

Assessment of potential of executive housing to enhance Penrith industrial lands
A report into three suburban industrial-office precincts

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The University of Newcastle

Executive Summary

Description of the research project

This project investigates the importance of the provision of executive housing as a co-location input for the successful development of suburban employment lands. The project responds to the need for information about the potential influence of a local supply of executive housing opportunities on employment and investment decisions in substantial suburban industrial-office precincts.

The report draws on international studies; original research into the relationships between place of employment and place of residence observable in three Sydney suburban industrial-office precincts: Norwest Business Park at Baulkham Hills, the more expansive Macquarie Park corridor at North Ryde and the Austlink Business Park at Belrose; and supportive case studies from these precincts.

Data for the investigations come from 2001 census data as reconfigured into travel zones by the NSW Transport and Population Data Centre. These data are supplemented by direct field observations, discussions and interviews.

The report commences with a discussion of the definition of executive housing. Analysis of the three industrial-office precincts then follows, including three case studies of firms from the industrial-office precincts and associated employee/householder interviews.

A definition of executive housing

Executive housing refers to high quality housing in a neighbourhood that acts as a device to attract and secure quality professional, management and administrative personnel to jobs within a local economy. Executive housing is also a device to attract and secure investments in local ventures by entrepreneurs seeking to reside in the vicinity of these investments.

International studies

There is considerable evidence of increased instances of co-location between various types of employment lands projects and the presence of executive housing. The report cites 20 cases where planning for the provision of executive housing is considered highly important for the advancement of an employment lands development project. These cases include developments undertaken by a variety of agencies including private sector developers in both thriving and stagnant regional economies as well as urban and regional redevelopment agencies seeking to expand employment opportunities, promote occupational mix and address demographic concerns such as the out-migration of skilled and younger groups.

Key findings from the analysis of three suburban employment precincts

The report draws on original research into employment and travel associated with three prominent suburban Sydney employment precincts: Norwest at Baulkham Hills, Macquarie Park at North Ryde and Austlink at Belrose. The following are the significant findings from this research.

1. The three Sydney suburban industrial-office parks generate disproportionately high concentrations of employment in the managers and administrators, professionals and associate professionals occupations categories. Combined proportions for these categories are Norwest 48.3%, Macquarie Park 57.9% and Austlink 56.0%. The equivalent figure for residents of Penrith LGA is just 32.7%.
2. The suburban industrial-office parks have developed a remarkably close association with their local neighbourhoods in labour market terms. This relationship is shown in figures N3, M3 and A3. The blue zones show the main contributing suburbs for workers in the parks. In each case, fifty percent of a park's workers come from these blue zones.
3. The maps show 5 and 10 kilometre radial distances from the park. Clearly all parks have a strong and proximate relationship with their local labour markets. Moreover, the longest operating of the three precincts, Macquarie Park, shows the strongest local relationship of all three parks. An impressive 5,722 workers for this knowledge-intensive precinct are drawn from the local Ryde LGA.
4. Data are not available to show the dynamic relationship between an industrial-office park and its host local labour market through time. Available evidence strongly infers, however, that as a park develops there is a tendency for its jobs to be taken by those who live well inside a ten kilometre feeder zone. This seems to occur through a combination of longer-distance commuters relocating their place of residence to adjacent neighbourhoods and local residents securing jobs at the park.

Case studies of three firms from the precincts

Case studies were undertaken with one firm from each of the precincts. These case studies revealed that firms locating in the suburban precincts consciously chose locations where worker amenity would be advanced. This consideration included access to quality suburban housing types within reasonable travelling time and distance from the place of employment. Moreover, the case study firms recognised the advantages of having key staff located in quality, proximate housing since this provision ensured low staff turnover and absentee rates and heightened staff loyalty with consequent positive productivity effects. A cumulative effect of this successful localization of each firm's labour market is the establishment of successful firms in the precincts which then become models for other firms to imitate.

Household case studies

Case studies were undertaken with six households, two from each precinct. The case studies revealed a consciousness by professional and management staff of maximising the advantage of a suburban employment opportunity by living within a close travelling distance. In general they were prepared to sacrifice higher salaries in a CBD location in order to minimise journey-to-work times and distances. Similarly, the case study respondents were conscious of enhanced loyalty to their employment firms as a result of their appreciation of their travel time advantage over other workers.

Summary

In summary, then,

- a successful suburban industrial business-park relies heavily on a capacity to recruit managers, administrators, professionals and associate professionals;
- over time, local neighbourhoods become major suppliers of these occupations categories;
- it is highly probable that shortages of executive housing opportunities would impede the long-term successful development of a suburban industrial-office park.

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Description of the research project

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The project responds to the need for information about the potential influence of a local supply of executive housing opportunities on employment and investment decisions in substantial suburban industrial-office precincts.

Data for the investigations come from 2001 census data as reconfigured into travel zones by the NSW Transport and Population Data Centre. These data are supplemented by direct field observations, discussions and interviews.

The report commences with a discussion of the definition of executive housing. Analysis of the three industrial-office precincts then follows, including three case studies of firms from the industrial-office precincts and associated employee/householder interviews.

Key findings

5. The three Sydney suburban industrial-office parks generate disproportionately high concentrations of employment in the managers and administrators, professionals and associate professionals occupations categories. Combined proportions for these categories are Norwest 48.3%, Macquarie Park 57.9% and Austlink 56.0%. The equivalent figure for residents of Penrith LGA is just 32.7%.
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7. The maps show 5 and 10 kilometre radial distances from the park. Clearly all parks have a strong and proximate relationship with their local labour markets. Moreover, the longest operating of the three precincts, Macquarie Park, shows the strongest local relationship of all three parks. An impressive 5,722 workers for this knowledge-intensive precinct are drawn from the local Ryde LGA.
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- a successful suburban industrial business-park relies heavily on a capacity to recruit managers, administrators, professional and associate professionals;
- over time, local neighbourhoods become major suppliers of these occupations categories;
- it is highly probable that shortages of executive housing opportunities would impede the long-term successful development of a suburban industrial-office park.

A definition of executive housing

Executive housing refers to high quality housing in a neighbourhood that acts as a device to attract and secure quality professional, management and administrative personnel to jobs within a local economy. Executive housing is also a device to attract and secure investments in local ventures by entrepreneurs seeking to reside in the vicinity of these investments.

In both the United Kingdom and the United States, executive housing has been seen as a way to boost a local economy by attracting quality staff to new investments. In some instances, the provision of executive housing opportunities has also been used to counter downturns in other segments of the housing market (Haughton and Counsell 2004; Robertson 1998). The idea has also been deployed in northern England to counter urban flight in depressed inner city areas (Benneworth and Vigar n.d.); although there is criticism of this tactic from some quarters with arguments that executive housing in such contexts can contribute to a culture of fear in suburbia (Robertson 2006).

Penrith Council uses the lure of executive housing opportunities in its promotion of the Penrith Valley, especially with regard to the Penrith Lakes development (Penrith City Council n.d.). Executive housing is also seen locally as attractive lifestyle option for overseas elites, as evidenced by the European Australian Business website listing it as a feature of lifestyle options in the Baulkham Hills, Parramatta and Blacktown districts (European Australian Business n.d.).

