



Australian Government

Department of Infrastructure
and Regional Development

WESTERN SYDNEY AIRPORT



Business Case Summary

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This document provides a summary of the Business Case submitted to Infrastructure Australia in July and reviewed by its Board on 21 October 2016.

Introduction

Debate surrounding a potential second Sydney airport has been ongoing since 1946, with various studies commissioned over the years by successive Australian and New South Wales (NSW) Governments into both the need and the appropriate location for this significant infrastructure asset.

Most recently, the 2012 *Joint Study on aviation capacity in the Sydney Region* (the Joint Study) found that, under current conditions, Sydney (Kingsford-Smith) Airport (KSA) would be unable to meet the increasing demand for new aviation services. The Joint Study identified substantial costs to the NSW and Australian economies if Sydney's future aviation demand cannot be met. Notwithstanding strategies to optimise the use of KSA, and protect the existing capacity of other airports, the Joint Study found that a second major airport in the Sydney basin was required and that the best site was the Commonwealth-owned land at Badgerys Creek.

After thorough analysis of the findings of the Joint Study, as well as a subsequent analysis of Wilton as an alternative site for a second airport and RAAF Base Richmond as an option for limited civil aviation operations, the Australian Government announced in April 2014 that Badgerys Creek will be the site for a new airport for Western Sydney.

Under the terms of a Right of First Refusal (ROFR) granted by the Australian Government as part of the sale of KSA in 2002, the right to develop a second major airport within 100 kilometres of the Sydney central business district must first be offered to Southern Cross Airports Corporation (SCAC), the purchaser of KSA at the time of privatisation. The offer is made through a document referred to as a Notice of Intention (NOI) that can only be issued following a consultation process.

To assist in Government decision-making about the project, the Business Case has been prepared. The Business Case should be read with reference to other key documents and processes relating to the WSA Project – in particular, the Airport Plan and the Environmental Impact Statement (EIS).

The Business Case does not set out the commercial and contractual terms on which the Project would be delivered. These would be embodied in the relevant contractual documents (the NOI).

The case for a Western Sydney Airport

Australia's aviation sector provides an essential service by physically connecting people and businesses to one another and to the rest of the world, by transporting high-value goods quickly to markets and by bringing international visitors to the country. In supporting the sector to carry out this vital role, airports are linked intrinsically to the social and economic performance of our country, cities and regions. Accordingly, constrained aviation capacity can have significant adverse effects on an economy, including lower levels of productivity and business competitiveness, reduced international trade and undesirable land use impacts.

Updated analysis confirms the need for a second airport

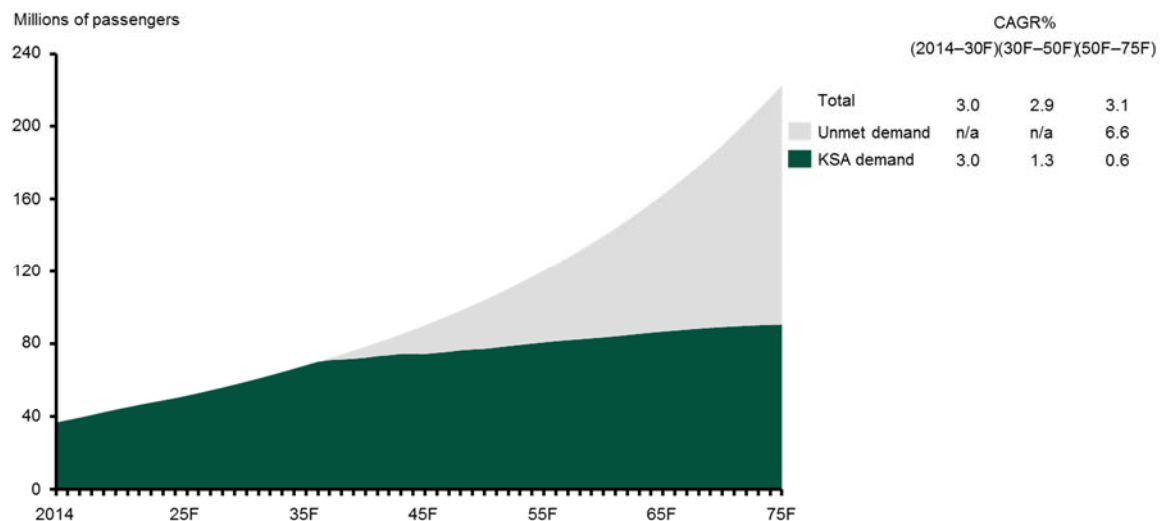
The Joint Study anticipated that forecast demand for aviation services within the region would place considerable capacity pressure on KSA well before 2030. The demand and capacity analysis in the

Joint Study has been updated for the Business Case. The updated analysis confirms that KSA alone will not be able to meet the forecast demand for aviation services in the Sydney region.

- **Passenger demand** – total Sydney basin passenger demand is expected to increase from 36 million annual passengers (MAP) in 2013 to 59 MAP in 2030, 104 MAP in 2050 and 223 MAP in 2075.
- **KSA capacity** – without the construction of a WSA, KSA is projected to reach its long-term aircraft movement capacity by 2037.

This is expected to result in total unmet passenger demand in the Sydney basin of approximately 27 MAP in 2050 and approximately 132 MAP by 2075 (see Figure I), unless additional infrastructure is developed. Over the entire forecast period to 2075, a cumulative total of around 2.0 billion passengers would be expected to go unserved without additional airport capacity.

