CHAPTER 12
THE FUTURE
“GREAT CITIES HAVE EXCELLENT TRANSPORT CONNECTIONS.”

ACT ECONOMIC WHITE PAPER 2003
12 Future Travelport Canberra Airport

Canberra Airport is located at the southern end of Majura between the Molonglo River and the Federal Highway. Metropolitan and regional traffic flows convey passengers and freight via the Majura Interchange between the Monaro, Federal, Barton and Kings Highways and Canberra Airport.

A sound foundation already exists for the transfer between ground and air at Canberra Airport comprising domestic airlines, local and regional bus lines, taxis, hire cars and rental cars. The new international age airline terminal and matching runway and taxiway infrastructure, combined with forward planning will facilitate significant passenger and freight transport growth opportunities over the 20 year life of this Draft Master Plan to 2034.

These opportunities and forward planning include, but are not limited to:

- **Airline passengers**

  Airline passenger growth from 3 million passengers per annum now to reach over 6 million passengers in 10 years (average of 16,500 per day) and over 9.3 million passengers per annum in 2034 (average of 25,500 per day) plus freight. These forecasts as set out in Chapters 5 and 6 include the commencement of international services at Canberra Airport within the next few years and assume a second Sydney Airport is operational before 2034 and there is no Sydney to Canberra high speed rail (HSR).

- **High speed rail**

  HSR between Canberra and Sydney, assuming no second Sydney Airport is built, is likely to add 10.8 million passengers per annum (an average of 30,000 additional passengers per day) at Canberra Airport in 2035 as set out in Table 12.10, Low Case.

- **Light rail**

  The future Capital-Metro Light Rail to Canberra Airport will provide a seamless modern, efficient transit ground and air interchange of passengers to benefit tourism, trade and commerce within the region. This interchange will also provide an opportunity to greatly increase Canberra’s public ground transport commuter modal split from the current 7 percent to over 16 percent.

The likelihood or otherwise in overcoming the difficulties in delivering a second Sydney Airport is a major influence on whether a high speed rail between Sydney and Canberra and other capital cities is also delivered.
“No other part of Sydney’s going to be contaminated by the sort of noise that is connected with an airport. Let’s accept that fact and start to invest in linking the Canberra Airport and this City.”

Barry O’Farrell, NSW Premier ABC 666 Radio, 15 February 2012

The introduction of low cost carriers and international airlines at Canberra Airport, as actively jointly sponsored by the ACT Government and the Airport (refer Chapter 2), will accelerate passenger growth over the next five years. This growth will benefit from a matching efficient integrated ground transport.

The ACT Government’s Economic White Paper (2003) acknowledged the importance of excellent transport connections:

“Great cities have excellent transport connections. Since the ownership of Canberra Airport was transferred to private ownership investment in the Airport and general economic activity around the Airport has increased markedly. The Master Plan, which is the major planning tool for the Airport, outlines a vision for the development of Canberra International Airport as a major passenger, freight and business hub serving the ACT Region.

Therefore it is essential that the Spatial Plan recognises the Airport’s role as a generator of employment and a regional hub. In particular, transport and employment links between Civic and the Airport need to be given high priority”.

Action 47

“The Government will recognise Canberra International Airport as a major activity centre and work with the Australian Government and airport management to continue to upgrade connections to the Airport, especially from Civic.”


12.1 HIGH SPEED RAIL

A significant benefit to HSR, widely acknowledged and adopted overseas, is for HSR to interchange directly with airlines via station connections at airports.

A HSR between Sydney and Canberra, with stations at Sydney and Canberra Airports would be a good win for Canberra and the region in terms of regional development on the back of decentralisation and jobs in tourism, trade and commerce.
Canberra Airport has been a strong public supporter for more than fifteen years of a ‘fast, efficient, and comfortable transport system with easy access to air, rail, and coach services’:

- Initially within the first Master plan, approved August 1999, then;
- The release in September 1999 of a plan outlining the ambition (which remains current today) to be a ‘World Class Travelport’ – a major transport terminal where fast air, rail, light rail, and coach services will converge, (refer figure 12.1) to provide seamless travel for business and leisure passengers; and

![Travelport concept from 1999 Master Plan](image)

- Again in 2012/4, including “57 minutes Canberra to Sydney...and less than a decade away” and the release of a discussion paper as a contribution to the public debate “The HSR will be a significant, nation-building project with substantial benefits to the Australian economy”. The integration of the Airport station proposal is as set out in figure 12.2 and the HSR alignment to the station is as set out in figure 12.3.

In June 2012 Canberra Airport unveiled plans for a $140 million HSR station facility to be constructed adjacent to and within 215 metres of the Airport terminal (refer to figure 12.2).
The Airport’s announcement of 12 June 2012 included the following:

- “We have long been advocates of a HSR link between Canberra and Sydney and that reality is getting closer with strong support from NSW Premier Barry O’Farrell”;

- “Today Canberra Airport is proud to present plans for a superb, multi-modal, transport facility to underline the HSR’s integration into Canberra Airport, in accordance with Premier O’Farrell’s vision”;

- “This terminal will provide a seamless interface for passengers arriving in Canberra by air ready for their 57 minute train trip to Sydney”;

- “The facility will cost $140 million (in 2012 dollars) and take two years to build. Canberra Airport is today committing to funding the HSR terminal project and will be in a position to consider a start date once the timetable for the HSR is confirmed”;

- “We know that Sydney Airport, and its surrounding transport infrastructure are already facing capacity issues, and that the Joint Study into Aviation Capacity for the Sydney Region advised that passenger demand in the region (including Canberra and Newcastle) will increase from the 2010 level of $40 million to $58 million in 2020 and $88 million by 2035”;

- “The HSR will be a significant, nation-building project with substantial benefits to the Australian economy, from jobs during construction and for the local steel industry, to international tourism, as well as relieving the congestion endured by Sydneysiders as the population grows to six million in 2036”;

Figure 12.2 - Future HSR station facility
“The HSR from Canberra to Sydney should be delivered by 2020, with the terminal at Canberra Airport constructed over the last two years of that period”;

“With the completion of this project, Canberra Airport would become a multi-modal hub for HSR, domestic and international airlines, regional and local buses and onsite car parking”.

