Ku-ring-gai & Hornsby Subregional Employment Study

Final Report

Hornsby & Ku-ring-gai Councils May 2008



This report has been prepared on behalf of:





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Executive Summary

Scope of Work

SGS has been commissioned to complete an Employment Lands Study on behalf of Hornsby and Ku-ring-gai Councils. This Study will assist planning for employment within these two LGAs.

Together, Hornsby and Ku-ring-gai LGAs comprise the North Subregion, for which there is an employment capacity target of 13,500 new jobs to 2031. This Study will provide guidance on accommodating this employment target. Opportunities to strengthen centres, and to protect and promote employment lands, will be identified in parallel with the development of strategies to promote economic growth.

The objectives of the Study are to:

- Ensure local employment land strategies facilitate opportunities for the Subregional employment targets for the North Subregion
- Ensure that the distribution of additional jobs supports existing centres
- Identify opportunities to provide employment lands in accordance with the strategic areas identified in the Metropolitan Strategy (including Section A: Economy and Employment)
- Develop a strategy for zoning, land uses and controls for employment lands that is consistent with current strategic planning guidance
- Develop a strategy for the provision of employment lands to encourage economic growth to complement population growth
- Identify employment lands in strategic areas that are accessible to residents and workers and are linked into the transport network

Economic & Policy Context

This section sets the broad economic and policy framework for the Study. It includes a discussion of the key economic trends and drivers for Sydney SD and the North Subregion, the policy context (in terms of state and local government strategy and policy).

The key findings of this section are summarised below:

- The sub-region has many of the 'keys to competitiveness'. The sub-region already has
 many of the attributes necessary for competitiveness. These include: enabling infrastructure,
 education and health facilities, adequate labour pool, business sophistication and quality of life.
- The movement of low-density employers may favour the sub-region. With the growth in logistics and warehousing the amount of land consumed per employee has increased and



this has accelerated demand for large lots on the urban fringe. At face value, high levels of land availability and good infrastructure access should position the area well of these industries

- The sub-region is well placed for high levels of home based work. The attraction of home based work is flexibility in work hours and the avoidance of a commute to work. Thus, incidence of home based work is usually highest in areas that are distant from employment centres. Home based work is also often high in areas with high quality natural environments. Home-based work is also attractive to mature age and disabled workers. With older populations of Hornsby and Ku-ring-gai may benefit from the lifestyle change that home-based work can offer. And with all fringe areas in the Sydney Metropolitan area it can provide greater employment opportunities, particularly in places where there is not a large variety of work options
- Policy direction to promote growth in centres. Both the Metropolitan Strategy and the Draft North Subregional Strategy provide a clear indication that economic growth should be concentrated in centres particularly those at the top end of the centres hierarchy. For the North Subregion, this means a renewed focus on Hornsby as an employment and activity centre. The Subregional Strategy has a target of 13,500 additional jobs by 2031 with Hornsby centre expected to accommodate 3,000 of those jobs.

The Economy of the Sub-region

The economy of the North Subregion to outline the character in terms of its assets and infrastructure, its demographic and socio-economic profile, its industrial base and employment characteristics, and local business issues. This analysis draws heavily on ABS Census data from 2001 and 2006 together with TDC Journey to Work Data (2001). Information on local business issues is dawn from primary research into local business completed as part of this Study.

The key findings can be summarised as follows:

• **Economic specialisation in health and education**. Employment in health and education is very high in the sub-region. In 2006, health and education were among the top 5 employing sectors in both LGAs. In addition, health and education industry sectors have displayed the strongest growth in the 2001-2006 period.

There are several key institutions responsible for some of these jobs. In Hornsby, the Hospital and TAFE are key employers. In Ku-ring-gai, the two most significant 'magnet institutions' are the Sydney Adventist Hospital and UTS Lindfield campus.

One of the challenges for the Study is that while these institutions are large employers, Councils will typically have limited control in their planning and future growth.

• Importance of arterial infrastructure. Both of the LGAs in the sub-region have arterial infrastructure as a spine for economic activity. The North Shore rail line, with the Pacific Highway running in parallel dominate Ku-ring-gai LGA with the commercial centres scattered along its length. Similarly, in Hornsby, the Northern Line and the North Shore line with the Pacific Highway running to the north dominate patterns of economic activity.



The accessibility of employment lands to this infrastructure is vital for many industries. Most obviously, time dependant industries such as transport and storage, distribution, and logistics functions require arterial road access. However, many other sectors require both accessibility to and visibility from he main roads. Examples here include Bulky Goods Retail, larger office functions and 'business park' land uses.

Proximity to transport nodes is important for land uses that generate large numbers of trips – especially those that draw activity from a wide catchment. These types of uses are higher order retail functions (larger shopping centres and Bulky Goods Retail), office functions and central community services.

• 'Leakage' of professional workers. In broad terms, origin-destination analysis has shown that there are fewer jobs in the Manager and Administrator and Professionals & Associate Professional categories than there are workers – suggesting a 'leakage' of employment. This is particularly marked for these occupation categories in the construction sector. While this is true for both LGAs, for Ku-ring-gai, there is a greater level of employment leakage in general and as with Hornsby, the leakage is more pronounced in the Managers and Administrators and Professionals & Associate Professionals categories.

While the leakage of higher order employment may simply be related to the fact that the subregion has a disproportionate level of executive housing. On the business side of the equation, it is just as possible that there is a lack of higher order job opportunities in the sub-region for its executive resident workers.

High growth in retail and personal services. Outside of health and education, most of the
employment in the sub-region is driven by retail and services. However, the 2001-2006
picture is far from consistent at the LGA level. In Hornsby, retail trade grew by 536 jobs in the
2001-2006 period while in Ku-ring-gai retail trade fell by 493 jobs.

In terms of total employment 'Retail Trade', 'Property & Business Services', 'Education & Training and' and Health Care & Community Services' remain the most significant employing industry sectors.

- **Decline in professional services**. The decline of professional services employment in the sub-region gives some cause for concern. In the 2001-2006 period, in Ku-ring-gai property and business services fell by 491 jobs and in Hornsby, finance and insurance fell by 526 jobs.
- Very high degree of home based work (HBW). Compared with other regions in Sydney GMR, Hornsby-Ku-ring-gai has the highest levels of home based work and has shown significant growth in the 1996-2001 period. In Hornsby, the highest incidence of home based work occurs in the 'Professionals' and 'Associate Professionals' category followed by 'Clerical and Service' workers. Particularly high levels occur in the Property & Business Services and Construction, 'Manufacturing' and 'Wholesale Trade' categories. In Ku-ring-gai, the highest incidence of home based work occurs in the 'Professionals' and 'Associate Professionals' category followed by 'Clerical and Service' workers. Particularly high levels occur in the Communication Services industry category with significant proportions also in Government Administration & Defence.

Home based work does not appear to be a temporary state of business operation. Through consultation home based workers in the sub-region have suggested that work from home is driven by the benefits of this way of working rather than any shortage of suitable business space elsewhere.



Current Land Use

A 'supply-side' assessment was completed as part of this employment study. The most important component was the completion of a land-use audit of zoned employment land in the sub-region. For Ku-ring-gai, the audit included business zoned land in the commercial centres. For Hornsby, the audit included all business and industrial zones.

This report discusses the findings of previous employment studies and details the headline findings from the SGS land use audit. Audit data is a key component for this Study. It provides a clear indication of both the volume and character of employment land use against which the demand forecasts can be examined.

The key findings from this section are summarised below:

- The largest land use category in employment zones does not generate employment. the 'other' category accounts for the greatest proportion of floorspace in the surveyed areas. This category includes car parking, floorspace in vacant buildings and residential floorspace. For Hornsby, 'Other' floorspace accounts for 551,357 sqm. For Ku-ring-gai, the 'other' category accounts for 131,336 sqm.
- Office uses dominate Ku-ring-gai's employment zones. For Ku-ring-gai, Main Street Retail (RM) and office (O) land uses occupy the greatest amount of floorspace (178,354 sqm and 176,937 sqm respectively).
- Retail uses dominate Hornsby's employment zones. For Hornsby, big box retail (RB) occupies the largest amount of floorspace (371,003 sqm), followed by Main Street Retail (RM) (275,524 sqm)
- Existing employment zones accommodate a wide range of land uses. In both LGAs, the various employment zones host a wide range of land uses. There is a significant proportion of bulky goods (RBG) and Main Street Retail (RM) in the Industrial (b) zones. In the Business (e) and Business (b) zones, there is a significant proportion of light manufacturing (ML) and freight and logistics (FL) activity. Both business and industrial zones also have significant residential floorspace totals.
- There are high levels of supply in both LGAs. Within the limits of the current planning controls there is a total of 3,059,857 sqm in Hornsby and 750,813 sqm in Ku-ring-gai. Of this total 1,421,977 sqm and 379,153 sqm is used for employment purposes in Hornsby and Ku-ring-gai respectively. 169,536 sqm of floorspace is vacant in Hornsby with 24,813 sqm vacant in Ku-ring-gai. In terms of total supply potential, inder the max FSR scenario, Ku-ring-gai has a total of 391,869 sqm (under the draft LEP) and Hornsby has 1,689,969 sqm or 1,420,505 sqm when constrained land is taken into account. Under the 80% of max FSR scenario, Ku-ring-gai has 246,596 sqm and Hornsby has 697,278 sqm or 595,168 sqm when constrained land is taken into account.



Forecast Demand

This report discusses employment and floorspace forecasts used in this Study. Both employment and floorspace forecasts are described for each LGA at the 1 digit ANZSIC level for the 2006-2031 period. Using the data from the land use audit these are then converted into BLCs. This is important step in the process as the BLCs allow for better spatial analysis.

The forecasts described in this report represent the demand side of the Study. These are weighed against the supply side data gathered from the land-use audit in the assessment of the subregion's capacity to absorb future economic growth. Importantly, these employment and floorspace forecasts are presented as 'baseline' forecasts. The role of policy intervention to change prevailing trends is discussed in later sections.

The key findings from this section are summarised below:

- Strong forecast growth in property & business services. This sector displays very strong growth in Ku-ring-gai for the period 2006-2031. In line with forecast employment growth, demand for floorspace from 'Property & Business Services' is high at 49,428 sqm over the 2006-2031 period. The next highest in terms of floorspace demand comes from the 'Retail Trade' sector with forecast demand for an additional 15,031 sqm in the 2006-2031 period. for Hornsby for the period 2006-2031. In line with forecast employment growth, demand for floorspace from 'Property & Business Services' and 'Retail Trade' is high at 56,185 sqm and 58,946 respectively over the 2006-2031 period.
- **High demand for office space in Ku-ring-gai**. Demand for office space (O) is by far the greatest of the BLC in Ku-ring-gai at 40,185 sqm over the 2006-2031 period. This is followed by Main Street Retail (RM) at 17,728 sqm.
- High demand for retail in Hornsby. Retail activities dominate the forecast with highest floorspace demand for big box retail (RB) Main Street Retail (RM) at 55,307 sqm and 38,343 sqm respectively
- Decline in industrial sectors. Driven by forecast decline in manufacturing employment, demand for heavy manufacturing (MH) and light manufacturing (ML) floorspace is forecast to decline by 11,275 sqm and 11,806 sqm respectively. Declining industrial employment and associated land requirements will obviously impact on the demand for land in the industrial areas.



Gap Analysis

This gaps between forecast demand for floorspace by Broad Land Use Category (BLC) and the available supply as determined through the land use audit. The demand forecasts have been generated by converting TDC employment numbers into floorspace figures by both ANZSIC and BLC. This is made possible by using data from the land audit.