International examples of co-location of employment lands and executive housing

There is considerable evidence of increased instances of co-location between various types of employment lands projects and the presence of executive housing. The following co-locations provide a sample of recent international developments.

- i. A £70 million development has recently been announced for Mansfield, a town of around 70,000 people close to Nottingham in England's midlands. The development will comprise a tertiary education facility and a business park supported by executive housing on a nearby brownfields property redevelopment site. Key to the siting of the venture is its location adjacent to the new regional arterial road, the Mansfield Ashfield Regeneration Route (MARR) and the A60 arterial road.

Source: Ashfield Observer (UK) 13 March 2007

- ii. The Interlocken Business Park of northwest Denver, Colorado, continues to receive significant single and multi-storey commercial and industrial investments. The co-location of shopping, restaurants (US style drive-ins) and executive housing opportunities are noted as significant features of the business park.
Source: Business Wire (USA) 1 March 2007
- iii. Growth in Atlanta's (USA) peripheral office and industrial development is claimed to be heavily influenced by the availability of executive housing on the north-central side of the city near Alpharetta.
Source: Voxant FD (Fair Disclosure) Wire (USA) 8 December 2006
- iv. Newcastle City Council (UK) last year approved the development of 320 "luxury homes" as a co-location with the next stage of the city's Newcastle Great Park, a £600 million development on a greenfields site north of Gosforth. The report notes, "It is hoped the impressive homes will help stem the population shift of efficient professionals from urban to rural areas in search of executive homes... This aspirational development will provide essential housing to attract the right people to Newcastle to support the growing businesses on the park and in the region."
Source: The Journal (UK) 17 June 2006
- v. The township of St Cloud in Central Florida (USA) has promoted an executive housing estate, co-located with a business park, to help maintain the locality's independent community feel as the area confronts urban sprawl pressures.
Source: The Orlando Sentinel (USA) 20 March 2006
- vi. A major US\$124 million industrial development facility in Rutherford, Maryland (USA), is reported to have been encouraged by "... good amenities, good access to highways and adjacency to executive housing."
Source: Voxant FD (Fair Disclosure) Wire (USA) 16 February 2006
- vii. Community and academic debate are reported surrounding applications for executive housing development in Antioch, a dormitory town of about 90,000 people on the fringe of the San Francisco Bay urban area. The debate attempts to isolate whether executive housing attracts industrial development or whether such housing emerges following quality industrial development in a district. Irrespective, the report indicates a propensity for rising demand for executive housing in association with business and industrial development on the urban fringe.
Source: Contra Costa Times (USA) 7 December 2005
- viii. Executive housing availability is cited as a key locational asset for new industrial warehouse and business park developments at key intersections of arterial roads and the New Jersey Turnpike in the northeast of the USA.
Source: New Jersey Business (USA) 1 October 2005
- ix. The Wynyard One business park, a 500 acre development on Teeside in England's north east claims the co-location of an executive housing estate to be critical to attracting major investors such as Samsung to the park.
Source: Evening Gazette (UK) 24 August 2005

- x. A development for a new business park on the A1079 between Hull and Beverley in England's Yorkshire County features a co-located executive housing estate.
Source: Hull Daily Mail (UK) 15 June 2005

- xi. Fringe urban development in California's Orange County is more likely to attract top-end employing industries such as electronics, biomedical manufacturing and financial services when there is also access to executive housing and "cultural amenities". This claim comes from the "Orange-Riverside Counties Economic Interaction Report".
Source: The Press-Enterprise Riverside, CA (USA) 19 January 2003

- xii. Blaine, a city of about 45,000 in Minnesota USA, is reported to have once been noted only for its "flatland of peat bogs and trailer parks" but now has become attractive for small business manufacturing. This is attributable to low land costs, access to key interstate highways, a quality golf club and executive housing.
Source: Star Tribune (Mpls. – St. Paul, USA) 19 August 2002

- xiii. Executive housing opportunities are cited as a key reason behind the success of the Meridian International Business Park in Denver (Colorado, USA).
Source: Rocky Mountain News (USA) 2 July 2002

- xiv. San Ramon in Contra Costa County, California, a city of 45,000 people, hosts the Sunset Business Park whose success is claimed to be related to "... its proximity to executive housing, its central location and access to BART (San Francisco's rapid transit system)."
Source: Knight-Ridder Tribune Business News (USA) 21 July 2001

Other projects where access to executive housing is cited as advantageous to industrial and business park developments are:

- xv. Warner Center Business Park (Los Angeles, USA: *Los Angeles Business Journal*, 2 July 2001)

- xvi. Worcester Business Park (Midlands, UK: *The Independent*, 5 June 2001)

- xvii. Westlake North Business Park (Conejo Valley, California, USA: *Los Angeles Daily News*, 4 March 2001)

- xviii. North Fulton – Atlanta's "Little silicon valley" (*The Atlanta Journal – Constitution, USA*, 13 May 1999)

- xix. Castle Creek Corporate Park, Indianapolis (*Indianapolis Business Journal, USA*, 15 February 1999)

Profiles of three industrial office precincts

The following three sections present results and analysis of the relationship between key industrial office precincts and their surrounding labour markets.

Norwest Business Park

Profile

Located in Sydney's Hills District

Established in the 1990s

377 hectares

Key tenants include IBM, ResMed, BASF, C & W Optus, Schneider Electrics, Woolworths Ltd, Sigma Pharmaceuticals and Wyeth Australia.

Norwest draws from a wide geographical area reflecting its relatively recent establishment. The dispersed nature of its workforce can be attributed to managers and staff being relocated to Norwest by firms whose operations were located elsewhere. Evidence from the more established Macquarie Park (below) indicates that this dispersal will diminish as longer-distance journeys to Norwest evaporate either through replacement by a more localised labour force, or as workers re-locate their place of residence to suburbs nearer Norwest.

Journey to work patterns for Norwest are shown in figures N1, N2 and N3.