On 11 April 2013 Canberra Airport welcomed the Australian Government’s long-awaited second stage report into HSR and noted:

“Canberra Airport has been, and continues to be, a vociferous advocate of HSR for Australia’s eastern seaboard”; 

“Overall the HSR Report is a good win for Canberra because it makes it very clear that Sydney to Canberra is stage one – that is fantastic considering the study started with the preconceived strategy that Newcastle to Sydney would come first. Well done to the ACT Government, the Canberra Business Council, and others for achieving this”;

“Clearly, the key objective now is making HSR happen and I have today written to the Chief Minister to reaffirm our commitment to working with the ACT Government to achieve that”;

“The station location is secondary for all 430,000 of us in the Canberra/Queanbeyan region – so we support Civic as the location if it gets us HSR”;

“We remain committed to working positively together to achieve the economic and social benefits that will accrue to the Capital region from HSR, the sooner the better”;

“We note the report recommends Canberra Airport as the first alternative if Civic is unable to support the parking infrastructure needed for the station”. Canberra Airport is a reasonable fall-back option if Civic either cannot work or the commercial proponents prefer the patronage uplift out of an Airport Station”.

The Phase 2 HSR Report’s preference for a Civic station over an Airport location was explained to be for the following reasons:

A HSR station in Civic would “provide better access to the primary tourist destinations in the Parliamentary Triangle than a station.... at Canberra Airport”.

Civic is “the centre of a city of 350,000 people” in a “polycentric pattern of urban development of urban precincts each with its own town centre”. For the report to ignore Queanbeyan and fail to recognise a Canberra/Queanbeyan City of 425,000
people or a regional catchment for the station of 900,000 is peculiar – to underestimate Canberra’s population so much is inappropriate. In any case, Canberra’s dispersed town centre structure means the rationale for a CBD station largely falls away.

- The HSR rail station in Civic would be superior to the Airport in terms of public transport access (partly due to the proximity to the Gungahlin light rail station – 800 metres walk away) – yet the Report finds that only 5 percent of HSR passengers would come to the Civic station by public transport and 95 percent would come by road;

- ‘Canberra Airport is located on a ‘frequent public transport corridor’ (a category of public transport corridor defined by the ACT Government), which provides less public transport capacity than the core ‘rapid service network’ which serves Civic” – this analysis is based upon a 2031 long term transport plan which the ACT Government has recently indicated could be updated to reflect the recent growth of the Airport precinct. Certainly the construction of a HSR station at the Airport ought not prohibit the ACT Government from updating this plan and increasing public transport services in response to that development - it is unusual for the HSR Report to have ignored this reality.

- The Airport “site would affect existing Airport infrastructure and operations…” – the plans in this Chapter of the Draft Master Plan make it clear it would not affect either aviation infrastructure or operations “…and would be moderately difficult to construct” - this is factually incorrect and completely erroneous. It is also at odds with the Report’s findings on the buildability of the Civic option:

  - The Mt Ainslie Tunnel would cost $430 million extra;

  - Ainslie Avenue would need to be reconfigured and closed for up to three years during construction; and

  - The necessary parking would require the demolition of existing buildings (currently social housing) at the Canberra Centre end of Ainslie Avenue as well as a shuttle bus service from parking at the far end of Ainslie Avenue.

This Draft Master Plan proceeds on the basis that an operator of a HSR service will select the best location for a station in Canberra based on demand, route economics and capital cost. Accordingly a station at the Airport and a station in Civic should be included in the future planning for Canberra, Queanbeyan, and the region.

Canberra Airport supports an approach to the market now, by way of a call for expressions of interest from consortia interested in designing, building and operating the first stage of HSR. This is likely to result in a strong commercial assessment and a major reduction in cost compared to the 2012/13 studies.
Figure 12.3 – Future high speed rail and light rail alignment

This plan is indicative only. Actual developments and the timing and placement of these developments will be subject to demand, detailed planning and the obtaining of relevant approvals.
12.2 THE IMPACT OF A SECOND SYDNEY AIRPORT NOT BEING BUILT

The debate over a second airport for Sydney continues, as it has done for over 40 years. The Australian Government should name Badgerys Creek as Sydney’s second airport and should get on and ensure it is built. It may commence this process but given the long time period for appeals and contract negotiations with the owner of Sydney Airport (who holds a first right of refusal) it may be over 10 years before construction could commence.

Sadly the political appetite to proceed may dissipate. Canberra Airport is ready and is willing to step into the breach as an antidote for the looming aviation capacity challenges of Sydney’s Kingsford-Smith Airport (KSA).

