Employment Centres Analysis

Final Report

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SGS Economics & Planning

Independent insight.

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1 OVERVIEW

There are a range of tasks underway to inform subregional planning for each of Sydney's six subregions. This includes analysis of housing markets, macroeconomic factors influencing employment trends, feasibility of development in different locations, the operation of the transport system and barriers to the development of commercial buildings in strategic centres. The Department of Planning and Environment engaged SGS to help understand the potential for employment growth within each of Sydney's strategic centres. This study is an important companion document to the Barriers to Growth of office floorspace in specific centres project.

The Strategic Transport Model (STM) requires small area projections of population and employment for each travel zone in Greater Metropolitan Area of Sydney. These population and employment projections (produced by the Bureau of Transport Statistics (BTS)) are sometimes used as a guide to future development patterns in these precincts. However, this can be misleading as the STM projections are based on broad assumptions regarding the development of a centre.

Development of a particular centre is linked to a range of macro factors (health of the economy and population growth) and micro factors (decisions by individual businesses, development of particular parcel of land, competition from surrounding centres). All of these influences require a range of assumptions. A range of employment outcomes are produced in this report to demonstrate the uncertainty surrounding all of these assumptions. The analysis also reports on the factors which would result in higher or lower employment growth.

This document provides an overview of the employment modelling and the policy implications. The document contains:

1. A narrative on the employment profile of each subregion including an understanding of the assets and structure of importance for jobs.
2. An employment profile of Strategic Centres (centres) in 2011.
3. Projections of future employment in Strategic Centres, developed using growth rates from the past four censuses (2011, 2006, 2001, 1996). These projections have a Lower Bound, a Mid Point and an Upper Bound. These are total future jobs, not net additional jobs.
4. SGS have identified local factors and policy settings that may influence the employment projection being reached in each centre. These are presented as challenges and opportunities. It is factors such as these that require successful planning and management to support an employment outcome towards the Upper Bound projection
5. Descriptions of where jobs growth are likely to be drawn from if centres were to reach their Upper Bound.
6. A data table that provides more detail on historical growth rates and other statistics on each centre.

Some examples of local factors and policy settings that SGS believe may influence employment outcomes include planning interventions to encourage office development and positive urban design and other improvements to local amenity to help grow retail employment.

The geographic extents of the strategic centres were defined by SGS and were based on a detailed concordance of current and historic travel zones.

2 METHOD

The employment projections for each centre were developed using the following method:

- Focused on strategic centres as defined in *A Plan for Growing Sydney*: "Locations that currently or are planned to have least 10,000 jobs. These are priority locations for employment, retail, housing, services and mixed-uses".
- Using a consistent centre boundary for 1996, 2001, 2006 and 2011, employment was collected from the Australian Bureau of Statistics (ABS) Census Place of Work Data. In each Census year the boundaries used for the Place of Work Data changed. This required a detailed GIS concordance to be development for each year to allow a time series to be developed.
- The boundary used reflected the extent of employment lands associated with the centre rather than a strict statuary zoning boundary (see Figure 1).
- Between 1996 and 2011 there were two industry classification used by the ABS. The different classifications were concorded into three broad groups: Population serving, Office jobs and Industrial. This helps to understand how the industry profile had changed over time.
- From this historical data, a range of growth rates was observed for each 5 year, 10 year and 15 year period.
- These growth rates were applied to the 2011 Bureau of Transport Statistics (BTS) employment data for each centre (The centre boundary is defined by DPE which differs to those presented in Figure 1), producing a set of six projections of employment for 2036. The 1996-2011 growth rate produces the midpoint projection.
- The lower and upper employment projections reflect the likely realistic range of employment outcomes. The 15th percentile and 85th percentile of the range of projections has been selected for this purpose. Projections outcomes outside these percentiles are excluded as they tend to reflect a *one off event*. A *one off event* could include a redevelopment of shopping centre, a larger employer moving in/ departing the centre, or a new office development that impacted the employment projections.
- If the centre had rapid employment growth off a very low base, an adjustment was made using the growth rate of similar but more established centre.
- If a growth rate was negative it was set to zero rather than being used to project a long term decline in employment.
- It is assumed that overall employment growth will continue over the next twenty years as it has over the past twenty years.
- The Badgerys Creek Airport and Marsden Park Precincts are subject to other more detailed studies and are not included in this analysis.
- For centres that are about to experience major change (For instance Green Square, Marsden Park and the Northern Beaches Health Precinct), these employment forecasts are less certain.

FIGURE 1. STRATEGIC CENTRES

A key conclusion of this analysis is shown in Figure 2. In the outer subregions the vast majority of jobs are outside of the strategic centres – e.g. the South, (11 per cent of all jobs in the strategic centres), South West (15 per cent) and West (19 per cent). While in the North (41 per cent), West Central (43 per cent) and Central (52 per cent) subregions the strategic centres represent a much greater proposition of all jobs.

Figure 3 highlights the relative size of the strategic centres and highlights the dominance of Global Sydney with over 400,000 jobs. The next five largest centres combined only total 250,000 jobs.

FIGURE 2. SYDNEY'S JOBS LOCATION 2011

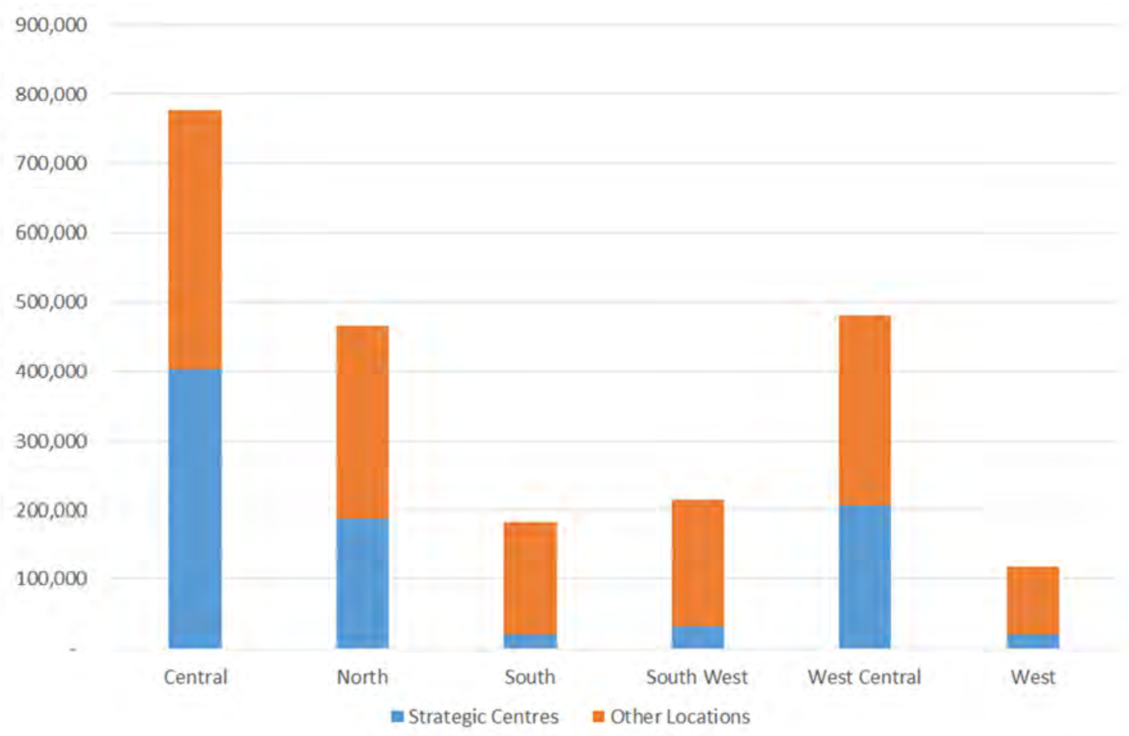
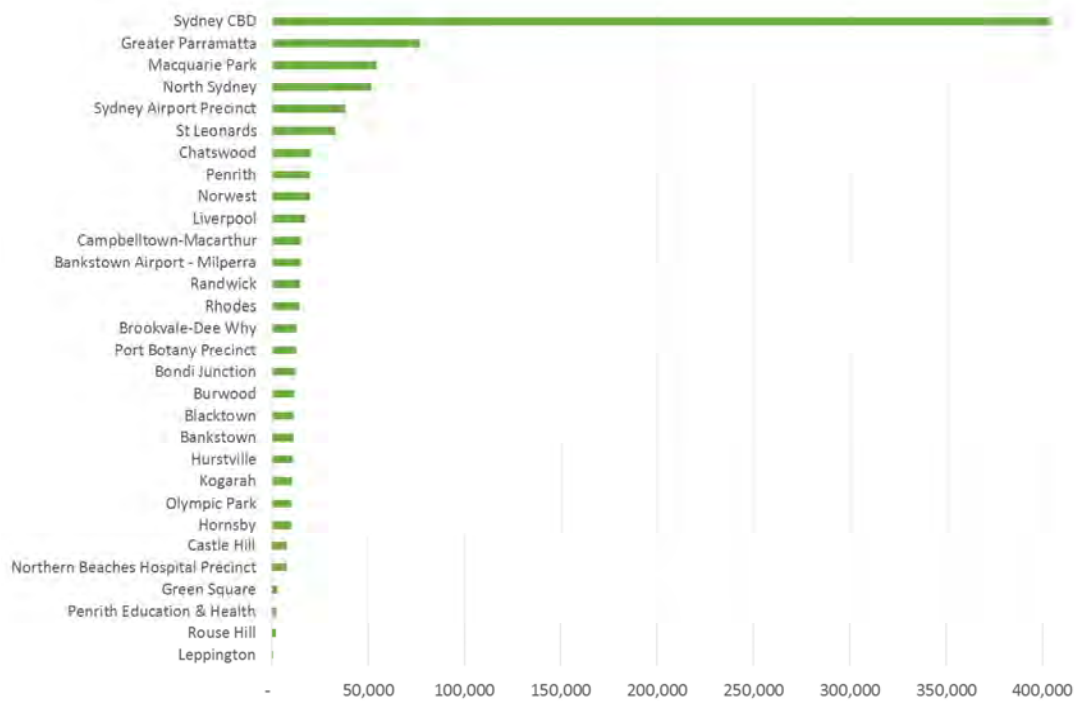