- [Demand Scenario 1] 'Baseline' from TDC forecasts. This converts the TDC employment numbers into floorspace demand figures by BLC. At a centre/ precinct level, the audited floorspace is grown forward in proportion to the TDC employment forecast for the LGA.
- [Demand Scenario 2] Baseline plus Subregional targets. This adds the Subregional employment targets to the scenario 1 demand forecast.
- [Demand Scenario 3] Share Adjustment Between Centres. This scenario applies to the analysis at a centre/ precinct level only. After allowing for the forecast growth plus Subregional targets, the share of floorspace by BLC is adjusted between centres to better align with the centres hierarchy and economic opportunities.
- [Demand Scenario 4] Consideration of Housing Strategy. As a final step in the demand assessment we have determined the likely additional retail floorspace required for the additional dwellings proposed under the Hornsby and Ku-ring-gai housing strategies. The step is necessary as the TDC employment forecasts are based on 2004 population data and will not have considered the dwellings additions proposed in the housing strategies.

To accommodate the forecast demand for floorspace by BLC, we have examined the potential supply under 2 supply scenarios:

• [Supply Scenario 1] Development with intensification. Supply potential = vacant floorspace + capacity on vacant sites + capacity on developed sites. Intensification assumes that there is some scope for business to use land more intensively on developed and vacant sites but falls short of assuming development up to the FSR limit. On average, across the LGA, the actual FSRs are 69% of max FSR in Ku-ring-gai and 71% of max FSR in Hornsby. For this Study the intensification limit has been set at 80% of the maximum FSR under existing controls.

The 80% intensification figure is based on an assessment of development capacity in the North Subregion completed for a previous study. This is the recommended potential supply figure to be used in this Study.

• [Supply Scenario 2] Development up to FSR limit. This assumes that development is able to occur up the FSR limit under the existing planning controls. While this is an unrealistic scenario, this is the notional maximum under the current controls. This potential supply figure is included as a benchmark.

This report has recommended on the basis of **Demand Scenario 4 and Supply Scenario 1**. The results of this analysis are summarised as follows:



- Hornsby Supply-demand gaps. After taking account of the additional retail floorspace implications of the housing strategy, the centres in Hornsby with a significant supply shortfall are the commercial centres of: Carlingford Court, Epping, Galston, Thornleigh and Waitara. However, again, we should note that the shortfall in Carlingford Court and Galston is driven by a recorded current supply demand gap rather than strong forecast demand growth.
 - The centres with more than ten times the supply potential to accommodate forecast demand are the industrial areas of: Kookaburra Road, Asquith, Dural Service Centre, Mt Ku-ring-gai, Thornleigh and the commercial centres of: Berowra, Berowra Heights, Berowra Waters, Brooklyn, Cherrybrook, Cowan, Hospital Precinct, Ku-ring-gai, Malton Road, Mt Colah Shops, Pennant Hills Road (Thornleigh), Sefton Road (Thornleigh), West Pennant Hills and Westleigh.
- **Ku-ring-gai supply-demand gaps**. After taking account of the additional retail floorspace implications of the housing strategy, the Ku-ring-gai centres where the existing supply potential (under the Draft LEP) is not sufficient to meet the forecast demand are: East Lindfield, Fox Valley, Pymble Office Park, Roseville chase, St Ives chase, West Gordon and West Lindfield. However, in most cases the shortfall is small and the only centre with significant supply shortfall to meet the forecast demand is Pymble Office Park.

The centres with more than ten times the supply potential to meet the demand forecast are: Hampden Avenue Shops, Roseville, South Turramurra, St Ives, Turramurra and West Pymble.

Strategic Directions

A summary of the broad strategic directions emerging from this analysis is given in Table 1 and these are illustrated in Figure 1, Figure 2 and Figure 3.

Table 1. Strategic Directions

Strategic Direction	Issue	Action
	- Evidence of residential encroachment in commercial centre	- Zone commercial core to discourage residential development with adjoining Business Development zone to 'free up employment opportunities
	- There is a leakage of professional jobs from the sub-region	- Provide planning incentives for office activity
Strengthen Hornsby's Position as the Major Centre	- Hornsby centre has a low level of existing office activity	- Examine potential to redevelop sites in public ownership ('build in' additional commercial floorspace potential)
	- Hornsby is the administrative centre for the LGA	- Initiate place making activity
	- Hornsby has a strategic position with respect to transport infrastructure	- Work with owners and target pre-commitments for strategic commercial sites

Cont.

Strategic Direction	Issue	Action
	- Gordon/ Pymble acts as a key employment centre for Ku-ring-gai	- Increase FSRs in Pymble Office Park
Consolidate the	- Gordon is the administrative centre for the LGA	- Encourage retention of office in north Gordon
Consolidate the Position of Gordon/ Pymble Office Park	- Gordon has a strategic position with respect to transport infrastructure	- Improve connectivity between Gordon and Pymble office park
	- Gordon and Pymble office park are currently considered as separate centres	- Discourage retail development at Pymble office park
		- Consider combined approach to Pymble/ Gordon as a single centre
	- Gordon and Epping should have some higher order retail and office activity	- Limit development capacity at centres with very high excess supply
Strengthen Town		- Increase FSRs at Epping
Centre Roles with Office and Higher Order Retail	- Office activity at Epping should not detract from Hornsby's major centre status	- Encourage centralised services for HBW and live-work developments in centres
Order Retail		- Limit development capacity at St Ives
	- Growth at St Ives should not detract from growth at Gordon	- No change to development capacity at Carlingford Court
Reinforce the Local Service Role of Villages, Small	- Significant higher order retail and employment use exists at some smaller centres - these would be more appropriate at town & major centres	- Limit development capacity at Village, Small Village and Neighbourhood Centres that have very high excess supply
Villages & Neighbourhood Centres	•	- Encourage centralised services for HBW in centres
00111100		- No change to development capacity at Galston
	- Current zoning does not permit significant retail or service activity	- Apply industrial and local centre zone to broaden permissible uses
Expand the Local Service Role of Dural Service Centre	- Centre has inadequate infrastructure for higher order retail and employment functions	- Discourage uses that draw on a wide catchment and generate significant trips
		- Broaden the range of permissible uses to include local level retail and professional services
Protect Existing	- There is forecast decline in industrial employment in the subregion	- Maintain capacity at strategic industrial areas
Strategic Industrial Centres	- Hornsby Shire's industrial land is competitively placed to attract industrial activity	- Initiate economic development activity to target industrial users



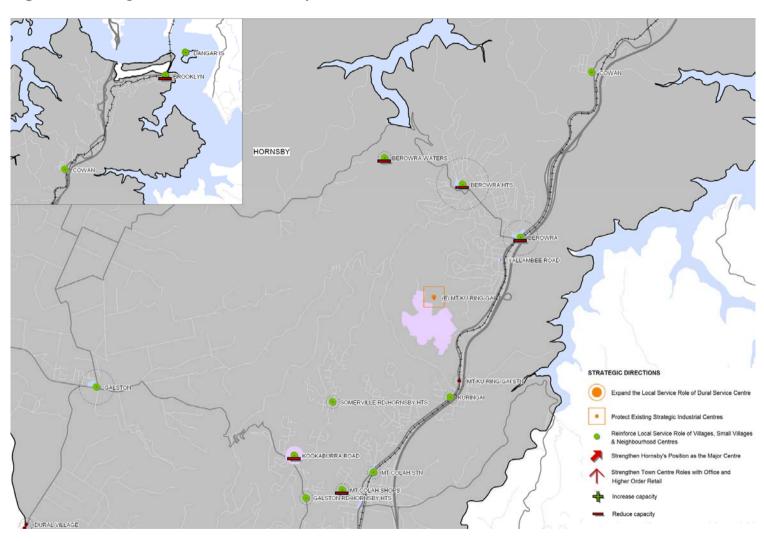


Figure 1. Strategic Directions for Hornsby North

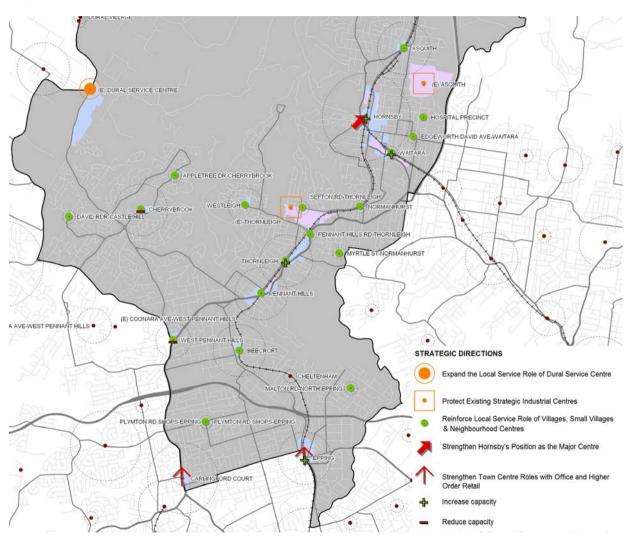


Figure 2. Strategic Directions for Hornsby South

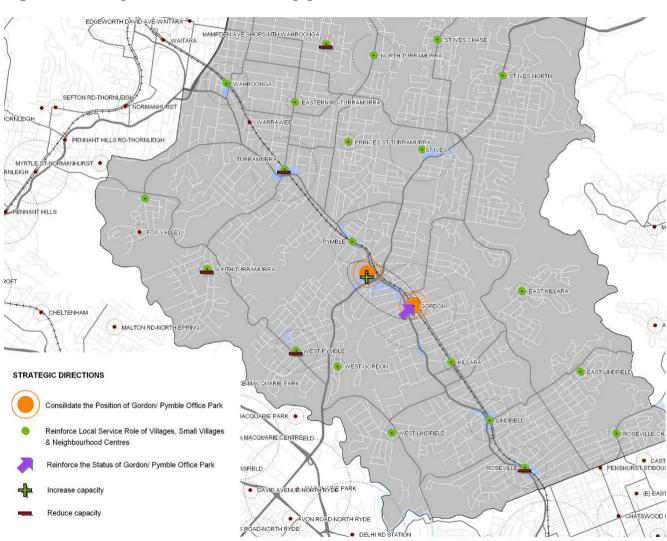


Figure 3. Strategic Directions for Ku-ring-gai

'Major' and 'Town' Centres

Current position. As detailed in the Subregional Strategy, a Major Centre is expected to be a
major shopping and business centre serving immediate and the Subregional residential
population usually with a full range shopping mall, council offices, taller office and residential
buildings, central community facilities, and a minimum of 8,000 jobs.

Hornsby is the Major Centre in the sub-region. It accounts for a very high proportion of the total employment and floorspace in all non-industrial BLCs. Hornsby provides as an administrative and commercial centre for the sub-region, hosts as TAFE and hospital precinct and has a target of 3,000 additional jobs in the 2006-2031 period. Hornsby centre currently has a predominantly retail focus with the Westfield shopping centre contributing to a substantial total retail floorspace figure. The broad split of land uses is 15% industrial, 61% retail, 13% office, 10% special uses, 1% residential.

Town Centres are expected to have one or two supermarkets, community facilities, medical centre, schools, etc. They are expected to contain between 4,500 and 9,500 dwellings and are usually a residential origin rather than an employment destination.

Epping Town Centre with a total of 62,550 sqm of employment floorspace is much smaller than Hornsby but still accounts for a significant share of office floorspace (over 10% of the total in the Shire). This proportion is high considering the existence of Hornsby as a Major Centre and the Town Centre status of Epping. At a very broad level, the land use split in Epping is 34% industrial, 30% retail, 31% office, 4% special uses, and 1% retail.

