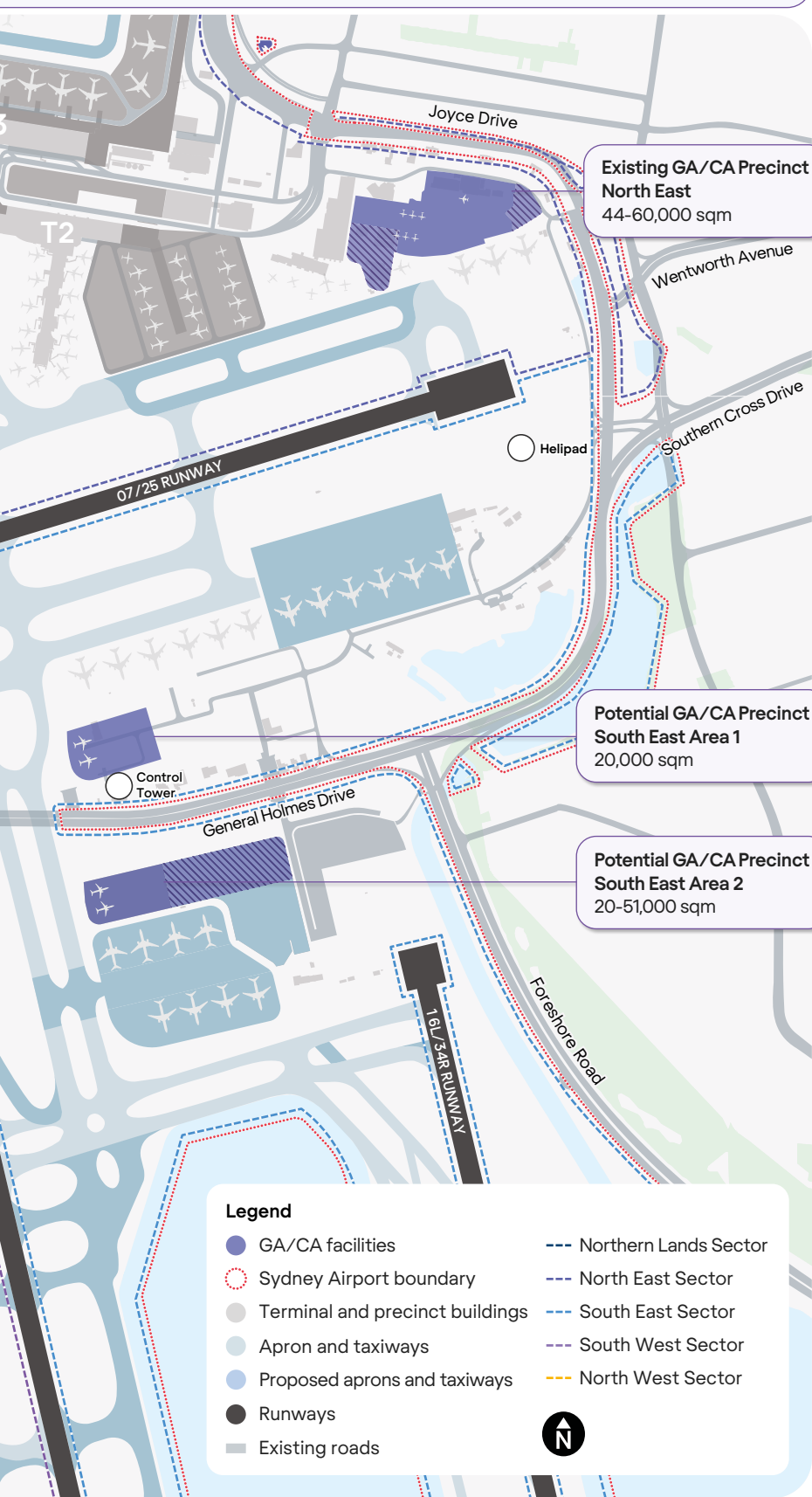
Accordingly, demand for supporting airport infrastructure is expected to continue. Sydney Airport’s draft Master Plan supports GA/CA through land use provisions that, subject to government and regulatory approvals, allow for the upgrade and expansion of general and corporate aviation facilities. This includes potential upgrades to existing facilities east of Terminal 2 and future GA/CA development within the South East Sector. These provisions ensure the Master Plan addresses the present and future requirements of GA/CA and other airport users for services and facilities at Sydney Airport.

Figure 6-6 Aircraft movements by category (2018-2045)



6. Air traffic forecasts

Map 6-1 Potential GA/CA facilities



Land use

The Master Plan facilitates the ongoing infrastructure requirements of GA/CA and related aviation activities, as well as providing opportunities to expand to other sectors.