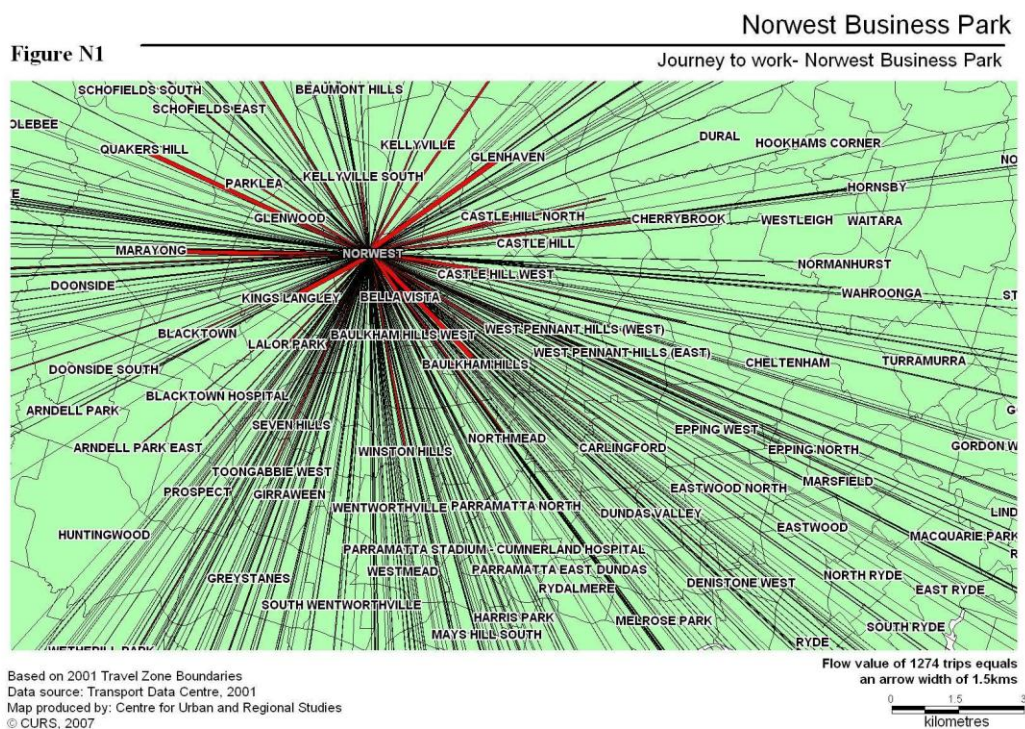


Figure N1 shows the, as yet, relatively incomplete nature of Norwest's embeddedness within Sydney's suburban labour markets. Data used for Figure N1 are shown in Table N1.

ORIGIN SLA	Trips destined for Norwest Business Park
Ashfield (A)	20
Auburn (A)	17
Bankstown (C)	49
Baulkham Hills (A)	773
Blacktown (C) - North	506
Blacktown (C) - South-East	236
Blacktown (C) - South-West	115
Blue Mountains (C)	46
Burwood (A)	6
Camden (A)	15
Campbelltown (C)	38
Canterbury (C)	20
Concord (A)	15
Drummoyne (A)	12
Fairfield (C)	71
Gosford (C)	37
Hawkesbury (C)	110
Holroyd (C)	108
Hornsby (A)	230
Hunter's Hill (A)	10
Hurstville (C)	20
Kogarah (A)	3
Ku-ring-gai (A)	39
Lake Macquarie (C)	6
Lane Cove (A)	8
Leichhardt (A)	36
Liverpool (C)	73
Manly (A)	6
Marrickville (A)	12
Mosman (A)	12
Newcastle (C) - Remainder	12
North Sydney (A)	10
Parramatta (C)	181
Penrith (C)	156
Pittwater (A)	10
Randwick (C)	15
Rockdale (C)	7
Ryde (C)	78
Shellharbour (C)	3
Shoalhaven (C) - Pt A	1
South Sydney (C)	12
Strathfield (A)	3
Sutherland Shire (A) - East	12
Sutherland Shire (A) - West	27
Sydney (C) - Remainder	3
Warringah (A)	40
Waverley (A)	12
Willoughby (C)	23
Wingecarribee (A)	3
Wollondilly (A)	11
Wollongong (C)	8
Woollahra (A)	13
Wyong (A)	26

Table N1

The top ten SLAs (Statistical Local Areas) from which Norwest draws its workforce are:

1. Baulkham Hills (773 daily trips)
2. Blacktown North (506)
3. Blacktown South-East (236)
4. Hornsby (230)
5. Parramatta (181)
6. Penrith (156)
7. Blacktown South-West (115)
8. Hawkesbury (110)
9. Holroyd (108)
10. Ryde (78)

The distribution shown in the top ten indicates a clear evolution of labour market attachments to Norwest from the most proximate SLAs. Moreover, proximity appears to be a stronger variable than socio-economic status in driving Norwest's attachment to local labour markets with SLAs of varying socio-economic status intermingled in the list of top ten workforce origins. As distance from Norwest increases, the business park maintains a reach to labour markets each of northern, eastern, southern and western directions.

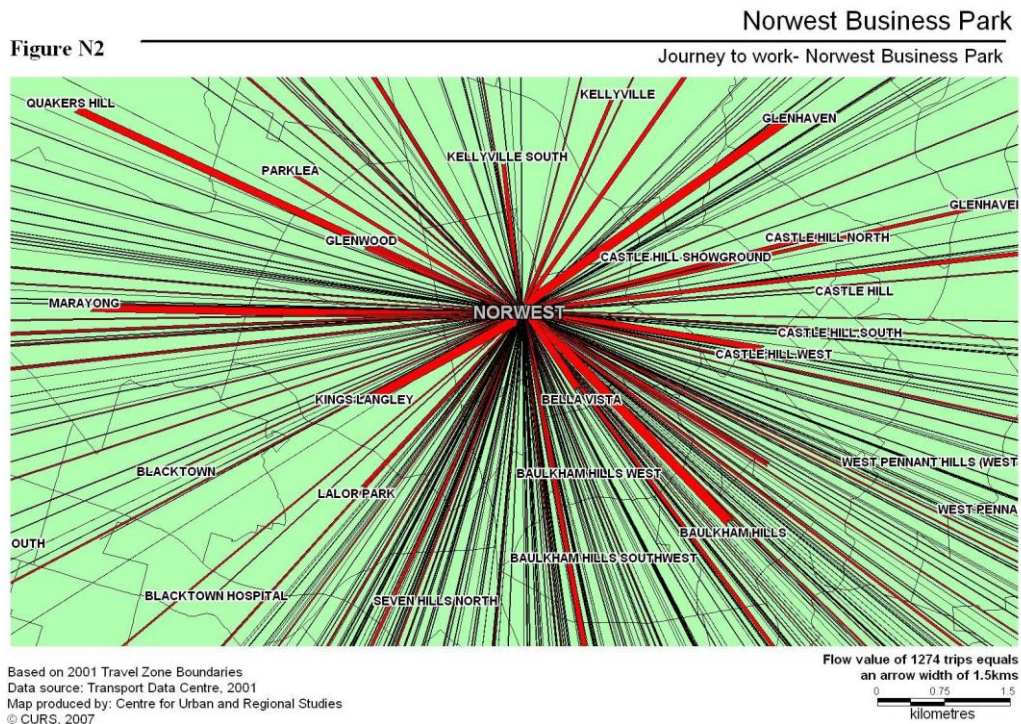


Figure N2 is a close-up representation of the journeys shown in Figure N1, emphasising the emerging stronger labour market linkages between Norwest and its most proximate SLAs.

Figure N3 shows the territories (in blue) from which Norwest draws the most proximate 50% of its labour force. The figure reinforces the observational trend from material presented above. Note that non-blue spaces nearer Norwest do not indicate an absence of journeys from these areas to Norwest. Rather, these zones have insufficient journeys to be admitted into the top 50% of origin areas because, overwhelmingly, these zones are lower residential density zones reflecting areas of suburban bushland, parks, farmland and industrial estates rather than any absence of local worker journeys.