In Ku-ring-gai, Gordon is the only Town Centre. Gordon is the administrative centre for the LGA and provides large volumes retail and service floorspace. However, the bulk of the office floorspace is provided at the neighbouring Pymble office park. In the case of Gordon Town Centre, its role as a residential origin rather than employment destination is not well defined. In very broad terms, the split of land use in Gordon is 16% industrial, 45% retail, 30% office, 9% special uses, and 1% residential.

• **Forecast**. For Hornsby centre, after taking into account the baseline TDC forecast, the Subregional targets, additional retail demand implied by the housing strategy and adjusting for a greater share of office employment, there is still excess supply of 33,592 sqm.

For Epping centre, after taking into account the baseline TDC forecast, the Subregional targets, additional retail demand implied by the housing strategy and adjusting for a greater share of office employment, there is a small supply shortfall of 2,078 sgm.

For Gordon centre, after taking into account the baseline TDC forecast, the Subregional targets, additional retail demand implied by the housing strategy and adjusting for a greater share of office employment, there is still excess supply of 67,887 sqm.

• **Opportunities and threats**. For Hornsby, there is an opportunity to increase the profile of the centre as a commercial office centre as well as retail centre. From an economic development perspective this may play an important role in helping to achieve a higher proportion of resident professional workers remaining within the Shire. Hornsby centre has the advantage of its central position, railway station, and status as the administrative and service centre of the LGA. However, the centre is divided by the railway line and is perceived as a retail rather than employment centre.



For Gordon, the existence of the Pymble office park, while helping to grow employment, may also threaten to shift the centre of gravity away from the 'Village heart' of the centre. Care should be taken to limit the degree of retail development permissible in Pymble Office Park.

For the development of Hornsby and Gordon/ Pymble Office Park as employment destination, we must also consider the 'threat' of competitor employment locations outside of the subregion. Macquarie Park and Chatswood should be considered the most significant threats to retail/ business attraction to Gordon/ Pymble Office Park and both have the advantage of high quality arterial road access.

There is an opportunity for Gordon to create a distinct 'niche' here – to become a unique destination, not compete head to head with Major Centres. It could aim to develop as an 'upmarket' fashion and food precinct. A limited 'non retail' employment base at Gordon reduces the effective catchment of this Town Centre if it operates predominantly for resident shopping, and residents work elsewhere; need to create a more complex Town Centre dynamic with mix of retail and other employment, and attractive centre for nearby residents

- **Strategy**. To re-position Hornsby as a commercial (office) centre as well as a regional retail and service centre will require some intervention. There are several strands to this, including:
 - Application of the zones recommended in this Study. The 'accepted' wisdom for commercial centre is that they don't really work where residential development is also a permissible use. This is for a couple of reasons (i) Potential for residential development pushes up land values making commercial development less (and usually not) viable, (ii) Larger commercial tenants are looking for purely commercial address/environment, i.e. they want to operate their business among commercial developments. For these reasons, a zoned commercial core is important.
 - Planning incentives for office activity. Some planning control incentives, such as FSR bonuses, may also be beneficial in attracting a higher share of office activity.
 - Achieving critical mass through key site development. A critical mass of potential commercial development is probably also important. A small commercial 'core' will always struggle to achieve the same quality of business address when compared to larger centres. Of course, overcoming the inertia of the centre will be difficult. The development of key sites in public ownership can play a key role here. The council offices on George Street may have some potential in this respect.
 - Economic development action to attract 'pre-commitments' to the commercial sites.
 After a site by site assessment of development sites and amalgamation possibilities, industry targeting would be appropriate to encourage pre-commitments for commercial development sites.
 - Place making activity. Dominance of retail (particularly in Hornsby) is also likely to reduce the appeal for large scale commercial development. The perception of the centre as a retail destination, whilst convenient for workers, may not attract 'big business'. Some of the required action here is at the marketing level and links with the economic development point above. Also important here is some consideration of the environment for business in the centre. Increased modal spilt to public transport, improved links between the east and west side of the centre and other urban design improvements will assist in re-positioning the centre.



In additional to a commercial core on the eastern side of the centre, increasing opportunities for large-scale commercial development on the western side of the centre, in locations close proximity to the station, would increase capacity of the centre considerably and should be considered.

Hornsby Station itself and the adjacent areas currently occupied by commuter parking would also be a potential catalyst location for commercial development. Redevelopment of the station would provide the means of achieving a better knitting together of the eastern and western sides of the centre.

Exclusion of residential development and expansion of the commercial core area would provide a strong signal to the market that Hornsby has serious aspirations as a Major Centre.

It is important here that the activity is seen as part of a *real change* in the centre and not merely superficial activity. For this reason, the actions should combine as a suite of activity to re-position the centre as an employment destination.

For Epping, developing strategic directions is difficult (if not impossible) without having equally detailed knowledge of land use on the Parramatta LGA side centre. While the centre is strategically located with respect to transport infrastructure, its position as employment centre should not be allowed to compromise the position of Hornsby centre if the strategy for Hornsby centre is to succeed. Epping's location also makes the centre a good candidate for increased residential density to encourage local population growth and support growth in local retail and services. While we expect that retail activity on the Parramatta side of the centre gives the centre a better economic balance than is evident in the analysis of the Hornsby LGA side's data alone, increased residential density will further drive the need for local retail and services. Coordination with Parramatta Council is recommended to achieve consistent approaches to zoning, development densities, parking rates and public domain strategies. We understand that the Department of Planning, in conjunction with Hornsby Council, is progressing a study of Epping and its immediate environs.

For Gordon, Business Park zoning in the adjacent Pymble office park with strict limits on retail activity will assist in promotion of economic growth in Gordon centre. Gordon should be positioned to accommodate a greater share of the LGA's growth in the future – particularly against the growth of St Ives given Gordon's position with respect to transport infrastructure and its status as the administrative centre of the LGA. However, it is not reasonable to expect Gordon to recapture *all* of the retail expenditure that currently 'escapes' outside of the LGA. As stated above, there may be opportunity for Gordon to position itself as a centre with a 'premium' retail offer aimed at the upper end of the socio-economic spectrum. Possible interventions to help achieve this might include:

- Increased activity around the station. Taking the retail activity closer to the station entrance will enhances safety and security and will create passing traffic for retailers. Ground level retail frontages to both sides of Wade Lane are desirable (this will require some reconfiguration, the creation of arcades, amalgamation of shops, and new servicing arrangements. Opportunities should also be seized to take retailing closer to the station entrance.
- Limitation of the length of the centre 'strip'. The length of the retail at Gordon should be limited to about 600 metres (the current distance between Merriwa Street and Church Hill Lane) to provide for as compact and 'walkable' a centre as possible.



- Encourage further development of community/ cultural hub. Develop civic precinct as a community activities 'hub' in any redevelopment, e.g. look to redevelop library in time as a learning / education centre (with private colleges etc, to bring additional activity to centre).
- Promotion of Gordon Centre as the Retail Anchor. The enclosed Gordon centre should be supported as the retail anchor. The existing bridge connection across the road may be too narrow to create a sense of continuity of activity.
- Increased connectivity between Gordon and Pymble Office Park. There is an opportunity to help develop Gordon and Pymble Office Park through considering the two areas together in planning activity and encouraging a greater level of connectivity between the two.

In further developing strategy for Gordon and Pymble Office Park it may be appropriate to consider both areas together. An expanded role for the Gordon/ Pymble Office Park area may help to address the noted decline in professional services jobs that Ku-ring-gai has experienced in the inter-censal period. This aim should be to promote greater connectivity between the two areas while recognising the different economic and social function that each area performs.

Villages and Small Villages

• **Current position**. As described in the Subregional Strategy, a Village Centre is expected to have a strip of shops, and surrounding residential area, within a 5 to 10 minute walk and containing a supermarket, hairdresser, take-away food shops, and containing between 2,100 to 2,700 dwellings. A Small Village is expected to consist of a small strip of shops and adjacent residential area within a 5 to 10 minute walk and contain between 800 and 2,700 dwellings

In both Hornsby and Ku-ring-gai, centres at the Village and Small Village level host relatively high proportions of land uses usually found in larger centres. This is particularly pronounced in Ku-ring-gai where Lindfield, Turramurra and St Ives, each with Village status, host a significant share of the total LGA's office floorspace 8.4%, 4.1% and 3.7% respectively.

Despite the high office component however, Villages and Small Villages in the sub-region do have higher retail (especially Main Street Retail) proportions than town and Major Centres. This is in line with expectations of the role of centres at this position in the hierarchy.

- **Forecast**. Forecast growth at the Village and Small Village level is generally much lower than the potential supply at this level. Many of the centres at this level in the hierarchy have more than ten times the supply to accommodate the forecast demand in the 2006-2031 period.
- **Opportunities and threats**. With such high growth potential at this level in the hierarchy, there is a risk that floorspace uptake will jeopardise the strategy to concentrate growth in the major and Town Centres.
- **Strategy**. In Hornsby, consideration should be given to reducing capacity at the employment land in the commercial centres of: Berowra, Berowra Heights, West Pennant Hills and Cherrybrook as these centres have more than ten times the supply potential to accommodate demand. Westleigh is not included here as it is an area of high historic population growth. Capacity should also be increased at Thornleigh given the supply shortfall.



In Ku-ring-gai consideration should be given to reducing capacity at Roseville, and Turramurra as these centres have more than ten times the supply potential to accommodate demand. While capacity reduction at St Ives may also be considered given the high excess capacity at this centre we are aware of the considerable planning for growth around this centre given the proposed residential additions and strategic bus corridors. We recommend that capacity is not increased and that careful attention should be given to development that might jeopardise strategy for Gordon centre.

Reducing capacity at some of these centres with very high levels of excess supply will help to focus economic activity on the key centres as identified in the centres hierarchy.

Neighbourhood Centres

• **Current position**. As described in the Subregional Strategy, Neighbourhood Centres are expected to consist of one or a small cluster of shops and services with between 150 and 300 dwellings. We would expect Neighbourhood Centres to host predominantly local service functions with very small trade areas.

In Hornsby, the Neighbourhood Centres typically fit the template, with retail activities (usually Main Street Retail) dominating activity. In very broad terms the land use split in Neighbourhood Centres is: 22% industrial, 64% retail, 6% office, 8% special uses and 1% residential. Industrial activity at this level is almost exclusively local light industry. Similarly, office land uses are typically small service operations rather than major employers.

In Ku-ring-gai, the Neighbourhood Centres have a similar profile. In broad terms, the land use split is: 18% industrial, 67% retail, 5% office, 9% special uses and 1% residential. Again, industrial activity at this level is almost exclusively local light industry.

• **Forecast**. The forecast floorspace demand at some of the Neighbourhood Centres in both LGAs is low compared to the available supply. In Hornsby, there are 6 Neighbourhood Centres with capacity at more than ten times the demand forecast in the 2006-2031 period. These are Berowra Waters, Brooklyn, Mt Colah Shops, Pennant Hills Road (Thornleigh), and Sefton Road (Thornleigh).

In Ku-ring-gai, most of the Neighbourhood Centres are closer to the demand forecast – though several Neighbourhood Centres show small supply shortfalls. Hampden Avenue Shops, South Turramurra and West Pymble are the only Neighbourhood Centres with capacity at ten times forecast demand.

- **Opportunities and threats**. As with some of the Village and Small Village Centres, there are numerous centres at the neighbourhood level that perform some higher order functions.
- **Strategy**. In Hornsby, consideration should be given to reducing capacity at the commercial centre of: Berowra Waters, Hornsby Heights, My Colah shops, where there are very high levels of excess supply. Pennant Hills Road (Thornleigh) and Sefton Road (Thornleigh) have been excluded from this list as Thornleigh centre itself has a supply shortfall. Increasing capacity at Galston is not recommended given its out of centre location.

