Sydney Airport

The right future.
Starting now.

Sydney Airport Master Plan

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Sydney Airport Master Plan 2033

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CHIEF EXECUTIVE OFFICER'S FOREWORD

I am delighted to present the Master Plan 2033, which details our plan to improve the experience of all passengers and ensure Sydney Airport remains Australia's premier airport and major international gateway. These plans will enable the forecast growth in air travel for tourism and trade well beyond the 2033 planning period.

Since our previous Master Plan was approved in 2009, we've been listening to our passengers, airline partners, other members of the aviation industry, the NSW, federal and local governments, the Joint Study on Aviation Capacity for the Sydney Region, the tourism industry, the business sector, and the local community. The comments we received have been carefully considered and have informed the preparation of this Master Plan. Stakeholders have recognised that the consultation process undertaken to prepare this Master Plan has been more extensive than any previously undertaken by Sydney Airport.

Importantly, the initiatives we propose under this Master Plan will meet the needs of our customers: it will deliver

a better passenger experience, improve the efficiency of the airport, enhance safety for our users and maximise the capacity of the airport. The plans include innovative ground transport solutions developed with the NSW Government that will significantly improve access to the airport and road traffic flow around it. Significant upgrades to the public transport facilities are also proposed.

The development plans are designed to be adaptable and flexible to ongoing industry and technological change. Over $2 billion of investments and other initiatives during the past decade have led to increased service levels, enhanced safety and security, delivered environmental improvements and increased capacity to meet demand. Continued investment will ensure that Sydney remains a global city, with Sydney Airport connecting Sydney to other global cities and many other parts of Australia.

Sydney Airport is one of Australia's most important pieces of infrastructure and is a critical economic engine for Sydney, NSW and Australia. Directly and indirectly it generates and/or facilitates the equivalent of 6% of NSW's economic activity and almost 300,000 jobs. This is forecast to increase to over 400,000 jobs by 2033, with each additional daily A380 service from China contributing an estimated $388 million of GDP and 5,000 jobs. The airport is located just 8km from the CBD, and less than 10km from the iconic Sydney Harbour and southern beaches. This location gives our city and our state a unique advantage when attracting the international business and tourism markets to Australia.

Accordingly, a number of stakeholders have recommended a modernisation of the operational regulations that govern Sydney Airport, to recognise the advances in airline and airspace technology over the past several decades since the regulations were introduced and increase the productivity of infrastructure. Sydney Airport supports these recommendations.

Nevertheless, consistent with existing legislation, the Master Plan assumes no change to the curfew, aircraft movement cap, noise sharing arrangements, access arrangements for regional airlines or flight paths and assumes no new runways.

We continue to invest in capacity, operational efficiency and environmental initiatives.

In our Airport Environment Strategy we outline more than 100 ongoing and new actions and initiatives that together will minimise our impact on the environment and support our objective of sustainable growth. In addition, we are investigating the development of energy efficient trigeneration for the airport, are planning to incorporate energy and water efficiencies into the terminal developments, and have commenced work to improve bicycle access as part of the ground access improvements.

With aircraft becoming environmentally cleaner, quieter and more fuel-efficient, it is pleasing to see evidence that the noise impacts of aircraft flying to Sydney have reduced significantly over the past decades.

The Master Plan clearly demonstrates the benefits of the new development plan, and has received strong support from stakeholders during the public exhibition period. Importantly, this plan cost-effectively delivers the greatest benefit to passengers, airlines and other airport stakeholders under a wide variety of demand scenarios, significantly improving upon previous master plans. The Master Plan demonstrates Sydney Airport's capacity to meet demand over at least the next 20 years under a wide variety of forecast traffic scenarios.

Kerrie Mather

Chief Executive Officer

EXECUTIVE SUMMARY

This Master Plan outlines Sydney Airport's plan for the operation and development of Australia's premier airport for the period to 2033.

The Master Plan is superior and more robust than previous master plans. It contains a development plan which is the best infrastructure plan for the airport as it can accommodate a wide range of future air traffic scenarios, increases the productivity, flexibility and capacity of the airport, and will benefit all passengers through a more balanced use of the airport's airfield, terminals and roads.

Through the development plan, airfield safety and efficiency will be enhanced and on-time performance of aircraft will improve. It also delivers significantly improved ground transport access to the airport precinct and improved traffic flows for non-airport traffic in the area.