Figure N3

Norwest Business Park

Journey to work- Norwest Business Park

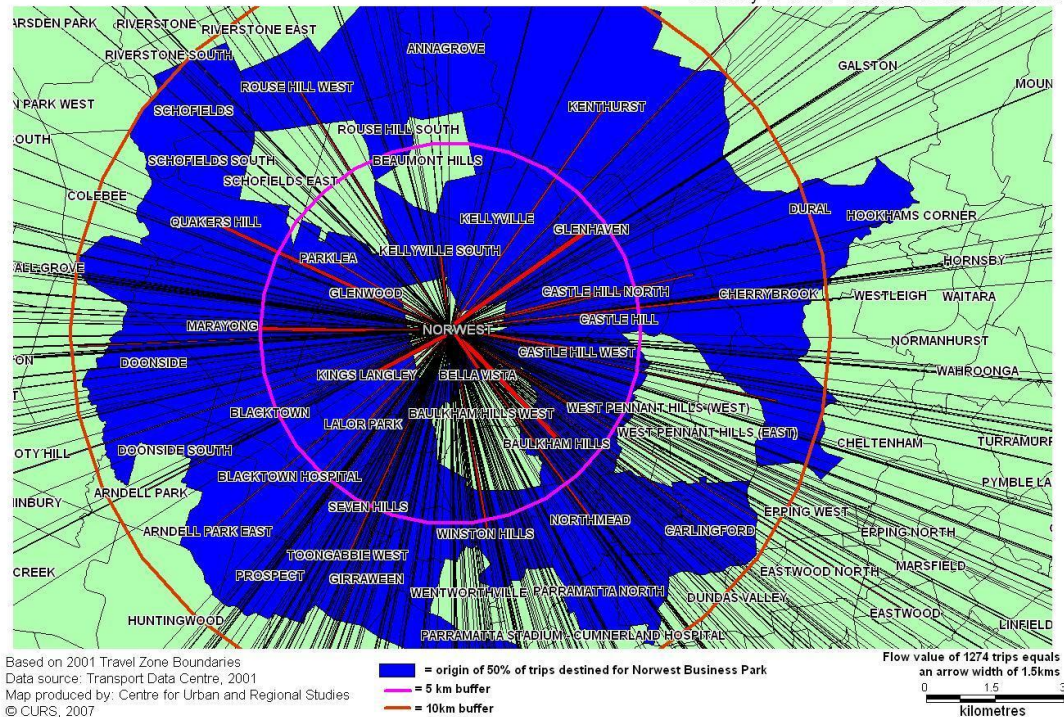


Figure N3, then, reveals the emergence of a localised labour market around Norwest stretching from the urban periphery suburbs in the north (Riverstone, Rouse Hill, Annangrove, Kenthurst), the older northwest Sydney suburbs to the east (Epping, Carlingford), the older western Sydney suburbs to the south (Wentworthville, Toongabbie) and the 1970s-1980s residential estates to the west (Doonside, Quakers Hill).

<u>Occupation Category</u>	<u>Number</u>	<u>Percentage of total</u>
Managers and administrators	572	12.8
Professionals	953	21.4
Associate Professionals	631	14.1
Tradespersons and related workers	264	5.9
Advanced clerical and service workers	295	6.6
Intermediate clerical, sales and service workers	841	18.9
Elementary clerical and service workers	474	10.6
Labourers and related workers	432	9.7
Total	4,462	100

Table N2 Occupations breakdown of journeys to work, Norwest Business Park

Table N2 shows the occupations breakdown of the Norwest workforce. The table reveals the particular balance of occupations within the business park precinct. The managers/administrators (12.8%) and professionals (21.4%) categories are very well represented in the business park with a combined contribution of 1,525 positions or 34.2% of the business park's total workforce.

Moreover, there are also significant contributions to total employment from other occupations categories with higher levels of formal skills training; associate professionals (14.1%), tradespersons and related workers (5.9%) and advanced clerical and service workers (6.6%). In total then, the five leading skilled occupations categories contribute

2,715 or 60.9% of Norwest's 4,462 journey-to-work origins, demonstrating the significant contribution of the Norwest Business Park to quality employment opportunities in Sydney's northwest; and, in turn, the high degree of responsiveness by local residents to Norwest's employment provision.

Macquarie Park Corridor

Profile

Located in Ryde

Established in the mid 1960s

164 hectares

Key tenants include AWA Limited, Beiersdorf, Racal and Universal Press.

Macquarie Park is the most established of the three case study industrial office precincts in this report. It provides an insight into how a suburban business park evolves in respect to its relationship to local labour markets. The Macquarie Park case study reveals an ongoing localisation of surrounding suburban industrial park labour markets. The case study provides substantial evidence that both firms and executive, professional and other skilled staff are attracted to suburban locations because of their proximity to residential neighbourhoods; and/or because of the attractiveness of recruiting labour from these desirable residential locations; and/or because they provide opportunities for senior staff and key personnel to relocate places of residence to desirable residential locations especially to minimise journey-to-work travel times and distances.

Journey-to-work patterns for Macquarie Park are shown in figures M1, M2 and M3.

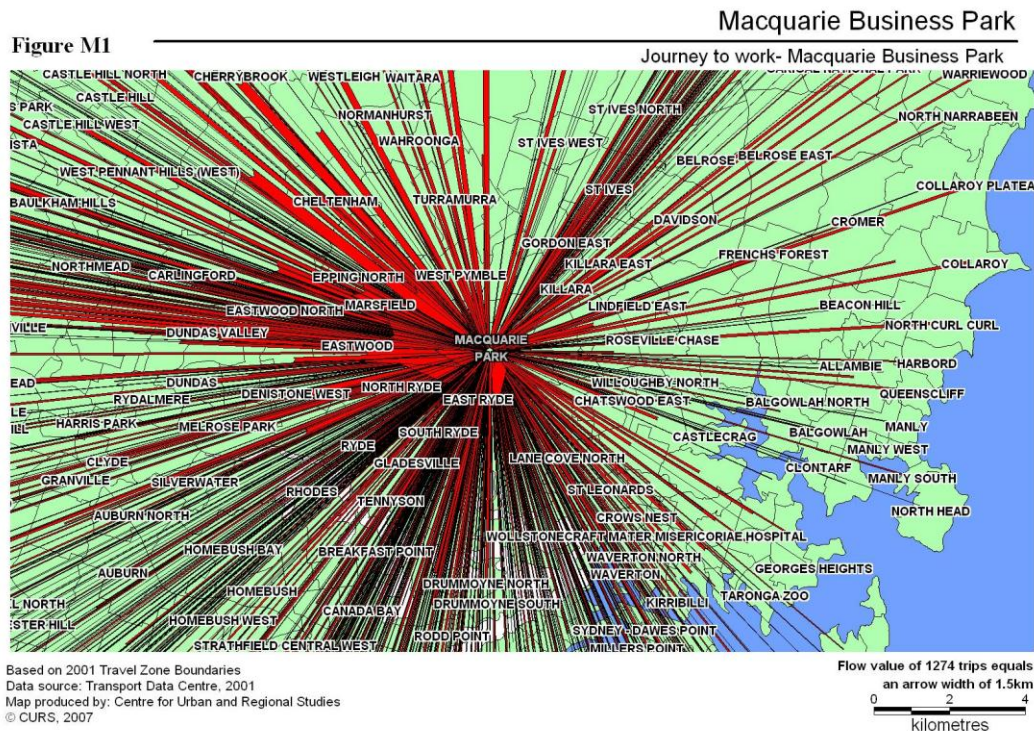


Figure M1 shows the major role played by Macquarie Park in the north-western and western Sydney labour markets via its provision of 29,909 employment positions. Data used for Figure M1 are shown in Table M1.