In Ku-ring-gai, consideration should be given to reducing capacity at Hampden Avenue shops where there is a very high level of excess supply.

Reducing capacity in some of these centres with very high levels of excess supply will help to focus economic activity on the key centres as identified in the centres hierarchy.



Industrial Areas

- **Current position**. Industrial areas identified as 'employment lands' in the Subregional Strategy are expected to be traditional industrial areas and business and technology parks for higher order employment. They are expected to incorporate light industries, heavy industry manufacturing, urban services, warehousing and logistics and high tech based activities.
 - In broad terms, the industrial areas in the sub-region fit this template. The broad land use split in the industrial areas is: 60% industrial, 23% retail, 11% office, and 6% special uses. However, the 'retail' category here is dominated by Bulky Goods Retail. Similarly, the office component is mostly the 'business park' (BP) land use.
- Forecast. Hornsby has four identified 'employment lands' in the Subregional Strategy, Asquith, Dural Service Centre, Mt Ku-ring-gai and Thornleigh. In addition, Kookaburra Road is a light industrial area identified as a Neighbourhood Centre in the Subregional Strategy. Four of these areas have supply potential more than ten times the forecast additional demand in the 2006-2031 period Dural Service Centre, Mt Ku-ring-gai (after taking account of constrained land), Kookaburra Road and Thornleigh. This position is largely driven by the very low employment forecasts for industrial sectors.
- Opportunities and threats. Although, the employment forecasts for industrial sectors are poor, Hornsby's industrial areas should have the potential to attract some of those businesses requiring cheaper land, larger lots and arterial access. Transport, logistics, warehousing and distribution are key sectors here.
 - For Dural Service Centre, a broader range of permissible uses is appropriate given its role in providing service for the surrounding community. However, uses at this centre should not jeopardise the strategy to encourage economic growth in existing centres, especially where Dural Service Centre is less well served by transport infrastructure than many other centres in the LGA. For this reason, commercial functions at the centre should not draw trade from a wide catchment. Industrial zoning with a focus on light industry and additional local service functions is appropriate.
- **Strategy**. The potential for the attraction of transport, distribution sectors should be explored through a targeted economic development strategy. This should take into account the competitive position of Hornsby's land offer in terms of site and location attributes against the nature of competing industrial areas elsewhere.
 - Economic development action should build from this study to establish value-chain details and the links between industrial land and location needs and the existing 'offer' of the sub-region's sites in light of competition elsewhere.

Other (non employment) Zones

• **Current position**. There are a number of 'other' significant areas for employment activity in the sub-region that do not fall under the centres hierarchy and are not industrial areas. The most obvious of these are the health and education precincts.

In Hornsby, the broad land use split in the hospital precinct is 61% special uses, 28% retail, 7% office and 7% residential. In Ku-ring-gai, the SAN is a major employer, with an estimated 2,200 to 2,730 jobs – the single largest employer in the LGA.



There are numerous education employers scattered throughout the sub-region. In Hornsby, the TAFE and in Ku-ring-gai the Lindfield UTS campus are significant employers.

In addition, we have seen that there is significant employment in residential zones in the form of home-based work.

• **Forecast**. The TDC baseline employment forecast anticipates strong growth in education employment in both Hornsby and Ku-ring-gai LGAs. Hornsby in particular is expected to experience very strong growth in education employment in the 2006-2031 period. Growth in health and community services employment is more moderate.

The position of the existing health and education land to accommodate the floorspace demand forecast is not possible to quantify completely as not all of the health and education land was audited. Indeed, in practice this would be difficult as many of these institutions are small and dispersed.

• **Opportunities and threats**. The proposed development at the SAN has the potential to adversely affect strategy for the promotion of economic growth in centres.

The potential closure of UTS Lindfield will obviously result in a loss of education jobs in the LGA.

Home based work presents an opportunity for economic growth to build on the sub-region's assets but also may present a threat to centres if growth in home-based work occurs at the expense of growth in employment in centres.

• **Strategy**. Recommended zoning for the hospital precincts (both Hornsby and the SAN) is Infrastructure zoning: SP2 (Health Service Facility). Permissible land uses would then be: The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose. It would be the role of the DOP to determine whether the retail, commercial and residential uses proposed are "ordinarily incidental or ancillary to development".

In Ku-ring-gai, in considering the proposal for the development at the SAN site, a key issues to be considered is the potential impact of this development of other higher order centres (particularly those with better public transport access). Would this development and/or the associated retail, commercial and residential components be better accommodated in existing higher order centres and how likely is it that this would be the case? We feel that a specialised centre status for the SAN site is not justified and would risk encouraging out of centre development that may adversely impact on the centres strategy.

 In terms of facilitating home based work, provided that 'home occupation' and/ or 'home business' are permissible in the appropriate residential areas, there is little else that can be done to facilitate HBW in residential zones (In the NSW LEP template 'home occupation' involves only residents of the dwelling where as 'home business' can involve up to two nonresidents)

The 50 sqm maximum area control in the Hornsby LEP is probably unnecessary as the limiting factor of 2-4 people and amenity criteria should be sufficient.

From consultation with home based business it is clear that, the role of business services in centres is likely to have a greater impact than any adjustment to planning controls. Services such as post offices, photocopying/printing/binding services or even fully fledged (but small scale) business centres are likely to make HBW a viable option for more people.



The application of the Standard zones by centre is shown in Table 2 and **Error! Reference source not found.**.



Table 2. Application of Zones by Centre in Hornsby

Hornsby	Designation	Planning Controls	Notes
(E) Asquith	Employment Land (i) IN1	IN2	The Shire's largest industrial precinct with 206,161 sqm floorspace. The precinct has almost one third of the total freight and logistics floorspace for the Shire (32.8%) with significant shares of heavy manufacturing and light manufacturing floorspace (31% and 30% respectively. Within the precinct itself, freight and logistics land uses take up a large proportion (35% of the precinct's floorspace). The precinct has a potential supply of 179,059 sqm. In light of forecast demand in the 2006-2031 period, the precinct has 'excess supply' of 163,227 sqm. Recommended zoning for the precinct is IN1 – general industrial and IN2 - light industrial reflecting the current division between Industrial A and B.
(E) Dural Service Centre	Employment Land (ii) IN2	B2	Dural Service Centre has a mixed industrial and local service profile. The precinct accounts for a significant share of the Shires Urban Services (US) floorspace (12.4%) with significant shares of Freight and Logistics (6%) and Bulky Goods Retail (6.1%). Within the centre, big box retail, Bulky Goods Retail and freight logistics occupy the majority of the land. The precinct has 145,414 sqm potential floorspace supply. In light of forecast demand in the 2006-2031 period, the precinct has excess supply of 142,056 sqm of floorspace. This precinct has supply potential more than ten times the demand forecast in the 2006-2031 period
			There is no zone within the Standard Instrument that, either through its objectives or compulsory permissible land uses, reflects the current range of land uses permissible under the Business E zoning that currently applies to the Dural Service Centre. The recommended strategy for future zoning of this area would be to apply the IN2 zoning and as far is possible including as many permissible land uses in the zone that would be desirable in this area, bearing in mind that these uses would then also be permissible on all other IN2 zoned land. In order to introduce some additional variety of local service uses, a part of the Dural Service Centre could be zoned B2 Local Centre. The area of land with this commercial zoning should be limited so as not to encourage significant additional employment and services in an out of centre locations. In addition to the permissible uses (with consent) in the LEP standard instrument, we have added a range of additional retail and local service uses. Additional zone objectives should be introduced reflect the broader range of anticipated uses.
(E) Mt Ku-ring-gai	Employment Land (i) IN1		Mt Ku-ring-gai is a significant industrial precinct with 115,705 sqm of floorspace. The precinct has high shares of the total heavy and light manufacturing in the Shire (26% and 25% respectively). Within the precinct, the predominant land is freight and logistics which accounts for 42% of the total floorspace. The precinct has very high potential floorspace supply of 354,438 sqm. However, some of the land in this precinct is constrained. After taking this into account, the potential floorspace supply figure is 138,865 sqm. Using this smaller potential supply figure, the precinct still has an excess supply of 129,309 sqm to accommodate forecast demand. This precinct has supply potential more than ten times the demand forecast in the 2006-2031 period. Recommended zoning for the precinct is IN1 – general industrial.

(E) Thornleigh	Employment Land (i)	IN1	IN2
(E) Kookaburra Road	Employment Land	IN2	
Annalatura Da Obassatura d	Naishbasshaad Oosta	Di	
Appletree Dr-Cherrybrook	Neighbourhood Centre	B1	
Asquith	Village	B2	
Beecroft	Village	B2	
Berowra	Small Village	B2	

Thornleigh is the Shire's second largest industrial precinct with a total floorspace of 140,360 sqm. The precinct has significant shares of the heavy and light manufacturing with 36% and 33% of the total Shire's floorspace in these categories. Within the precinct itself, the predominant land uses are freight and logistics (20%), light manufacturing 17% and 'heavy manufacturing' 15%. The precinct has a floorspace supply potential of 51,637 sqm. In light of forecast demand in the 2006-2031 period, the precinct has excess supply of 59,811 sqm. This precinct has supply potential more than ten times the demand forecast in the 2006-2031 period. This result is driven by a forecast decline in demand for the predominant industrial land uses. Recommended zoning for the precinct is IN1 – general industrial and IN2 - light industrial reflecting the current division between Industrial A and B.

Kookaburra Rd is a small light industrial area with 6,336 sqm of employment floorspace. Within the centre the predominant use is freight and logistics (50%). The centre has a floorspace supply potential of 4,711 sqm. After the share adjustment, the centre has excess supply of 4,516 sqm. Recommended zoning for the area is IN2 – light industrial.

Appletree Drive, Cherrybrook is a small Neighbourhood Centre with 1,589 sqm of floorspace. Within the centre the predominant land uses are big box retail (27%), Main Street Retail (20%) and special uses (22%). The centre has supply potential of -11sqm in the 80% of max FSR scenario. This apparent shortfall is typically the result retail operations having significant proportions of *internal* space that do not count towards the total floorspace in the FSR calculations. The centre has a supply shortfall of 154 sqm to accommodate the forecast demand in the 2006-2031 period. We would not suggest altering controls to accommodate the small floorspace gap. Recommended zoning is B1 - Neighbourhood Centre.

Asquith is a Village Centre with 7,402 sqm of floorspace. Within the centre the predominant land uses are big box retail (31%), Main Street Retail (21%). The centre has a supply potential of 13,610 sqm. In light of forecast demand in the 2006-2031 period, the centre has excess supply of 9,246 sqm. Recommended zoning is B2 - Local Centre.

Beecroft is a Village Centre with 11,528 sqm of floorspace. Within the centre, the predominant land uses are big box retail (31%), Main Street Retail (20%). The centre has a supply potential of 10,301 sqm. In light of forecast demand in the 2006-2031 period, the centre has excess supply of 6,441 sqm. Recommended zoning is B2 - Local Centre.

Berowra is a Small Village with 6,151 sqm of floorspace. Within the centre, the predominant land uses are: big box retail (30%) and Main Street Retail (25%). The centre has a supply potential of 13,155 sqm. In light of forecast demand in the 2006-2031 period, the centre has an excess supply of 12,752 sqm. This centre has floorspace supply potential more than ten times the demand forecast – attention should be given to reducing some of the supply capacity. Recommended zoning is B2 – Local Centre.