Figure I: Basin passenger demand under business as usual Base Case (2014 to 2075)



Source: Diio Mi; PaxIS; BITRE; TRA; L.E.K. analysis
CAGR refers to compound annual growth rate.

The costs of not increasing aviation capacity are significant

Constrained aviation capacity can have detrimental impacts on the economy, businesses, passengers and the wider community. The Joint Study quantified the significant impact on the Sydney and national economies as a result of not responding to capacity concerns.

- The cumulative impact (from 2010 to 2060) on expenditure in the Australian economy may be between \$34 billion and \$59.5 billion in foregone Gross Domestic Product.
- NSW is likely to be the most significantly affected economy, with an estimated cumulative impact by 2060 of \$17.5 billion in foregone Gross State Product.
- The total number of jobs that will be foregone is estimated to grow over time as unmet demand increases. This is averaged to be 12,700 full-time equivalent positions per year in NSW and 17,300 full-time equivalent positions per year nationally over the period from 2011 to 2060. In 2060 alone, the annual estimate of foregone jobs is approximately 57,000 in NSW and 77,900 nationally.

A catalyst for economic development in Western Sydney

Western Sydney is home to more than two million residents – nearly 50 per cent of the Sydney metropolitan population – and is one of Australia’s largest, most diverse and fastest growing economies. The broader Western Sydney region would be the nation’s fourth-largest city.

Over the next 20 years, the region will experience significant population and employment growth. By the mid-2030s, almost one million more people will live west of Homebush and one in every two Sydneysiders will call Western Sydney home. This is expected to place increasing pressure on existing transport networks and create a need for new employment and entrepreneurial opportunities in the west.

By 2050, Western Sydney is forecast to be home to around four million people, roughly equivalent to either Melbourne or Sydney today.

This growth means that Western Sydney is increasingly critical to Sydney’s and NSW’s productivity and economic growth. In this context, an airport would not only be transformational for Western Sydney and a catalyst for investment, economic growth and job creation in the region for decades to come; it would also make a vital contribution to the broader Sydney and NSW economies.

Role of Government in ensuring continuing aviation capacity

The benefits of aviation accrue to more than the owners and users of aviation assets. Airports are drivers of economic growth, productivity and competitiveness. However, private investors generally do not have regard to these positive externalities when making investment decisions and any decision about whether to invest is based on private risks and benefits.

Accordingly, while Government has not had a direct role in operating airports for some time, consideration should be given to how the development of a second airport in the Sydney basin can be undertaken to maximise social welfare. Government resources are also critical to ensuring WSA is:

- integrated into the existing global aviation network and regulatory framework;
- connected to the surrounding land transport network – the Government has already committed to the Western Sydney Infrastructure Plan (WSIP) to connect WSA to the surrounding roads network; and
- developed in such a way that is in the best interests of the Australian public – delivering the best outcomes for Western Sydney, NSW and the nation.

The proposed Western Sydney Airport

The Badgerys Creek site

The Commonwealth-owned land at Badgerys Creek covers an area of approximately 1,780 hectares and is approximately 50km from Sydney’s CBD and 15 to 20 kilometres from major population centres such as Liverpool, Fairfield and Penrith. It is also contiguous with the NSW Government’s Western Sydney Priority Growth Area and just north of the South West Priority Land Release Area. Figure II outlines the location of the site.

Figure II: Proposed site location




Source: WSA Environmental Impact Statement

The Airport Site originally comprised approximately 200 rural residential properties. These properties were progressively acquired by the Australian Government between 1986 and 1991 for the purpose of developing an airport and were subsequently consolidated into a single title. A number of other titles were also acquired for noise amelioration purposes. Planning restrictions have been in place around the Airport Site for nearly three decades, protecting the surrounding area from urban development that would be incompatible with an airport.

In July 2015, the site was formally declared as the Airport Site for WSA, under the *Airports Act 1996*.

WSA's role in the Sydney basin

Initially, WSA is expected to primarily serve its local catchment in Western Sydney, from where travelling to the existing airport is challenging due to distance and traffic congestion. Analysis of existing domestic and international multi-airport systems suggests that, at opening, WSA would experience difficulties in attracting demand from KSA, which would remain the primary airport with a premium market position due to its proximity to Sydney's central business district and established route network.



Therefore, under normal market conditions, WSA would likely commence operations as a Low Cost Carrier (LCC) focused airport, serving distinct geographical areas, because:

- airlines most sensitive to price discounts would be LCCs; and
- there would be a natural regional split in demand, with each airport drawing passengers more heavily from certain geographic areas.

In particular, the large and growing catchment of Western Sydney would be expected to support WSA's growth.

At the anticipated commencement of operations in 2026 WSA is projected to serve approximately 3.0 MAP, with demand expected to grow over the next five years to 9.7 MAP (in around 2031).¹ In considering the scale of the initial airport development, this demand modelling suggests that WSA should initially be an LCC-focused airport capable of serving approximately 10 MAP. However, its facilities would be fitting of a full-service airport with a runway long enough to handle large international aircraft, including the A380.

Importantly, once the initial 10 MAP airport is built, subsequent expansions, prior to the construction of a second runway, would be value-creating for the operator. Thus, once the initial airport is built, WSA would be on the same footing as other Australian airports, consistent with the current policy framework.