Overseas, HSR is a mature technology, and the relationship between airports and HSR linking passengers to the CBDs of the world’s major cities is well established such as Frankfurt, Paris, and Amsterdam. The Joint Study on Aviation Capacity in the Sydney Region acknowledged the potential role for HSR:

“One factor frequently cited as being able to change the level of demand for aviation services is the operation of a HSR system between the Sydney region and other cities. However, the extent to which HSR could reduce the demand for air travel will depend on the relative attractiveness (in terms of price, frequency and travel times) of the services offered, routes served (including the station locations) and the timing of its construction. Internationally, many nations build or extend HSR networks while also expanding their aviation capacity – the two should not be considered in a mutually exclusive manner”.

Building on the work of the HSR Study and the Joint Study, this Draft Master Plan uses the available data and produces forecasts to illustrate the potential passenger demand for HSR on the Canberra Airport to Sydney CBD (CBR – SYD) route considering a range of different scenarios and impacts.

12.3 THE BASE CASE FOR HIGH SPEED RAIL

The Australian Government’s HSR Study forecasts passenger numbers for the HSR of more than seven million in the nominal first year of operation in 2036. These passenger forecasts (shown in Table 12.1 below) are for a Canberra Station including passengers travelling to and from Sydney and those travelling to and from a Southern Highlands Station (notionally Moss Vale).

The HSR Study Phase One did not take into account any impact on passenger demand as a result of:

- KSA reaching capacity; or
- A second Sydney airport being built; or
A second Sydney airport not being built.

Table 12.1 - HSR passenger forecasts

<table>
<thead>
<tr>
<th>Route</th>
<th>2036</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sydney to Canberra</td>
<td>3,291</td>
</tr>
<tr>
<td>Canberra to Sydney</td>
<td>3,291</td>
</tr>
<tr>
<td>Canberra to Moss Vale</td>
<td>390</td>
</tr>
<tr>
<td>Moss Vale to Canberra</td>
<td>390</td>
</tr>
<tr>
<td>Total Canberra Station</td>
<td>7,362</td>
</tr>
</tbody>
</table>

The HSR Study forecasts overall travel demand (all modes – road, rail, air) in the Sydney-Canberra corridor would increase from 5.83 million in 2009 to 10.27 million in 2036 and 14.55 million in 2056, an annual increase from 2009-2036 of 1.2 percent and from 2036-2056 of 1.8 percent. The annual increase on the Moss Vale-Canberra corridor would be 1.9 percent and 1.5 percent between 2009-2036 and 2036-2056 respectively.

Table 12.2 - HSR travel demand growth forecast

<table>
<thead>
<tr>
<th>Route</th>
<th>2009 – 2036</th>
<th>2036 - 2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBR – SYD – CBR</td>
<td>1.2% pa</td>
<td>1.8% pa</td>
</tr>
<tr>
<td>CBR – MV – CBR</td>
<td>1.9% pa</td>
<td>1.5% pa</td>
</tr>
</tbody>
</table>

If these growth rates are applied on a five-yearly basis to the HSR passenger forecast at 2036, the passenger demand for the HSR on the Sydney-Canberra corridor, including Moss Vale, will be more than 6.8 million in 2030 and 9.4 million in 2050 as shown in Table 12.3 below.

Table 12.3 - HSR passenger forecasts

<table>
<thead>
<tr>
<th>Route</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2036</th>
<th>2040</th>
<th>2045</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBR-SYD-CBR</td>
<td>5,774</td>
<td>6,128</td>
<td>6,504</td>
<td>6,582</td>
<td>7,075</td>
<td>7,744</td>
<td>8,477</td>
</tr>
<tr>
<td>CBR-MV-CBR</td>
<td>632</td>
<td>696</td>
<td>765</td>
<td>780</td>
<td>830</td>
<td>897</td>
<td>970</td>
</tr>
<tr>
<td>Total CBR Station</td>
<td>6,406</td>
<td>6,824</td>
<td>7,269</td>
<td>7,362</td>
<td>7,905</td>
<td>8,641</td>
<td>9,447</td>
</tr>
</tbody>
</table>

The Joint Study on Aviation Capacity in the Sydney Region provided an indication of the likely passenger demand for HSR between Canberra Airport and Sydney in the event of a second Sydney Airport not being built. This is examined below.
12.3.1 UNCONSTRAINED AVIATION DEMAND IN THE SYDNEY REGION

The Joint Study considered the unconstrained aviation demand forecasts for passenger numbers for the Sydney Region Airports as a whole (KSA, Newcastle and Canberra Airports) and indicated they would be:

- 57.6 million in 2020;
- 87.4 million in 2035; and
- 165.0 million in 2060

12.3.2 KSA REACHING CAPACITY

The Joint Study forecasts KSA will reach capacity in terms of having no available slots for extra aircraft movements in 2027 and an additional airport will be required by 2030 at the latest.

The lack of available capacity will mean a growing amount of peak demand cannot be met at KSA. Modelling shows, for the busiest hour (8.00am to 9.00am), an estimated:

- Four movements of peak hour demand per day (or five per cent) will not be met by 2015;
➢ 12 movements of peak hour demand per day (or 13 per cent) will not be met by 2020;

➢ 30 movements of peak hour demand per day (or 27 per cent) will not be met by 2035;

➢ 85 movements of peak hour demand per day (or 51 per cent) will not be met by 2060.

Further, the demand at other hours of the day will be similarly increasing, approaching or exceeding the movement cap.

As a result of slots not being available to land aircraft, airlines will not be able to schedule services to meet demand.

