



WHERE ARE THE **JOBS?**

Part 3: Western Sydney workers in 2036

WESTERN SYDNEY UNIVERSITY



The
Centre for
Western
Sydney

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INTRODUCTION

In two accompanying reports we analyse the recent history of jobs generation in Western Sydney and how the ongoing jobs deficit affects different segments of the region's labour force. We note, too, how poor jobs access has become chronic in particular neighbourhoods. In this report we turn our attention and ask what will happen to the region over the next twenty years? Is the region likely to evolve an economic profile capable of delivering quality jobs in sufficient numbers to its growing workforce, or will the future be a disappointing one for workers and households with each day a frustrating repeat of another: long commutes, car dependency, disillusioned youth, and protracted joblessness in the same old places?

Our report commences with detailed examination of the projections for Western Sydney undertaken by Transport for NSW, the agency responsible for the NSW government's employment and population modelling¹. We then contextualise these projections with comments on the possible impact of COVID-19 and the economic recession that has taken hold as a consequence of the virus. We make particular comment on issues relating to jobs access for the professional services worker, in the labour market segment that has grown spectacularly in Western Sydney in the last two decades, but for whom employment opportunity within the region has remained poor. We follow this discussion with analysis of two scenarios, each with different jobs

outcomes to those derived by Transport for NSW modellers, and show how variations in assumptions about the next 20 years result in dramatically different employment and commuting landscapes for Western Sydney. The final section checks these scenarios against the optimistic outcomes expected from a Western Sydney airport and aerotropolis. We ask whether Western Sydney is on a winner with these two grand ventures? We then conclude with some observations about policy directions and future research.

1. For details see <https://www.transport.nsw.gov.au/data-and-research>

TRANSPORT NSW PROJECTIONS

In this section we focus on projections for the Western Sydney labour market released by Transport for NSW in June 2019². These projections are an update to 2016 projections using data released from the 2016 national census. Note, however, the revised projections do not incorporate planning for the Sydney metropolitan area undertaken since 2016. This means the substantial work of the Greater Sydney Commission, especially its three-cities planning initiative, is not incorporated into the modelling. Plans for the Western Sydney Airport and the Western City Aerotropolis are also excluded. These plans will, no doubt, be included in future projections. For now, though, the exclusion of the effects of these plans has minimal effect on projections for the next decade and probably the decade thereafter given the long time frames required for the enactment of the plans. Nevertheless, commentary on the effects of these exclusions are made in this report as appropriate.

It is important also to note that the projections do not include the impact on jobs of COVID-19, although commentary on the effects on jobs growth arising from a COVID-19 downturn are also made at appropriate points in the text.

In this section we take a close look at both the number of jobs predicted for Western Sydney by Transport for NSW, concentrating on the 2016-2036 period, and the anticipated geographical distribution of these jobs. Our guiding questions are twofold: Are enough jobs anticipated? Will the jobs be located where they are most needed?

We start with an overview of the projections. From them we calculate that in 2011 Western Sydney hosted 33.2% of all jobs in Sydney's metropolitan area (excluding the Central Coast)³. This amounted to 739,884 jobs from a metropolitan area total of 2,228,440 jobs. For 2016 Western Sydney's proportion of metropolitan area jobs remained

steady at 33.3%, or 829,471 jobs from a total of 2,491,733 jobs across the metropolitan area. Transport NSW predicts (pre COVID-19) there will be 915,741 jobs in Western Sydney in 2021, again steady at 33.8% of the metropolitan total.

Between 2016 and 2036, Transport for NSW predicts total jobs in the metropolitan area will increase by 897,861 and by 444,990 for Western Sydney. This allocates 49.6% of the metropolitan increase to Western Sydney, which is a substantial change to the recent contributions by Western Sydney to metropolitan jobs, which as we have seen has been stable at around 33% since 2011. Ramping up to supply nearly half of all new metropolitan area jobs by 2036 is a substantial task, notwithstanding the desirability of such an enhancement.

Figure 1 tracks Western Sydney's projected annual jobs growth in jobs alongside our estimates of Western Sydney's labour force growth. With

2. Transport for NSW, 2019, Travel Zone Projection 2016 (TZP2016) model version 1.51, available at <https://opendata.transport.nsw.gov.au/dataset/employment-projections>