Demand and commercial modelling demonstrated that alternative models to the above for the development of WSA had relative disadvantages:

- **A higher initial traffic target on opening** – The Government could, if it wished, take active steps to shift high volumes of demand to WSA, but this would require a level of Government intervention inconsistent with its current light-touch approach to aviation policy. Intervention would likely have to be in the form of a Government mandate or large subsidy to shift traffic from KSA to WSA ahead of natural market forces.
- **A larger scale airport on opening** – An airport with an initial capacity greater than 10 MAP would incur additional expenditure inadequately offset by any potential benefits in terms of reducing expenditure at later stages, after taking account of the costs and timing of expenditures under these alternatives.
- **A smaller scale airport on opening** – An airport with an initial capacity smaller than 10 MAP on opening could potentially offer better initial viability by reducing initial costs. However, subsequent additional expansions would be more challenging, as they would need to occur earlier in the Project's life, before WSA would have generated sufficient traffic to be able to support the costs of expansion across a substantial traffic base. A smaller airport might also provide a smaller range of destinations, fewer carriers and reduced options for flight times for Western Sydney residents, potentially leading to lower revenues and economic benefits for the regional economy.

¹ Note the forecast estimates presented here have been the subject of minor revisions relative to the forecasts in the EIS and Airport Plan and accordingly there may be some minor variations in estimates, particularly in the near term. These analytical refinements within the Business Case do not alter the environmental considerations discussed in the EIS.

Long-term demand forecasts – WSA and KSA

Understanding expected demand allocation between WSA and KSA, and the nature of likely traffic at WSA – international and domestic passenger mix, resident and non-resident passenger mix, LCC and Full Service Carriers (FSC) mix and freight – is important for:

- forecasting the likely evolution of WSA and the Sydney basin's airport infrastructure more broadly; and
- testing the likely potential viability and economic benefit of any WSA development.

Underlying policy and regulation assumptions

To inform the demand modelling in the Business Case, it was assumed that²:

- **Operating parameters** – the operation of WSA will not involve hourly caps, overnight restrictions (curfew) or noise sharing arrangements. WSA will be free to operate in line with the Australian Government's aviation policies and regulations on a 24-hour basis, with slot management consistent with IATA's Worldwide Slot Guidelines.
- **Regional slots** – the operation of WSA will not involve the creation of distinct regional access arrangements.

The development of WSA is expected to have an impact on the demand for aviation services at KSA, as well as the operating strategy implemented by KSA (see Figure III). While KSA is expected to retain its position as the preferred airport for domestic and international FSCs, passenger demand would continue to grow steadily but somewhat more slowly. However, with the existence of WSA, KSA is projected to reach its maximum capacity for aircraft movements in 2045 – estimated to be 380,000 Air Traffic Movements (ATM) per annum. By 2052, passenger demand at KSA is projected to reach 77.3 MAP and then grow relatively slowly to 84.1 MAP in 2064 and 89.1 MAP in 2075.

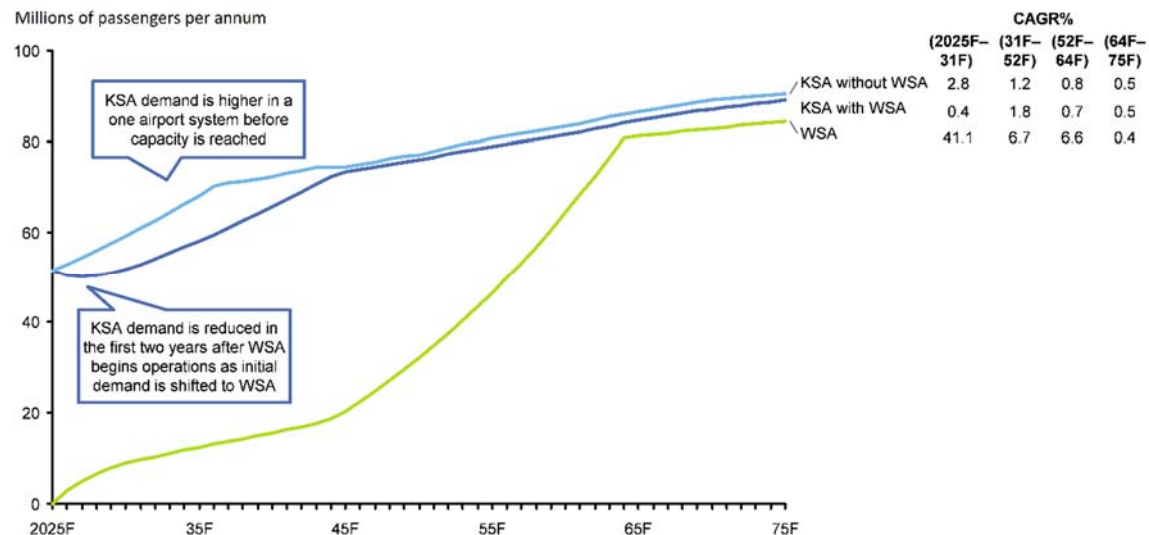
As previously identified, the demand modelling assumed that the commencement of WSA operations would see passengers in the Western Sydney region seeking lower cost and more convenient access to aviation services and travel, including during curfew constrained periods at KSA, with KSA servicing other traffic with its remaining unused capacity. Once KSA reaches capacity (i.e., in 2045), all remaining international and domestic growth in Sydney basin would go to WSA.

In light of this, total passenger demand at WSA is forecast to be 9.7 MAP by 2031, 37.4 MAP by 2052 and more than 80 MAP (approaching operational capacity) by 2064. WSA could continue to support 84.5 MAP to the end of the Evaluation Period (2075), as shown in Figure III.

² These assumptions have been adopted for the purposes of modelling only and are not intended to be a statement of government policy in relation to these matters.