ORIGIN SLA	Trips destined for Macquarie Business Park
Ashfield (A)	220
Auburn (A)	273
Bankstown (C)	492
Baulkham Hills (A)	1340
Blacktown (C)	1690
Blue Mountains (C)	176
Botany Bay (C)	70
Burwood (A)	168
Camden (A)	51
Campbelltown (C)	171
Canterbury (C)	342
Cessnock (C)	6
Concord (A)	196
Drummoyne (A)	263
Fairfield (C)	457
Gosford (C)	441
Hawkesbury (C)	127
Holroyd (C)	489
Hornsby (A)	2968
Hunter's Hill (A)	175
Hurstville (C)	198
Kiama (A)	5
Kogarah (A)	128
Ku-ring-gai (A)	1199
Lake Macquarie (C)	52
Lane Cove (A)	511
Leichhardt (A)	443
Liverpool (C)	341
Manly (A)	209
Marrickville (A)	324
Mosman (A)	188
Newcastle (C)	25
North Sydney (A)	596
Parramatta (C)	1691
Penrith (C)	505
Pittwater (A)	415
Port Stephens (A)	9
Randwick (C)	355
Rockdale (C)	208
Ryde (C)	5722
Shellharbour (C)	16
Shoalhaven (C)	12
South Sydney (C)	304
Strathfield (A)	103
Sutherland Shire (A)	475
Sydney (C)	45
Warringah (A)	876
Waverley (A)	189
Willoughby (C)	648
Wingecaribee (A)	24
Wollondilly (A)	21
Wollongong (C)	74
Woollahra (A)	150
Wyong (A)	227

Table M1

The top ten SLAs (Statistical Local Areas) from which Macquarie Park draws its workforce are:

1. Ryde (5722 daily trips)
2. Hornsby (2968)
3. Parramatta (1691)
4. Baulkham Hills (1340)
5. Ku-ring-gai (1199)
6. Warringah (876)
7. Blacktown North (708)
8. Willoughby (648)
9. (equal) Blacktown South East (596)
9. (equal) North Sydney (596)

A similar influence of proximity to that observed for journeys-to-work for the Norwest Business Park can be observed for the Macquarie Park corridor. Even though some place of residence preference for Macquarie Park workers can be observed for SLAs in higher socio-economic areas to the north and east of the Macquarie Park corridor, the influence of proximity is still notable in all geographical directions. Pertinent observations include that

- The host SLA, Ryde, is by far the major origin for journeys-to-work indicating the intensity of localisation of the labour market attachments created by the corridor
- Less prestigious SLAs in terms of socio-economic status are still major suppliers of staff to firms in the Macquarie Park corridor; these SLAs include Parramatta (third major supplier), Baulkham Hills (fourth), Blacktown North (seventh), Blacktown South East (ninth) and Penrith (twelfth).

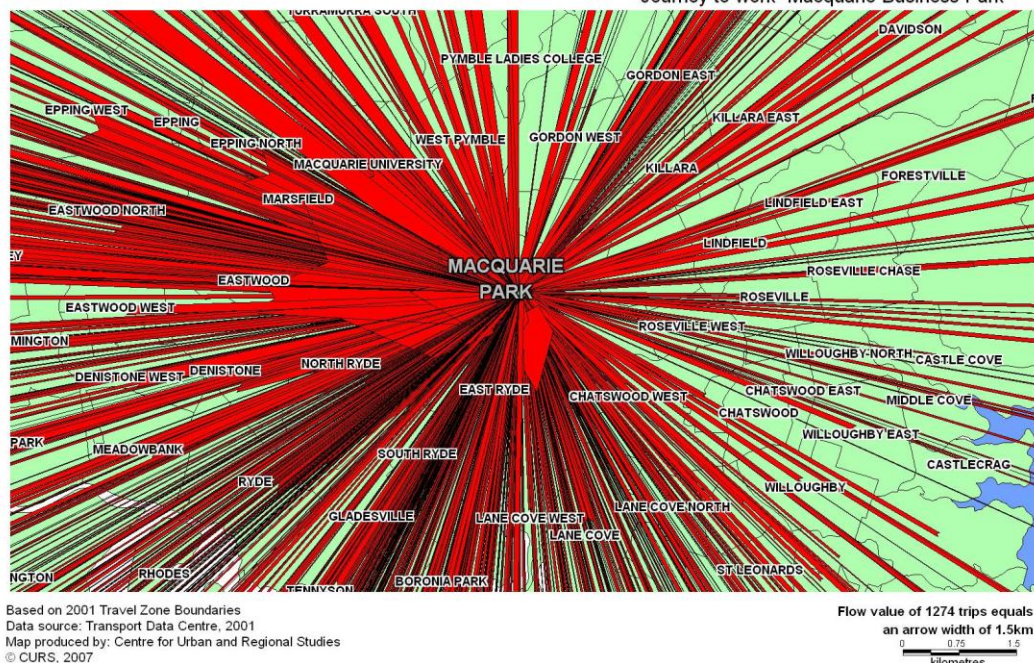
Hence, like is observable at Norwest, the Macquarie Park corridor maintains proximate journey-to-work relationships in all geographic directions.

Figure M2 is a close-up representation of the journeys shown in Figure M1. Here the strength of the labour market linkages between Macquarie Park firms and the most proximate SLAs is apparent. Moreover, the figure shows the very strong relationships between the corridor and the SLAs to the corridors' west and south.

Figure M2

Macquarie Business Park

Journey to work- Macquarie Business Park



This is reiterated in Figure M3 which shows the region (in blue) from which Macquarie Park firms draw the nearest 50% of the corridor's total labour force. Again, as explained for the equivalent figure for Norwest (Figure N3), non-blue spaces adjacent or nearly adjacent to the corridor depict areas of bushland, parks and/or a relatively low rate of labour supply to Macquarie Park firms due to low residential density characteristics.