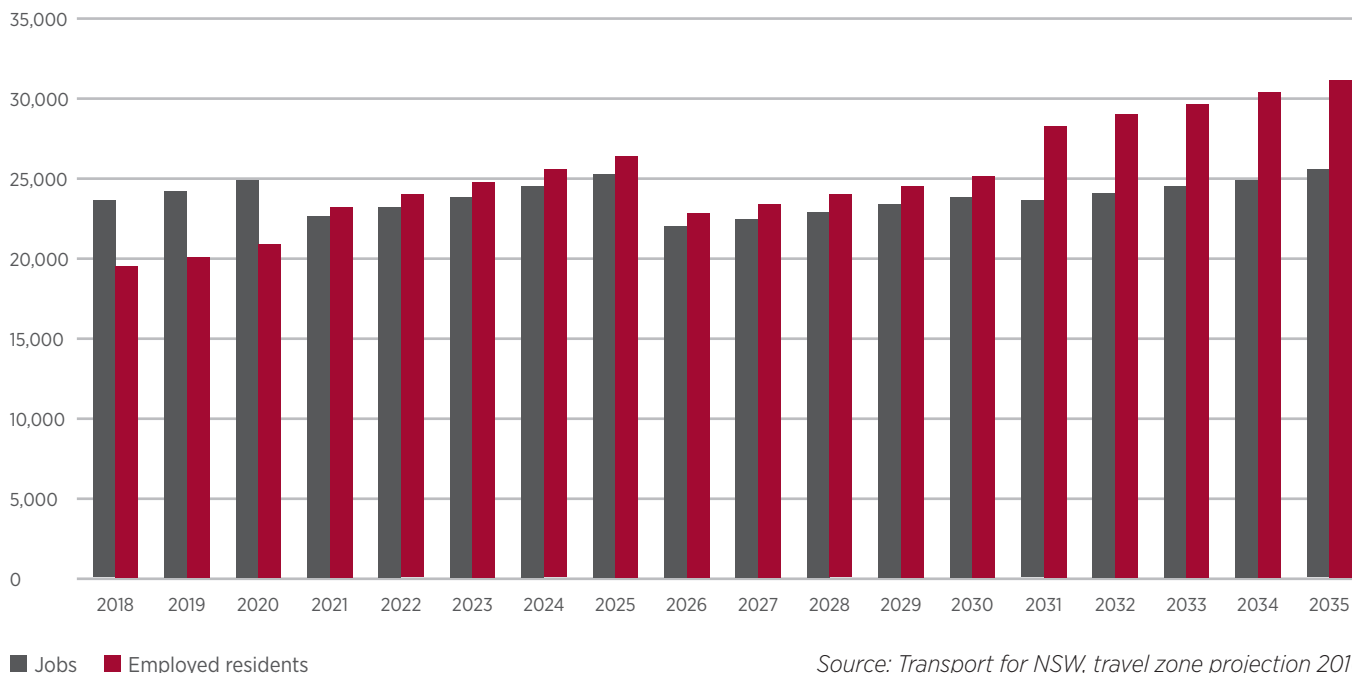
3. Unless otherwise stated, in this section the Sydney metropolitan area excludes the NSW Central Coast.

recognition of the 2016-18 jobs boom we describe elsewhere, Transport for NSW anticipates a continuation of this jobs growth rate, predicting a rate for 2018-20 in excess of 2% per annum. Such a handsome rate would lead to a significant reduction in Western Sydney's jobs deficit. Figure 1 shows year-on-year the extra jobs growth (the grey columns) compared to the growth of employed residents (the red columns) that an annual 2% jobs growth rate would deliver. For the period 2021-31, Transport for NSW projects a continuation of high growth in local jobs, with an average annual growth rate for Western Sydney of 2.39% for 2021-26 and 1.95% for 2026-31. Across this decade, however, the rate of jobs growth is consistently lower than the rate of growth of employed residents – meaning the region's jobs deficit will once again be worsening. Then, after 2031, projected annual jobs growth falls to 1.88% at a time of heightened labour force growth. This results in a widening of the jobs deficit in Western Sydney, as is seen clearly on the right hand side of the graph, with the growth of employed residents exceeding the growth in jobs by 5,000 or more each year. Of course, all this discussion assumes away the impacts of COVID-19 and recession.

FIGURE 1

Transport for NSW forecasts for jobs, Western Sydney 2018-2015

Annual change



Source: Transport for NSW, travel zone projection 2016

The Transport for NSW projections provide breakdowns at local government (LGA) level. Here it needs noting that the base geographic terrain for assigning jobs growth in the Transport for NSW modelling is the existing Western Sydney landscape – the suburbs, regional centres and LGAs that we know. As noted above, the modelling does not attempt to assign jobs to Western Sydney’s yet-to-come economic precincts, in particular the Western Sydney Airport and the Western Parkland City and aerotropolis. Another caveat needs repeating, namely that the discussion does not incorporate the impacts of COVID-19 and subsequent recession.

In total for 2016-36, Western Sydney’s 13 LGAs are predicted by Transport for NSW to contribute 49.6% (or 444,990) of 897,861 extra jobs within the metropolitan area. By far, the most significant LGA for jobs growth in the metropolitan area will be the City of Sydney (centred on the CBD) where an extra 196,280 jobs are anticipated. This increase would be the equivalent of at least eight development projects each the size of the Barangaroo project along the Sydney CBD’s western harbour edge, where 25,000 jobs are expected to be generated. The other major LGAs for jobs growth 2016-36 outside Western Sydney are Ryde (where 28,060 extra jobs are predicted) and North Sydney (24,296 extra jobs).

The expectation by Transport for NSW that jobs growth will be concentrated in existing jobs centres – such as City of Sydney, Ryde, and North Sydney – recurs in the projections for Western Sydney. Indeed, five established regional centres in Western Sydney are forecast to contribute 280,871 jobs in total, representing 63.1% of Western Sydney’s jobs growth 2016-36. The largest growth LGA (in absolute terms) is predicted to be Parramatta with an increase of 67,232 jobs. Four other major centres assigned for jobs growth in Western Sydney 2016-36 are the LGAs of The Hills (up by 58,505), Blacktown (up by 57,367), Penrith (up by 49,988) and Liverpool (up by 47,779). This would mean roughly the equivalent of the jobs output of two Barangaroo projects in each of these four centres and nearly three Barangaroo projects in Parramatta, a total of eleven Barangaroo projects across these five Western Sydney regional centres.