Berowra Hts Small Village B2

Berowra Waters Neighbourhood Centre B1

Brooklyn Neighbourhood Centre B1

Carlingford Court Stand Alone Shopping Centre B2 B5

Berowra Heights is a Small Village with 11,497 sqm of floorspace. Within the centre, the predominant land uses are big box retailing (31%) and Main Street Retail (27%). The centre has a floorspace supply potential of 13,242 sqm. In light of forecast demand in the 2006-2031 period, the centre has excess supply of 13,335 sqm. This centre has floorspace supply potential more than ten times the demand forecast – attention should be given to rezoning some of the existing employment land Recommended zoning at this centre is B2 – Local Centre. As the potential supply at this centre is more than ten times the forecast demand, some reduction of the employment area is recommended.

Berowra Waters is a Neighbourhood Centre with 1,359 sqm of floorspace. Within the centre, the predominant uses are big box retail (34%) and Main Street Retail (29%). The centre has a floorspace supply potential of 6,583 sqm. In light of forecast demand in the 2006-2031 period, the centre has an excess supply of 6,450 sqm. This centre has floorspace supply potential more than ten times the demand forecast – attention should be given to rezoning some of the existing employment land Recommended zoning in B1 – Neighbourhood Centre.

Brooklyn is a Neighbourhood Centre with 4,368 sqm of floorspace. Within the centre, the predominant uses are: big box retail (37%) and Main Street Retail (30%). The centre has supply potential of 4,052 sqm. In light of forecast demand in the 2006-2031 period, the centre has an excess floorspace supply of 3,738 sqm – attention should be given to reducing capacity at this centre. Recommended zoning at the centre is B1 – Neighbourhood Centre.

The status of this centre as Neighbourhood Centres reflects the relatively modest local residential catchments and limited non-residential development. The commercial areas of these centre could be zoned B2 Local Centre (as opposed to B1) as such a broader range of land uses may be appropriate in these more remote Neighbourhood Centre locations.

Carlingford Court is a stand alone shopping centre with 45,499 sqm of floorspace. The centre accounts for a significant share of the total Shire bulky goods and big box retail (7% and 4% respectively). The centre also hosts a significant share of the Shire's local light industry at 5%. Within the centre itself, the predominant uses are: big box retail (32%) and Main Street Retail (21%). The centre has a supply potential of -3,024 sqm. This apparent existing shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls. In light of forecast demand in the 2006-2031 period, the centre has a supply shortfall of 5,918 sqm.

B2- Local Centre and B5 – Business Development zoning is appropriate generally corresponding to the existing Business A and Business B areas respectively; this will permit a range of retail, light industrial. No change to the FSR controls is recommended, this will limit the amount of office activity as the centre is already close or at capacity.

The designation of Carlingford Court as a stand alone shopping centre acknowledges that whilst this facility provides the functions of a local or subregional centre, it does not have the spatial structure, public domain quality or civic character of a traditional Local Centre.

Cowan Neighbourhood Centre B1

David Rd-Castle Hill Neighbourhood Centre B1

Edgeworth David Ave-Waitara Neighbourhood Centre B1

Epping Town Centre B2 B4

Village

B2

Cherrybrook

Cherrybrook is a Village Centre with 12,393 sqm of floorspace. Within the centre, the dominant uses are: big box retail (37%) and Main Street Retail (23%). The centre has potential floorspace supply of 17,690 sqm. In light of forecast demand in the 2006-2031 period, the centre has an excess supply of 17,526. This centre has floorspace supply potential more than ten times the demand forecast – attention should be given to rezoning some of the existing employment land Recommended zoning for the centre is B2 – Local Centre.

Cowan is a Neighbourhood Centre with 263 sqm of floorspace – predominantly in the retail trade categories. Potential supply at the centre is 183sqm. In light of forecast demand in the 2006-2031 period, the centre has excess supply of 186 sqm to accommodate the forecast demand in the period 2006-2031. Recommended zoning for the centre is B2 – Local Centre.

David Road, Castle Hill is a Neighbourhood Centre with 3,013 sqm of employment floorspace. Within the centre the predominant uses are: big box retail (311%) and Main Street Retail (23%). The centre has supply potential of -116 sqm. This apparent existing shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls. In light of forecast demand in the 2006-2031 period, the centre has a supply shortfall of 335 sqm. Given the very small supply-demand gap we would not suggest altering the planning controls. Recommended zoning for the centre is B1 – Neighbourhood Centre.

Edgeworth David Avenue, Waitara is a Neighbourhood Centre with 2,489 sqm of employment floorspace. Within the centre, the predominant uses are: big box retail (37%) and Main Street Retail (21%) and the centre also has a significant proportion of local light industry (19%). The centre has floorspace supply potential of -12 sqm. This apparent existing shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls. In light of forecast demand in the 2006-2031 period, the centre has a supply shortfall of 144 sqm. Given the very small supply-demand gap we would not suggest altering the planning controls. Recommended zoning for the centre is B1 – Neighbourhood Centre.

Epping is a Town Centre with 62,550 sqm of employment floorspace (in the surveyed area within Hornsby LGA). The centre accounts for high shares of the total Shire floorspace in office (10%), business park (9%) and freight and logistics (7%) categories. Within the centre, uses with the most significant shares of floorspace are: freight and logistics (26%), office (16%) and big box retail (16%). Epping has potential floorspace supply of 5,167sqm. In light of forecast demand in the 2006-2031 period, the centre has a supply shortfall of 2,078 sqm. This is driven largely by very strong forecast demand for office space. Increasing FSR limits would accommodate the supply-demand gap. Recommended zoning for the centre is predominantly B2 – Local Centre. The B4 mixed use zone would apply in areas of existing and future high density residential and where future residential growth and additional retail and commercial floor space is desirable given transport infrastructure and amenity and in light of Subregional dwelling and employment targets. B3 zoning may be appropriate spending on the outcomes of the joint Council and DoP study.

Galston Local Centre B1

Galston Rd-Hornsby Hts Neighbourhood Centre B1

Hornsby Major Centre B3 B4 B5

Galston is a Neighbourhood Centre with 4,189 sqm of floorspace. Within the centre, the predominant uses are: big box retail (35%) and Main Street Retail (20%). The centre has a potential floorspace supply of -3,792 sqm. This apparent existing shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls. In light of forecast demand in the 2006-2031 period, the centre has a supply shortfall of 3,741 sqm. Given Galston's existing status in the hierarchy, economic profile, size, location and infrastructure access alterations to the controls to address the supply-demand gap are not recommended. Recommended zoning for the centre is B2 – Local Centre.

Galston Rd, Hornsby Heights is a Neighbourhood Centre with 1,161 sqm of employment floorspace. Within the centre, the predominant uses are: big box retail (38%) and Main Street Retail (22%). The centre has a floorspace supply potential of -59sqm. This apparent existing shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls. In light of forecast demand in the 2006-2031 period, the centre has a supply shortfall of 116 sqm. We do not recommend changing the planning controls to address this gap. Recommended zoning for the centre is B1 – Neighbourhood Centre.

Hornsby is the sub-region's Major Centre and has a total of 419,696 sqm of employment floorspace. The centre is by far the centre in the Shire and in terms of floorspace accounts for: 63% of the short term accommodation, 59% of dispersed activities, 34% of local light industry, 54% of big box retail, 40% of Bulky Goods Retail and 48% of Main Street Retail. Within the centre, the predominant uses are: big box retail 34% and Main Street Retail; (21%). Hornsby centre has floorspace supply potential for 218,658 sqm. In light of forecast demand in the 2006-2031 period (including the accommodation of Subregional Strategy targets), the centre has excess supply of 33,592 sqm.

Recommended zoning for the central commercial area (the east side of the railway line) encompassing Westfield up to Linda Street is B3 – Commercial Core. A dedicated commercial core is important given the need to increase the degree of office land use in the centre. B3 - Commercial core zoning or B4 – Mixed use zoning should also be considered on the west side, given that further commercial activity on the east side is compromised by residential development. B3 zoning here would be a more conservative option to try to 'secure' commercial development on the west side.

Recommended zoning for the area north of Linda Street bound by Hunter and George Streets is B5 – Business Development. This will allow a range of commercial and industrial uses that require larger lot sizes to operate close to the centre. This area would also serve as land bank for the future expansion of the commercial core area to the north. Some B4 – mixed use zoning may be appropriate outside the commercial core where high density residential is desirable in addition to commercial operations. The industrial strip running along Jersey Street is recommended to be zoned B5 – Business Development.

Hospital Precinct	Health Services Facility	SP2
Mt Ku-ring-gai Shops	Neighbourhood Centre	B1
Malton Rd-North Epping	Neighbourhood Centre	B1
Mt Colah Shops	Neighbourhood Centre	B1
Mt Colah Stn	Neighbourhood Centre	B1
Myrtle St-Normanhurst	Neighbourhood Centre	B1

The hospital precinct has 59,788 sqm of employment floorspace and accounts for substantial share of the Shire's special use floorspace (40%). Within the precinct, the predominant use is special use (57%). The precinct has floorspace supply potential of 23,936 sqm. In light of forecast demand in the 2006-2031 period, there is excess supply of 23,083 sqm. Recommended zoning for the precinct is SP2 — Health Services Facility. Permissible land uses would then be: The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose.

The Mt Ku-ring gai shops area is a small Neighbourhood Centre with 1,114 sqm of employment floorspace. The centre has some small retail businesses and has potential floorspace supply of 486 sqm. In light of forecast demand in the 2006-2031 period, the centre has an excess supply of 469 after accommodating the forecast demand in the 2006-2031 period. Recommended zoning for the centre is B1 – Neighbourhood Centre.

Malton Road, North Epping is a Neighbourhood Centre with 1,808 sqm of employment floorspace. The centre has some small retail businesses and has potential floorspace supply of 167 sqm. In light of forecast demand in the 2006-2031 period, the centre has an excess supply of 89sqm. Recommended zoning for the centre is B1 – Neighbourhood Centre.

Mt Colah shops is a Neighbourhood Centre with 2,978 sqm of employment floorspace. The centre has some small retail businesses and has potential floorspace supply of 5,859 sqm. In light of forecast demand in the 2006-2031 period, the centre has an excess supply of 5,808 sqm after accommodating the forecast demand in the 2006-2031 period. The centre has capacity of more than ten times the demand forecast and some reduction in capacity is recommended. Recommended zoning for the centre is B1 – Neighbourhood Centre.

The status of this centre as Neighbourhood Centres reflects the relatively modest local residential catchments and limited non-residential development. The commercial areas of these centre could be zoned B2 Local Centre (as opposed to B1) as such a broader range of land uses may be appropriate in these more remote Neighbourhood Centre locations.

Mt Colah station is a Neighbourhood Centre with 1,502 sqm of employment floorspace. The centre has some small retail businesses and has potential floorspace supply of 438 sqm. In light of forecast demand in the 2006-2031 period, the centre has an excess supply of 301 sqm. Recommended zoning for the centre is B1 – Neighbourhood Centre.

Myrtle Street, Normanhurst is a Neighbourhood Centre with 660 sqm of employment floorspace. The centre has some small retail businesses and has potential floorspace supply shortfall of 180 sqm. This apparent existing shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls In light of forecast demand in the 2006-2031 period, the centre has a supply shortfall of 197 sqm after accommodating the forecast demand in the 2006-2031 period. Given the very small shortfall, no adjustment to the planning controls is recommended zoning for the centre is B1 – Neighbourhood Centre.