FIGURE 3. SYDNEY'S STRATEGIC CENTRES EMPLOYMENT 2011



3 WEST CENTRAL SUBREGION

The West Central subregion is home to half a million jobs - roughly 20 per cent of all jobs in Sydney. Forty three per cent of the West Central subregion jobs are located in eight strategic centres (Greater Parramatta, Bankstown, Blacktown, Castle Hill, , Norwest, Rouse Hill, Sydney Olympic Park and Bankstown Airport - Milperra). The remaining 57 per cent are scattered across a number of industrial areas and smaller centres.

Employment is able to disperse in this manner across a number of locations due to relatively good transport accessibility by car. As a business can interact with its workers, clients and suppliers via car, there is little benefit to locate in a centre where car parking may be limited. Even if public transport access is good in the centre, in the West Central subregion car travel is a more effective way for workers to access their jobs and for business to business interaction. However, the transport accessibility provided by car will be increasingly challenged as the subregion continues to grow. Increasing car congestion will result in many firms wanting to locate within large employment centres with good public transport access (e.g. Greater Parramatta and Macquarie Park). The clustering together also means that many trips can be undertaken on foot, removing the need to travel by car to meet with clients and suppliers.

The economy of the West Central subregion has a strong focus on population serving industries. There are major retail centres (e.g. Parramatta, Castle Hill), university campuses, hospitals (e.g Westmead) and health research facilities across the region. There is an emerging strength in knowledge intensive (professional / financial / media telecommunications) industries in key centres. Parramatta, Norwest and Olympic Park have added 320,000 square metres of office space over the past decade.

However, manufacturing still plays an important role in the subregion and is significant in the Sydney and Australian economy. There is the potential for manufacturing in the West Central subregion to evolve and develop further up the value chain by drawing on the advice of knowledge intensive business.

Construction is also a key industry with over 30,000 jobs located in the subregion. Transport and logistics jobs are cluster along the M5, M4 and M2 and there are number of current/future intermodal terminals (e.g. Villawood, Clyde and Western Sydney).

The West Central subregion plays a pivotal role in the economic geography of the whole city. Via the Western Line and the M4 corridor, Sydney Olympic Park and Parramatta link with the knowledge intensive industries in the Central subregion. The centres of Castle Hill, Norwest, Rouse Hill and, in the longer term, Marsden Park represent an extension of office development spreading along the Global Economic Corridor from the North subregion. Greater Parramatta provides business services, health and retail services to the South and South west subregion.

3.1 Greater Parramatta

In 2011 total employment in Greater Parramatta was approximately 76,500.

- The centre plays a diverse role and has a range of industries represented.
- Employment in Greater Parramatta is primarily in Health Care and Social Assistance with around 17,150 jobs (concentrated at Westmead) or 22 per cent of the total share of employment.
- Other strong industries for employment include Public Administration and Safety (over 14,100 jobs) and Financial and Insurance Services (approx. 9,800 jobs).
- Retail trade (approx. 5,000 jobs), Professional, Scientific and Technical Services (approx. 4,750 jobs), Education and Training (approx. 3,750), Administration and Support Services (approx. 2,800 jobs), and Manufacturing (approx. 3,000) are also important sectors for employment in Greater Parramatta.
- Health care and office (mainly focused in Financial services and Public Administration) have been the main driver of growth along with Retail employment.
- Annual growth rates have varied between 0.2 per cent and 4.2 per cent. This wide range of historical growth rates produces a wide band for the employment projection of between 90,000 and 141,000 by 2036. If Greater Parramatta were to reach the Upper Bound of the projection, the jobs growth would be drawn mostly away from dispersed centres in the subregion and to a less extent from the Central subregion.

TABLE 1. GREATER PARRAMATTA EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Parramatta	90,000	117,000	141,000
Growth Rate	0.7%	1.7%	2.5%

Source: SGS Economics & Planning

Challenges and opportunities:

- Provision of office floor space: With 690,000 square metres of office development, Parramatta CBD is host to the second largest concentration of office development outside of the Sydney CBD and North Sydney, having recently been surpassed by Macquarie Park/North Ryde (850,000 square metres). Parramatta has low vacancy rates for A grade office space but there is considerable floor space in the development pipeline: around 115,000 square metres of approved floor space in five developments. These buildings typically host 20,000 to 30,000 square metres but have not yet progressed for lack of pre-commitments from prospective tenants. If the market cannot deliver these types of commercial projects then employment will be at the lower end of the projection.
- Ensuring that residential does not crowd out potential office development. Parramatta's planning framework has been built on a clear and consistent strategy to maintain a commercial core (employment only) as a focus for future employment growth. In the face of pressure for residential development it is important that the commercial core is protected.
- Transport capacity: for the centre to grow it cannot rely on the private car, the Western rail line and buses to service growing employment. Access to potential labour markets is a major factor in the locational decisions of large employers. Parramatta can improve its access to labour markets relative to these other centres primarily through improvement in public transport access.
- Internal transport links: Greater Parramatta has a number of distinct employment hubs which can be linked more effectively (e.g. the CBD and Westmead Hospital, University of Western Sydney) via public transport and active travel to encourage employment growth.
- Aviation considerations: ensuring safe airspace for aircraft movements presents a challenge to taller buildings in Greater Parramatta

3.2 Bankstown

In 2011 total employment in Bankstown is approximately 11,000.

- Bankstown is primarily a retail centre serving a relatively small catchment.
- Accordingly, employment in the retail industry is strongest with approximately 1,950 jobs (18 per cent of total employment locally).
- Health Care and Social Services and Public Administration and Safety are the next largest employers with 1,600 and 1,450 jobs respectively.
- Education and Training and Accommodation and Food Services both absorb 10 per cent of total employment in Bankstown, with over 1,000 jobs in each sector.
- Average annual growth between 1996 and 2011 was between -3.6 per cent per year and 1.3 per cent. Only two of the six growth rates were positive. This reflects a decline in industrial / manufacturing employment surrounding the core of the centre and declines in office and retail employment.
- The number of dwellings within and immediately surrounding the Bankstown Centre has increased from 3,900 to 7,000. Some of this residential growth has taken place south of the train station where apartments have been constructed on former factory/warehouse sites.
- If Bankstown was to reach the Upper Bound of the projection, the jobs growth would be drawn dispersed retail centres within the subregion.