If these projections are realised there would be a substantial accumulation in total jobs available to Western Sydney workers. Yet the total increase would still be insufficient to cater for the growth of the labour force in Western Sydney in this two-decades period. The increase in the region’s labour force, shown in figure 1, would stay consistently above the rate of jobs growth, with substantial widening of the region’s jobs deficit between 2031-36.

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QUALIFICATIONS DUE TO COVID-19

In this section we discuss the difficulties of making predictions about labour market conditions in Western Sydney. Accurately forecasting the supply of jobs is very difficult, and Transport for NSW is commended for taking on this task, knowing its predictions will always be wrong to some extent. Predicting the demand for jobs is also difficult, the growth of Western Sydney's labour force being dependent on a range of demographic, economic and cultural variables.

Some observations about the difficulties of forecasting are important at this point. The first concerns COVID-19 and the subsequent recession. Here there are a number of dimensions. One is the timeframe in which the economic impact of the recession will play out. For the June quarter 2020, National Economics estimates a loss of Western

Sydney regional output of 11.6% compared to 2018-18 quarter averages. This translates to a 11.9% loss of Western Sydney jobs and a 13.5% fall in the number of Western Sydney workers holding jobs⁴.

There is also a corporate dimension. The severity and duration of the COVID-19 recession depends on the extent to which firms take the opportunity to restructure business operations. Australian recessions over the last fifty years have seen different private sector adjustment strategies including productivity campaigns involving work intensification and redundancies, closures and rationalisations of business locations, takeovers and mergers to shore up market positions and balance sheets, and a range of investment strategies especially involving technical change⁵.

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4. National Economics estimates are based on modelling reported at economy.id.com.au/cws/covid19; percentages include JobKeeper recipients.

5. An enduring guide to business reaction to recessions is Massey, D. and Meegan, R., 1982, *Anatomy of Job Loss*, Methuen: London.

There is a geographic dimension to these economic and enterprise changes. A region's sectoral make-up will greatly affect the level of job loss. Timeframes for downturn and recovery will also vary geographically. Important to the resilience of a region's economy will be the flexibility and adaptability of its workforce, with regions hosting workforces with higher levels of training and skills less likely to experience the worst of the downturn and more likely to experience a high growth, enduring recovery.

There is also a political dimension whereby the nature and extent of a region's experience of recession can be significantly influenced by government actions. These can include direct spending to moderate downturn and targeted assistance to ensure recovery is not impeded by inadequate or redundant labour skills, shortfalls in capital, and market settings that impede local enterprise growth.

The second observation concerns uncertainty about future levels of immigration. As noted in our report *Western Sydney's short-lived jobs boom* (see section 3), 66% of the growth in the Western Sydney

workforce between 2011 and 2016 – which amounted to 106,000 workers – came from workers who had arrived from overseas sometime in the previous five years. A fall in the level of immigration to Australia post-COVID-19 would lower labour force growth in Western Sydney, although to an extent and for a duration not yet knowable. There will be indirect effects of lower rates of immigration as well, via lower demand in the construction sector and in the population-serving sectors such as retailing, health and education. A potential positive effect of lower migration would be a reduction in the competition for Western Sydney jobs. Further research will be required to ascertain the effects on the Western Sydney economy of lower labour force growth due to lower immigration rates.

The third observation concerns the response of firms that employ large concentrations of office workers to circumstances where the transmission of COVID-19 continues to be of concern. Considerations here include:

→ the safety of large numbers of workers in open-space office configurations

→ the capacity of high-rise buildings to deliver the services necessary to house workers for eight or more hours daily in these configurations, including the provision of lift transport and access to catering and toilet facilities

→ the safety (and perceived safety) of heavily utilised public transport systems as the primary commuting mode for CBD office workers.

Balanced against these considerations is the possibility of locating workers in suburban hub locations or in home-based work settings as permanent alternatives to CBD office locations. Again, informed research and workplace observations are needed to ascertain long-term trends in the use of dense commercial space, and the implications thereby for the geography of professional services and office workers.