In addition to the existing GA/CA precinct, two appropriately zoned areas have been identified for the development of potential GA/CA facilities (Map 6-1). These are;

- **North East Sector**
East of Terminal 2,
44,000 to 60,000 sqm
- **South East Sector**
Area 1 near ATC Tower,
20,000 sqm
- **South East Sector**
Area 2 south of General Holmes Drive,
51,000 sqm

Forecast outcomes

Non-scheduled slot access to Sydney Airport is retained throughout the forecast period, although available slots are expected to shift to later in the day. Given its proximity to the CBD and available runway infrastructure, Sydney Airport is expected to remain the preferred airport for business aviation in the Sydney Basin. Bankstown and Camden airports will continue to provide viable alternatives for some GA/CA segments, while WSI has indicated in its approved master plan that future GA/CA facilities may be considered in later planning periods.



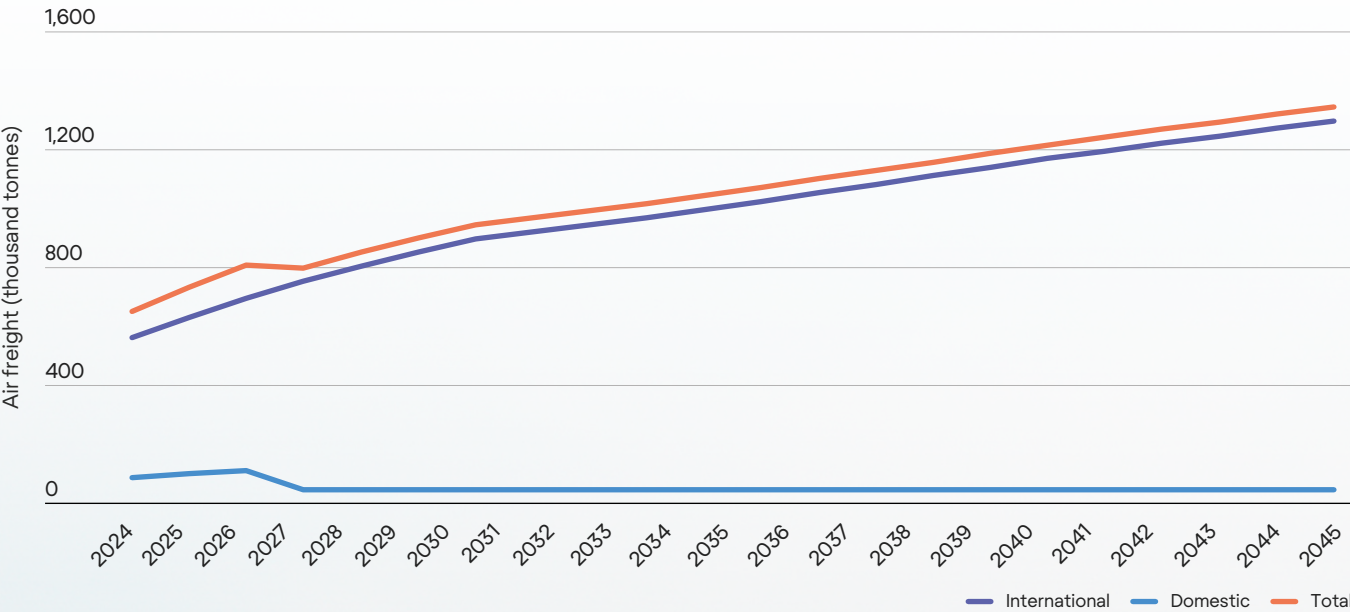
6. Air traffic forecasts

Air freight

Air freight is a critical economic activity at Sydney Airport. We handle around half of the country’s international air freight, providing a significant revenue stream for passenger airlines and dedicated freight carriers.

By 2045, total freight processed is expected to increase from 0.6 million tonnes in 2024 to 1.4 million tonnes – a CAGR of 4.3% (see Figure 6-7). From 2026 to 2027, Sydney Airport expects to see an initial reduction in freight processed, accounted for by the opening of WSI and the potential shift of some dedicated freight traffic. This is expected to be a short-term impact, as subsequent growth is expected to return freight processing volumes to pre-WSI levels by 2028. Dedicated freighter movements of 10,848 are forecast by 2045.