TABLE 2. BANKSTOWN EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Bankstown	11,000	11,000	12,000
Growth Rate	0.0%	0.0%	0.3%

Challenges and opportunities:

- Ensuring the decline in employment in the centre is reversed. This will require improvements in local amenity and the overall attractiveness of the centre as a retail destination to the local and subregional population.

3.3 Blacktown

In 2011 total employment in Blacktown is approximately 11,000.

- Blacktown is a retail centre and population serving centre servicing a subregional catchment.
- Since 1996 employment growth was 1.7 per cent, driven by growth in public administration, health and education. Employment in Blacktown is delivered across two main sectors: Health Care and Social Services and Retail Trade, with approximately 3,000 and 2,200 jobs respectively.
- Public Administration and Safety is the next largest employment sector with around 1,500 jobs.
- Accommodation and Food services also provides approximately 1,050 jobs.
- Average annual growth between 1996 and 2011 was between -1.5 per cent per year and 6.2 per cent.
- The historical growth rates produce a band for the employment projection of between 12,500 and 21,500 by 2036. If Blacktown was to reach the Upper Bound of the projection, the jobs growth would be drawn mostly away from other centres in the subregion (mostly Greater Parramatta and Norwest).

TABLE 3. BLACKTOWN EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Blacktown	12,500	17,000	21,500
Growth Rate	0.5%	1.8%	2.7%

Challenges and opportunities:

- Maintaining and improving local amenity will help to increase overall attractiveness of the centre as a retail destination in the face of new developments elsewhere in the southwest growth area.
- Attract more office employment to diversify away from population serving industries.
- Improve links over the rail line to increase commercial development to the north of the centre.

3.4 Castle Hill

In 2011 there were 11,000 jobs located at Castle Hill.

- Castle Hill is a retail centre serving a catchment beyond the surrounding area and local government area.
- Employment in Castle Hill is predominantly in Retail Trade with approximately 2,550 jobs.
- The next largest employment sectors are Accommodation and Food Services (over 1,100 jobs) and Health Care and Social (over 900 jobs).
- Average annual growth between 1996 and 2011 was between -1.1 per cent per year and 4.2 per cent. The 4.2 per cent corresponds to the major expansion of the Castle Towers shopping centre.
- The historical growth rates produce a band for the employment projection of between 8,000 and 14,000 by 2036. If Castle Hill was to reach the Upper Bound of the projection, the jobs growth would be drawn from dispersed locations within the surrounding area. Given the strength of the population servicing industries at Castle Hill, this jobs growth would most likely to be in the office segment of the market.

TABLE 4. CASTLE HILL EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Castle Hill	8,000	10,000	14,000
Growth Rate	0.0%	0.9%	2.3%

Challenges and opportunities:

- Obtaining sufficient employment lands in a centre which is surrounded by residential development.
- Attracting more office employment in addition to population serving employment.

3.5 Norwest

In 2011 there were 19,500 jobs at Norwest.

- Norwest is a business park with a strong retail offer.
- Retail Trade provides 4,350 of the 19,500 jobs. However, this influenced by the Woolworths head office rather than traditional retail employment.
- Manufacturing is also a strong sector with approximately 3,000 jobs, comprising 15 per cent of total employment in Norwest.
- Health Care and Social Assistance and Professional, Scientific and Technical Services are also strong employment sectors with over 2,000 jobs in each.
- The historical growth rates are very high as the centre has offered large sites for purpose-built developments that have met a key part of the market. The surrounding skilled labour force and the easy access by car has helped this rapid growth.
- The historical growth rates produce a band for the employment projection of between 38,000 and 43,500 by 2036. If Norwest was to reach the Upper Bound of the projection, the jobs growth would be drawn other centres in the Global Economic Corridor (in particular Macquarie Park).

TABLE 5. NORWEST EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Norwest	38,000	41,000	43,500
Growth Rate	2.7%	3.0%	3.3%

Challenges and opportunities:

- The ability to develop health related land uses and infrastructure around Norwest Private Hospital.
- Unlocking the potential capacity around the future Norwest and Bella Vista train stations for offices, retail, services and housing.
- Norwest losing jobs or failing to attract additional jobs due to increased competition with North Sydney, St Leonards and Chatswood strategic centres if these centres reverse their recent decline in employment

3.6 Rouse Hill

In 2011 there were 2,000 jobs at Rouse Hill.

- Rouse Hill is primarily a retail centre serving a small but rapidly growing catchment.
- Retail Trade is the strongest employment sector, providing approximately 1,100 jobs or 56 per cent of total employment in the area.
- The next largest sector is Accommodation and Food Services with 250 jobs.
- Education and Training along with Health Care and Assistance also provide some sources of employment with 90 and 85 jobs respectively.
- The band for the employment projection is between 6,000 and 7,500 by 2036. To reach the Upper Bound of the projection, the jobs growth would be drawn from dispersed locations in the subregion. Given the strength of the population servicing industries, this jobs growth would most likely to be in the office segment of the market.

TABLE 6. ROUSE HILL EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Rouse Hill	6,000	7,000	7,500
Growth Rate	4.5%	5.1%	5.4%

Challenges and opportunities:

- Unlocking the potential capacity around the future Rouse Hill train station for offices, retail, services and housing.

3.7 Sydney Olympic Park

There were 10,000 jobs at Sydney Olympic Park in 2011.

- Sydney Olympic Park is an urban renewal site, attracting new housing and employment over the past 15 years.
- The largest employment sector in the Sydney Olympic Park centre is Financial and Insurance Services with approximately 3,800 jobs or 37% of total employment.
- Arts and Recreation Services is the next largest employment sector with approximately 1,300 jobs.
- Professional, Scientific and Technical Services is the third largest source of employment with approximately 850 jobs.
- Average annual growth between 1996 and 2011 was been -2.0 per cent per year and 5.9 per cent. These rates produced a range of between 14,500 and 35,000 jobs.
- To reach the Upper Bound of the projection, the jobs growth would be drawn from across the Central and West Central subregion and to some degree Greater Parramatta.

TABLE 6. ROUSE HILL EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Sydney Olympic Park	14,500	19,000	35,000
Growth Rate	1.5%	2.6%	5.1%

Challenges and opportunities:

- Increased capacity for additional mixed-use development in Sydney Olympic Park including offices, retail, services and housing.
- Increased urban amenity and vibrancy in and around Sydney Olympic Park
- Identifying appropriate light rail connections from Parramatta CBD to Sydney Olympic Park.

3.8 Bankstown Airport – Milperra

In 2011 there were 15,300 jobs at Bankstown Airport – Milperra.

- Bankstown Airport – Milperra has a percentage of Manufacturing jobs (6,400 jobs) representing 42% of total employment.
- Wholesale Trade is the second largest employment sector with 1,850 jobs.
- Transport, Postal and Warehousing and Construction are also important sources of employment with approximately 1,350 and 1,200 jobs respectively.
- The band for the employment projection is between 15,000 and 26,000 by 2036. To reach the Upper Bound of the projection, the jobs growth would be drawn from dispersed locations in the subregion.

TABLE 6. BANKSTOWN AIRPORT – MILPERRA EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Bankstown Airport – Milperra	15,000	17,000	26,000
Growth Rate	0.0%	0.5%	2.2%

Challenges and opportunities:

- Protect strategically important industrial-zoned land in the centre for ongoing employment purposes.
- Maintain safe airspace for aircraft movements

4 NORTH SUBREGION

The North subregion is home to half a million jobs - roughly 20 per cent of all jobs in Sydney. Its resident workforce is also highly skilled and works across Sydney. Forty one per cent of the North subregion jobs are located in seven strategic centres - North Sydney, Macquarie Park, St Leonards, Chatswood, Hornsby, Brookvale-Dee Why and the Northern Beaches Hospital Precinct.