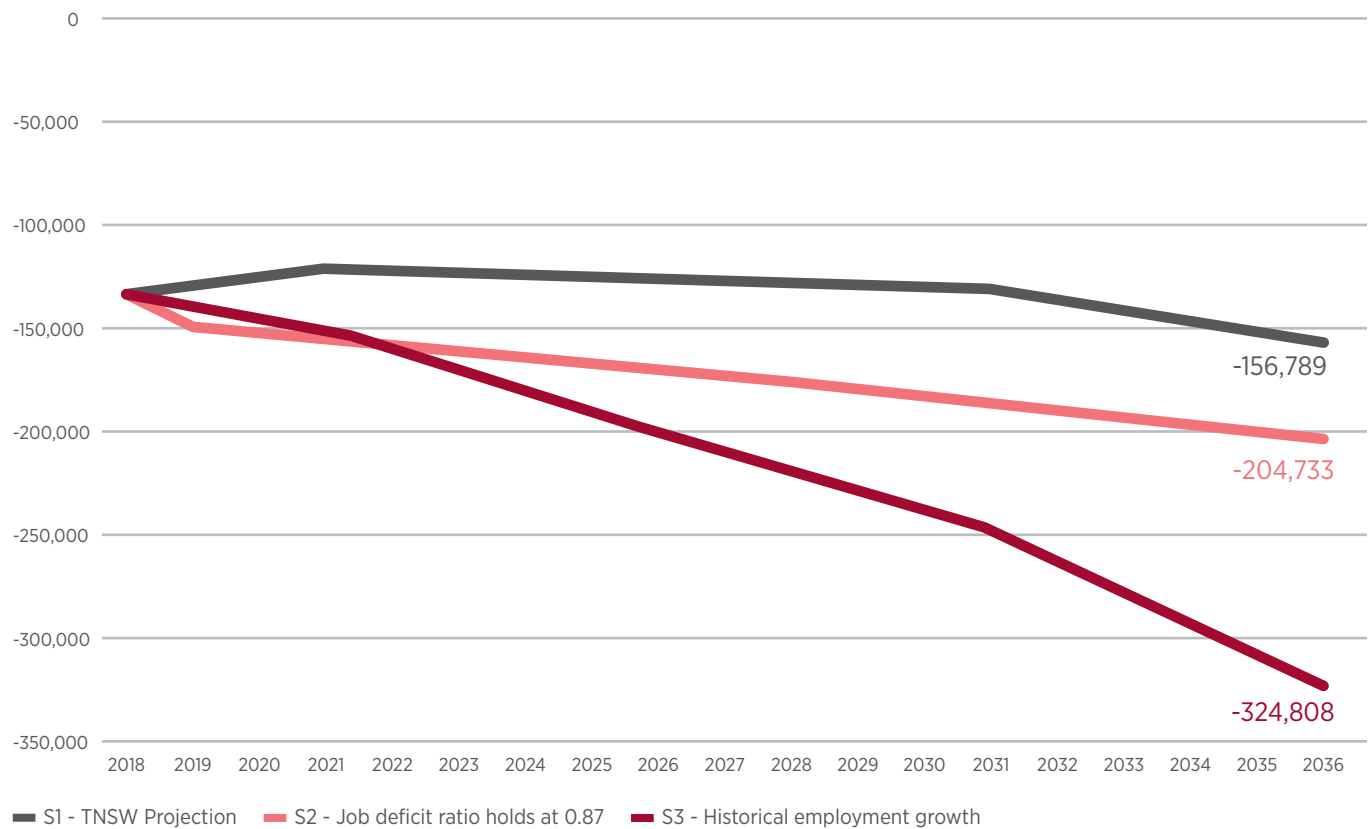
THE PROSPECTS FOR ENOUGH JOBS BY 2036

In this section we position the Transport for NSW forecasts against other possibilities, informed by recent trends in job creation and workforce growth. We do this not so much because we claim to hold a more accurate view of the future of the Western Sydney economy, but so that we can make a better assessment of the conditions required for the Transport for NSW projections, indeed any projections, to be realised.

Figure 2 shows three jobs scenarios for Western Sydney. Each scenario tracks the excess of Western Sydney's resident workers over Western Sydney's jobs. The growth rate of resident workers is identical in each scenario and is based on Transport for NSW labour force forecasts. What distinguishes each scenario is the estimate of the rate of jobs generation. For the Transport for NSW projection, the assumption is that jobs intensity, averaged for 2018 to 2036, will be 0.90, or 90 net new jobs for every 100 net additional resident workers. As discussed in section 2 above, the Transport for NSW projections assume a jobs intensity well above 0.9 in the years immediately following 2018 but then a falling rate into the late 2020s and beyond. But for simplicity in this discussion we use the 0.9 average rate across these years when referring to the Transport for NSW scenario.

FIGURE 2

Job deficit scenarios for Western Sydney, 2018-2036



Source: Projections supplied by .id using Transport for NSW forecasts and supplementary analysis

We then plot two additional scenarios in order to assess the robustness of the Transport for NSW forecast. One, shown as the pink line in figure 2, uses a jobs intensity ratio of 0.87. This is the actual ratio of Western Sydney resident workers to Western Sydney jobs in 2018, the year Western Sydney experienced a jobs surge, as explained in our accompanying report, Western Sydney's short-lived jobs boom. The other, shown as the red line, uses a fixed annual increase of 14,500 jobs. This figure is based on a jobs intensity ratio of 0.79 which is the average net increase in jobs in Western Sydney for the period 2001-2018⁶. We can therefore call this the historical scenario.

Table 1 shows dramatically different outcomes by 2036 for the three scenarios. For the Transport for NSW scenario we calculate a jobs deficit of 156,789 by 2036. But for the 0.87 scenario we find the deficit opening to 204,733 by 2036, and for the 0.79 scenario a deficit by then of 324,809.