International airlines proposing new services to Sydney in peak periods will need to consider whether to:

➢ Redistribute a proposed service to non-peak hours, if slots remain available and commercially viable;

➢ Redistribute to other Australian airports;

➢ Go to other airports internationally, representing a loss to the Australian economy (suppressed demand); or

➢ Not offer services at all, again representing a loss to the economy (suppressed demand).

In addition to severe road congestion gridlocking KSA at peak periods, and capacity issues on the rail network to the CBD from 2018, the impact of slot capacity being reached will be significant in terms of aircraft delays and reliability.

Modelling suggests by 2035 almost half of all non-cancelled movements will be late and almost 10 percent of desired movements will be cancelled.

The most severe disruptions to airline operations, and thus delays, will be in weather conditions resulting in westerly winds which will force operations onto the single cross runway with a capacity at 55 movements per hour as against the capped demand of 80 movements per hour.

KSA is sometimes affected by the passage of weather fronts and strong winds. These can produce conditions where safety requires greater spacing between aircraft conducting instrument approaches, slowing the rate of arrivals. When winds exceed 20 knots, and particularly when they are strong westerly winds (affecting the
operation on parallel runways), Airservices adjusts the runway operating patterns resulting in the operation of approximately 55 movements per hour (or less).

It is estimated this occurs for some period on approximately 125 days per year. Thunderstorms also curtail the airport’s operations for a few hours per month, particularly in the summer months.

As Table 12 from the Joint Study below shows, by 2035 recovery from being forced onto the cross runway by westerly winds at 7.00am for just two hours will take until 10.00pm that night (ie passengers will incur delays for the next 13 hours) and this will occur on average once every three days.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of displaced movements</th>
<th>Number of movements delayed by one hour</th>
<th>Number of hours affected</th>
<th>Time of day in which schedule is recovered</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>45</td>
<td>48</td>
<td>2</td>
<td>11.00am</td>
</tr>
<tr>
<td>2015</td>
<td>69</td>
<td>135</td>
<td>4</td>
<td>1.00pm</td>
</tr>
<tr>
<td>2020</td>
<td>75</td>
<td>211</td>
<td>5</td>
<td>2.00pm</td>
</tr>
<tr>
<td>2035</td>
<td>75</td>
<td>556</td>
<td>13</td>
<td>10.00pm</td>
</tr>
</tbody>
</table>

† After 8.59am (when the available runway slots resume to 80 movements per hour). This excludes the construct of delay created by limitation of 55 movements per hour for a two hour period.
Source: Booz & Company analysis

When this delay occurs every three days, the reliability of air travel into KSA will be severely undermined and the cost penalties on airlines operating into KSA will become highly problematic. It is no surprise the major domestic and international airlines support additional airport capacity.

12.3.3 UNMET DEMAND

Having identified these operational impacts, the Joint Study concluded that KSA will reach capacity in 2027 and recommended a second airport for Sydney is required by 2030 at the latest. It forecast unmet passenger demand if an additional airport is not built as follows:

<table>
<thead>
<tr>
<th>Unmet demand</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
<th>2045</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>3.0</td>
<td>10.5</td>
<td>19.0</td>
<td>29.0</td>
</tr>
</tbody>
</table>

It is surprising no unmet demand is identified prior to 2035 given the Joint Study’s finding that KSA will reach capacity by 2027 and demonstrates the conservatism of the approach, as well as an inconsistency with its observations on the extensive nature of delays. (The Joint Study findings have again been used for the purposes of this document.)
Importantly, the unmet demand rises rapidly after 2035 due to KSA’s growth being curtailed by reaching capacity at 74.7 million passengers in 2035 out of a total Sydney Region Airports demand of 87.4 million.

The five years from 2035 to 2040 are instructive – overall passenger demand for the Sydney Region Airports rises from 87.4 million to 99.6 million, but KSA can only accommodate 3.8 million of this growth. Unmet demand grows by 7.5 million passengers (more than 60 percent of the five year growth in demand) to total 10.5 million passengers in 2040.

Similarly in the following five years to 2045 unmet demand grows a further 8.5 million to total 19 million passengers meaning almost two-thirds of the demand growth over this five year period is unmet.

12.3.4 CANBERRA AIRPORT AS AN OVERFLOW AIRPORT FOR SYDNEY WITH A HSR

The Joint Study made it very clear that from 2030, not only is a second airport for Sydney required, if it is not delivered passenger demand will not be met because KSA will be suffering significant operational and growth constraints.

Given the difficulty in delivering a second airport for Sydney, NSW Premier Barry O’Farrell has recognised the role Canberra Airport can play in absorbing the unmet passenger demand:

“Well I don’t believe, and I said this during the campaign, there’ll ever be another airport built in the Sydney Basin. What part of Sydney are you going to impose an airport on? I’ve always believed that the way to address this was through fast train links. I’ve always been a big supporter of the fast train link to Canberra, and if you wanted to do a Snowy Mountains style scheme, you’d go Melbourne, Canberra, Sydney, Brisbane. You’d change the population growth of a couple of States and a Territory. But importantly you’d solve the airport issue.”

Two key thresholds must be met for a HSR from Canberra Airport to Sydney CBD before Canberra Airport is considered a viable overflow airport for Sydney and one that is genuinely able to meet KSA’s unmet demand. These are the travel time from Canberra Airport to Sydney, and the integration and timeliness of the passenger transition from air to rail and vice versa.