Without WSA, all demand in the Sydney basin would be required to access KSA. Under a single-airport system, KSA would ultimately support more traffic (413,000 ATMs per annum), driven by an assumption of greater peak spreading in a single-airport system compared to a two-airport system. Therefore, over the course of the Business Case Evaluation Period, it was expected that KSA, without the development of WSA, would accommodate greater passenger movements than in a scenario with WSA.

Figure III: Passenger demand under KSA Base Case, KSA and WSA Project Case (2025-2075)



Source: PaxIS; Diio Mi; TRA; L.E.K. analysis

Note: Beyond 2064/65 the data is a projection of likely demand during a period when demand growth at both airports is likely to be predominantly met via aircraft up-gauging. CAGR refers to compound annual growth rate.

With the development of a WSA, the Sydney basin's dedicated freight services are forecast to shift to WSA over a 10-year period, driven by WSA's operational advantages including a lack of night-time operating restrictions, less congested ground transport connections and proximity to distribution centres in Western Sydney. This means that WSA's freight demand is estimated to grow from about 265,600 tonnes in 2031 to nearly one million tonnes in 2052 and 1.8 million tonnes in 2064. Dedicated freight planes (which are often the same types of aircraft to passenger planes) would make up around 13 per cent of all ATMs in 2031, 12 per cent in 2052 and would decrease to eight per cent in 2064.

High-level physical airfield design

While airport design is subject to strict safety and other regulations, in terms of airfield capability the two key physical thresholds are:

- runway length – to accommodate a full range of aircraft and therefore a full range of destinations served; and
- runway separation – to allow independent operation of each runway and sufficient midfield space for terminals and taxiways to maximise movement capacity, provide for airport support services and revenue producing opportunities.



Runway length

To identify the preferred length of the parallel runways for WSA, the runway length requirements of all commercial and cargo aircraft that are currently operating (e.g. the Airbus A380) or expected to commence service operations in the near future were considered. The recommended long-term runway length was identified as 3,700m, because this runway length will meet or exceed that required by all aircraft forecast to operate at WSA.

Midfield area optimisation

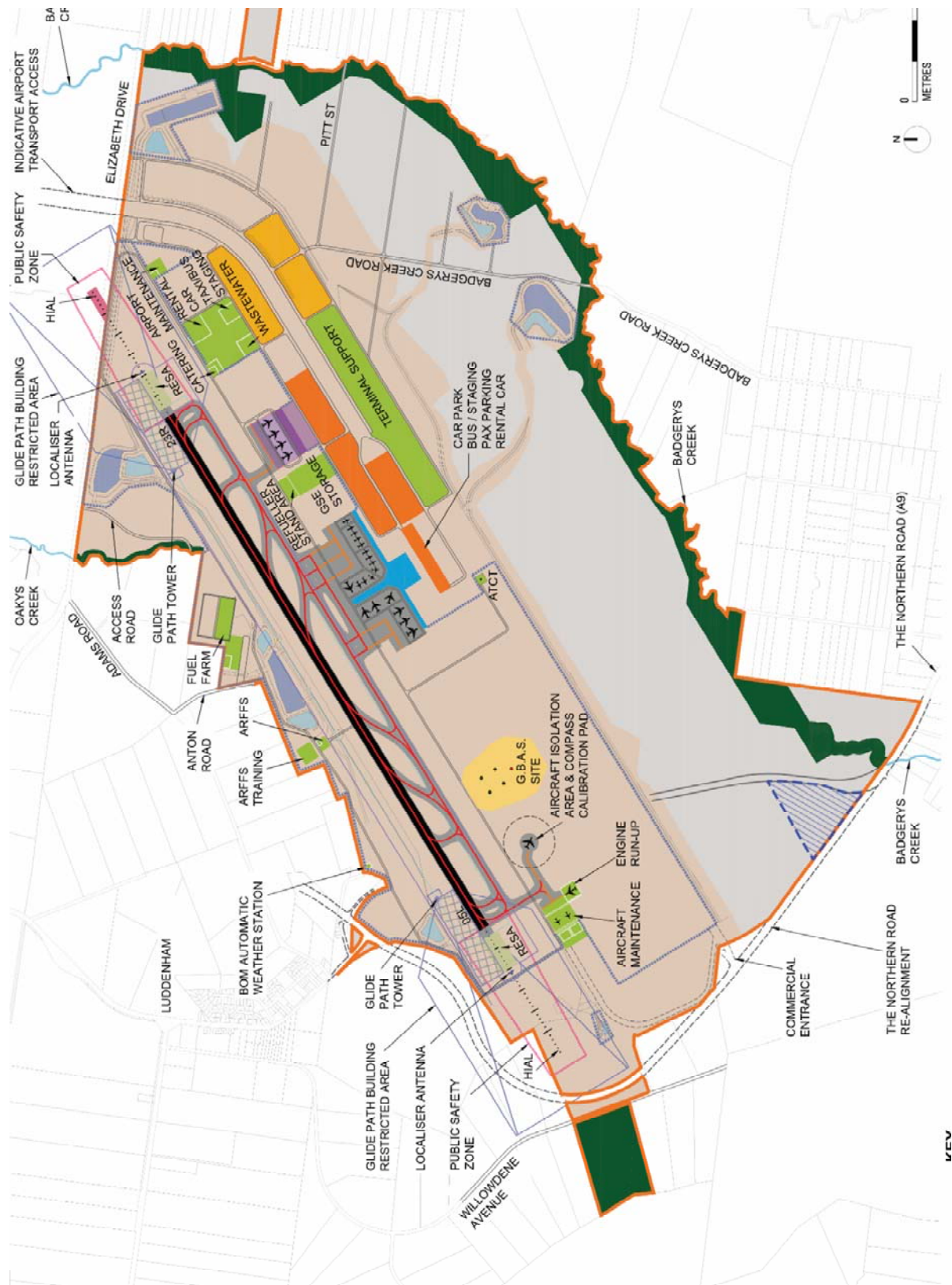
To maximise efficiency and minimise operational delays, it is essential to facilitate unimpeded or near-unimpeded movement of aircraft between the aprons and runways. Detailed design optimisation has resulted in a proposed runway separation of 1,900m, which would maximise the terminal/concourse envelope within the existing site and provided additional land for airport support facilities (i.e., cargo, aircraft maintenance, catering and public car park) and revenue producing commercial/retail development.