Figure 6-7 Air freight forecasts, 2024 to 2045

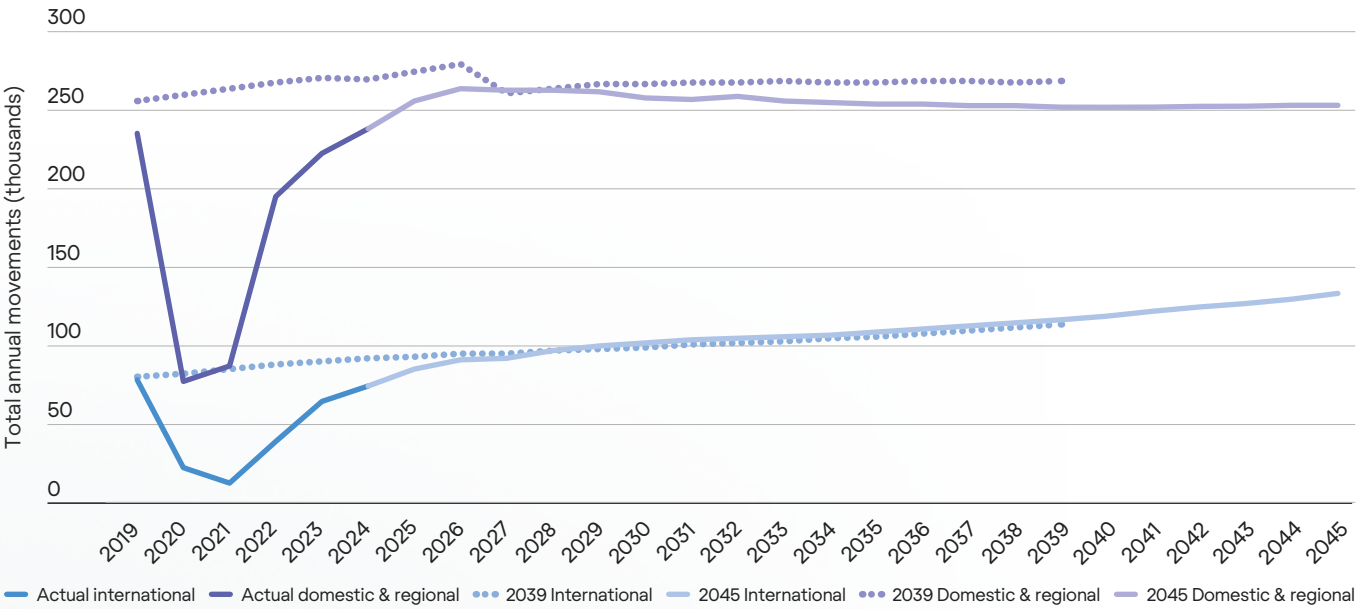


Benchmarking of the traffic forecasts

Comparison to Master Plan 2039

Master Plan 2039 forecasted 65.6 million passengers and 382,305 passenger aircraft movements annually by 2039. Actual annual passenger aircraft movements from 2019 to 2024 were lower than forecast due to COVID-19-related travel disruptions. The Master Plan 2045 forecasts from 2025 to 2045 highlights the transition from recovery to growth that is expected for the duration of the Master Plan, with 72.6 million passengers and 385,000 passenger aircraft movements forecast in 2045 (see Figure 6-8).

Figure 6-8 Comparison with Master Plan 2039 aircraft movement forecasts



6. Air traffic forecasts

Comparison with historical performance

Sydney Airport handles approximately 40% of Australia’s international and 21% of domestic and regional air passengers. From 2017 to 2024, our passenger traffic decreased at a rate of -0.6% annually, from 43.3 million to 41.4 million.

Across the same period, annual passenger aircraft movements decreased from 313,857 to 311,600, indicating a -0.1% CAGR. This is attributed to the impacts of the pandemic.

Table 6-3 compares the recent and forecast growth rates for international and domestic (including regional) passengers, and aircraft movements.

Steady growth is forecast for all passengers and aircraft movements.

Table 6-3 Historical and forecast CAGR of passenger numbers

	Passengers %	Passenger aircraft movements (RPT) %
International		
2017 to 2024	(0.4)	0.2
2024 to 2045	3.9	2.7
Domestic and Regional		
2017 to 2024	(0.7)	(1.7)
2024 to 2045	1.7	0.9
Total 2017 to 2024	(0.6)	(0.1)
Total 2024 to 2045	2.7	0.2



Section One Vision and Context

6. Air traffic forecasts

Representative days and noise sharing

To determine infrastructure and operational requirements, a schedule was developed for a ‘busy day’ in 2045. This approach is consistent with previous master plans, as well as slot coordination practices.

The schedule analysis considered:

- The operational suitability of an aircraft type for a given route network.
- The aircraft rotations compatible with a high level of utilisation.
- The use of commercially feasible arrival and departure timings throughout the network.
- Anticipated utilisation of next-generation aircraft.
- All relevant regulatory requirements.

The ‘busy day’ is not the busiest forecast day, rather, it is a representation of a busier than average day in peak season. The effect this will have on noise sharing opportunities under the LTOP for Sydney Airport is discussed in Chapter 14 Aircraft Noise.