The economy of the North subregion has a strength in Financial and Professional Services and Media and Telecommunications. This is underpinned by the strong transport links of the Global Economic Corridor. North Sydney is the major financial services centre outside of Global Sydney and has around 15,000 Professional Services jobs. Chatswood and St Leonards have another 12,000 Professional services jobs. Macquarie Park is the major office precinct outside of the Global Sydney (with 850,000 square metres) and home to a diverse range of industries.

The Global Economic Corridor has allowed the economy of Sydney to grow as highly productive jobs have had a range of centres to locate in and still trade with jobs in nearby centres. That is, North Sydney's financial and professional services jobs interact with the Sydney CBD jobs. Chatswood and St Leonards have grown to some degree as satellite centres to North Sydney. Rapid development at Macquarie Park has allowed business with a lower threshold for rents to locate near to the higher order jobs and the skilled labour that those jobs help to attract.

The North subregion is faced with increasing traffic congestion. At this point in time congestion is at its worst during peak period. This congestion has resulted in two outcomes. Firstly, some firms locate within centres such as North Sydney, St Leonards and Chatswood to access the labour supply that the public transport network can provide. The second and more powerful response has been to locate in centres further to the northwest where the congestion is a less of factor. Macquarie Park has been the main beneficiary of this effect. As the subregion continues to grow the public transport network will increase in importance for accessing labour and business to business interactions.

The major retail centres within the region are Chatswood, Macquarie Park, Brookvale-Dee Why and Hornsby. Hornsby and Brookvale-Dee Why also play more of a population serving role for the skilled labour attracted to the high amenity of the northern beaches. The construction of the Northern Beaches hospital will serve 250,000 people on the northern beaches.

4.1 North Sydney

North Sydney extends the employment footprint of the Sydney CBD and has 51,500 jobs.

- Employment can be found predominantly in Professional, Scientific and Technical Services (approx. 14,850) and in Financial and Insurance Services (approx. 8,300). These are the largest employment sectors in North Sydney, with 29 per cent and 16 per cent respectively of the total share of employment.
- Similar to the Sydney CBD, Administration and Support Services as well as Information, Media and Telecommunications are significant employment sources, taking up 6 per cent and 7 per cent respectively of the total share of employment with approximately 6,500 jobs.
- In 2011, there was a higher percentage of construction jobs in North Sydney (4 per cent) compared to the CBD (2 per cent).
- Average annual growth between 1996 and 2011 was between -0.8 per cent per year and 2.6 per cent. These rates produced a range of between 55,000 and 79,500 jobs.
- If North Sydney was to reach the Upper Bound of the projection, the jobs growth would be drawn mostly away from other centres such Sydney CBD, Macquarie Park and Norwest.

TABLE 7. NORTH SYDNEY EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
North Sydney	55,000	67,000	79,500
Growth Rate	0.3%	1.1%	1.8%

Challenges and opportunities:

- Attracting a new generation of investment in office space. While having around 850,000 square metres of office space, only a quarter of this is Premium and A Grade. As a result, North Sydney has been losing out to newer developments in Macquarie Park and the Sydney CBD.
- Ensuring that residential development does not crowd out potential office development.
- Maintaining safe airspace for aircraft movements presents a challenge for taller buildings in North Sydney.

4.2 Macquarie Park

Macquarie Park is a major employment node with approximately 54,000 jobs.

- With office, retail, health and education it is a highly diverse employment centre.
- Macquarie University (there are 4,300 Education & Training jobs in the centre) and its associated hospital (there are 3,600 Health care jobs in the centre) provide opportunities for research and development for firms locating within the business park.
- Wholesale Trade is the largest employment sector in Macquarie Park with approximately 10,600 jobs.
- Professional, Scientific and Technical Services and Information, Media and Telecommunications are also significant employment sectors with 8,850 and 8,750 jobs respectively. They each account for 16 per cent of total employment in Macquarie Park.
- Manufacturing is also an important source of employment in Macquarie Park with 6,100 jobs. Although this reflects head office operations rather than traditional production activities.
- The centre has added almost as much additional floor space (around 380,000 square metres) over the past decade as the Sydney CBD (465,000 square metres).
- Average annual growth between 1996 and 2011 was between 2.9 per cent per year and 8.1 per cent. Using these large growth rates for the projections produce implausible employment projections. Historical growth rates from Sydney CBD (between 1.4 percent and 2.4 per cent) were used for the Macquarie Park projections. Macquarie Park is one of only three centres (Global Sydney and Randwick) where the BTS projections is below the Lower Bound (see Table 25).

– To reach the Upper Bound of the projection, the jobs growth would be drawn mostly away from the Sydney CBD, North Sydney, St Leonards and Chatswood. Macquarie University could draw education and research jobs growth away from other universities in Sydney.

TABLE 8. MACQUARIE PARK EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Macquarie Park	82,000	88,000	94,500
Growth Rate	1.7%	2.0%	2.3%

Challenges and opportunities:
– Protect the commercial core from potential future residential development.
– The growth in employment over the past 15 years has been based around car based travel. However, as the centre has continued to grow, access via car has been increasingly challenging.
– Fostering a move toward an increased public transport usage (in particular the heavy rail network) to help the centre to continue to grow. This includes improved pedestrian links from the train station to the key employment precinct.

4.3 Chatswood

In 2011 Chatswood had around 20,000 jobs.
– Chatswood has a relatively even spread of jobs between Retail Trade and Professional, Scientific and Technical Services with approximately 3,400 and 3,250 jobs respectively.
– The next largest employment source is in Health Care and Social Assistance with around 1,800 jobs.
– Construction and Information Media and Telecommunications are also significant employment sectors with approximately 1,650 and 1,550 jobs respectively.
– Employment in Chatswood declined in all periods, with the exception of 1996-2001 when there was a small level of growth (1.0 per cent). Over this same period the number of dwellings in Chatswood increased by 3,400 (3.8 per cent). This would suggest that there increased competition for sites within the Chatswood centre from housing, crowding out employment.
– This is combined with increased competition from other centres in the North subregion and other subregions (including Macquarie Park and Norwest) has resulted in high vacancy rates in the centre (13.5 per cent).
– This has resulted in a very narrow band of future employment outcomes.

TABLE 9. CHATSWOOD EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Chatswood	20,000	20,000	21,500
Growth Rate	0.0%	0.0%	0.3%

Challenges and opportunities:
– Ensuring that residential does not replace existing office space, and does not crowd out future potential office development.

4.4 St Leonards

Approximately 33,000 people are employed at St Leonards.

– Employment in St Leonards is predominantly in the Professional, Scientific and Technical Services with 8,700 jobs or 27 per cent of total employment. It is an extension of the North Sydney office market.
– Health Care and Social Assistance is the next largest area of employment with 8,200 jobs or 25 per cent of total employment.
– Average annual growth between 1996 and 2011 was been 0.2 per cent per year and 2.7 per cent. These rates produced a range of between 41,000 and 56,000.
– The number of dwellings in St Leonards increased by 3,700 (3.8 per cent). This would suggest that, like Chatswood, there is increased competition from housing for sites within the centre which is crowding out employment functions.
– To reach the Upper Bound of the projection, the jobs growth would be drawn mostly away from the Sydney CBD, North Sydney, Norwest, Macquarie Park and Chatswood.

TABLE 10. ST LEONARDS EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
St Leonards	41,000	46,000	56,000
Growth Rate	0.9%	1.3%	2.1%

Challenges and opportunities:

– Retaining the commercial core in St Leonards for long-term office employment growth
– Ensuring that health related employment land and infrastructure around Royal North Shore Hospital are protected and encouraged to develop.
– Unlocking potential future employment and housing opportunities associated with a Sydney Metro station at St Leonards/Crows Nest.

4.5 Brookvale-Dee Why

Brookvale-Dee Why had 12,500 jobs in 2011

– Brookvale-Dee Why is primarily a retail centre with some tourism related employment.
– Of a similar size and composition to Bondi Junction, total employment in Brookvale-Dee Why is over 12,000 with the majority of jobs in Retail Trade (3,400 or 28 per cent of total employment share).
– Health Care and Social Assistance, Wholesale Trade and Professional, Scientific and Technical Services each employ around 1,100 people, together making up 27 per cent of total employment share.
– Accommodation and Food Services employs 900 people.
– Compared to other strategic centres, Manufacturing also plays a significant role in delivering employment with over 900 jobs or 7 per cent of the total share of employment.
– The band for the employment projection of between 15,000 and 23,500 by 2036. To reach the Upper Bound of the projection, the jobs growth would be drawn from dispersed locations in the surrounding subregion.