So what can we say about these forecasts and their likelihood? Table 1 shows the assumptions and calculations behind figure 2 and adds some additional projections. At the outset it bears noting that the Transport for NSW projections for 2036 assume that the rate of jobs growth will be higher over the 20-year projection period than it has been at any time this century, including the record 2016-18 interval. Nevertheless, even with such an ambitious assumption, this scenario sees Western Sydney arrive in the year 2036 with a jobs deficit of 156,789

and a daily worker outflow from Western Sydney of 426,225. This is a large number.

However, should the job intensity ratio for this 20-year period be 0.87, the actual ratio recorded for 2018, then the 2036 deficit would be 30.5% higher at 204,733. This would generate a daily outflow from the region of 465,059 commuters. This is a very large number.

But should the job intensity ratio resemble the average annual rate experienced in Western Sydney so far this century – a period without significant downturn and with substantial growth impetus – the 2036 deficit is estimated at 324,808 jobs, which is 107.2% higher than the Transport for NSW projection. The possibility of such a large deviation on estimates from the state's primary forecaster bears concern, especially given the straight forward historical assumptions underpinning the alternative scenario we present.

Alarming, the historical scenario, if realised, would in 2036 generate a daily worker outflow from the region of 562,320 commuters. This number is higher than the entire resident workforce of eastern Sydney in 2016 (which was 523,519). Picture every worker east of Strathfield to Bondi, from Sydney harbour south to the Georges River – the municipalities of Randwick, Waverley, Woollahra, Sydney, Botany Bay, Inner West, Canada Bay, Strathfield, Burwood and Georges River – and imagine them journeying

beyond this expansive region every morning to access their places of work. Then imagine, as is currently the case for Western Sydney, around 75% of this outflow of workers using cars as their means of travel. Such a situation would be seen as planning madness.

Yet Western Sydney will experience such a daily exodus of workers in 2036 should the average rate of jobs generation for Western Sydney from 2002 to 2018 be repeated.

Then imagine, as is currently the case for Western Sydney, around 75% of this outflow of workers using cars as their means of travel. Such a situation would be seen as planning madness.

6. The number 14,500 would have been the 2018 increase in jobs for a jobs intensity ratio of 0.79.

TABLE 1

Three scenarios for jobs and out-commuting, Western Sydney 2036

Scenario	Employed residents of Western Sydney ¹	Jobs intensity ratio ²	Jobs in Western Sydney ³	Job deficit (all negative values) ⁴	% Western Sydney jobs performed by local employed ⁵	Western Sydney jobs performed by local residents ⁶	Western Sydney worker Outflow ⁷
Year/time period	2036	Constant	2036	2036	Constant	2036	2036
Transport for NSW projections	1,574,870	0.90	1,418,081	156,789	81%	1,148,646	426,225
Job intensity ratio for 2018 is maintained	1,574,870	0.87	1,370,137	204,733	81%	1,109,811	465,059
Average level of job growth 2001-2018 is maintained	1,574,870	0.79	1,250,062	324,808	81%	1,012,551	562,320

Sources: See notes below and description in text

Notes:

1. Employed residents is taken from Transport for NSW forecasts
2. Jobs intensity scenario (assumed)
3. Jobs in Western Sydney = (employed residents) x (jobs intensity ratio)
4. Jobs deficit = (jobs) – (employed residents)
5. 81% estimated from ABS census 2016, place of work.
6. Western Sydney jobs performed by local residents = 81% of jobs in Western Sydney
7. Worker outflow = (employed residents) – (Western Sydney jobs performed by local residents)

QUALIFICATIONS DUE TO WSA AND WCAA. WHAT IS OFFERED FOR THE FUTURE?

The problem of jobs deficits for Western Sydney has been in the public spotlight for half a century, from the 1970s when global economic downturn led to jobs loss in the region and a slow economic recovery into the 1980s failed to deliver sufficient jobs to soak up high levels of unemployment. Structural unemployment, youth disengagement, female underemployment and excess levels of welfare dependency became entrenched after the early 1990s recession and didn't readily disappear in the boom years leading to the Sydney Olympics in 2000.

Greater Sydney's metropolitan strategy, *City of Cities: A Plan for Sydney's Future*⁷, released in December 2005, represented a major advance in the prioritisation of jobs for Western Sydney. The strategy integrated plans for the provision of jobs with plans for population and housing growth and provided detailed jobs targets for districts across the metropolitan area. An overall ambition was that almost half of all new jobs created in the metropolitan area between 2005 and 2031 were to be in Western Sydney. Yet the targets disappeared from public discourse over the following decade, perhaps a sign that governments were doubtful of their capacity (or commitment) to meet them⁸.

Nevertheless, public pressure in recent years has re-asserted the priority of jobs growth for Western Sydney in national and state policy portfolios. The key commitments to jobs generation in Western Sydney, prepared by the Australian and NSW governments and their agencies, are outlined in table 2. The list is a simple one, with actions scheduled for the next 20 years in order to redress Western Sydney's inadequate jobs access and provide the foundation for jobs sustainability towards the middle of the century. We examine the three strategies from the table in turn.