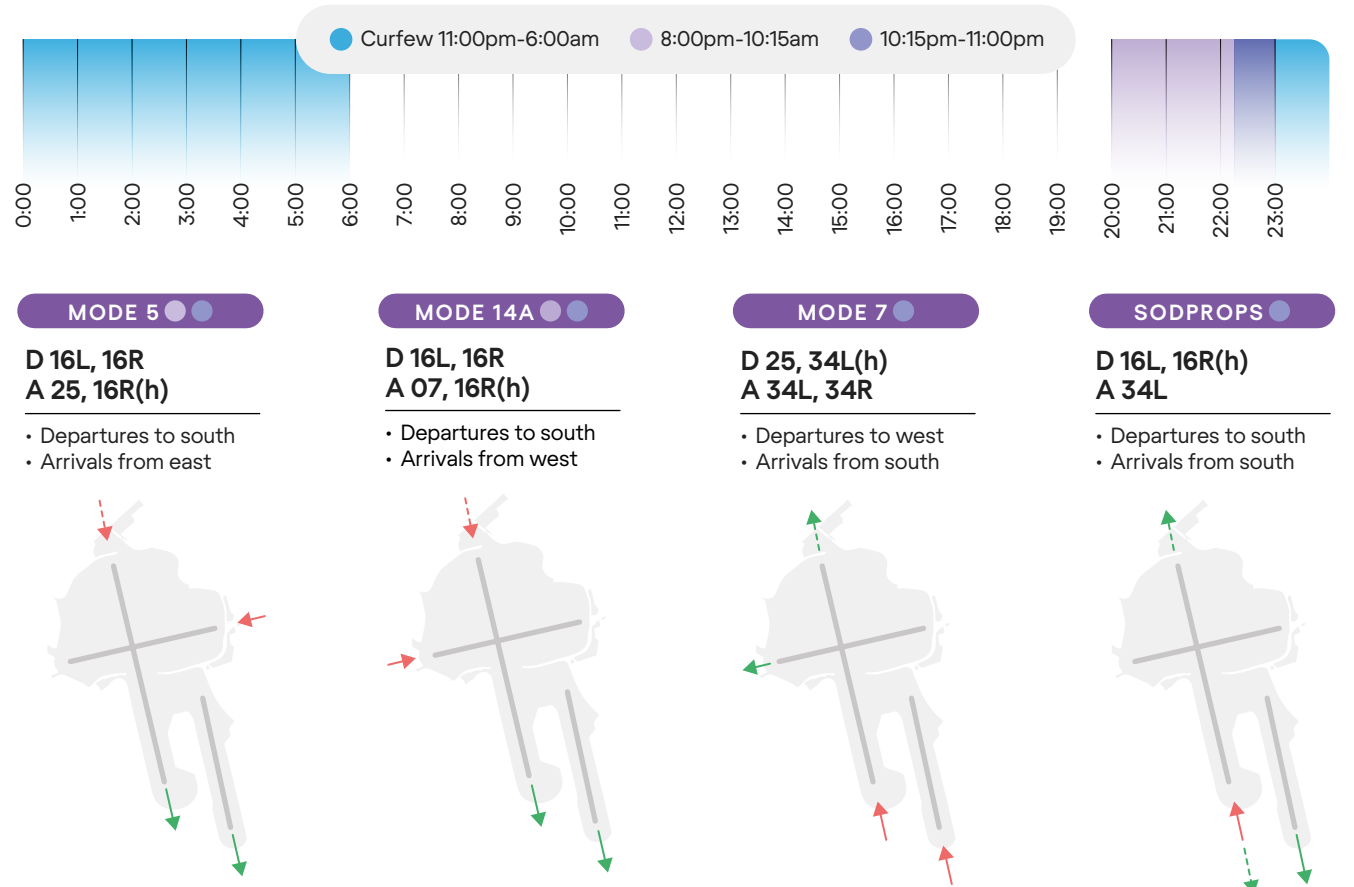
Hourly aircraft movements throughout the 2045 schedule, broken down by flight category, are shown in Figure 6-10. This addresses Sydney Airport’s normal 17-hour operating day between 6am and 11pm.

During the 11pm to 6am curfew period, it is expected that there will be no freight and GA aircraft movements. This is the result of legislation which allows the government to remove permitted curfew movements at Sydney Airport once WSI is opened.

It is expected that NSW regional air traffic at Sydney Airport will continue to account for a substantial proportion of slots in the peak hours in 2045.

The use of LTOP’s noise sharing modes 5, 7, 14A, and SODPROPS will vary across the year, available in shoulder periods prior to curfew for the busiest days and more frequently across the day for the less busy days of the year (refer Figure 6-9). As noted in Chapter 14, noise sharing outcomes are also achieved when LTOP’s noise sharing modes 9 and 10 are being used.

Figure 6-9 Noise sharing 2045



Source: Airservices, Sydney Airport Operational Statistics January 2018 Departure —> Long Haul (h) Departure —> Arrival —> Long Haul (h) Arrival —>



Figure 6-10 Forecast schedule hourly aircraft movements, 2045