Airspace movement analysis by Airservices Australia suggests the Airport Site should be capable of supporting 103 ATMs per hour (45 arriving and 58 departing operations) across two runways operating simultaneously without compromising the capacity of KSA.

Airfield design at Stage 1

On opening in 2026, the airport would have one 3,700-metre (m) runway to support the potential for international movements from day one, with a parallel taxiway and associated aviation terminal infrastructure and support precincts. An indicative layout for the Stage 1 Reference Design is illustrated in Figure IV. This indicative layout has been used to inform the Airport Plan and the EIS.

Figure IV: Indicative Reference Design Layout (Stage 1)



Source: Airport Plan

Achieving the projected demand of 80.8 MAP in 2064 would require additional aviation infrastructure, including a second runway and associated supporting aprons, taxiways, terminal and other facilities. Figure V provides an indicative long-term layout of WSA's development. As previously mentioned, upon the delivery of Stage 1, the operator should be in a position to sustain ongoing development.

Figure V: Indicative Reference Design Layout (Long-term)



Source: Airport Plan

Delivering an airport development

The Reference Design considers three broad categories of work needed to deliver an Airport that would meet Sydney's long-term aviation requirements:

- **On-site Infrastructure Works** – including all site preparation activities and airport infrastructure activities required to develop Stage 1 and support the ongoing expansion and commercial interests of the Airport.

These works would, in Stage 1 of development, include acquiring some small parcels of land to complete the Airport Site, relocating infrastructure from the site and undertaking bulk earthworks to clear and level the site within the Construction Impact Zone shown in the indicative Stage 1 layout (see Figure IV). It would also include constructing airfield and terminal infrastructure, aviation support facilities (such as freight, aircraft maintenance), and connection and reticulation of on-site utilities to support the operation of WSA, as well as some minor road connections. From the start of operations, WSA would be able to accommodate aircraft ranging from regional jets and turboprops to the largest aircraft in operation today (such as the A380) with capacity to serve both domestic, international, FSC and LCC passengers.

Beyond Stage 1, on-site airport infrastructure including the Airport Business Park is expected to be developed in stages as the Airport grows.

- **Commonwealth Agency Works** – These works would include aviation rescue firefighting services, air traffic control tower, meteorological station, navigational aids and provisions for specialist equipment/fit out of the Australian Federal Police and border agencies. For costing purposes, it has been assumed that these facilities will be constructed, owned and operated by the Commonwealth (through its respective agencies), with certain enabling works to be undertaken by the Airport Lessee Company (ALC) based on long-standing precedents.
- **Off-site Infrastructure** – These works would include road and public transport infrastructure to link WSA with Sydney's ground transport system. Most off-site supporting road infrastructure would be provided through the NSW Government in consultation with the Commonwealth. This infrastructure would be provided in a way that ensures WSA operates efficiently and would meet demand at a particular point in time. This includes the \$3.6 billion committed over the next 10 years for major road infrastructure upgrades delivered through the WSIP, for which construction has commenced.³

The On-site Infrastructure Works to deliver Stage 1 of the Reference Design are expected to cost approximately \$5 billion in nominal terms.

Planning for WSA assumes that rail services will be required through a connection to the Sydney metropolitan network at some point. At this stage, no decision regarding a rail line to the WSA site has been made, however, a rail corridor through the site has been identified, which includes provision for two independent rail services to be developed.

The planning for future rail connections for a WSA has been undertaken in close consultation with Transport for NSW (TfNSW) and involves two principle activities:

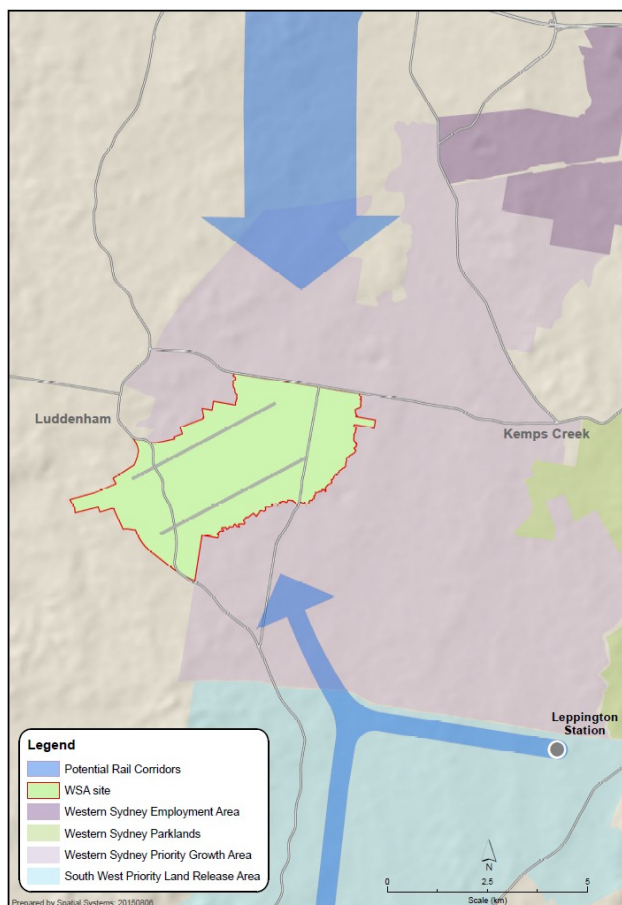
- In relation to identifying the route and timing of potential rail connections to a WSA, the Australian and NSW Governments are collaborating on a joint Scoping Study of the Rail Needs for Western Sydney which is due to report in the first half of 2017. This will help governments identify the