The proposed HSR station at Canberra Airport is fully integrated into the aviation terminal making for a seamless transition. The train platform is elevated and is to be built at the same level as the airline check-in desks and the aerobridges for direct boarding of aircraft. The distance from the train platform to the airport terminal entry is 215 metres. The distance from the train platform to the nearest aerobridge is 315 metres. This is an extraordinary level of integration and will facilitate transfers from air to rail in as little as 5–10 minutes without baggage and 15–20 minutes with baggage.
This quality of passenger transfer (with walking distances a fraction of most Australian domestic terminals let alone international) maximises the opportunity for the Canberra Airport to Sydney CBD HSR solution to be highly efficient and attractive to consumers. It must be noted this opportunity would be hugely diminished if the HSR station is 500-1,000 metres from the Airport terminal and it will be lost altogether if the HSR station is elsewhere in Canberra.

The critical issue is the travel time between Canberra Airport and Sydney’s CBD, making this journey a viable alternative for handling KSA’s excess demand, and the logical and preferred overflow solution. As a fundamental criterion the Joint Study established that any second airport site must be within 90 minutes of Sydney. A HSR between Canberra Airport and Sydney with a travel time of 57 minutes clearly satisfies that criterion. In fact, it represents a superior solution when compared to:

- **Wilton**

  The Joint Study notes the road travel time to the CBD is currently 70 minutes; and travel by train from Douglas Park Station (12 kilometres away) is also 70 minutes.

- **Richmond**

  The Joint Study notes the current (in 2011) travel time ‘assuming relative free-flow traffic’ is 65 minutes and the train journey time from Clarenden Station (800 metres from RAAF Base, Richmond) to Central Station is 80 minutes.

- **KSA**

  By 2036 traffic congestion will mean it will take 40 minutes to travel the 5 kilometres to Surry Hills and thus up to an hour to get to the CBD.

  The travel time for the HSR between Canberra Airport and Sydney is not only superior to the alternate airport location options of Wilton and Richmond, it is likely to be shorter than from KSA itself to the CBD, especially at peak periods and having regard to the seamless interchange from air to rail at the Canberra Airport terminal.

  These raw travel times, although they show Canberra Airport’s relative advantage over Wilton, Richmond and KSA, fail to capture the biggest transformation of the HSR option - the certainty of travel time. The HSR will be on time, every time, as it is elsewhere in the world, with average delays measured in seconds not minutes. The HSR model internationally includes guarantees for on-time performance backed by ticket refunds.

  This sort of clockwork operational performance represents a stark contrast to both the airline delays forecast into KSA post-2027 and the ground transport gridlock likely to occur between KSA and the Sydney CBD beyond 2020.
12.3.5 PASSENGER FORECASTS

So what do passenger numbers look like in an environment of seamless transfers and certainty of travel time? Table 12.5 shows base case passenger forecasts for the number of air passengers that would use Canberra Airport as an overflow airport for access to Sydney if it was connected by HSR. High and low case scenarios are shown in Table 12.5. The base case assumes a commencement of operation of the HSR in 2030 and forecasts additional passengers as follows:

Table 12.5 - Base case forecast for KSA overflow pax using HSR (millions)

<table>
<thead>
<tr>
<th>Route</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
<th>2045</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Departing CBR</td>
<td>1.25</td>
<td>2.25</td>
<td>5.25</td>
<td>9.5</td>
<td>14.5</td>
</tr>
<tr>
<td>Arriving CBR</td>
<td>1.25</td>
<td>2.25</td>
<td>5.25</td>
<td>9.5</td>
<td>14.5</td>
</tr>
<tr>
<td>Total</td>
<td>2.5</td>
<td>4.5</td>
<td>10.5</td>
<td>19.0</td>
<td>29.0</td>
</tr>
</tbody>
</table>

These passengers are all additional train passengers over and above the HSR Study forecast which ignores the second Sydney Airport issue. This forecast demonstrates the KSA unmet demand is satisfied largely by the Canberra Airport HSR solution.

The high case assumes an earlier HSR operational commencement of 2025 and a higher penetration into KSA’s share of the overall air passenger demand for the Canberra Airport HSR solution, especially in the earlier years, given the high level of constraints and operational delays at and around KSA. However this shift is, in overall terms, very modest when compared with KSA’s overall traffic.

The low case assumes a later HSR operational commencement of 2033 and a lesser penetration into KSA’s share of the air passenger demand with passenger forecasts generally less than the unmet demand for KSA. This is a very conservative approach, appropriate for a low case, refer Table 12.6.

Table 12.6 - High and low case forecasts for KSA overflow pax using HSR arriving and departing (millions)

<table>
<thead>
<tr>
<th></th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
<th>2045</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>High case</td>
<td>1.0</td>
<td>3.5</td>
<td>7.5</td>
<td>14.5</td>
<td>22.0</td>
<td>30.0</td>
</tr>
<tr>
<td>Base case</td>
<td>-</td>
<td>2.5</td>
<td>4.5</td>
<td>10.5</td>
<td>19.0</td>
<td>29.0</td>
</tr>
<tr>
<td>Low case</td>
<td>-</td>
<td>-</td>
<td>3.6</td>
<td>8.4</td>
<td>14.3</td>
<td>20.3</td>
</tr>
</tbody>
</table>

In summary, the range of forecasts for Sydney overflow passengers using Canberra Airport and the HSR is as follows:

- In 2035, between 3.6 million and 7.5 million passengers with a base case of 4.5 million; and
- In 2040, between 8.4 million and 14.5 million with a base case of 10.5 million.
12.4 NO SECOND SYDNEY AIRPORT IMPACT ON OVERALL HSR PASSENGER FORECASTS

The impact on demand for HSR between Canberra Airport and Sydney CBD is affected heavily by:

- KSA reaching capacity in 2027;
- Increasing levels of unmet demand from 2035; and
- The likely failure to build a second Sydney Airport.