TABLE 11. BROOKVALE EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Brookvale-Dee Way	15,000	20,000	23,500
Growth Rate	0.7%	1.9%	2.6%

Challenges and opportunities:

– Retaining the commercial core for long-term office employment growth

– Growing capacity for additional mixed-use development in Brookvale-Dee Why including offices, retail, services and housing.

4.6 Hornsby

In 2011 there were 10,000 jobs at Hornsby

– Hornsby is a retail centre with associated health care services.
– Employment in Hornsby is predominantly in Health Care and Social Assistance with approximately 2,600 jobs.
– Retail Trade is the second largest employment source with 2,300 jobs.
– Public Administration and Safety (800 jobs), Accommodation and Food Services (750 jobs) and Education and Training (600 jobs) are the next largest employment sectors.
– Average annual growth between 1996 and 2011 was been -0.4 per cent per year and 3.1 per cent. These rates produced a range of between 12,500 and 18,000.

TABLE 12. HORNSBY EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Hornsby	12,500	13,000	18,000
Growth Rate	0.9%	1.1%	2.4%

Challenges and opportunities:

– Retaining a commercial core in Hornsby, as required, for long-term employment growth.
– Support health-related land uses and infrastructure around Hornsby Ku-ring-gai Hospital.
– Improve walking and cycling connections between Hornsby train station and Hornsby Ku-ring-gai Hospital.

4.7 Northern Beaches Hospital Precinct

In 2011 there were 8,000 jobs at the Northern Beach Hospital Precinct

– The construction of the Northern Beaches Hospital commenced in mid-2015 and will be completed in 2018.
– In 2011 in the Northern Beaches Hospital Precinct, Wholesale Trade was the largest employment sector with approximately 2,400 jobs or 29% of total employment.
– Health Care and Social Services was the second largest source of employment with approximately 1,000 jobs.
– Retail trade was the third largest sector with around 800 jobs.
– Average annual growth between 1996 and 2011 was very high (10.4 per cent). Rather than using these very high growth rates, a range of between 1.6 per cent and 4.7 per cent was used.

TABLE 12. NORTHERN BEACHES HOSPITAL PRECINCT EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Northern Beaches Hospital Precinct	16,000	17,000	19,000
Growth Rate	2.8%	3.1%	3.5%

Challenges and opportunities:

– Deliver the Northern Beaches Hospital development.
– Support health-related land uses around the Hospital site.
– Provide road and public transport improvements for the Northern Beaches Hospital strategic centre.

5 CENTRAL

The Central subregion is the dominant economic region within Sydney. It plays a key role for Sydney, New South Wales and Australia. The Sydney CBD is an agglomeration of financial, media and professional services industries and a range of employment in other industries (e.g. Retail, Arts, Transport and Logistics). Global Sydney has over 400,000 jobs. The Central subregion is faced with considerable traffic congestion. This congestion results in many firms wanting to locate within the Sydney CBD to access the labour supply which the public transport network can provide. The clustering together also means that many trips can be undertaken on foot and hence remove the need to travel by car to meeting with clients and suppliers.

It has a strong tourism draw to both domestic and international visitors with many iconic places of national importance. The Central subregion also has key retail hubs (such as Pitt St Mall and Bondi Junction), health facilities (including Princes of Wales and Children's Hospitals and RPA) and universities (The University of New South Wales and The University of Sydney) which attract people from across Sydney, Australia and overseas.

The Sydney CBD is strongly linked with the eastern suburbs and the inner west of Sydney, but also has strong transport links to the other subregions. In particular it has strong links to the North subregion via the Global Economic Corridor. The Central subregion draws much of its labour force from the eastern suburbs and north shore but people travel across the whole of Sydney to access the 760,000 jobs. The diversity of activities in the subregion and high amenity residential locations options make it a desirable place to live and for business to locate.

Port Botany is key for freight movements while Sydney Airport's role is more focused on passenger movements many of which are in the financial, media and professional services industries.

5.1 Sydney CBD

The Sydney CBD is the largest employment centre in NSW with over 400,000 jobs.

- The strongest sector is Financial and Insurance Services with 90,800 jobs or 23 per cent of total employment.
- Professional, Scientific and Technical Services is the second largest employment sector, with approximately 79,300 jobs or 20 per cent of total employment.
- Service industries also play an important role in the Global Sydney, with over 27,000 jobs in Accommodation and Food Services and approximately 19,000 jobs in Administration and Support Services.
- The Information, Media and Telecommunications sector and the Public Administration and Safety sector are also significant employment sources, providing 26,350 and 29,800 jobs respectively.
- Average annual growth between 1996 and 2011 was been 1.4 per cent per year and 2.4 per cent. Over this same period almost 30,000 dwellings were added to Sydney CBD and surrounding areas.
- The historical growth rates produced a range of between 615,000 and 705,000. Sydney CBD is one of only three centres (Macquarie Park and Randwick) where the BTS projections is below the Lower Bound (see Table 25).
- To reach the Upper Bound of the projection, the jobs growth would be drawn mostly away from the Sydney Airport Precinct, Macquarie Park, North Sydney, St Leonards and Chatswood.

TABLE 13. SYDNEY CBD EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Sydney CBD	615,000	660,000	705,000
Growth Rate	1.7%	2.0%	2.3%

Challenges and opportunities:

- Provision of office floor space. Sydney CBD is constrained by Sydney Harbour and key pieces of open space. Growth in floor space will have to be driven by increasingly large commercial buildings. There is an imperative to provide capacity for long-term office growth in Sydney CBD, but ensuring that that residential does not crowd out potential office development.
- The maximum employment capacity of Sydney CBD was assumed to be strongly linked with the capacity of the morning peak period for workers traveling to the CBD. If the transport network cannot accommodate an increased workforce, employment growth will slow.
- Transport within Sydney CBD is required to ensure the various precincts are well integrated and can tap into the vast agglomeration benefits.
- Ensuring safe airspace for aircraft movements is a particular challenges for the Sydney CBD, which faces increasing demand for additional employment space achieved through taller buildings.

5.2 Randwick Education and Health

In 2011 there were 14,500 jobs.

- Employment in the Randwick Education and Health centre is fairly evenly distributed between Education and Training with 6,200 jobs and Health Care and Social Assistance with 6,550 jobs.
- All other sectors provide significantly lower levels of employment. The next largest sector is Professional, Scientific and Technical Services with 420 jobs.
- Average annual growth between 1996 and 2011 was been 1.4 per cent per year and 5.8 per cent. These rates produced a range of between 28,500 and 37,000. Randwick is one of only three centres (Macquarie Park and Global Sydney) where the BTS projections is below the Lower Bound (see Table 25). To reach the Upper Bound of the projection, the jobs growth would be drawn from other hospitals and universities across Sydney.

TABLE 14. RANDWICK EDUCATION AND HEALTH EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Randwick Education and Health	28,500	33,000	37,000
Growth Rate	2.7%	3.3%	3.8%

Challenges and opportunities:

- Locating sites for urban renewal surrounding education and health facilities for office and retail.
- Supporting health-related land uses and infrastructure around Prince of Wales Hospital and Sydney Children's Hospital.
- Support education-related land uses and infrastructure around The University of New South Wales.

5.3 Rhodes

There were 14,000 jobs at Rhodes in 2011.

- Rhodes is an urban renewal site attracting new housing and employment over the past 15 years.
- Rhodes has a strong Health Care and Social Assistance sector with 2,650 jobs or 19 per cent of total employment.
- The Financial and Insurance Services sector provides approximately 2,250 jobs.
- The next largest sectors are manufacturing with 1,600 jobs and Wholesale Trade also with approximately 1,600 jobs.
- Average annual growth between 1996 and 2011 was been -2.0 per cent per year (reflecting the departure of industrial jobs) and 5.9 per cent. These rates produced a range of between 20,000 and 47,500 jobs.
- To reach the Upper Bound of the projection, the jobs growth would be drawn from across the Central subregion and to a lesser degree Greater Parramatta.