³ These investments are being assessed as part of separate Government decision making processes, and have therefore not been considered in the remainder of the Business Case (and therefore are not included in the cost items outlined above).

possible rail alignments, timing of delivery, cost, funding options, type of services and frequency for rail connections to the WSA.

- In regards to a rail corridor on the Airport Site, planning for the airport preserves a flexible rail alignment across the WSA that will be refined after further design has occurred. To help identify the nature of any rail enabling works on the airport site, the Australian Government is undertaking a Rail Concept Design. Any rail works identified for the Airport site are expected to be subject to a separate approval process.

Figure VI: Potential off-site rail alignments




Commercial Assessment

Establishing WSA, like any greenfield infrastructure project, is commercially challenging. The usual challenges are accentuated in this instance by the unusually long construction period and the relatively slow ramp up in demand.

The Commonwealth's preferred commercial model includes the following elements:

- **Preferred packaging option** – Works that are best undertaken by the Commonwealth would be delivered by the Commonwealth. All other construction and operating phase activities would be delivered by the ALC. For the construction phase, a single integrated design and construct (D&C)



contracting package was used as the basis for commercial analysis. The actual approach to construction packaging would be determined at the appropriate time.

- **Preferred commercial model and risk allocation** – An airport lease model analogous to other Australian airports was selected as the preferred model for the commercial analysis, owing to the ready availability of precedent and the impracticality of the alternatives.

Economic Assessment

To assess the merits of the proposed airport development, the Business Case contains an economic analysis incorporating:

- **An economic cost-benefit assessment (CBA)** – A CBA estimates (and monetises) the incremental economic costs and benefits of a proposed investment relative to a Base Case (i.e., a scenario where WSA is not developed). The resulting cost and benefit figures are then compared to determine the extent to which the proposed project delivers net benefits to the community.
- **A socioeconomic assessment** – The socioeconomic assessment presents the identified costs and benefits that were not monetised as part of the CBA.
- **An economic impact assessment** – The economic impact assessment considers how a project of this scale could potentially affect existing land use across Sydney, as well as the distribution of the economic benefits identified as part of the CBA – in terms of household incomes, gross value added, jobs, etc.

Economic Cost-Benefit Results

- The Project is expected to generate net benefits of approximately \$5,441 million and a benefit-cost ratio (BCR) of 1.9. As the BCR is greater than one, the CBA anticipates that the Project will deliver a net benefit to the community.
- Table I summarises the results of the CBA. All values outlined below are in Net Present Value 2015 terms, having been discounted at 7 per cent per annum.

Table I: Incremental results of the development of WSA from 2015 to 2075 (in 2015 \$ discounted @ 7%)

Item	
Opportunity cost of land	\$81.0
Capital expenditure	\$4,173.9
Operating and maintenance costs	\$1,716.7
Total costs	\$5,971.6
Avoided delays for existing passengers in the Sydney basin	\$196.2
Accessibility benefits for existing passengers in the Sydney basin	\$726.2
Consumer surplus benefits for new passengers in the Sydney basin	\$7,624.1
Airport aero revenues (incurred by new passengers)	\$645.2
Operating savings for existing ATMs (accrued by airlines)	\$127.8
Producer surplus from new ATMs (accrued by airlines)	\$7.6
Non-aero revenues to airport operators	\$1,383.9
Foregone / deferred investment and opex at KSA	\$342.7
Residual value of airport and supporting infrastructure	\$800.9
Externality impacts of road use	\$983.1
Environmental impacts of airport and aircraft operations	-\$1,336.9
Noise impacts of additional ATMs	-\$88.3
Productivity benefits from increased connectivity	***
Total benefits	\$11,412.6
Net present value	\$5,441.0
BCR	1.9

Source: EY

All years are financial years to 30 June.

Social and environmental impact assessment

The recently finalised EIS process, which ran in parallel to the Business Case, considered the potential impacts of the proposed WSA development on a number of social and environmental factors including noise and vibration, hazards and risks, biodiversity, Aboriginal and European heritage, air quality, community health and hydrology and water quality.

Economic impact assessment

A breakdown of the expected employment at WSA and KSA can be seen in Table II.

Table II: Incremental employment/jobs at WSA and KSA

	2031	2063
WSA on-airport employment	8,730	62,860
WSA Business Park employment	4,440	27,150
KSA on-airport employment	(7,120)	(4,110)




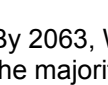
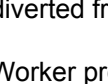
Source: EY

Note: In terms of KSA on-airport employment, these estimates show the reduction in employment relative to the Base Case (without WSA)

The impact assessment found that there would be an increase in value-add in Australia of \$205 million per year in 2031, rising to \$5,838 million in 2063 (undiscounted). Of the gain in 2031, \$77 million is attributed to Western Sydney and \$145 million is attributed to the Rest of Sydney. It also found that productivity per worker and yearly household income would increase throughout NSW from 2031 onwards as a result of WSA's development.