This can be seen by comparing the HSR Study base case forecasts (ie, assuming no capacity issues at KSA) with the forecasts made in this document for overflow KSA passengers using Canberra Airport and the HSR, as shown in Tables 12.9 and 12.10 below.

| Table 12.7 - HSR passenger forecasts with no second airport – base case (millions) |
|---------------------------------|--------|--------|--------|--------|--------|--------|
|                                | 2025   | 2030   | 2035   | 2040   | 2045   | 2050   |
| HSR Study Phase 1              | 6.4    | 6.8    | 7.3    | 7.9    | 8.6    | 9.4    |
| KSA Overflow Pax               | 0      | 2.5    | 4.5    | 10.5   | 19.0   | 29.0   |
| Total HSR Pax                  | 6.4    | 9.3    | 11.8   | 18.4   | 27.6   | 38.4   |

These figures highlight that under the base case assessment of KSA overflow passengers:

- In 2030, the KSA overflow passengers utilising the HSR boost demand for the HSR by 37 percent or 2.5 million, to 9.3 million passengers in total;
- In 2035, the KSA overflow passengers utilising the HSR, boost demand for the HSR by 62 percent or 4.5 million to 11.8 million passengers in total;
- In 2040, the KSA overflow passengers utilising the HSR, boost demand for the HSR by 133 percent or 10.5 million to 18.4 million passengers in total.

Critically, the above numbers highlight the significant boost to the HSR business model and fiscal feasibility that Canberra Airport’s role as an overflow Airport for Sydney can deliver. It represents a huge boost to the viability of HSR.

12.5 CAPITAL METRO, CANBERRA’S LIGHT RAIL VISION

“Light rail can be extended through the heart of the City connecting to...major destinations such as the airport.”

City to the Lake Project, www.citytolake.com.au
On the 24th September 2013 Canberra Airport released a discussion paper ‘Linking the Heart of Canberra with Light Rail’.

Following on from recent public interest around initiatives such as the City Plan, City to the Lake and Australia Forum, Canberra Airport believed it was timely to engage in further discussion about connecting the heart of Canberra by Light Rail. This proposal was developed as a contribution to the public conversation on Canberra’s transport network, and to inform the development of the ground transportation plan included in this Draft Master Plan.

Extending light rail is part of Canberra’s future transport solutions

“A liveable city is one where the streets are pleasant pedestrian spaces that encourage people to walk and cycle while being functional for traffic and public transport. A liveable city should have a range of formal and informal public spaces that encourage gatherings and activity and attract people to the city centre. The test of the quality of our city centre – as seen through the prism of its public spaces, cultural facilities and retail spaces – will be how much it will naturally attract people from across the Territory and our broader region, and become the preferred place to visit, work and live. In terms of the quality of its attractions, whether cultural or commercial, the city should ‘balance’ the quality and attractiveness of the national area to the south of the lake. This was Griffin’s expectation, and now we have the opportunity to plan for its fulfilment.”

Professor Alastair Swayn, ACT Government Architect, City Plan

12.5.1 LINKING THE HEART OF CANBERRA WITH LIGHT RAIL

Canberra’s 100th year is a time to reflect on the history and growth of the City, as well as to plan for the future. As a planned City from the outset, based on Walter Burley Griffin’s inspired design for a compact and productive City, the form and function of Canberra as a place to live, work and play has never had greater focus. The Territory Plan, the National Capital Plan, the Canberra Spatial Plan and documents addressing particular areas such as the new City Plan, the City to the Lake project, the Railway Master Plan and the East Lake Plan all aim to address the amenity and smart future design of our City.

Similarly, Canberra Airport produces a Master Plan every five years that guides the development of the airport over the following 20 years. A Ground Transport Plan covering the internal road network as well as connections to the rest of Canberra including public transport is included at Chapter 11 of this Draft Master Plan.

Getting residents, workers and visitors around in a timely and efficient way will be increasingly important as Canberra continues to grow. Development of precincts around the City including the North Quarter, New Acton and Braddon has seen the revitalisation of Canberra’s heart. The visions of the City to the Lake project and Canberra Business Council-initiated Australia Forum, further residential...
development along Constitution Avenue and south of the lake at the Kingston Foreshore and East Lake are developments that will further transform central Canberra and strengthen the need for supporting transport infrastructure that makes the City accessible without the need for motor traffic.

As Canberra’s population increases, one in three new residents will opt to live in the centre of the City. Within the next 10 years, nearly 100,000 people are predicted to commute to and from work in the heart of Canberra. In addition to this doubling of workers, there will be visitors arriving on direct international flights and global events with the proposed Australia Forum new Convention facility. The Australia Forum will be a major boost to the Canberra economy and is vital to assist in the diversification of the economy away from the reliance on the public sector. The Canberra Convention Bureau estimates business tourism brings almost $1 billion each year to the local economy. That will increase dramatically with a new facility.

With the City to the Lake project, the Griffin Legacy, East Lake development (a high density urban community designed to provide an Australian showcase of sustainable development), Kingston Foreshore and numerous smaller developments being planned or underway around the lake, the number of people living in the ‘heart’ of Canberra will quadruple.