Figure M3

Macquarie Business Park

Journey to work- Macquarie Business Park

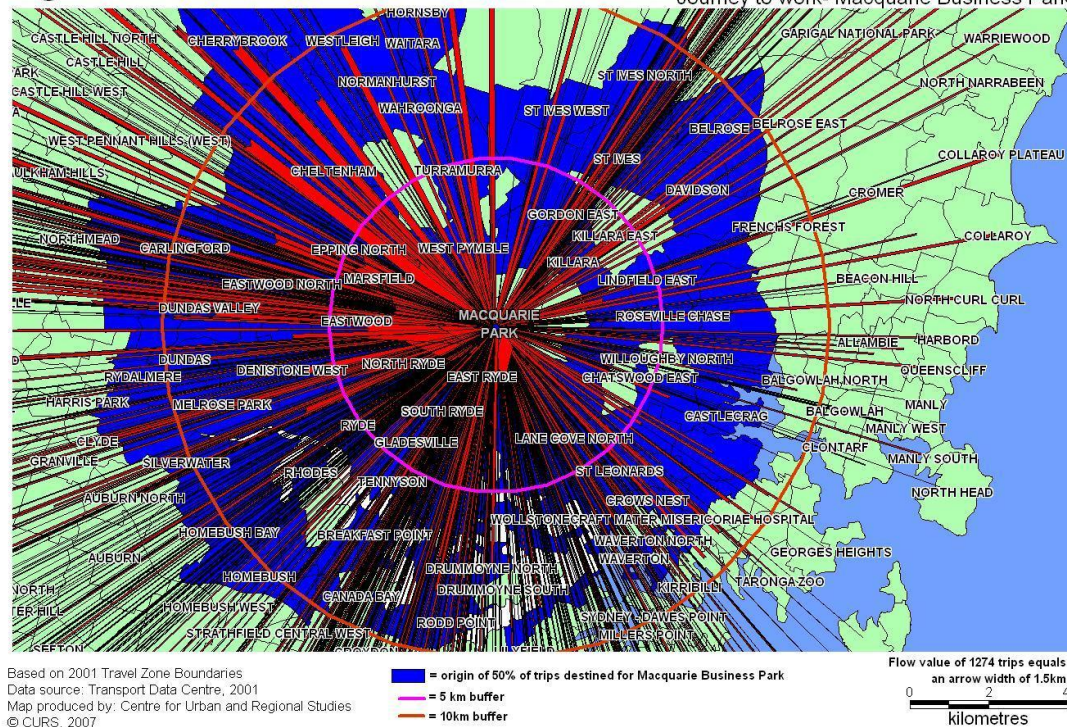


Figure M3, then, shows the intensely local labour market that has developed around the Macquarie Park corridor. The 50% labour supply zone extends short distances to the west (Northmead), south (Parramatta River), east (Roseville) and north (Wahroonga). Stronger westwards linkages – evidenced by the thicker red arrows – towards a belt stretching from Cherrybrook across Cheltenham, Epping, Eastwood and Ryde suggest the influence of the M2 motorway and the more recent housing construction, or more affordable housing prices, in these suburbs.

Table M2 shows the occupations breakdown of the workforce attached to firms in the Macquarie Park corridor. As per the Norwest Business Park, managers/administrators (13.7%) and professionals (30.5%) together make up a very high proportion of the corridor's workforce with a combined contribution of 13,220 positions or 44.2% of the corridor's total workforce.

<u>Occupation Category</u>	<u>Number</u>	<u>Percentage of total</u>
Managers and administrators	4090	13.7
Professionals	9130	30.5
Associate Professionals	4091	13.7
Tradespersons and related workers	1839	6.2
Advanced clerical and service workers	901	3.0
Intermediate clerical, sales and service workers	4755	15.9
Intermediate production and transport workers	1184	4.0
Elementary clerical and service workers	2997	10.0
Labourers and related workers	922	3.1
Total	29,909	100

Table M2 Occupations breakdown of journeys to work, Macquarie Park corridor

Again like has been observed for the Norwest Business Park, the Macquarie Park corridor is an employment zone with relatively high demand for labour across all skills categories. Adding associate professionals (13.7%), tradespersons and related workers (6.2%) and advanced clerical and service workers (3.0%) to the managers/administrators and professionals categories yields a combined highly skilled group equal to 67.1% of the corridor's total workforce. Of course, this figure is elevated by its including the Macquarie University workforce although there is a valid argument that the University's presence is a key element of the corridor's high-end occupations categories having been a historical anchor to the corridor's evolution. As such it is hardly anomalous to the corridor's overall success.

What might be anomalous though is the relatively high proportion of workers in the intermediate clerical, sales and service workers category. This high proportion is due to the presence within the corridor of the Macquarie Centre retail complex. Discounting this centre's workforce from the corridor's total would have the effect, of course, of raising the significance of the more skilled occupations categories.

Based on the available measures, then, observations of journeys-to-work with the Macquarie Park corridor as a destination show the long term alignment of the corridor to the labour pool in the corridor's surrounding suburbs. This alignment has probably arisen from two parallel processes:

- The location of firms within the corridor as a result of senior executives within these firms seeking to minimise journey-to-work travel times and distances for management, administration and professionals occupations categories as well as other more skilled occupations categories
- The movement of management, administration, professional and other employees in the more skilled categories to residential locations with better access to firms operating from within the corridor.

Austlink Business Park

Profile

Located in Belrose

Established in 1990s

32.95 Hectares

Key tenants include BBC Hardwarehouse, Wang, Panasonic and Colby Demag.

Austlink Business Park is a hybrid business park and bulky goods, specialist retailing precinct. The case study provides an interesting comparison to the Norwest Business Park and the Macquarie Park corridor with some common and some contrasting elements.

Journey-to-work patterns for Austlink are shown in figures A1, A2 and A3.

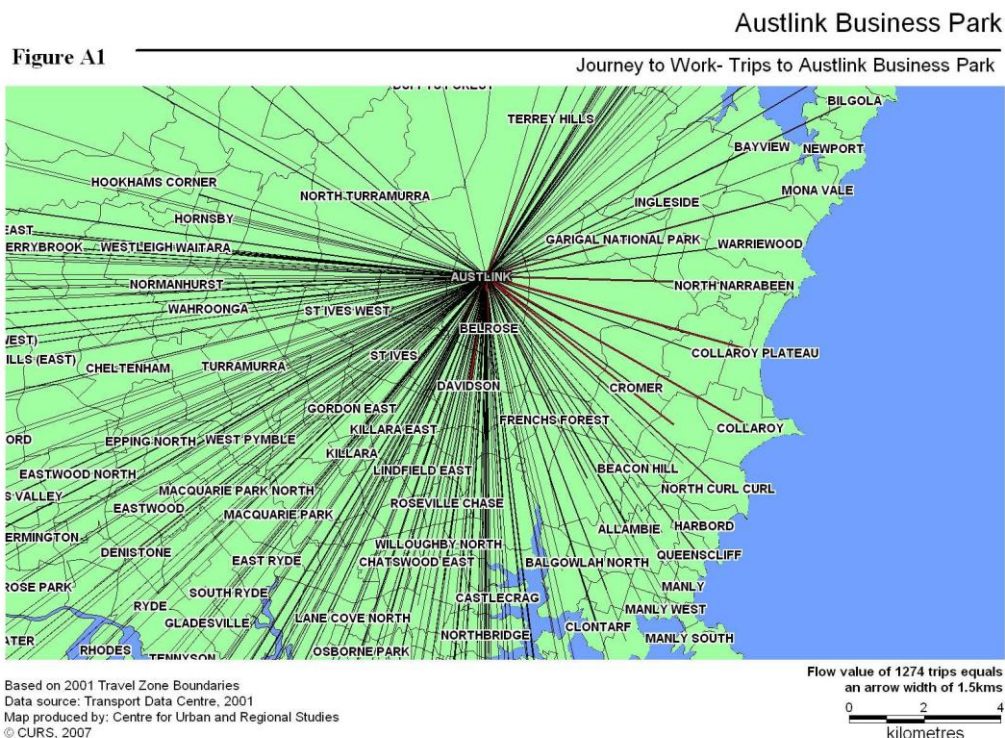


Figure A1 shows a larger scale representation of journey-to-work trips to Austlink. The map shows an apparent dispersal of staff who work for Austlink firms. Despite this aggregate dispersal, figure A2 and figure A3 show a tendency towards the localisation of

labour markets around Austlink especially involving nearby northern suburbs and suburbs along the northern beaches. This tendency is shown by the more pronounced red arrows in Figure A2 and by the blue '50% of all origins' zone shown in Figure A3. Again note that green areas surrounded by blue zones are areas of low residential densities, rather than areas which have abnormally low proportions of workers with an Austlink journey-to-work destination.