Some key outputs from the model are highlighted in Table III. These include changes in value-add (\$ million), productivity (\$/worker), business profits (\$ million), household income (\$/worker) and exports (\$ million) for the year 2063.

Table III: Overall economic impacts (2063, undiscounted real (2015) terms)

Metric	Western Sydney	Rest of Sydney	Rest of NSW	Rest of Australia	Total
 value add	\$1,507m	\$4,640m	\$506m	-\$815m	\$5,838m
 business profits	\$541m	\$1,372m	\$248m	-\$138m	\$2,023m
 productivity per worker (\$)	\$941	\$1,613	\$225	-\$42	\$252
 household income	\$869m	\$1,580m	\$333m	\$670m	\$3,452m
 net imports	\$660m	-\$1,015m	\$372m	\$1,389m	\$1,406m

Source: EY

By 2063, WSA is expected to increase value-add in the Australian economy by \$5.8 billion per year, the majority of which will be experienced in Sydney. About \$800 million of value-add is expected to be diverted from the Rest of Australia to NSW.

Worker productivity increases significantly, by \$940 per worker in Western Sydney and \$1,600 in Rest of Sydney. A smaller negative impact to the Rest of Australia is caused by a compositional impact – as the activity that is attracted to NSW is on balance of higher-than-average productivity per worker.

Business profits increase by \$2 billion per year, with the positive impact entirely in NSW. Total household income increases across all regions, from \$333 million per year in Rest of NSW to \$1.6 billion per year in Rest of Sydney. All regions are also expected to see an increase in net imports.

Off-airport population and employment distribution results

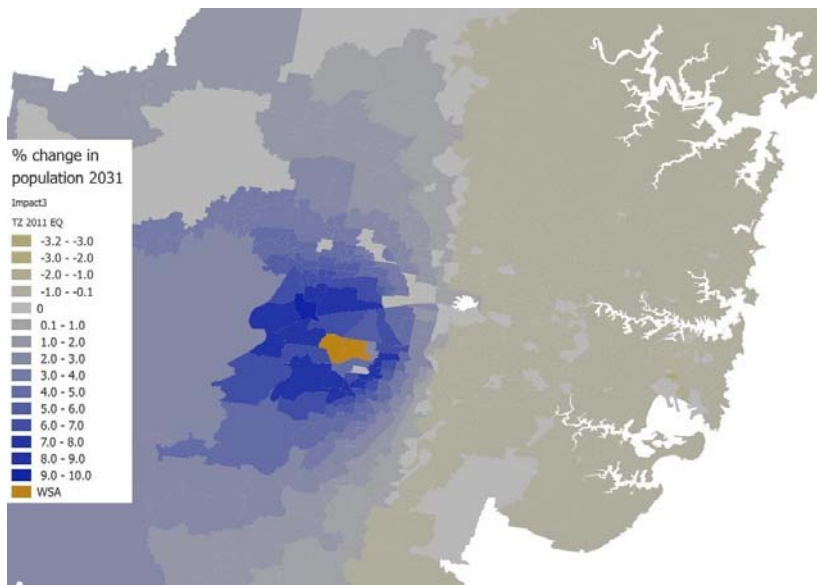
The land use analysis found that areas around WSA would be more attractive for both workers and employers as a result of developing WSA. In particular, the analysis found that by 2031 an estimated 17,900 more people and 6,900 more jobs would locate in Western Sydney compared with a Base Case without WSA. It should be noted that this analysis compares the likely change in the distribution of population and jobs within the Sydney Basin under a future Project Case with WSA, compared with a future Base Case without WSA. The analysis does not reflect the potential increase in overall population or employment in the Sydney Basin that may be caused by WSA.

In particular, in terms of population, Sydney West (Penrith, Hawkesbury and Blue Mountains local government areas) is anticipated to see the largest increase. By 2031, an estimated 16,200 people are collectively expected to move there from other regions to be closer to WSA and the employment opportunities it offers; rising to 63,400 in 2063. Sydney South West (local government areas of Liverpool, Fairfield, Camden, Campbelltown and Wollondilly) is also anticipated to experience strong growth relative to the Base Case, particularly in the later years, growing from 4,900 people in 2031 to 31,100 in 2063. The Rest of Sydney, the Rest of NSW and Sydney West Central (Auburn, Bankstown, Blacktown,

Holroyd, Parramatta and The Hills Shire) would experience slower population growth compared with the Base Case without a WSA.

Figure VII shows the resulting changes in population densities in 2031. Darker blue areas show where WSA will cause the most additional growth in population compared to the Base Case (without WSA). The grey/green areas show where population growth, with WSA, would be lower than without WSA. The WSA site straddles the two travel zones coloured brown.