The first strategy is the Western Sydney Airport, justified publicly using two parallel arguments: that demand for air services from within the Sydney basin will outstrip the capacity of Sydney Airport as a single provider sometime around the middle of the century; and that locating a second airport within Western Sydney will result in major employment opportunities for the region. As referenced in table 2, environmental impact statements prepared for the airport proposal in 2016 estimate a fully operational airport by 2063 will generate 88,580 direct airport jobs, 27,150 direct jobs on an adjoining business park, with supply chain and multiplier effects adding

29,200 jobs elsewhere across Western Sydney. If realised, this total number of jobs would make a major contribution to the region's jobs needs in the decades to come. An immediate concern, though, is that the timetable for jobs creation is not clear, save that most of the hoped-for airport-based jobs would not be available until the airport ramps up activity, based chiefly on the operation of a second runway at the new airport which is predicted for some time after 2050.

The second strategy is the Western Sydney Deal, which includes the promise of what the deal calls an aerotropolis. This is the idea that a large 21st century airport is capable of leveraging the connectivity and flow of people, products, finance and telecommunications associated with an airport to attract a large congregation of high value enterprises. While the aerotropolis was initially targeted for lands adjacent to the planned Western Sydney Airport, the idea of the aerotropolis has evolved such that aerotropolis activity would be spread across what the Greater Sydney Commission sees as the Western Parkland City⁹, rather than being contained to a specific airport-adjacent site. A concern here is the absence of an evidence-based

7. Department of Planning, 2005, *City of Cities, A Plan for Sydney's Future*. New South Wales Government, Sydney

8. For review see Fensham P., 2015, The Sydney Metropolitan Strategy: implementation challenges. In: Buček J., Ryder A., eds, *Governance in Transition*. Springer: Dordrecht, 41-64

9. For elaboration of the three cities idea see <https://www.greater.sydney/metropolis-of-three-cities>

TABLE 2

Jobs growth strategies for Western Sydney

Item	Agents	Details	Comment
Western Sydney Airport (WSA)	Australian government	By 2063: 88,580 direct airport jobs; 27,150 direct business park jobs; 29,200 jobs elsewhere in the region	Based on assessments in environmental impact statement 2016. Affirmed in Prime Minister announcement 15 April 2014, ^{1,2}
Western Sydney City Deal	Australian and NSW governments	Within “next 20 years” 200,000 jobs to be created, using an aerotropolis linked to WSA as “catalyst”	Based on official announcement 4 March 2018 ³
A Metropolis of Three Cities, and accompanying district plans ^{4,5,6}	Greater Sydney Commission	Commitment to jobs growth redress jobs deficit in Western Sydney. Asserts 95,400 increase in total jobs 2016-36 in Western Sydney’s strategic centres, which is 11.7% of total metropolitan increase	Lacks comprehensive jobs targets; thin assessment of jobs growth in Western Parkland City including for WSA and Aerotropolis.

Sources: See notes below and description in text

Notes

1. Department of Infrastructure, Transport, Regional Development and Communications, 2016, *Western Sydney Airport Environmental Impact Statement Volume 3*, Commonwealth of Australia, Canberra
2. Abbott, T. and Truss, W., 2014, Joint press release: *Western Sydney airport to deliver jobs and infrastructure*, Office of Prime Minister, Canberra, 15 April
3. Turnbull, M., 2018, Western Sydney City Deal to deliver rail, investment and jobs, *PM Transcripts*, <https://pmtranscripts.pmc.gov.au/> 4 March. See also documentation at <https://www.infrastructure.gov.au/cities/city-deals/western-sydney/files/western-sydney-city-deal.pdf>
4. Greater Sydney Commission, 2018, *Greater Sydney Region Plan: A Metropolis of Three Cities*, GSC, Parramatta;
5. Ibid. *Central City District Plan*
6. Ibid. *Western City District Plan*

literature where actual aerotropolises around the globe are identified and explained. Relying on a aerotropolis to deliver such a large portion of the jobs needed in Western Sydney seems risky without such analysis.

Jobs access is thus crucial to the fulfilment of the 30-minute city aspiration.

The third strategy is the set of actions proposed for jobs that are contained in the Greater Sydney Commission’s 2018 plan, *A Metropolis of Three Cities*. In this plan, adopted by the NSW government as its official planning strategy for the Sydney basin, Western Sydney is divided into two cities, the Central River City and the Western Parkland City, broadly the inner (and older) and outer (and newer) districts that make up the region. The eastern, northern and southern districts of Sydney are grouped into the Eastern Harbour City. The commission integrates population, housing and jobs into its land use and infrastructure plans in an attempt to ensure balanced sustainable growth around the idea that a household’s regular activity should be able to be conducted within a 30-minute travel circumference. Jobs access is thus crucial to the fulfilment of the 30-minute city aspiration.

The commission sees that a total of 817,000 additional jobs is needed in the 2016-36 period to match metropolitan Sydney's labour force growth – although (disappointingly) a breakdown of this aggregate at the level of the three cities is not provided. Instead, the plan contains details of projected jobs growth in each of the metropolitan area's strategic centres. For the Central City, the commission nominates ten strategic centres and predicts for them 2016-36 a total baseline growth of 71,400 jobs. For the Western Parkland City, however, the plan nominates only three strategic centres and predicts for them a jobs growth 2016-36 of only 24,000 jobs. While it acknowledges the importance of the airport and aerotropolis for jobs in the Western Parkland City, the commission fails to attach jobs targets to these ventures. Perhaps this failure comes from the uncertainty around the level of jobs generation that will flow from the airport and aerotropolis activity prior to the airport becoming fully operational mid-century.