Sydney Airport's guiding principle is to maximise benefits for passengers and the aviation community as a whole, taking into account stakeholder needs through ongoing consultation. The Master Plan reflects extensive consultation over more than two years with stakeholders to understand their priorities and is designed to ensure that Sydney Airport can facilitate the growth of tourism and trade well beyond the 2033 planning horizon, within the existing regulatory framework.

The development plan, through its flexibility and adaptability to air traffic demand scenarios, is able to offer:

- The balancing of activity more evenly throughout the airfield, terminals and roads which will reduce congestion and improve terminal infrastructure utilisation. The peak hour balance is expected to improve aircraft movements from an 80:20 split between Terminals 2/3 (T2/T3) and Terminal 1 (T1) at present to a 66:34 split between T2/T3 and T1 by 2033
- The development of new major international terminal infrastructure, with the capability for up to 16 additional A380 type international contact gates – almost double[1] the capability of previous master plans
- Better use of existing infrastructure through the introduction of up to 30 swing gates. Swing gates are a flexible aircraft stand that can serve international and domestic/regional flights, with aerobridges and ramps able to serve three levels of the terminal
- Taxiway enhancements, prepared in consultation with Airservices Australia, that improve airfield efficiency and therefore on-time performance

1 The 2009 Master Plan included the capability for 18 A380 international contact gates

- A 65% reduction in the total number of inter-precinct transfer passengers by 2033, providing a single terminal experience for 97% of passengers. A high quality inter-precinct airside transfer corridor will be provided for the 3% of passengers requiring transfers in 2033 – equating to less than 6800 passengers per day
- Significant improvement to ground transport access to and around the T1 and T2/T3 precincts
- Preservation of T1 international freight facilities on the airport, providing long term certainty that will encourage investment that in turn will increase productivity and improve capacity over time

The development plan can be implemented in a staged approach to minimise operational impacts. The development plan is more flexible than proposals contained in previous master plans – in particular, through the integration of terminals and the addition of international and domestic/regional swing gates able to cater to changes in the relative traffic growth. It can also be delivered at similar or lower cost than previous master plans over the full life of the plan, due to the increased productivity of the plan.

The primary features of the development plan are:

- Both the T1 and T2/T3 terminal precincts will be expanded, with the largest expansion to the north of T3 and east of T2
- Both the T1 and T2/T3 terminal precincts will become integrated terminals for international, domestic and regional airlines
- The T2 and T3 terminals will be integrated by linking the two terminals
- Both precincts will include swing gates which can be used for either international or domestic/regional operations at different times of the day
- The retention of the existing fuel facility locations for the period of the Master Plan
- The retention of the existing T1 freight precinct for the period of the Master Plan
- The development of additional apron parking and engineering facilities in the South East and North East Sectors of the airport
- Taxiway extensions and significant airfield developments, including the extension of Taxiway B to the east of the main runway.

The ground transport solutions will improve the performance of the roads and intersections, and encourage increased access by public transport, bicycle and pedestrians

Sydney Airport is committed to enabling reliable, sustainable and cost effective transport options for travellers, visitors and staff, and to improving environmental outcomes of travel to and from the airport.

The many operational synergies and efficiencies achieved under the development plan will also have the positive effect of reducing congestion outside and within the airport at all passenger interfaces including

buses, rail stations, public and airport roads, car parks, kerbside drop-off and check-in facilities.

The development plan includes a number of projects to significantly improve road traffic capacity in and around the airport over the short and long term. In particular, proposed works to the junctions around the T2/T3 precinct, proposed road works within the T1 precinct and the creation of public transport facilities in both precincts will result in improved traffic flows in and around the airport.

Sydney Airport is working closely with Transport for NSW and NSW Roads and Maritime Services to ensure that the NSW Government's proposed road projects and their impacts have been incorporated into the planning process.

Sydney Airport is committed to increasing public transport mode share. Currently, public transport journeys account for 17% of total trips to Sydney Airport. This has been increasing by one percentage point per annum over the past five years and is anticipated to continue to increase at that rate to 2018. The NSW Government has committed to additional train capacity on the airport line in peak periods to facilitate that transition further.

The Infrastructure NSW "First Things First" recommendations announced in October 2012 include a range of investments to address the commuter, freight and airport-related traffic in the vicinity of the airport, including:

- Constructing WestConnex, which expands and links the M4 and M5 and will provide commuters with alternative routes that avoid the airport precinct
- Fixing road pinch points in the Port Botany and Sydney Airport precinct
- Reducing rail fares to the airport stations
- Adding new bus routes to Sydney Airport
- Enhancing the capacity of the freight rail lines, which will divert some freight traffic from road to rail

Finally, additional car parking facilities will be provided across the airport to service growing demand over the planning period.