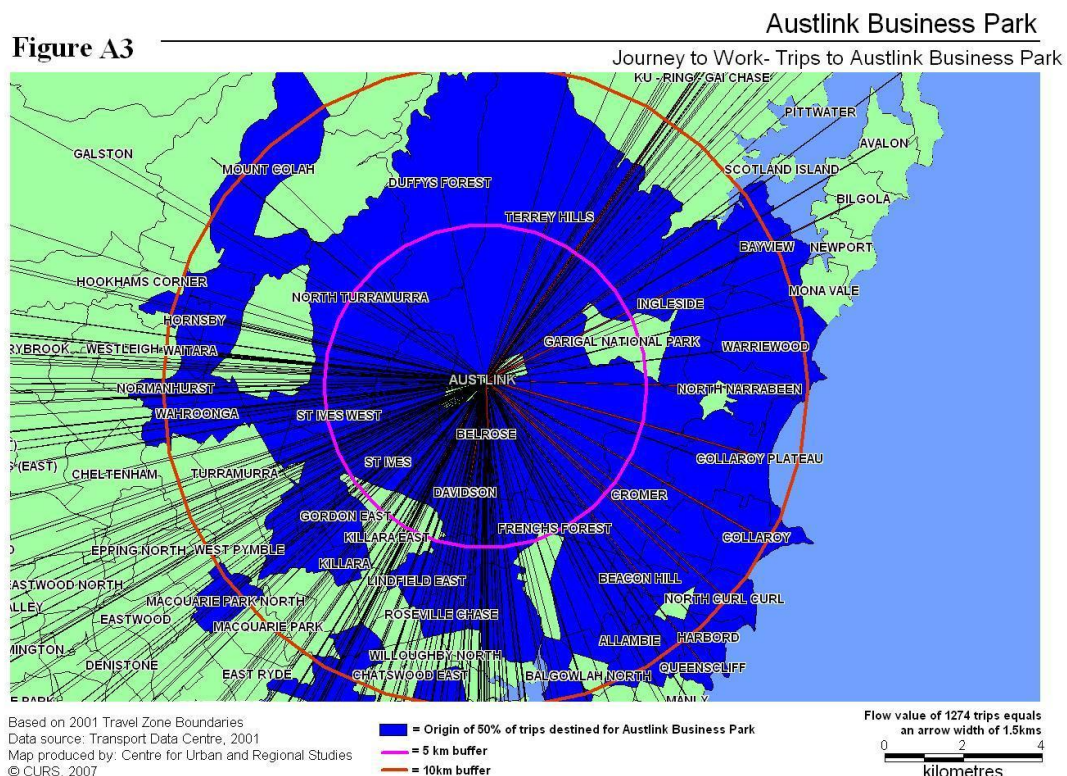
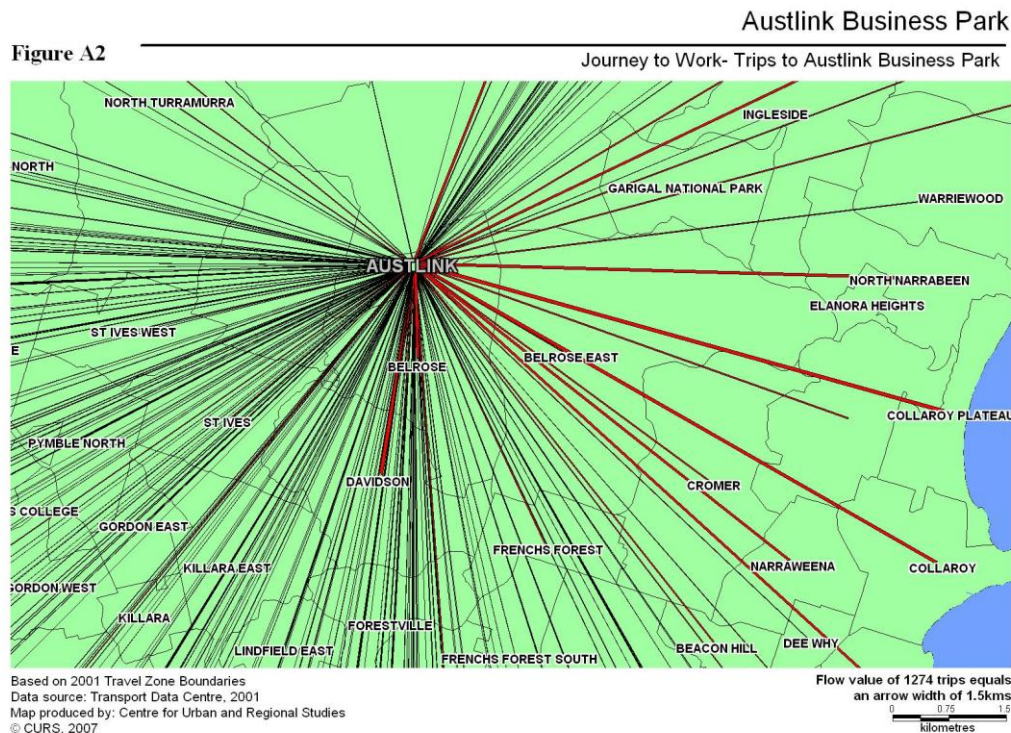


Figure A3 thus contrasts with the dispersal pattern shown in Figure A1. Figure A3 shows that 50% of journey-to-work trips have origins in a tight zone bounded by the northern edges of the Sydney metropolitan area, nearby suburbs (Hornsby, Wahroonga, Pymble) along the Pacific Highway to the west, Roseville Chase to the south, and, then, nearly the entire northern beaches region to the east stretching from Mona Vale to Queenscliff.

ORIGIN SLA	Trips destined for Austlink Business Park
Ashfield (A)	3
Auburn (A)	5
Bankstown (C)	13
Baulkham Hills (A)	37
Blacktown (C) - North	20
Blacktown (C) - South-East	15
Blacktown (C) - South-West	8
Botany Bay (C)	6
Burwood (A)	6
Camden (A)	3
Campbelltown (C)	6
Canterbury (C)	7
Cessnock (C)	3
Concord (A)	3
Drummoyne (A)	12
Fairfield (C)	6
Gosford (C)	46
Holroyd (C)	13
Hornsby (A)	84
Hurstville (C)	3
Kogarah (A)	6
Ku-ring-gai (A)	72
Lane Cove (A)	10
Leichhardt (A)	13
Liverpool (C)	6
Manly (A)	40
Marrickville (A)	11
Mosman (A)	17
North Sydney (A)	39
Parramatta (C)	33
Penrith (C)	6
Pittwater (A)	166
Randwick (C)	15
Rockdale (C)	3
Ryde (C)	42
Shoalhaven (C) - Pt B	1
South Sydney (C)	15
Strathfield (A)	6
Sutherland Shire (A) - East	3
Sutherland Shire (A) - West	9
Warringah (A)	464
Waverley (A)	11
Willoughby (C)	29
Wollongong (C)	3
Woollahra (A)	6
Wyong (A)	20

Table A1

The top ten SLAs (Statistical Local Areas) from which Austlink draws its workforce are:

1. Warringah (464 trips)
2. Pittwater (166)
3. Hornsby (84)
4. Ku-ring-gai (72)
5. Gosford (46)
6. Ryde (42)
7. Manly (40)
8. North Sydney (39)
9. Baulkham Hills (37)
10. Parramatta (33)

This list reinforces the observations made from analysis of the figures. Together the two sources of evidence suggest that the nature of the localisation of the Austlink labour market is very dependent on potential workers' knowledge of the operation and location of firms in the business park including knowledge of how to access the park. Perhaps higher volumes of passing traffic in the environs of Norwest and Macquarie Park are important in raising awareness of the existence of employment and/or investment opportunities in these locations.