TABLE 16. RHODES EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Rhodes	20,000	25,000	35,750
Growth Rate	1.5%	2.6%	5.0%

Challenges and opportunities:

- Supporting health-related land uses and infrastructure around Concord Hospital.
- Identifying commercial sites to ensure ongoing employment growth in Rhodes.
- Improving links between Rhodes train station and Concord Hospital to allow greater use of public transport.

5.4 Bondi Junction

In 2011 Bondi Junction had 12,000 jobs.

- Bondi Junction is a major retail centre with associated health care services and some commercial development.
- The largest employment sector in Bondi Junction is Retail Trade with approximately 3,400 jobs. This makes up 28 per cent of total employment.
- Health Care and Social Assistance is the next largest sector with approximately 1,400 jobs.
- Professional, Scientific and Technical Services and Accommodation and Food Services also absorb some employment with 1,150 and 1,000 jobs respectively.
- Average annual growth between 1996 and 2011 was between 0.0 per cent per year and 1.0 per cent. There has been moderate growth in dwellings (an additional 1,000) over the same period. These rates produced a range of between 11,000 and 16,000 jobs.
- The Upper Bound of the employment projections would be reached by drawing dispersed jobs from across the eastern suburbs.

TABLE 16. BONDI JUNCTION EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Bondi Junction	13,500	14,000	15,000
Growth Rate	0.5%	0.6%	0.9%

Challenges and opportunities:

- Obtaining sufficient employment lands in a centre which is surrounded by residential development.
- Attracting more office employment in addition to population serving employment.

5.5 Burwood

In 2011 Burwood had 11,500 jobs.

- Burwood plays a retail centre role with some commercial and light industrial employment.
- Retail Trade employs approximately 2,200 people, representing 19 per cent of the total share of employment.
- Health Care and Social Assistance is the second largest employment source with around 1,650 jobs.
- Uniquely compared to other centres, employment in Transport, Postal and Warehousing plays an important role with approximately 1,400 jobs or 12% of total employment in the area.
- There has been little employment growth since 1996 (between -0.4 per cent per year and 0.4 per cent). This reflects a decline in industrial / manufacturing employment surrounding the core of the centre. There has 700 additional in dwellings (1.3 per cent) over the same period so residential does not appear to be heavily competing for sites.

TABLE 17. BURWOOD EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Burwood	12,000	12,000	12,500
Growth Rate	0.2%	0.2%	0.3%

Challenges and opportunities:

- Providing additional mixed-use development in Burwood including offices, retail, services and housing to accommodate more jobs and a growing population.
- Improve transport links to other centres to the east (Global Sydney) and west (Greater Parramatta) to improve agglomeration economies.

5.6 Sydney Airport Precinct

In 2011 there were 38,000 jobs in the Sydney Airport Precinct

- Employment in the Sydney Airport Precinct is predominantly in the Transport, Postal and Warehousing sector with 20,650 jobs.
- The next largest sectors are Public Administration and Safety with 2,700 jobs and Accommodation and Food Services with 2,600 jobs.
- Other significant employment sectors include Wholesale Trade with 1,700 jobs, Administration and Support Services with 1,650 jobs and Retail Trade with 1,550 jobs.
- Average annual growth between 1996 and 2011 was between 0.1 per cent per year and 4.1 per cent. These rates produced a range of between 43,500 and 65,000 jobs. The Upper Bound of the employment projections would be reached by drawing dispersed jobs from across the Central subregion.

TABLE 18. SYDNEY AIRPORT PRECINCT EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Sydney Airport	43,500	57,000	65,000
Growth Rate	0.5%	1.6%	2.2%

Challenges and opportunities:

- Provision of office floor space in a centre which is surrounded by transport and industrial uses.
- The impact of development of the Second Sydney Airport

5.7 Green Square

In 2011, there were 3,000 jobs in Green Square.

- These were was relatively equally spread between Wholesale Jobs, Retail Trade and Manufacturing. The remaining jobs are spread across all other industries.
- Green Square has undergone, and will continue to undergo, significant change. Average annual growth between 1996 and 2011 was between -0.5 per cent per year and 0.5 per cent. Manufacturing employment has halved over the period while Retail has doubled. This reflects the 4,300 additional dwellings being constructed in and surrounding the centre.
- Over the next twenty years, the population of the Green Square strategic centre will grow by an additional 20,000 people. This population will require a range of population serving jobs.
- It was assumed that Green Square would grow a 1 percentage point higher than the Global Sydney historical growth rates over the past 15 years. This resulted in growth rates ranging between 2.4 and 3.4 per cent.

TABLE 19. GREEN SQUARE EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Green Square	6,000	6,000	7,000
Growth Rate	2.8%	2.8%	3.4%

Challenges and opportunities:

- Ensuring that housing does not crowd out employment functions. Green Square is unlikely to provide pure office developments but mixed-use development in Green Square for offices-retail-commercial- services to serve the local population is possible.

5.8 Port Botany Precinct

In 2011 there were 12,700 jobs at the Port Botany Precinct.

- The Port Botany Precinct has approximately 12,700 jobs, mostly within the Transport, Postal and Warehousing Sector with approximately 4,500 jobs.
- The second largest employment sector is Manufacturing with approximately 2,450 jobs.
- The third largest source of employment in the Port Botany Precinct is Wholesale Trade with 1,650 jobs.

TABLE 6. PORT BOTANY PRECINCT EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Port Botany Precinct	22,250	23,000	26,500
Growth Rate	2.3%	2.5%	3.1%

Challenges and opportunities:

– Protect Port Botany's function as an international gateway for freight and support port-related land uses and infrastructure in the area around the port.
– Protect strategically important industrial zoned land at Port Botany Precinct to allow ongoing employment.

6 WEST SUBREGION

The West subregion has over 100,000 jobs – 5 per cent of all jobs in Sydney. A quarter of these jobs are located at the Penrith and the Penrith Education and Health strategic centres. The remainder of the jobs in the West subregion are scattered in a number of industrial areas and smaller retail centres. Employment is able to disperse due to relatively good transport accessibility. As a business can interact with clients and suppliers and its workers via car, there is little benefit to locate in a centre where car parking may be limited. Even if public transport access is good in the centre, in the West subregion car travel will be the superior way for workers to access their jobs and business to business interaction.

The economy of the West subregion has a strong focus on population serving industries. Manufacturing transport and logistics play an important role in the subregion. The West subregion also provides a link between productive agricultural lands further to the west and the key markets in the rest of Sydney.

Construction represents around 10 per cent of total jobs in the subregion.

The West subregion also has a number of niche industries. For example, the Greater Blue Mountains World Heritage Area is a key tourist attraction which brings people and spending into the region, generating tourism spending and associated employment opportunities. Sport science industries are also based around the world class sporting facilities at Penrith Lakes. The Royal Australian Air Force's base at Richmond employs 2,000 people plus more in off base support industries. There around 2,000 people employed in Agriculture, Forestry and Fishing which represented 30 per cent of the industry in Sydney.

6.1 Penrith

In 2011 there were 15,500 jobs located at Penrith

- The centre plays a regional retail and population serving role.
- Retail Trade and Public Administration and Safety are respectively the largest sectors with 3,350 and 3,200 jobs. Combined these make up 33 per cent of total employment in Penrith.
- Employment in Penrith follows a similar trend to other outer ring centres (such as Campbelltown-Macarthur and Liverpool), where the Health Care and Social Assistance sector is a major employer. Penrith has around 2,500 jobs in the sector.
- Accommodation and Food Services employment makes up 10 per cent of total employment with nearly 1,900 jobs.
- Average annual growth between 1996 and 2011 was between 0 per cent per year and 3 per cent. These rates produced a range of between 20,500 and 34,000 jobs. To reach the Upper Bound of the projection, the jobs growth would be drawn mostly away from dispersed employment in the subregion and to a lesser extent from centres such as Parramatta and Blacktown.

TABLE 20. PENRITH EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Penrith	20,500	26,000	34,000
Growth Rate	1.1%	2.1%	3.2%

Challenges and opportunities:

- Retaining a commercial core in Penrith, as required, for long-term employment growth.
- Providing capacity for additional mixed-use development in Penrith including offices, retail, services and housing.