Normanhurst Neighbourhood Centre B1

Pennant Hills Village B2 B5 B6

Pennant Hills Rd-Thornleigh Enterprise Corridor **B6 B5**

Normanhurst is a Neighbourhood Centre with 1,770sqm of employment floorspace. The centre has some small retail businesses and has potential floorspace supply shortfall of 454 sqm. This apparent existing shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls. The centre has a supply shortfall of 510 sqm after accommodating the forecast demand in the 2006-2031 period. Given the very small shortfall, no adjustment to the planning controls is recommended. Recommended zoning for the centre is B1 – Neighbourhood Centre.

Pennant Hills is a Village Centre with 84,349 sqm of employment floorspace. The centre accounts for a significant share of the total office floorspace in the Shire with 9%. The centre also has a significant share of total residential floorspace (in employment zones) with 9% and 11% of short term accommodation floorspace. Within the centre, the predominant uses are: big box retail (26%) and Main Street Retail (22%). The centre has potential floorspace supply of 1,158 sqm. The centre has a shortfall of 211 sqm to accommodate forecast demand in the 2006-2031 period. We would not recommend adjusting the controls at this centre.

Recommended zonings are: B2 for the 'traditional' centre (area generally north of Pennant Hills Road and West of the rail line); B5 for the triangular area generally south of Pennant Hills Road and West of the rail line; and B6 for areas that are immediately adjacent Pennant Hills Road, generally north of the Crescent. B6 may also be appropriate for land that is current commercially zoned, adjacent Pennant Hills Road and south of Fischer Avenue.

NOTE: These recommendations are only intended to provide broad guidance regarding the spatial application of different land use zones within the centre. Further on the ground analysis is recommended to determine the optimal utilisation of the new Standard Instrument zones.

Pennant Hills Rd, Thornleigh is a Neighbourhood Centre with 12,941 sqm of employment floorspace. Within the centre, the predominant uses are: big box retail (27%) and Main Street Retail (26%). The centre has floorspace supply shortfall of 22 sqm. This apparent shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls. The centre has excess supply of 3,908 sqm to accommodate the demand forecast in the period 2006-2031.

Pennant Hills Road, Thornleigh is recommended as an Enterprise Corridor by virtue of it's location on and exposure to Pennant Hills Road. The B6 Enterprise Corridor Zoning should be applied to those areas immediately adjacent to Pennant Hills Road (currently both Business B and C). Other adjacent employment land, located adjacent the rail line and not immediately adjacent Pennant Hills Road may be zoned B5 Business Development. The proposed Bulky Goods Retail development at 180-190 Pennant Hills Road should be within a proposed B6 Enterprise Corridor zone. Bulky Goods Retail should be included as a permissible development in the B6 zone. As such we do not feel that it would jeopardise the viability of the industrial precinct or the centre.

Plympton Rd Shops-Epping

Neighbourhood Centre

B1

Thornleigh

Village

B2

B5

B6

Waitara

Village

B2

B6

Plympton Road shops, Epping is a Neighbourhood Centre with 1522 sqm of employment floorspace and characterised by a selection of small retail and service businesses. The centre has floorspace supply shortfall of 25 sqm. This apparent existing shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls. In light of forecast demand in the 2006-2031 period, the centre has a supply shortfall of 120 sqm. Adjustment to the planning controls to accommodate the small supply demand gap is not recommended. Recommended zoning for the centre is B1 – Neighbourhood Centre.

Sefton Road, Thornleigh is a Neighbourhood Centre with 1,292 sqm of employment floorspace. Within the centre, the predominant uses are local retail and services with a significant proportion of freight and logistics activity. The centre has floorspace supply potential of 8,353 sqm. After share adjust6ment, the centre has excess supply of 8,207 sqm. This centre has floorspace supply potential more than ten times the demand forecast. Recommended zoning the centre is B1 – Neighbourhood Centre.

Thornleigh is a Village Centre with 63,204 sqm of employment floorspace. The centre accommodates a significant share of the Shire's total office and business park floorspace (9% and 9%). Within the centre, the key uses are big box retail (25%) and Main Street Retail (18%). The centre has a floorspace supply shortfall of 5,361 sqm. This apparent existing shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls. In light of forecast demand in the 2006-2031 period the centre has a supply shortfall of 8,992 sqm. The demand at Thornleigh is largely driven by growth in demand for office space at the centre. Increasing FSRs could address the demand supply gap. Recommended zoning is a combination of B2 - Local Centre for the area immediately adjacent to the station; B6 Enterprise Corridor for areas that are immediately adjacent to Pennant Hills Road; and B5 Business Development for land located adjacent to the rail line and not immediately adjacent to Pennant Hills Road.

NOTE: These recommendations are only intended to provide broad guidance regarding the spatial application of different land use zones within the centre. Further on the ground analysis is recommended to determine the optimal utilisation of the new Standard Instrument zones.

Waitara is a Village Centre with 33,929 sqm of employment floorspace. Within the centre the predominant land uses are: big box retail (32%) and Main Street Retail (24%). The centre has a floorspace supply shortfall of 4,678 sqm. This apparent existing shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls. Some action to address the shortfall is advised for Waitara bust this should compromise the growth of Hornsby – especially in terms of the re-positioning of Hornsby as an employment destination. In light of forecast demand in the 2006-2031 period the centre has a supply shortfall of 10,242 sqm.

Alexandria Parade, Waitara is a Village Centre reflecting the size of the residential population within walking distance of this centre. The existing industrial land is recommended as an Enterprise Corridor by virtue of it's location on and exposure to the Pacific Highway. The northern portion of this area that is further from the Pacific Highway may be retained as industrial zoned land if there is thought to be a need to provide for a wider range of uses in the area.

West Pennant Hills Small Village B2

Westleigh Small Village B2

Wiseman's Ferry Neighbourhood Centre B1

Neighbourhood Centre B1

West Pennant Hills, on Pennant Hills Road, has been classified as a Small Village. In 2006, total employment floorspace on business zoned land was 7,569 sqm, which is a relatively small share of all floorspace across the LGA. Retailing in the primary land use within this centre, with some Local Light. There is scope to accommodate future demand within existing controls. Zone B2 – Local Centre and Zone B4 – Mixed Use are the most appropriate zone for this location. This centre has floorspace supply potential more than ten times the demand forecast – attention should be given to rezoning some of the existing employment land – attention should be given to rezoning some of the existing employment land. There is sufficient capacity under existing controls to accommodate future demand.

Located on Duffy Avenue, this small centre consists primarily of Retail Main Street, and includes a supermarket. In 2006, total employment floorspace on business zoned land was 8,315 sqm. The centre accounts for a relatively small share of all floorspace across the LGA. Zone B2 – Local Centre is most appropriate zones for this location. While this centre has floorspace supply potential more than ten times the demand forecast this is also an area of high historical population growth. No action to reduce capacity is recommended.

Wiseman's Ferry is one of many small Neighbourhood Centres, it also plays a role as a day-trip destination. In 2006, total employment floorspace on business zoned land was 3,622 sqm. The centre only account for a very small share of all floorspace across the LGA. There is insufficient potential floorspace within the centre to meet future demand, with a shortfall of 267 sqm. This reflects limited capacity within the existing controls. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

Yallambee Rd contains a very small share of Hornsby LGA's total floorspace. In 2006, total employment floorspace on business zoned land was 624 sqm. Retailing is the primary land use. Demand forecasts indicate a small increase in the required floorspace, which is unable to be accommodated within the current controls. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

Yallambee Road

 Table 3. Application of Zones by Centre in Ku-ring-gai

KRG	Designation	Planning Controls	Notes
East Killara	Neighbourhood Centre B1		East Killara is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land was 1,137sqm in this centre, which only accounts for a very small share of all floorspace across the LGA. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 601 sqm. This reflects the relatively low forecast of future demand within this centre. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.
East Lindfield	Neighbourhood Centre B1		East Lindfield is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land, in this centre, was 1,309 sqm. The centre accounts for a very small share of all floorspace across the LGA. Within the centre the primary BLC is Retail Main Street, with some Local Light industry. There is insufficient potential floorspace within the centre to meet future demand, with unmet demand for 470 sqm. This reflects the relatively limited potential supply. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.
Eastern Rd-Turramurra	Neighbourhood Centre B1		Eastern Road Turramurra is a small Neighbourhood Centre with a predominantly retail focus. In 2006, the centre had a total of 1,290sqm. After taking account of the forecast demand in the 2006-2031 period, this centre has an excess supply of 583 sqm. Recommended zoning for this centre is B1 – Neighbourhood Centre.
Fox Valley	Neighbourhood Centre B1		Fox Valley is a small Neighbourhood Centre, located in proximity to the SAN hospital. In 2006, total employment floorspace on business zoned land, in this centre, was 2,863. Special Activities (31%) and Retail Main Street are the primary land uses within this centre. There is insufficient potential floorspace within the centre to meet future demand, with unmet demand for 409 sqm. This reflects the relatively limited potential supply. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.
Gordon	Town Centre B2	B7 B4	Gordon is the primary centre within Ku-ring-gai LGA and will be the focus for future retail, commercial and residential growth. In 2006, total employment floorspace on business zoned land was 99,034 sqm. Retail Big Box, Retail Main Street, Office and Business Park are the primary uses within Gordon Town Centre, with Gordon accommodating 38.2% of Ku-ring-gai LGA's total office floorspace. The centre also includes over 40% of the LGA's floorspace which is used for short-term accommodation, 35.6% of the LGA's Business Park and 28.5% of the LGA's Retail Big Box.
			There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 67,881 sqm. This reflects the relatively large potential supply of floorspace under the Draft LEP. While for Ku-ring-gai's principal centres, there is ample floorspace to accommodate 2031 forecast demand, some intensification around transport nodes may be desirable for broader planning purposes. In Gordon, increased FSRs may be appropriate. Zone B2 – Local Centre would be appropriate for the Main Street Retail areas. Zone B7 – Business park would be appropriate for the area north of Fitzsimmons Lane. Zone B4 – Mixed Use is recommended for the area north of Merriwa Street and South of Fitzsimmons Lane.

Hampden Ave -N Wahroonga Neighbourhood Centre B1 Killara Neighbourhood Centre B1 Lindfield Village B2 Neighbourhood Centre B2 North Turramurra Princes St-Turramurra Neighbourhood Centre B1

Hampden Avenue Shop, North Wahroonga is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land was 868 sqm. The centre only accounts for a very small share of all floorspace across the LGA. Land uses within the centre are primarily Retail Main Street and Local Light. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 1,822 sqm. This centre has floorspace supply potential more than ten times the demand forecast – attention should be given to rezoning some of the existing employment land. This reflects the relatively low forecast of future demand within this centre. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

Killara is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land, in this centre, was 378sqm. The centre accounts for a very small share of all floorspace across the LGA. Retail Main Street is the primary land use. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 403 sqm. This reflects the relatively low forecast of future demand within this centre. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

Lindfield, located on the train line, contains a range of retailing to meet the needs of local residents. In 2006, total employment floorspace on business zoned land in the centre was 37,631 sqm. Lindfield accounts for 16% of the LGA's Special land uses, and approximately 10% of the LGA's Main Street Retail and Dispersed activities. Within the centre, the primary land use is Main Street Retail. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 24,737 sqm. This reflects the large potential supply of floorspace. Zone B2 – Local Centre would be appropriate for this location.

North Turramurra is one of many Neighbourhood Centres, and it contains a range of retailers and service providers to meet the needs of local residents. In 2006, total employment floorspace on business zoned land, in this centre, was 4,989 sqm. Retail Main Street is the primary land use within this centre. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 652 sqm. This reflects the relatively low forecast of future demand within this centre. Zone B2 – Local Centre would be appropriate for this location.