Table A2 shows the occupations breakdown of the workforce attached to firms in the Austlink Business Park. Like in the other two case study areas, managers/ administrators (18.7%) and professionals (23.1%) together make up a very high proportion of the park's workforce with a combined contribution of 41.8%, a higher level than Norwest's 34.2% and approaching Macquarie Park's 44.2%.

<u>Occupation Category</u>	<u>Number</u>	<u>Percentage of total</u>
Managers and administrators	276	18.7
Professionals	342	23.1
Associate Professionals	210	14.2
Tradespersons and related workers	109	7.4
Advanced clerical and service workers	48	3.2
Intermediate clerical, sales and service workers	297	20.1
Elementary clerical and service workers	95	6.4
Labourers and related workers	102	6.9
Total	1,479	100

Table A2 Occupations breakdown of journeys to work, Austlink Business Park

Yet, that there are only 618 staff involved demonstrates the much smaller size of this park. Nevertheless, when combined with the other more highly skilled occupations categories (associate professionals, tradespersons and related workers and advanced clerical and service workers), a total of 66% of Austlink's workers and staff are grouped in the formally skilled and above occupations categories. Despite the smaller absolute size, the 66.6% total corresponds very closely with the equivalent skilled-plus totals for Macquarie Park (67.1%) and Norwest (60.9%).

Like Macquarie Park and Norwest, too, Austlink's operations are linked inextricably with the housing location decisions of Austlink's workforce.

Case Study: A firm from Norwest Business Park

Norwest is predicted to provide jobs for 35,000 people as it reaches capacity sometime around 2010. The park is a mixture of users including retailing and professional services, corporate administration, manufacturing, IT and logistics.

Case study firm “Blue” (not its actual name) employs more than 300 employees in specially built premises within a 12 hectare site. Blue’s staff range from finance professionals, IT, engineers and specialist professional staff. Facilities on the 12 hectare site include a gymnasium, food and beverage outlets and light entertainment.

Blue chose the Norwest site as an opportunity to consolidate much of its Australian workforce on a single, integrated location. Blue faced the dual challenge of finding a site accessible to its workforce and with strategic access to customers and suppliers. The Norwest Business Park was seen to provide more advantages than competing locations.

In respect of workforce access, while public transport access is poor, the M2 corridor provides journey-to-work (by car) opportunity from across Sydney’s lower north shore and expanding northwest suburbs. In addition, quality housing opportunities in the northwest are seen by Blue’s management as providing significant relocation destinations for staff seeking to minimise travel times and distances. Indications are that such opportunities are being taken up including by those in managerial and key professional positions.

Case Study: A firm from the Macquarie Park Corridor

The Macquarie Park corridor commenced in the mid 1960s with the rezoning of green belt land to allow for industrial activities. Adjacency to Macquarie University was seen as an encouragement to high-tech co-locations.

Case study firm “Brown” (not its actual name) located within the Macquarie Park Corridor in 2003. Brown provides specialised design and consulting services in a non-urban industrial sector. Its clients are Australian and Asian based. Brown also has branch offices in two other major Australian urban centres. It employs over thirty staff at its Macquarie Park location. Over twenty of these are highly skilled professional staff.

Prior to its establishment at Macquarie Park, Brown was located at a harbour side location nearer Sydney’s CBD. Brown’s three principals all lived along the M2 corridor between Lane Cove and Beecroft in expansive suburban homes. A move to Macquarie Park was seen explicitly as providing a closer link between the place of work and the place of residence. In addition, while the shift to Macquarie Park created longer journeys-to-work for staff located south of the harbour, there are indications that the availability of housing in the northwest sector is generating housing relocations among Brown staff.

Cast Study: A firm from Austlink

Case study firm “Green” (not its actual name) was established at Austlink in mid 1992 in purpose-built premises. Green’s establishment preceded the major industrial growth at Austlink in the mid and late 1990s and the subsequent retailing growth in recent years.

Green is an international specialist products manufacturer and retailer with a prominent respected brand name. Green chose Austlink for its Australian headquarters facility because of distinct price advantages over other north shore estates including turn-key packages guaranteeing land price, construction cost, completion date and other sweeteners. Subsequently, Green took advantage of lease back arrangements to divest its initial investment.

Green’s site search was heavily influenced by the firm’s international propensity to seek locations which maximised staff amenity and access in ways that generated loyalty by staff and minimised staff turnover.

Access to quality housing was, therefore, a key factor in Green’s site and location selection. Moreover, Green reports that its ambitions have been fulfilled with managerial, professional and other staff taking full advantage of the opportunity to live in prestige locations on Sydney’s upper north shore and northern beaches.

Household case studies

Six household case studies were conducted, involving two households from each of the case study firms (code named Blue, Brown and Green) described elsewhere in this report. Each of the household case studies involved an employee in a senior management or professional role in the firm concerned. The life cycle stages of the households are:

- One couple family with children having left the family home
- Three couple families with children
- One couple family without children but with plans to have a child or children in the next 5 to 10 years
- One single person residing with her aged parents

Discussions were held with the person in each of the households who was the employee of a case study firm. Interviews were conducted by telephone having been arranged and authorised by human relations management of the firm concerned. Notes were taken during the interviews. No names were provided and no follow-up activity is planned.

The discussions revealed the following trends and propensities:

1. All households placed a high priority on minimising journeys-to-work in terms of both distance and time. While the older couple family had initially lived nearby its work location, it had recently relocated to an apartment from a house. The location of the apartment was selected primarily to ensure easy, continued access to the work location. Of the other four couple families, two had relocated from other more distant Sydney suburbs to more adjacent locations, one had changed jobs to secure a vacancy in a case study firm because it was more accessible,

while one had moved interstate to take the position and had chosen an adjacent location as its first housing choice. The single person sought employment in the case study firm because of it being more convenient journey-wise than the previous employer.

2. Four of the six households expressed an assessment that their remuneration packages could probably be improved by taking an employment position in a CBD location. However all four of these households expressed the view that such an increase would probably not compensate for the increased costs of travel that a CBD-located job would generate.
3. All households acknowledged that their adjacency to their place of employment contributed to their loyalty to the firm. All households made the assessment that their firms' capacity to attract quality staff and minimise staff turnover rates were enhanced when employees' journey-to-work times and distances were minimised.
4. Five of the six households – the exception being the couple with plans to have its first child in the next few years – agreed that consideration of applying for alternate jobs was increasingly limited to vacancies that arose locally, being the districts roughly contiguous to their home and work neighbourhoods.

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