6.2 Penrith Education and Health

In 2011 there were 6,000 jobs at this centre.

- The major source of employment in the Penrith Education and Health centre is Education and Training with approximately 5,050 jobs.
- The next largest employment sector is Public Administration and Safety with 220 jobs.
- The range for future employment is between 7,500 and 11,500. To reach the Upper Bound of the projection, the jobs growth would be drawn mostly away from the other health and education precincts across Sydney.

TABLE 21. PENRITH EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Penrith Education and Health	7,500	11,000	11,500
Growth Rate	0.9%	2.5%	2.6%

Challenges and opportunities:

- Supporting health-related land uses and infrastructure around Nepean Hospital.
- Supporting education-related land uses and infrastructure around the University of Western Sydney.
- Potentially integrating Penrith Education and Health with a future northerly extension of the South West Rail Link could increase development potential.

7 SOUTH WEST SUBREGION

The economy of the South West subregion has a strong focus on population serving industries. The South West subregion has over 200,000 jobs – 10 per cent of all jobs in Sydney. 32,000 of these jobs are located at the strategic centres of Leppington, Liverpool and Campbelltown-Macarthur. The remainder of these jobs are dispersed across the region in and smaller centres, rural areas and a range of industrial areas. Employment is able to disperse across a number of locations due to transport accessibility by car being relatively good. As a business can interact with clients and suppliers and its workers via car, there is little benefit to locate in a centre where car parking may be limited. Even if public transport access is good in the centre, in the South West region car travel will be the superior way for workers to access their jobs and business to business interaction. The small size (in terms of employment) of the centres in the South West also doesn’t provide a large enough economic mass to attract employment.

Reflecting the ongoing population growth the construction industry is an economic strength of the South West subregion with 15,000 jobs based in the subregion. Construction has strong linkages into the manufacturing industry in the South West subregion. For example there is a degree of specialisation in Fabricated Metal Product Manufacturing industry. This reflects an input into the residential housing (structural beams and frames etc.) but also provides opportunities for export of more advanced metal products.

Transport and logistics play an important role in the subregion. The M7 provides links for these industries to the key industrial hubs in the West Central subregion. The M5 provides access to Port Botany and Sydney Airport. This transport and logistics specialisation will continue to grow in the South West subregion with ongoing investment in Intermodal Terminals (e.g. Moorebank and longer term Macarthur terminals).

7.1 Campbelltown-Macarthur

Campbelltown-Macarthur contains over 15,000 jobs.

- This centre plays a regional retail and population serving role.
- Campbelltown-Macarthur is a strong employment centre for Health Care and Social Assistance with approximately 3,950 jobs. This is a 26% share of total employment.
- The second largest employment source in Campbelltown-Macarthur is Retail Trade with over 3,000 jobs.
- Accommodation and Food Services, Public Administration and Safety, and Education and Training sectors employ approximately 4,500 people combined. Each sector absorbs approximately 10% of the share of total employment in Campbelltown-Macarthur.
- Average annual growth between 1996 and 2011 was been -1.0 per cent per year and 5.9 per cent. These rates produced a range of between 15,000 and 37,500.
- To reach the Upper Bound of the projection, the jobs growth would be drawn mostly away from the elsewhere in the subregion and to a lesser extent from the Liverpool centre.

TABLE 22. CAMPBELLTOWN-MACARTHUR EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Campbelltown-Macarthur	15,000	22,000	37,500
Growth Rate	0.0%	1.5%	3.7%

Challenges and opportunities:

- A strong retail centres policy for the south west growth area to ensure that a concentration of retail and other population serving employment locates in Campbelltown-Macarthur.
- Retaining a commercial core in Campbelltown-Macarthur, as required, for long-term employment growth.
- Provide capacity for additional mixed-use development in Campbelltown-Macarthur including offices, retail, services and housing.
- Support health-related land uses and infrastructure around Campbelltown Hospital

7.2 Liverpool

Liverpool contained over 17,000 jobs in 2011.

- The Liverpool centre plays a regional retail and population serving role.
- The most significant employment sector in Liverpool is Health Care and Social Assistance with over 6,250 jobs (37% share of local employment).
- Retail trade makes up the second largest sector for employment in Liverpool with more than 2,150 jobs.
- Public Administration and Safety is the third largest sector, employing over 1,500 people.
- This industry profile highlights the population serving role that Liverpool plays in the South West subregion.
- Average annual growth between 1996 and 2011 was been 0.0 per cent per year and 4.1 per cent. These rates produced a range of between 20,000 and 36,000.
- To reach the Upper Bound of the projection, the jobs growth would be drawn mostly away from the elsewhere in the subregion and to a lesser extent from the Parramatta.

TABLE 23. LIVERPOOL EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Liverpool	20,000	26,000	36,000
Growth Rate	0.7%	1.7%	3.0%

Challenges and opportunities:

- Retain a commercial core in Liverpool, as required, for long-term employment growth.
- Provide capacity for additional mixed-use development in Liverpool including offices, retail, services and housing.
- Investigate potential future uses of land located east of Georges River and north of Newbridge Road.
- Support health-related land uses, infrastructure at the Liverpool Hospital.
- Improve pedestrian and cycle connections to the station from east of the train line and between Liverpool and the Georges River.

7.3 Leppington

In 2011 Leppington had 500 jobs.

- Leppington has around 50 jobs in Health Care and Social Assistance. This makes up 17% of total employment locally.
- Education and Training, Agriculture, Forestry and Fishing, Retail Trade and Transport, Postal and Warehousing are the next largest employment sectors with approximately 30 jobs in each.
- Construction and Other Services employ 20 people each.
- Average annual growth between 1996 and 2011 are not a useful guide for future projections. The assumed rates produced a range of between 7,500 and 15,500.

TABLE 24. LEPPINGTON EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Leppington	7,500	12,000	15,500
Growth Rate	11.4%	13.6%	14.7%

Challenges and opportunities:

- Plan Leppington as a mixed-use strategic centre focused on the new Leppington train station with capacity for long-term employment growth including offices, retail, services and housing.

8 SOUTH

Transport and logistics plays an important role in the South subregion given the access to Sydney Airport and Port Botany. The South subregion provides a link between Sydney's global gateways and the west and south west of Sydney. In particular the M5 provides good access to the to the transport and logistics clusters in the South West and Central West subregions. The South subregion is also the link between Sydney and the economy and housing market of the Illawarra Region.

The South subregion has over 185,000 jobs– around 8 per cent of all jobs in Sydney. Over 20,000 of these jobs are located at the strategic centres of Hurstville and Kogarah. These centres have a strong focus on population serving industries with a strong retail and health care facilities. Recent population growth in the South subregion has been slower than other subregions and hence there has not as been as much population serving employment. Many of the local population work in the Central subregion and hence strong transport links to that region are very important for local business and residents.

There is dispersed employment across the region including commercial and light industrial developments along the Princes Highway and in a number of industrial areas. Employment is able to disperse across a number of locations due to transport accessibility by car being relatively good. As a business can interact with clients and suppliers and its workers via car, there is little benefit to locate in a centre where car parking may be limited. Even if public transport access is good in the centre, for jobs in the subregion car travel will be the superior way for many workers to access these and business to business interaction.

The state of the art research facilities at the Open Pool Australian Lightwater (OPAL) reactor is used for a range of nuclear medicine, research, scientific, industrial and production goals. Tourism is a competitive strength along the coastal areas (e.g. Cronulla Beach, Botany Bay National Park, Captain Cook's Landing).

8.1 Kogarah

In 2011 Kogarah had 10,250 jobs

- The St George Hospital is the key anchor in the centre with some retail and office employment.
- Employment in Kogarah is mostly within Health Care and Social Assistance. Over 50% or approximately 5,500 jobs are in this sector.
- Financial and Insurance Services (the St George Bank headquarters) is the second largest employment source with 1,400 jobs.
- Education and Training make up the third largest source of employment with approximately 950 jobs.
- Average annual growth between 1996 and 2011 was been -0.1 per cent per year and 2.3 per cent. These rates produced a range of between 12,500 and 18,000.
- To reach the Upper Bound of the projection, the jobs growth would be drawn mostly away from the elsewhere in the subregion.