Princess Street Turramurra is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land, in this centre, was 1,328 sqm. The centre only accounts for a very small share of all floorspace across the LGA. Retail Main Street is the primary land use within the centre. There is sufficient potential floorspace to meet future demand in this location, with excess capacity of 417 sqm. This reflects the relatively low forecast of future demand within this centre. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

Pymble Small Village B2

Pymble Office Park Business Park B7

Roseville Small Village B2

Roseville Chase Neighbourhood Centre B1

Located on the train line, Pymble accommodates predominantly retailers and service providers, however, there are also some office buildings within the centre. In 2006, total employment floorspace on business zoned land was 18,775 sqm. Pymble accommodates over 5% of the LGA's floorspace within the following categories: Business Park, Dispersed activities, Office, Retail Main Street and Special use. Within the centre the primary land use is Retail Main Street. Office accounts for 12.8% of floorspace within the centre. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 10,004 sqm. This reflects the relatively low forecast of future demand within this centre. The centre contains some office buildings and potential for further office space should be considered in the application of zoning. Zone B2 – Local Centre would be appropriate

Pymble office park is located in proximity to the junction of Lane Cove Road and Pacific Highway. It accommodates a range of businesses in modern commercial buildings. In 2006, total employment floorspace in this area, on business zoned land, was 88,999 sqm. The key land uses are Freight and Logistics, Office, Business Park and Local Light. The area accounts for one third of the LGA's Office and Business Park floorspace. Considering future demand and potential supply, there is a shortfall of 19,412 sqm in this area. This is driven by increasing office based employment. We recommend increasing FSRs to accommodate this shortfall. Zone B7 – Business park is recommended with retail restricted to neighbourhood shops.

Roseville centre is divided by Pacific Highway and the train line. Roseville Cinema is a key attractor to this centre. In 2006, total employment floorspace on business zoned land was 17,528 sqm. Retail Main Street is the primary land use within the centre. Roseville accounts for approximately 5% of the LGA's retail floorspace. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 15,907 sqm. This reflects the forecast of negative future demand within this centre (-165sqm). This centre has floorspace supply potential more than ten times the demand forecast – attention should be given to reducing capacity at this centre. Zone B2 – Local Centre would be appropriate for this location.

Roseville Chase is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land, in this centre, was 2,383 sqm. The centre accounts for a very small share of all floorspace across the LGA. Retail Main Street is primary land use. There is a very small shortfall of 19 sqm when capacity against the demand forecast. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

South Turramurra

Neighbourhood Centre

B1

St Ives

Village

B2

St Ives Chase

Neighbourhood Centre

B1

Health Services Facility

SP2

Seventh Day Adventist Site

Recommended zoning for the hospital precincts (both Hornsby and the SAN) is Infrastructure zoning: SP2 (Health Services Facility). Permissible land uses would then be: The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose. It would be the role of the DOP to determine whether the retail, commercial and residential uses proposed are "ordinarily incidental or ancillary to development".

In terms of the proposed expansion of the precinct, the question is whether this development and/or the associated retail, commercial and residential components are better accommodated in existing higher order centres. We feel that a specialised centre status for the SAN site is not justified and would risk encouraging out of centre development that may adversely impact on the centres strategy.

South Turramurra is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land was 1,210 sqm. The centre only accounts for a very small share of all floorspace across the LGA. Retailing was the primary land use within this centre. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 1,829 sqm. This centre has floorspace supply potential more than ten times the demand forecast – attention should be given to rezoning some of the existing employment land. This reflects the relatively low forecast of future demand within this centre. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

St Ives is the key location offering comparison goods retailing within Ku-ring-gai LGA. It consists of an enclosed shopping centre and some Main Street Retailing. St Ives Village Shopping centre performs strongly, with a relatively high retail turnover density (RTD). In 2006, total employment floorspace on business zoned land was 47,122 sqm. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 37,946 sqm. This reflects the relatively low forecast of future demand within this centre following share adjustment. While there may be pressure for increasing floorspace, particularly at the shopping centre based on demand for retail, this is not in line with the Metropolitan or Subregional Strategies which seek to locate retailing in areas which are easily accessible by public transport. Zone B2 – Local Centre would allow for appropriate uses in this location.

St Ives Chase is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land, in this centre was 927 sqm. The centre only accounts for a very small share of all floorspace across the LGA. Retailing was the primary land use within this centre. There is sufficient potential floorspace within the centre to meet future demand, with a supply shortfall of 78 sqm. This reflects the relatively low forecast of future demand within this centre. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

St Ives North Neighbourhood Centre B1 Turramurra Village Small Village Wahroonga Neighbourhood Centre B1 West Gordon West Lindfield Neighbourhood Centre B1 West Pymble Neighbourhood Centre B1 St Ives North is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land was 2,092 sqm.

The centre accounts for a very small share of all floorspace across the LGA. Retailing is the primary land use within this centre. St Ives North has sufficient potential floorspace within the centre to meet future demand, with excess capacity of 1,841 sqm. This reflects the relatively low forecast of future demand within this centre. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

Located on the train line, Turramurra offers a range of retailing including a supermarket. In 2006, total employment floorspace on business zoned land was 28,712 sqm. Retailing is the primary land use, with some Local Light, Business Park and Office. Turramurra accommodates approximately 8% of the LGA's retail floorspace and over 10% of the LGA's Dispersed activities. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 51,264 sqm. Given that capacity is ten times the demand forecast in the 2006-2031 period, attention should be given to reducing capacity at this centre. Zone B2 – Local Centre would allow for appropriate uses in this location.

Located on the train line, Wahroonga offers a range of retailing and encompasses high quality open space. In 2006, total employment floorspace on business zoned land, in this centre, was 11,510 sqm. Retail Main Street is a key land use. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 4,667 sqm. This reflects the relatively large potential supply of floorspace. Zone B2 – Local Centre is the most appropriate zone for this location.

West Gordon is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land, in this centre was 961 sqm. The centre only accounts for a very small share of all floorspace across the LGA. Retailing is the primary land use within this centre. There is insufficient potential floorspace within the centre to meet future demand, with a capacity shortfall of 236 sqm. This reflects a relatively small demand forecast, but fairly limited supply. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

West Lindfield is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land was 4,484sqm. The centre accounts for a very small share of all floorspace across the LGA. Retailing is the primary land use within this centre. There is insufficient potential floorspace within the centre to meet future demand, with a capacity shortfall of 334 sqm. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

West Pymble is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land was 3,622 sqm.. The centre only account for a very small share of all floorspace across the LGA. Retailing is the primary land use within this centre. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 3,832 sqm. This reflects the relatively low forecast of future demand within this centre. Zone B1 – Neighbourhood Centre would allow for appropriate uses in this location.

1 Introduction

1.1 Study Background

SGS has been commissioned to complete an Employment Lands Study on behalf of Hornsby and Ku-ring-gai Councils. This Study will guide planning for employment within these two LGAs.

Together, Hornsby and Ku-ring-gai LGAs comprise the North Subregion, for which there is an employment capacity target of 13,500 new jobs to 2031, stated in the draft Subregional Strategy. This Study will provide guidance on accommodating this employment target. Opportunities to strengthen centres, and to protect and promote employment lands, will be identified in parallel with the development of strategies to promote economic growth.

1.2 Scope of Work

The objectives of the Study are to:

- Ensure local employment land strategies facilitate opportunities for the Subregional employment targets for the North Subregion
- Ensure that the distribution of additional jobs supports existing centres
- Identify opportunities to provide employment lands in accordance with the strategic areas identified in the Metropolitan Strategy (including Section A: Economy and Employment)
- Develop a strategy for zoning, land uses and controls for employment lands that is consistent with current strategic planning guidance
- Develop a strategy for the provision of employment lands to encourage economic growth to complement population growth
- Identify employment lands in strategic areas that are accessible to residents and workers and are linked into the transport network

1.3 Study Method

The Study was completed in 6 broad phases:

Project inception and baseline analysis. The aim of this phase was to understand the
planning and development parameters impacting on development in the economic activity
areas, and will ensure any resultant recommendations from this Study recognise the existing
strategy and policy framework.

As part of this phase, broad economic and development trends likely to affect prospect in the sub-region were examined.

- **Supply-side analysis**. The supply-side analysis involved a detailed lot by lot assessment of current land use in the employment zones throughout the sub-region. This phase gathered information on current levels of site vacancy, land use by industry sector, and the actual FSRs and site coverage by small area and industry sector. All gathered data was analysed using GIS.
- **Demand-side analysis data**. Demand side data analysis had 2 main components: (i) economic profiling and (ii) demand forecasting. The economic profiling drew heavily from ABS Census and TDC employment data. Industrial specialisation (LQ analysis), industry growth and employment self-containment were examined. For the demand forecasts, TDC base employment forecasts were converted into floorspace requirements by both industry sector (ANZSIC) and land use type (BLC) using land use data from the supply-side audit.
- Demand-side analysis consultation. To complement the data analysis, consultation was completed with local industrial and commercial agents, TAFE and University and health precinct representatives, Chambers of Commerce, the DoP, selected key local businesses. A meeting was also held with the Dural Service Centre Committee as part of this process. Regular meetings with the Employment Study Working Party were completed throughout the Study.

This consultation process also included a postal survey delivered to all businesses in employment zones within the sub-region.

- **Planning and development futures**. This brought together the evidence emerging from previous phases to determine (i) the ability of the sub-region's existing employment land to accommodate the forecast employment growth and the Draft North Subregional Strategy targets and (ii) the implications and opportunities for the sub-regions centres and precincts.
- **Reporting**. Reporting on the project has been completed through the delivery of this report and presentations to Council committees. A full database of audit results has also been delivered as part of the Study output.



2 Context

2.1 Introduction

This section sets the broad economic and policy framework for the Study. It includes a discussion of the key economic trends and drivers for Sydney SD and the North Subregion, the policy context (in terms of state and local government strategy and policy).

2.2 Economic Trends & Drivers

Globalisation

Globalisation has been marked by a rapid increase in global trade in goods and services and in particular capital flows. This has been facilitated by technological innovation in transport and communications, the promotion of deregulation in particular industry sectors, the removal of trade restrictions and exchange controls and innovation in the management and pricing of transaction risks (insurance, hedging, partnership formation etc).

Globalisation is likely continue to drive a separation between the 'thinking' part of the value chain (design, brokerage, marketing, strategy formulation) and the 'making' (manufacturing) and 'distribution' (transport, logistics, after sales service) aspects. Key services within the thinking part of the value adding process are showing increasing tendencies to centralise within one or two centres in advanced countries. This is evident in Australia, with Sydney being the pre-eminent national dispenser of advanced business services.¹

More countries are opening up their economies and seizing the opportunities that come from closer integration into the global economy. China and India, as well as other countries such as Russia, Brazil and Mexico, are growing rapidly.

Further, as communication and technology continue to improve, global production networks are becoming increasingly flexible, specialised and dispersed across continents. In an era where resources, technology and ideas can be moved rapidly to the most productive location, no economy can rely on its past strengths or traditional expertise.

These trends have significant implications for the developed world. Under the globalisation paradigm, the current and future economic context is one of increased global competition, albeit also one of increasing interdependence of national and urban economies. For Australia the specific implications include:

¹ Spiller, M. (2004) Urban Agglomeration of Advanced Business Services in Australia – Some Policy Implications, State of Australian Cities Conference, Sydney, December 2003



- Increased competition in lower order tertiary sectors of the economy
- Opportunities for increased trade (namely in resources, advanced manufacturing and sophisticated services)

On the other hand, the burgeoning middle classes in developing countries like China and India are providing new markets for very high quality manufactured goods from the developed world. For example, high end fashion and footwear manufacturers in Italy are now targeting high income customers in key locations such Shanghai and Beijing.