Traffic forecasts

Forecasts of peak period passengers, aircraft movements and air freight volumes provide the fundamental basis for the planning of airport facilities. The forecasts were independently prepared by Tourism Futures International in an iterative manner with the airlines, and independently peer reviewed by CAPA Centre for Aviation.

A comparison between 2012 and the aviation activity forecast for 2033 is shown in the table below. Passengers are forecast to approximately double over the period. It also shows that as a consequence of the global financial crisis (GFC) the projected level of passengers in 2029 is around 15% below the 2009 Master Plan forecast. The major economic forecasters are not predicting a period of above-average economic growth that would typically give rise to a period of above-average traffic growth. Accordingly, while traffic growth rates are expected to normalise the traffic volumes are not expected to recover to the pre-GFC trends.

Forecast traffic at the end of the 2033 planning period remains about 5% below the traffic forecasts for 2029 in the 2009 Master Plan.

	2012	2029[1] forecast	2033 forecast	CAGR[3]
International, domestic and regional passengers (millions)	36.9	78.9	74.3	3.4%
Fixed wing aircraft movements (thousands)	321.7	427.4	409.5	1.2%
Air freight (tonnes, thousands)	615	1,007	1,011	2.4%
Percentage of slots used[2]	60%	86%	82%	1.5%

Source: Sydney Airport and TFI
1: 2029 forecast in the 2009 Master Plan
2: Includes freight but not general aviation (GA)
3: Compound annual growth rate

Traffic developments in 2013 suggest the 2033 traffic forecasts (prepared in mid-2012) are more likely to be too high than too low. Both international and domestic traffic levels are lower than forecast, and the domestic airlines' stated short term growth expectations are lower than previously expected. To the extent that traffic growth is faster or slower than forecast, the infrastructure developments included in the Master Plan can be brought forward and deferred, in line with demand.

New generation, quieter, cleaner aircraft reduce long term environmental and noise impacts

Sydney Airport acknowledges aircraft noise impacts and is committed to working with the community, governments and the aviation industry to manage and mitigate these impacts, especially in areas close to the airport or under flight paths.

The International Civil Aviation Organisation said in 2012 that aircraft coming off the production line today are approximately 75% quieter than they were 40 years ago. The aviation industry is working to reduce this even further.

Domestic and international aircraft in Australian skies are some of the most modern in the world. With new generation, quieter, cleaner and more fuel efficient aircraft continuing to replace older aircraft, noise impacts around Sydney Airport will continue to improve during the planning period, helping to offset the forecast increase in aircraft movements.

The increasing use of quieter new generation aircraft means the Australian Noise Exposure Forecast (ANEF) noise contours for 2033 cover an area similar to that in 2011 and significantly less than the area in 1976, despite the increase in air traffic over that period. The area of land within the 25 ANEF contour in 2033 has decreased by 1,150 hectares or 36% since 1976. This comparison is indicated in the diagram on page 14.

This Master Plan references a number of the plans, actions and strategies that Sydney Airport and other organisations use to mitigate the impacts of aircraft noise. Sydney Airport's commitment to noise sharing and its past, present and future investment in on-airport infrastructure to accommodate larger, quieter aircraft will ensure residents living close to the airport or under flight paths continue to benefit from their use.

Noise from ground-based activities at Sydney Airport is managed separately to noise from in-flight aircraft operations. Engine ground running, which is an essential part of aircraft operations and maintenance, is regulated by a policy that includes a comprehensive set of operational rules designed to maintain safety, comply with relevant standards and practices, and minimise noise.

Sustainability

Sydney Airport is targeting carbon neutral growth from 2020 to further reduce its environmental impact. This commitment has been made, along with other aviation industry leaders, through the signing of an international agreement – the Global Aviation Industry Commitment to Action on Climate Change.

Recent investments demonstrate the commitment of Sydney Airport to growing sustainably and minimising the impact on the environment and local community, such as the recycled water project in the T1 precinct and the roll-out of fixed electrical ground power at all T1 and T2 gates, and preconditioned air at all T1 gates.

Sydney Airport is planning to expand the recycled water treatment plant in the T1 precinct and build a water treatment recycling plant in the T2/T3 precinct as part of the extension of the terminal precinct, saving millions of litres of drinking water each year. Sydney Airport is also investigating the use of cleaner energy supplies through the development of a trigeneration plant for the airport.