TABLE 24. KOGARAH EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Kogarah	12,500	15,000	18,000
Growth Rate	0.8%	1.5%	2.3%

Challenges and opportunities:

- The key challenge is ensuring the decline in employment in the centre is reversed. This will require improvements in local amenity and the overall attractiveness of the centre as a retail destination.
- Strengthen transport links to Central subregion with additional services train services.
- Retain a commercial core, as required, for long-term employment growth; and
- Support health-related land uses and infrastructure around St George Hospital.

8.2 Hurstville

Hurstville contains a similar amount of jobs compared to Kogarah, with around 10,500 jobs.

- Hurstville is a population serving centre with retail and other services the main employers.
- Hurstville has a strong Public Administration and Safety employment sector with approximately 1,900 jobs and a strong Retail Trade with 1,800 jobs. These sectors make up 35% of total employment locally.
- Financial and Insurance Services as well as Health Care and Social Assistance are also significant local employment sectors with approximately 1,300 and 1,250 jobs respectively.
- Accommodation and Food Services along with Professional, Scientific and Technical Services make up third tier employment sources with around 750 and 650 jobs respectively.
- Average annual growth between 1996 and 2011 was been -0.8 per cent per year and 0.7 per cent. These rates produced a range of between 11,000 and 12,500.

TABLE 25. HURSTVILLE EMPLOYMENT PROJECTIONS

	Lower Bound	Mid Point	Upper Bound
Hurstville	11,000	11,500	12,500
Growth Rate	0.2%	0.4%	0.7%

Challenges and opportunities:

- The key challenge is ensuring the decline in employment in the centre is reversed. This will require improvements in local amenity and the overall attractiveness of the centre as a retail destination.
- Strength transport links to Central subregion with additional services train services.

- Retain a commercial core, as required, for long-term employment growth.
- Provide capacity for additional mixed-use development in Hurstville including offices, retail, services and housing.

9 CENTRE STATISTICS

TABLE 25. CENTRE STATISTICS

		Employment		Employment			Growth rates					Historical Growth Rates						Growth Rates Used					
Region	Centre	1996*	2011**	Lower Bou	Mid Point	Upper Bound	Lower Bou	Mid Point	Upper Bound	Max Grow	Min Growth Rate	1996-2001	2001-2006	2006-2011	1996-2006	2001-2011	1996-2011	1996-2001	2001-2006	2006-2011	1996-2006	2001-2011	1996-2011
West Central	Parramatta	59500	76500	90000	117000	141000	1%	2%	2%	4%	0%	0%	4%	1%	2%	2%	2%	0%	2%	1%	2%	2%	2%
West Central	Bankstown	13000	11000	11000	11000	12000	0%	0%	0%	1%	-4%	-4%	-1%	1%	-2%	0%	-1%	0%	0%	1%	0%	0%	0%
West Central	Blacktown	8500	11000	12500	17000	21500	1%	2%	3%	6%	-2%	1%	6%	-2%	3%	2%	2%	1%	2%	0%	3%	2%	2%
West Central	Castle Hill	7000	8000	8000	10000	14000	0%	1%	2%	4%	-1%	4%	-1%	0%	1%	-1%	1%	4%	0%	0%	1%	0%	1%
West Central	Norwest	500	19500	38000	41000	43500	3%	3%	3%	30%	8%	30%	23%	8%	26%	15%	20%	3%	2%	3%	3%	3%	3%
West Central	Rouse Hill	200	2000	6000	7000	7500	4%	5%	5%	36%	13%	13%	13%	36%	13%	24%	20%	5%	4%	5%	5%	5%	5%
West Central	Olympic Park	7000	10000	14500	19000	35000	1%	3%	5%	6%	0%	4%	6%	0%	5%	2%	2%	4%	6%	0%	5%	2%	2%
West Central	Bankstown Airport - Milperra	13500	15000	15000	17000	26000	0%	1%	2%	0%	0%	0%	3%	-2%	1%	2%	1%	0%	3%	0%	1%	2%	1%
North	Hornsby	8000	10000	12500	13000	18000	1%	1%	2%	3%	0%	0%	3%	1%	1%	2%	1%	0%	3%	1%	1%	2%	1%
North	Brookvale-Dee Why	6000	12500	15000	20000	23500	1%	2%	3%	13%	1%	1%	13%	1%	7%	7%	5%	1%	2%	1%	4%	2%	2%
North	Chatswood	21500	20000	20000	20000	21500	0%	0%	0%	1%	-1%	1%	-1%	-1%	0%	-1%	0%	1%	0%	0%	0%	0%	0%
North	St Leonards	27000	33000	41000	46000	56000	1%	1%	2%	3%	0%	1%	3%	0%	2%	1%	1%	1%	3%	0%	2%	1%	1%
North	Macquarie Park	23500	54000	82000	88000	94500	2%	2%	2%	8%	3%	3%	5%	8%	4%	7%	5%	2%	1%	2%	2%	2%	2%
North	Northern Beaches Hospital Precinct	1500	8000	16000	17000	19000	3%	3%	4%	27%	2%	2%	27%	5%	15%	13%	10%	2%	3%	5%	3%	3%	3%
North	North Sydney	44000	51500	55000	67000	79500	0%	1%	2%	3%	-1%	1%	-1%	3%	0%	1%	1%	1%	0%	3%	0%	1%	1%
West	Penrith	11500	15500	20500	26000	34000	1%	2%	3%	3%	0%	3%	3%	0%	3%	1%	2%	3%	3%	0%	3%	1%	2%
West	Penrith Education and Health	0	6000	7500	11000	11500	1%	2%	3%	27%	-1%	27%	-1%	3%	1%	13%	9%	2%	0%	3%	1%	3%	3%
South West	Leppington	0	500	7500	12000	15500	11%	14%	15%	14%	-4%	5%	4%	-4%	5%	0%	14%	8%	15%	8%	15%	15%	20%
South West	Liverpool	13500	17000	20000	26000	36000	1%	2%	3%	4%	0%	1%	4%	0%	3%	2%	2%	1%	4%	0%	3%	2%	2%
South West	Campbelltown-Macarthur	12000	15000	15000	22000	37500	0%	2%	4%	6%	-1%	-1%	6%	0%	2%	3%	1%	0%	6%	0%	2%	3%	1%
South	Hurstville	10500	10500	11000	11500	12500	0%	0%	1%	1%	-1%	-1%	1%	1%	0%	1%	0%	0%	1%	1%	0%	1%	0%
South	Kogarah	8500	10250	12500	15000	18000	1%	2%	2%	2%	0%	2%	2%	0%	2%	1%	1%	2%	2%	0%	2%	1%	1%
Central	Sydney CBD	298000	403500	615000	660000	705000	2%	2%	2%	2%	1%	2%	1%	2%	2%	2%	2%	2%	1%	2%	2%	2%	2%
Central	Bondi Junction	11000	12000	13500	14000	15000	0%	1%	1%	1%	0%	0%	1%	1%	0%	1%	1%	0%	1%	1%	0%	1%	1%
Central	Burwood	11500	11500	12000	12000	12500	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Central	Randwick	8500	14500	28500	33000	37000	3%	3%	4%	6%	1%	1%	6%	3%	4%	4%	3%	1%	3%	3%	4%	4%	3%
Central	Green Square	3000	3000	6000	6000	7000	3%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	3%	2%	3%	3%	3%	3%
Central	Burwood	11500	11500	12000	12000	12000	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Central	Rhodes	9500	14000	20000	25000	35750	0%	2%	4%	6%	0%	4%	6%	0%	5%	2%	2%	4%	6%	0%	5%	2%	2%
Central	Sydney Airport	30000	38000	43500	57000	65000	1%	2%	2%	4%	0%	0%	4%	1%	2%	2%	2%	0%	2%	1%	2%	2%	2%
Central	Port Botany Precinct	8500	12500	22250	23000	26500	2%	2%	3%	3%	2%	2%	3%	3%	3%	3%	3%	2%	3%	3%	3%	3%	3%

*estimate of 1996 employment for DPE centre boundary

** 2011 BTS centre boundary estimate

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