The airport proposed a staged plan for Light Rail, encouraged community feedback and noted;

“The ACT Government has committed to Light Rail, with the City to Gungahlin route designed to relieve congestion along the arterial roads that deliver residents from Gungahlin to the City. The backbone of a Light Rail network is people travelling from home to their workplace and back”.

“A great opportunity exists to deliver a compact, sustainable, productive city, as envisaged by Walter Burley Griffin, by linking all the major employment nodes and emerging high density residential developments within a few kilometres of the CBD. You cannot have urban infill without supporting it with appropriate public transport”.

To get “residents, workers and visitors around in a timely and efficient way would be increasingly important as Canberra continued to grow.”

“The visions of the City to the Lake project and Canberra Business Council-initiated Australia Forum, further residential development along Constitution Avenue and south of the lake at the Kingston Foreshore and East Lake were developments that would transform Central Canberra and strengthen the need for supporting transport infrastructure that made the City accessible without the need for motor traffic.”
“The key features of the proposal include the design and siting of a Light Rail network that will service major, existing and future employment, residential, hotel accommodation, national tourist attraction and transport hub locations of the Central National Area (National Capital Plan), including Canberra’s CBD, the Airport and the Parliamentary Triangle.”

“This includes consideration of how the currently disbursed precincts flanking and nearby the West, Central and East Basins of Lake Burley Griffin can be interconnected and energised by scheduled, frequent Light Rail services.”

“The opportunity for mixed-use development along the new routes of the Light Rail will provide incentive for prospective private investors.”

“Like the City to Gungahlin Light Rail, this network would be taken forward ultimately by the ACT Government; but with Public-Private Partnerships proposed for the northern route, it makes sense for other routes to use the same model”.

“The expanded Light Rail network will strengthen land values for residences in the catchment area and increase the value of adjoining land sales by the ACT Government, thus boosting revenue to the government.”

The expanded Light Rail network proposed will:

- Accommodate the increasing transport needs of Canberrans and visitors;
- Build capacity in Canberra’s transport choices;
- Add life to the heart of Canberra;
- Help realise the vision for Canberra as a compact, sustainable and productive City;
- Enhance existing public transport systems through complementary scheduling and routes;
- Help deliver the ACT Government’s major planning and development projects for the National Capital: City to the Lake, Kingston Foreshore, the Griffin Legacy and the East Lake development, as well as other development proposals like the Australia Forum;
- Drive economic activity along the proposed routes;
- Boost ACT Government revenue from land sales;
- Appeal to private investors due to its staged approach and usage potential.
Meanwhile, more than 30,000 people currently travel to and from Canberra Airport to fly, greet, work, do business or shop, every day. These numbers will more than double within the next decade.

While staying true to Burley Griffin’s vision for a compact and productive City, our future transport system needs to support this growth efficiently and sustainably and give us more choice on how to get to and from where we live, work and play.

The backbone of a Light Rail network is people travelling from home to their workplace and back. Linking all the employment nodes and high density residential developments within kilometres of the City will deliver a compact, sustainable City, which is important for the future. You cannot have urban infill without supporting it with appropriate public transport.

Further, with Light Rail already on the ACT transport horizon through the Capital Metro initiative, expanding the network from the proposed City-Gungahlin route, in a staged approach, has the potential to more effectively link central Canberra’s major transport, residential, commercial, tourism, defence and government precincts. Plus the ability to move more passengers will deliver more utility in a planning sense.

12.5.2 THE LIGHT RAIL NETWORK SHOULD LINK MAJOR DESTINATIONS IN CENTRAL CANBERRA

The key features of the Airports proposal include the design and siting of a light rail network that will service the major existing and future employment, residential, national tourist attraction and transport hub locations of the Central National Area (National Capital Plan), including Canberra’s CBD, the Airport and the Parliamentary Triangle. This includes consideration of how the currently disbursed precincts flanking and nearby the West, Central and East Basins of Lake Burley Griffin can be interconnected and energised by scheduled, frequent Light Rail services. It proposes to link Canberra’s main commercial centre in the CBD with the City’s Airport and to link both with the HSR, whether the terminal is at the airport or the City.

A three-stage development is proposed to meet current needs, plans for future growth and allow the investment needed to be accounted for in future budgets. The proposed network design captures existing sites, development underway and proposed future development. Timetables could be scheduled for use as multi-stop or express services including programmed interchanges with the bus network to satisfy pick up and destination demand on and off commuter peak times.

Stage 1: East to West - from the City to the Airport

Services destinations between Canberra City and Canberra Airport including City to the Lake (National Museum, Aquatic Centre), New Acton, Canberra CBD, Australia Forum Convention Facility, CIT and New Stadium, Anzac Parade (Australian War Memorial), ASIO, Russell Hill, Royal Military College Duntrroon/University of NSW Australian Defence Force Academy, HSR Station and Canberra Airport Terminal.
Stage 2: Bridge to Bridge - the Parliamentary Triangle

Extends the network from Russell Hill, over Kings Avenue Bridge, and services the Parliamentary Triangle including Parliament House, the national attractions, and government departments, then continues over Commonwealth Avenue Bridge, servicing Regatta Point and rejoins the East to West route.

Stage 3: Eastern Loop – inner South and Fyshwick

Extends the network from south of Kings Avenue Bridge, and services Parliament House, Manuka (including Manuka Oval), Kingston Foreshore, East Lake, and Fyshwick, then rejoins the East to West line at Canberra Airport, thus completing the circuit.