Figure VII: Change in population density in 2031 with WSA

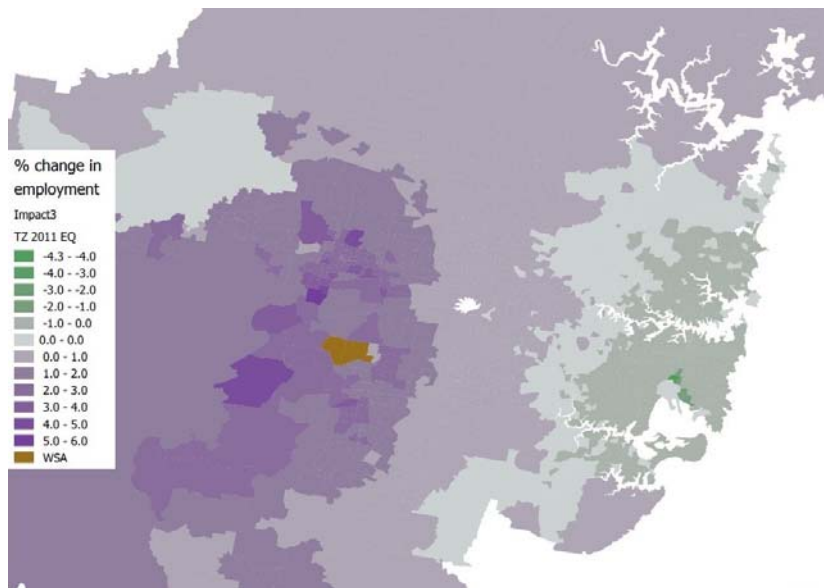


Source: EY.

In terms of employment, the Sydney West region is anticipated to see the largest increase in employment in Western Sydney in 2031 and beyond (an additional 3,000 jobs in 2031 and 12,300 jobs in 2051), relative to a Base Case without WSA. Sydney South West will also see a large increase, particularly in 2051 (7,700) and 2063 (10,600). The Rest of Sydney would experience slower employment growth compared with the Base Case without a WSA.

Figure VIII shows the resulting changes in job densities in 2031. Purple areas show where WSA will cause the most additional growth in jobs compared to the Base Case (without WSA). The green/grey areas show where job growth, with WSA, would be lower than without WSA. The WSA site straddles the two travel zones coloured brown.

Figure VIII: Change in job density in 2031 with WSA



Source: EY.

Project Implementation

The Commonwealth would have a number of roles throughout the development and operation of WSA. In addition to its regulatory, operational and service roles, the Commonwealth will have an important role as WSA's proponent. Given the depth and breadth of the Commonwealth's involvement, careful attention has been paid to the identification and management of risk as the Project has developed. Several bespoke mechanisms have been developed to assist in mitigating the Commonwealth's exposure over the three key phases of development as set out below.

Period prior to NOI acceptance or rejection

This phase involves the issue of an NOI which is then considered by SCAC. If SCAC accepts the NOI, the Project will proceed based on the terms set out in the NOI. If SCAC does not accept the NOI, the ROFR permits the Government to offer the opportunity to develop and operate a second airport to a party other than SCAC, or to develop WSA itself. However, any offer, taken as a whole, cannot be materially more advantageous than those terms set out in the NOI to SCAC.

Once the developer of WSA has been determined, and irrespective of who the developer is, the Commonwealth will retain an ongoing role as the counterparty to the Project documents. The Commonwealth will also continue to progress the activities for which it will be responsible.

Additionally, a rail analysis will draw on the results of the Joint Scoping Study of Rail Needs for Western Sydney, and a rail concept design for WSA, to assess the likely nature, timing and cost of developing rail connections to WSA.

Commencing in this phase, additional flight path design for the proposed WSA will be undertaken in a staged manner leading up to the commencement of operations.

Airport construction and commissioning phase

The construction and commissioning phase, from approximately 2018 to 2026, includes detailed design and construction of WSA, including securing approvals and compliance with the Commonwealth's aviation regulatory framework.

In this phase, the ALC will be responsible for ensuring the development of WSA, the performance of contractors, and compliance of the design specifications for WSA with the Commonwealth's requirements. The Commonwealth will have oversight to ensure the ALC develops WSA in accordance with agreed schedules and requirements.

Airport operations phase

The operations phase, from late 2026 and beyond, is when WSA would operate in a manner broadly consistent with other federally leased airports. The ALC would be responsible for meeting the requirements under the airport lease and the Airports Act for the continued expansion and development of WSA.

Conclusion

This Business Case illustrates the extensive analysis undertaken on Sydney's aviation needs and the options considered that have led to the determination that Badgerys Creek is the best site for Western Sydney's first major airport. The costs of not increasing aviation capacity in the Sydney basin would be significant. Updated analysis forecasts project that KSA will reach its long-term aviation capacity in the late-2030s in the absence of another airport.

Accordingly, further investigation was undertaken to determine the specifications for WSA that would meet the public interest. Various airport operating models, airport scales and designs were considered. Detailed demand and market analysis suggests that at the commencement of operations WSA would likely commence operations as a LCC airport, supported by the large and growing catchment of Western Sydney. However, infrastructure specified for the Stage 1 development will ensure it is capable of handling any domestic and international, LCC or FSC services. Planning for future wide-spaced parallel runways will maximise capacity and operational flexibility and meet the needs of the region for the medium to long term.

Adding aviation capacity at the Badgerys Creek site will:

- resolve capacity constraints for the foreseeable future, including meeting all incremental growth in basin demand from the mid-2040s;
- markedly improve access to aviation services in Western Sydney on opening; and
- act as a catalyst for broader economic growth in the Western Sydney region.

The Business Case complements the social, environmental and economic analysis in the EIS and demonstrates a WSA is expected to generate significant economic benefits for the community, with a BCR of 1.9.

In summary, the Business Case demonstrates that WSA is expected to generate significant economic benefits for Western Sydney and the greater Sydney region.