So, absent jobs targets for the airport and the aerotropolis for 2036, the total jobs growth assigned to Western Sydney strategic centres 2016-36 by the commission is 95,400 – which is a mere 11.7% of the commission's overall jobs growth target of 817,000 across the Sydney metropolis 2016-36. Without explicit targets from the commission, however, one might adopt the aspiration in the NSW government's 2005 metropolitan strategy, that 50% of new jobs be located in Western Sydney. This matches closely an

expectation for 49.6% of metropolitan jobs growth in Western Sydney embedded in Transport for NSW forecasts analysed in section 2 above. A 50% share of metropolitan jobs growth would translate to a jobs target for Western Sydney of 408,500 between 2016-36. Such a target would require jobs growth of 313,100 somewhere in Western Sydney other than in the strategic centres nominated by the commission. There are some clues in the commission's plans about where these jobs might emerge. The Western Parkland City strategy talks of the Western Sydney Employment Area providing "...more than 57,000 jobs over the next 30 years" (p.68) with the proposed Sydney Science Park Area at Luddenham providing 12,000, although by an unspecified date. But little detail is provided in either case.

In summary, then, jobs are certainly given emphasis in the three strategies arguably driving Western Sydney's urban development in the coming decades. Yet detail is lacking. Very little of the required jobs growth is anticipated to occur in Western Sydney's existing regional centres. We calculate from the commission's plans that Western Sydney's regional centres will host only 11.7% of metropolitan Sydney's anticipated jobs growth between 2016 and 2036. If half of the metropolitan area's jobs growth in this period – a net increase of 817,000 jobs according to the commission – is assigned to Western Sydney, then the region will need 313,000 jobs to come from the new airport, the aerotropolis, specialist industrial areas and initiatives like the science park.

The airport is being constructed at a time of great volatility for air travel in the near future, with a high degree of uncertainty about the nature and volume of air traffic in the longer term.

Each of these ventures carries risk. The airport is being constructed at a time of great volatility for air travel in the near future, with a high degree of uncertainty about the nature and volume of air traffic in the longer term. The spillover effects into an aerotropolis are untested, and thereby are uncertain, by definition. Then, for Western Sydney's greenfields employment areas the capacity to generate the jobs densities needed to make a significant contribution to the region's jobs total would need to change substantially from the low density land use practices on such sites over the last decade. Clearly, much more information is needed about these jobs pathways for Western Sydney before effective evaluations of their viability can be undertaken. Generating over 300,000 jobs by 2036 outside Western Sydney's existing regional centres is an enormous task. Detailed planning and generous resourcing for the realisation of the task are needed as a matter of urgency.

A COMMENT ON THE DIFFICULTY OF BUILDING LARGE CLUSTERS OF PROFESSIONAL SERVICES JOBS

In this section we make comment on an issue of particular concern, before we make some concluding remarks in the section that follows. The issue we raise is one that permeates many sections of our three reports. It is the problem of jobs access for Western Sydney's growing professional services workforce. A crucial question that must be addressed in resolving this problem is whether there are locational forces which are so compelling that nothing other than a CBD-centred concentration of professional services firms in Sydney is possible? Is the aspiration for large numbers of professional jobs for Western Sydney a realistic one?

Our concern for the professional services sector arises because, as we have seen, this is the sector where there is disjuncture in metropolitan Sydney between the demand for jobs from Western Sydney residents arising from escalating levels of education and training, and the supply of jobs by professional services firms reluctant to move away from CBD and inner city locations. Examining the forces behind the concentration of professional services jobs in CBDs worldwide, and, specifically, in Sydney, is a complex task and will be tackled in a future report by the Centre for Western Sydney. Here we identify questions that need answering by this future

research, an agenda that we think flows directly from the work we report on here. The questions are:

- Is there an inseparable tie between the CBD and highly-liveable neighbourhoods nearby?
- Does the shorter commute from these neighbourhoods stimulate private investment in social and community capital such that inner-city neighbourhoods enjoy access to better cultural facilities and higher-order goods and services, and evolve distinctive cultural and consumption values that act to further attract high-value professionals?

- Do concentrations of professional services firms build locationally-specific value chains around key suppliers and customers which then attract further participants, ensuring quality and price competitiveness?
- Does the co-location of concentrations of elite workers in inner suburbs and concentrations of value-sharing professional services firms in the CBD create an economic ecosystem of a type that is difficult to reproduce elsewhere without these constituent parts?
- Given the need for a large professional services cluster to be well resourced by government, how can a non-CBD centre secure the ongoing support of government in the presence of an inner-city epistemic community with its highly-tuned narratives, that has historically and continuously shaped the regulatory, fiscal and micro-economic interventions of the city economy to its benefit?