The opportunity for mixed-use development along the new routes of the Light Rail will provide incentive for prospective private investors. Like the City to Gungahlin Light Rail, these routes would ultimately be taken forward by the ACT Government, but with Public-Private Partnerships proposed for this northern route, it makes sense for other routes to use the same model. The expanded Light Rail network will strengthen land values for residences in the catchment area and increase the value of adjoining land sales by the ACT Government thus boosting revenue to the government.

The ACT Government has committed to spending around $20 million a year in scoping the City-Gungahlin Light Rail and the City Plan will also provide context for further staging of the Capital Metro Light Rail project.

12.5.3 CAPITAL METRO

As the authority responsible for public transport in Canberra, the ACT Government has taken the lead on Light Rail with the formation of Capital Metro. Below is an extract from the Capital Metro website http://www.capitalmetro.act.gov.au/.

Capital Metro is Canberra’s light rail project and an important part of the ACT Government’s vision to deliver a truly sustainable and creative city as set out in The Canberra Plan (2008).

The world’s best and most livable cities all have excellent transport systems, designed and planned in tandem with land use to create walkable, people friendly communities with a range of transport options.

Transport is critical to our vision of a sustainable city and the Transport for Canberra strategy has set the foundation for transport planning over the next 20 years. It aims to create a transport system that puts people first and links new development to investment in public transport.

However, Capital Metro is not just a transport project.
Experience in over 400 locations worldwide has shown effective and reliable light rail solutions can attract investment and employment opportunities, bring environmental benefits and encourage more active lifestyles.

Light rail has proven to transform cities into more productive, sustainable and liveable places. These broader benefits make light rail the right choice for one of Canberra’s busiest and fastest growing corridors between the City and Gungahlin.

12.5.4 THE PORTLAND (USA) EXPERIENCE

Shane Rattenbury, ACT Minister for Territory and Municipal Services, in an opinion piece in the Canberra Times 27 November 2013 acknowledged the effective impact of Light Rail on Portland (USA) especially the station at Portland Airport connecting passengers to the City, amongst other issues:

"Portland is widely regarded as being the “greenest” City in the US and a leader in innovative projects. One of its main attractions is its light rail and streetcar system, often cited as one of America’s most successful."
On its surface Portland appears quite different to Canberra. **It’s obvious as soon as you disembark at the airport and a light rail service offers a $2 ride to the City.** In fact, Portland has more than 100 kilometres of light rail and street cars. While Portland City has about 580,000 people, its surrounding region provides a base population of nearly two million - much greater than Canberra’s.

Different as it seems, elements of Portland provide a glimpse of Canberra’s possible future. Several people who have experienced both Canberra and Portland told me that “Canberra reminds me of Portland 15 or 20 years ago.“

### 12.6 CONCLUSION

Canberra Airport supports the ACT Government’s ambition of an efficient and sustainable public transport system within a creative and compact City. The government’s objectives are unchanged for over 10 years since the 2003 White Paper acknowledgement of "the importance of excellent transport connections" - between the Airport and the CBD.

*Leading world Cities leverage off their airports to achieve excellent transport connections and reap the economic and social benefits of jobs growth arising from expanding tourism, trade and commerce.*

Sydney needs a second airport because KSA will be at capacity by 2027 and is forecast to reach 74.7 million passengers out of a total Sydney Region Airports demand of 87.4 million in 2035. Unmet passenger demand into Sydney will be three million by 2035 rising to 10.5 million by 2040 and 19 million by 2045, due to KSA’s growth constraints.

If Badgerys Creek is not built the consequences will be significant. The Joint Study finds:

> **“By 2060, the economy wide (direct and flow-on) impacts across all sectors of the Australian economy could total $59.5 billion in foregone expenditure and $34.0 billion in foregone gross domestic product (GDP) (discounted to 2010 dollars).”**

> **“The number of total jobs that will not be created is estimated to grow over time as unmet demand increases. In 2060 alone, the annual estimate of foregone jobs is approximately 57,000 in NSW and 77,900 nationally.”**

With HSR from Canberra Airport, passengers will reach the Sydney CBD in 57 minutes – faster than from Wilton, Badgerys Creek and even KSA given the ground transport forecasts.

HSR from Canberra Airport to the Sydney CBD would cost about the same as building a new airport at Wilton - $11 billion.
Canberra Airport has the capacity to absorb the unmet KSA demand. With HSR, in 2035 between 3.6 million and 7.5 million passengers would access Sydney CBD via this mode and by 2040, between 8.4 million and 14.5 million passengers will do so. Airlines will choose Canberra as their port because with HSR they can deliver their passengers into the Sydney CBD in under an hour and with superior frequency and certainty to the experience they will get via an over-subscribed KSA.

Passenger demand for HSR between Canberra and Sydney is boosted significantly from the KSA overflow: 37 percent in 2030, 62 percent by 2035 and 133 percent by 2040, by which time some 18.4 million passengers would be utilising the service.

This demonstrates more than enough demand to make HSR from Canberra Airport to Sydney CBD a viable and logical solution for Sydney’s aviation capacity challenge.

The realisation of the opportunities to integrate HSR and Light Rail at Canberra Airport, Travel-port, will:

- Deliver a logistic competitive advantage to Canberra and the Region trade and commerce; and
- Drive the benefits of decentralisation opportunities to the Canberra region plus one hour.
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