The development of a Sydney Airport experience centre is also being planned. Through this facility the community, school children, aviation enthusiasts and others will be able to explore the heritage and history, operational challenges, environmental initiatives and plans for Australia's most significant airport.

Sydney Airport will continue to take action to minimise environmental impacts associated with airport operations and will broaden its environmental management framework by formally developing a sustainability policy and plan that encompasses economic and social matters, and that would incorporate the existing environment policy.

Community engagement and consultation

In December 2011, an extensive community consultation and engagement process for Sydney Airport's new development plan commenced.

Since then:

- Discussions and briefings have been held with around 150 community and government stakeholders
- Community updates have been placed in local newspapers circulating across the Sydney metropolitan and surrounding area, including community language publications
- 10 community open days were held in areas around the airport
- 150,000 households in the vicinity of the airport have received a community information brochure
- A community hotline and email service was set up to enable members of the public to make direct contact with and seek information from Sydney Airport representatives

The comments we received while preparing the last Master Plan, in the preparation of the Preliminary Draft Master Plan (PDMP) and following the public exhibition of the PDMP have been carefully considered and have informed the preparation of this Master Plan. Stakeholders have recognised that the consultation process for the PDMP and this Master Plan have been more extensive than any previously undertaken by Sydney Airport.

The tourism and economic benefits to Sydney and Australia will be maximised by optimising the use of Sydney Airport.

The benefits of aviation to Sydney, New South Wales and Australia are well established, and are recognised by all levels of government. Direct and indirect activity at Sydney Airport contributes approximately 6% of NSW economic activity and generates almost 300,000 jobs. This is forecast to increase to over 400,000 jobs by 2033, with each additional daily A380 service from China contributing an estimated $388 million of GDP and 5,000 jobs.

Sydney Airport is ideally located to maximise the benefits to the community. The airport is 8km from Sydney CBD, and less than 10km from the iconic Sydney Harbour and the southern beaches. Surrounding the airport are a large number of light-industrial and tourism-related businesses that rely on or support the airport.

Sydney Airport does not just serve passengers travelling to or from Sydney – it is also Australia's largest transport and logistics hub. 34 international, six domestic and six regional airlines operate from Sydney Airport to 97 destinations, including 11 international and eight regional destinations not served by any other Australian airport. Many passengers and large volumes of freight transfer between these flights.

Sydney Airport handles approximately 48% of all Australian international air freight – 76% more than any other Australian airport. It is estimated that around 80% of this freight is carried in passenger aircraft, and is important to the economics of the passenger services.

Sydney Airport supports the three core elements of the Joint Study on Aviation Capacity in the Sydney Region, Australian and NSW Governments, 2012 (joint study):

- Optimise the use of Sydney Airport as the primary airport for Sydney and NSW for international, domestic and regional passengers and freight, by ensuring that it operates efficiently and can grow to its maximum practical operational capacity
- Protect and optimise the use of other existing airports serving the Sydney region
- Select a site for a supplementary airport, and ensure operations commence at the appropriate time in the future

While the development plan can meet the forecast growth of air travel with no changes to the operating regulations, the joint study and several other stakeholders have advocated that Sydney Airport could operate more efficiently with:

- Modernisation of the operational regulations to take advantage of the advances in airline and airspace technology over the past several decades since the regulations were introduced. Reviewing and modernising a number of the regulations in consultation with the community to reflect the significant environmental benefits of existing and future new generation quieter aircraft that could further improve airport efficiency and productivity while maintaining or improving the airport's overall noise impact. Any future reform must be accompanied by a comprehensive stakeholder engagement process to ensure the views of industry and the community are incorporated
- Increased focus at Sydney Airport on core activities of international and domestic/regional passenger and related freight operations, with development of supplementary general aviation, helicopter and specialised freight capacity at RAAF Base Richmond operating on an integrated basis with Sydney Airport
- Enhanced land transport options for passengers, staff and other users

Conclusion

Sydney Airport is able to accommodate forecast traffic demand beyond the 2033 planning period. Importantly the development plan outlined in this Master Plan can meet the future needs of the constantly evolving aviation industry because it has in-built flexibility and adaptability.

Sydney Airport remains deeply committed to maintaining a safe and secure airport environment as well as remaining a sustainable business, a valued member of the community, and a key economic driver for Sydney, NSW and Australia. The airport continues to operate in an environmentally sustainable and responsible manner.


Gates 8-37
Gates 50-63
pure
HELP
SYDNEY
GUIDE
T1 GUIDE
T1 GUIDE