Answers to these questions have major implications for the issues we raise in our three reports. If there is genuine economic reason why large concentrations of professional services jobs are unlikely to be formed away from the CBD, then this impediment needs confronting and resolving. Perhaps government intervention can create the circumstances for growth away from Sydney's centre – as is the aspiration for Parramatta and the aerotropolis. However, if professional services firms can't be suburbanised¹⁰, or seeded or grafted into specialist zones away from Sydney's centre, then investment in expensive public transit infrastructure is essential so that Western Sydney's emerging class of professional workers have access to jobs. The worst outcome would be to uphold the promise of a jobs-rich Western Sydney economy, with the assembly of an expectant labour force in greenfields residential suburbs, only to arrive at some future year, say 2036, and find that the jobs promise was an illusion.

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10. This is argued by Jane-Frances Kelly and Peter Mares, 2013, *Productive Cities: Opportunity in a Changing Economy*, Grattan Institute, Melbourne

CONCLUSIONS

Our three reports have returned over and over to some common themes: insufficient jobs in Western Sydney overall; the difficulty of low-skilled segments of the labour force in finding work as entry level jobs disappear; and the dreadful insufficiency of jobs for professional services workers, Western Sydney's growing cohort of new graduates confronted by the unrealised promise of jobs from a transformed Western Sydney economy. Our reports have observed the two major geographical consequences of these labour market disappointments. One is the rising tide of out-commuting. The other is the perpetuation of concentrations of disadvantaged, jobless households. Both are longstanding Western Sydney problems; indeed, the region has become typecast by them.

In this report we have analysed Transport for NSW forecasts for jobs growth at a local government level. At face value, the forecasts describe a jobs-rich future for Western Sydney, one where jobs availability might match the demands for work from a growing labour force. Yet the detail contained in the forecasts is far from re-assuring. Transport for NSW tells us that, with 49.6% of metropolitan Sydney's jobs growth 2016-2016 to take place in the Western Sydney region, it predicts substantial jobs growth in five Western Sydney regional centres: Parramatta, The Hills, Blacktown, Penrith and Liverpool. But, to put this in perspective, the jobs growth in the five centres would need to be the equivalent of the jobs generated by eleven separate Barangaroo developments, each delivering the equivalent of 25,000 ongoing permanent jobs. The

timing of such a roll-out – to meet a 2036 deadline – would be one completed Barangaroo development in one of these centres every 18 months, which would be highly unlikely.

The Barangaroo analogy tells us how difficult jobs creation is, how much planning, resourcing, public and private investment is required to build giant concentrations of jobs in the 21st century. The development of Barangaroo on Sydney's western harbour foreshore nears completion after commencement in 2012. Western Sydney has no equivalent jobs rich development underway. And if there were, it would now be delayed by COVID-19 and a recession. Meanwhile Sydney's labour force growth seems likely to continue at historic rates.

Our report also assesses the labour force and job projections of Transport for NSW at the wider regional scale in order to ascertain the extent to which Western Sydney's jobs deficit is likely to improve or deteriorate, with direct implications for the region's out-commuting problem. Here we constrict two alternative scenarios to test the robustness of the Transport for NSW forecasts. In short, we find the agency's forecasts to be very optimistic, especially its expectation of 408,500 net additional jobs for the region between 2016 and 2036. Yet even with such strong jobs growth, and an ambitious jobs intensity ratio of 0.9, we calculate Western Sydney's daily commuter outflow at 426,225 workers.

Our alternative scenarios suggest poorer outcomes. For a jobs intensity ratio of 0.87, which was the proportion of net additional jobs to net additional workers in 2018, the 2036 commuter outflow would be 465,059. For an intensity ratio of 0.79, however, the average ratio for the period 2001 to 2018, the commuter outflow in 2036 would reach 562,320. This number would clearly be a major challenge to the capacity of Sydney's roads and public transport system with significant, probably unsustainable, social and environmental consequences.

Then we asked whether our planning agencies are on top of the problem? Certainly the 2018 metropolitan planning documents from the

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Greater Sydney Commission show an elevated understanding of the importance of aligning jobs growth in Western Sydney to the geography of future population growth. At this stage of the rollout of its planning actions, however, there are major gaps in the detail of how this jobs growth will be enacted. We are concerned at the commission's underwhelming ambitions for Western Sydney's regional centres, assigning them modest jobs growth targets. This restraint elevates responsibility for jobs growth in Western Sydney's proposed mega projects: Western Sydney Airport, an associated aerotropolis, and a small number of ventures targeted for specialist lands such as the Western Sydney Employment Area, and the science park at Luddenham. A federal government city deal commits some resourcing to these projects.

The absence of detail prevents a thorough evaluation of the plans for these ventures. Perhaps some or all of the ventures carry high degrees of risk. What resourcing is required? What labour force

skills will be needed? Will private investors turn up? Are there contingencies such that risk of failure might cascade from one venture to another. These are serious questions given so much of Western Sydney's jobs future is dependent on these ventures being successful.

Finally, like the second report in this series, we conclude with a comment on the meagre policy contributions made in our reports. Our excuse is that detailed empirical analysis is essential to effective policy development – and university researchers are well-placed to provide the dispassionate research that underpins good policy. Better understanding of the problem leads to robust solutions. So effective policy builds on the knowledge that comes from research, but in the case of regional policy, only where there are trust-filled region-wide partnerships to draw on. We look forward to being involved such policy development, to properly take-on the challenge of resolving Western Sydney's unsatisfactory jobs deficit.

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