Cities

In the absence of trade barriers, the underlying characteristics and resources of nations have come to determine the activities in which they specialise. In general, more labour-intensive, lower-technology production is taking place in countries with an abundance of low-cost labour, whilst advanced economies with higher labour costs, and more developed skills and physical capital, concentrate on the production of high-value, knowledge-based goods and services. Importantly, these knowledge driven sectors rely on productivity and innovation for their competitive advantage.

High-value, knowledge based jobs have an acute preference for locating in cities. This is because cities provide the most productive business environment and enhance firms' propensity to innovate as a result of agglomeration economies. Cities are now being increasingly recognised for the benefits simply arising from workers and firms being located close together.

However, cities themselves develop their own specialities in global high value supply chains, and not all cities have benefitted equally from the recent era of globalisation. Sydney, for example, contains Australia's critical global gateway infrastructure (Sydney airport and port), and has carved out a competitive role in the global trade network providing financial services to the Australian commodity trade (metals, mining etc), financial brokerage in the NZ/Pacific region and financial brokerage into the Australian consumption economy.

The attraction and retention of high-value, knowledge based sectors are crucial to long-term prosperity. Successful national economies are increasingly measured by their capacity to generate wealth through innovation and productivity, and to attract the labour and capital to support an innovation based economy. Because these functions are concentrated in cities, the efficiency, amenity and quality of life available in cities is an increasingly important factor in economic success.

Competitiveness

An indicative list for assessing 'local' competitiveness includes the following:

 Enabling infrastructure, 'hard' infrastructure such as transport systems, but also 'soft' infrastructure including R&D institutions, governance frameworks for economic development and peak body representation



- Education and health, which underpins a productive workforce and a lifelong learning and wellbeing agenda
- Adequate labour pool, within a reasonable geographic reach (which has implications for transport connections and adequacy)
- Business sophistication, which relates to the quality of business leadership and management, which also includes maximising performance from sound locational decisions where clustering and agglomeration economies can be maximised
- Innovation and technological readiness, which refers to the ability of the economy to develop new technologies or 'cutting-edge' products in order to grow and maintain a competitive advantage, and/or adapt to existing technologies to enhance the productivity of its industries;
- Sustainability, which will become increasingly relevant in 'competitiveness' judgements
- Quality of life, covering lifestyle, amenities, access to recreation and quality residential offerings.

While not necessarily definitive the variables do however display clear linkages, strengthening the assertion that competitiveness is the product of a range of interlocking factors.

Sydney is considered globally competitive against most of these indicators. It ranked equal 9th with the likes of Berne in Switzerland on Mercer's 2007 *Quality of Living* index, and 14th on MasterCard's *World Centres of Commerce* aggregate index. It would rank at around 5th against American cities such as Boston and Seattle on Richard Florida's Creativity Index. However, on MasterCard's ranking it does not fair so well on the individual criterion of knowledge and information flow which is some cause for concern given the importance of this 'competitiveness' element in the modern global economy.

Sydney's Economic Geography: Trends and Drivers

In recent years, rapid growth has been experienced in the advanced and property services sectors in office markets in Central Sydney and 'satellite' locations in the global economic corridor. Office employment has tended to concentrate in these areas. As some firms have integrated their operations across administration, research and development and warehousing there has been some suburbanisation.

In older industrial areas where the employment profile has shifted toward white collar occupations the component of floor area that is used for office activities has increased.

With the growth in logistics and warehousing the amount of land consumed per employee has increased and this has accelerated demand for large lots on the urban fringe.

Growing demand for employment lands in the outer sub-regions of Sydney has also been the result of numerous 'push' and 'pull' factors. These factors are listed as follows:

- Push Factors (from inner areas)
 - o Increasing rents and outgoings
 - o Lack of appropriately zoned industrial land
 - Small lot sizes
- Pull Factors (to outer areas)



- Release of SEPP 59 lands (designated employment lands located in and around Erskine Park and Eastern Creek)
- Availability of serviced land
- o Improved transport opportunities and infrastructure
- Lower rents and cheaper land
- o Growing population and customer base

These factors have reshaped Metropolitan Sydney's industrial structure, in particular the traditional inner city industrial areas which are now characterised by new types of commercial and industrial development, or have been converted for residential usage. Located on Sydney's fringe, and not traditionally a strong location for industrial employment, Hornsby and Ku-ring-gai have not experienced these pressures to the same extent as other areas.

Home-based Work

Home-based businesses are amongst the fastest growing industries annually, with an increasing number of people entering the marketplace. The rise can be attributed to the affordability of computers, the internet and other communication technologies. In Australia, approximately 50% of business owners are occupied in home-based businesses, with this trend continuing to increase.

When starting a home-based business, expansion is a key requirement for business choice. Industries that home-based businesses are more likely to be successful in include: e-commerce, health, nutrition, cosmetic, etc. These industries are new industries or industries that undergo frequent change. Because of the nature of home-based businesses innovation is critical.

Consumer spending should also be considered; knowing consumer habits and trends of the market is crucial. Knowing where business is 'going to deliver' is important, so that target marks can be properly identified.

Changes that are affecting home-based businesses are:

- The rapid development of the internet and associated technologies
- Globalisation of the marketplace
- Changing purchasing habits of consumers

These have an impact on the efficiency of goods and services being delivered to consumers. With competition for home-based businesses not just located locally but internationally, while trying to deal with ever-changing customers wants and demands. However, positives to emerge from these changes include cheaper and more extensive advertising, promotions and sales for a company.

The attraction of home based work is flexibility in work hours and the avoidance of a commute to work. Thus, incidence of home based work is usually highest in areas that are distant from employment centres. It is also important to note that home based work is more suited to some types of work than others and professional service, white collar work has traditionally made up a large percentage of this type of employment.



Defining home-based work can be difficult. The Australian Bureau of Statistics in 2005 indicated that around 2.5 million employed persons (24%) worked some hours from home. According to the Sensis Telework Insights Report (June 2005) 30% of individuals and 34% of small to medium size businesses reported some form of home-based work. The difficulty here is in understanding the proportion of home based workers who are working for home based businesses. This has important implications for this Study as it impacts on the need for workspace in employment areas.

Home-based work is also attractive to mature age and disabled workers. With older populations of Hornsby and Ku-ring-gai may benefit from the lifestyle change that home-based work can offer. And with all fringe areas in the Sydney Metropolitan area it can provide greater employment opportunities, particularly in places where there is not a large variety of work options.

SGS's report *Sydney's Economic Geography: Trends and Drivers* indicates that home-based work is increasing rapidly across most industry sectors, and across all sub-regions in Sydney. This trend is visible of more flexible modes of working, which characterise the 'new economy'. In addition, labour market participation rates have increased over the past decades, as more women enter the workforce. Accompany this trend has been the rapid increase in part-time employment. Part of this increase in part time work and hours worked by women is home-based work.

2.3 Policy Context

The State Plan

A key message in this plan is that NSW is 'Open for Business'. Accompanying this direction is the aspiration for Sydney to be 'the most attractive city in which to do business in South East Asia', with the regions sharing in the benefits of Sydney's global city status.

Priorities include:

- 'increased business investment',
- 'maintaining and investing in infrastructure to support the economy'; and
- 'cutting red tape';

Within the goal of 'Improved Urban Environment', priorities include 'Jobs Closer to Home' which picks up on a key aspiration from the Metropolitan Strategy. This will be implemented through the sub regional strategies which seek to ensure there is sufficient appropriately zoned land to accommodate forecast employment growth and change within each of the sub-regions.

State Infrastructure Strategy 2006/07 - 2015/16

The State Infrastructure Strategy (SIS), produced by the NSW Government, provides a 10 year plan that is designed to meet the growing needs for infrastructure within each of the six broad regions of NSW. The SIS aims to offer private and public sector agencies, as well as the community, an ability to contribute to decisions about the timing of major projects. Project funding is also a key factor of the Strategy.



The SIS recognises the strategic importance of specialised centres, Major Centres, employment lands, and renewal corridors, as key sites able to provide significant input for future employment, accounting for 50% of new jobs in the next 25 years. In particular, the Strategy wishes to establish Sydney as a 'strong global economic corridor', with connected centres and the ability for people to have access to housing, jobs and services.

Of particular relevance, is the Strategy's emphasis on public transport infrastructure investment (in the form of improved rail and bus networks) as opposed to focusing on road improvements. This stems from an assertion that as the population grows (particularly in Sydney) rail and bus network use will increase significantly thus placing greater demand on services. Population increases will also increase the volume of freight movement across NSW further strengthening the role of a strategic rail network.

Key capital works within Hornsby and Ku-ring-gai LGAs, as outlined in the SIS, include health care and home care improvements, rail infrastructure upgrades, increased distribution of electricity to the area, and development of a link between the M2 link and F3. This link will improve the subregion's connectivity with the rest of Sydney's employment lands. Hornsby and Ku-ring-gai's links to the Central Coast region via the F3 also provide access to employment markets on the Central Coast.

Planned investment, as detailed in the SIS, will be further elaborated upon following completion of the land use audit.

Statement on Innovation

In terms of key industry sectors for government focus, the Statement on Innovation identifies clear comparative advantages for NSW in the sectors of:

- high value added manufacturing;
- entertainment, design, media and creative arts;
- financial and business services;
- logistics and transaction services; and
- energy and related services, particularly coal.

The statement proposes that these sectors be the focus for boosting innovation infrastructure and capacity. Currently Hornsby and Ku-ring-gai LGAs employ a significant number of people within the following industries, which align within the focus areas of the Statement on Innovation:

- Architectural, Engineering and Technical Services
- Computer System Design and Related Services
- Legal and Accounting Services
- Telecommunications Services
- Auxiliary Finance and Investment Services
- Creative and Performing Arts Activities



Additionally, the following industries do not employ a large number of people, but have a higher concentration within the Study area, relative to other areas of Sydney:

- Software Publishing
- Sound recording and music publishing
- Publishing (except Internet and Music Publishing), nfd

The industries listed above may provide Hornsby and Ku-ring-gai Council with opportunities to boost local innovation.

The Metropolitan Strategy

The Metropolitan Strategy aspires to provide sufficient land for employment growth, and includes employment capacity targets for Sydney's sub-regions, as well as for strategic centres and employment land precincts.

Relevant analysis of trends and directions in employment lands is included in the Strategy, which recognises that changes in the way businesses are operating are increasing the 'white collar' component of employment in employment land areas. Old style industrial areas, for heavier industry types, are diminishing. Factors affecting employment land provision across the Greater Metropolitan Region are identified as²:

- Increasing 'export and import' business activity requiring proximity or good access to the airport and port;
- The role of innovation which is driving industry clusters, and the need for proximity to quality services and education activities;
- The increasing proportion of office jobs in traditional industry, meaning that public transport in or near centre locations, for employment areas need to be considered;
- The need for some activities, such as concrete batching and waste services, to have a good distribution across the metropolitan area; and
- The need for lower cost locations for 'start-up' businesses.

The Metropolitan Strategy will be rolled out through Subregional plans that provide a manageable area of consideration and have attempted to group together LGAs with similar issues and challenges. Hornsby and Ku-ring-gai LGAs comprise the North Subregion, and the Metropolitan Strategy expects that an additional 21,000 new dwellings and 8,000 new jobs would need to be accommodated within the sub-region by 2031. These numbers have since been revised in the Draft North Subregional Strategy.



² see pages 53-54 of the *Metropolitan Strategy* supporting information document

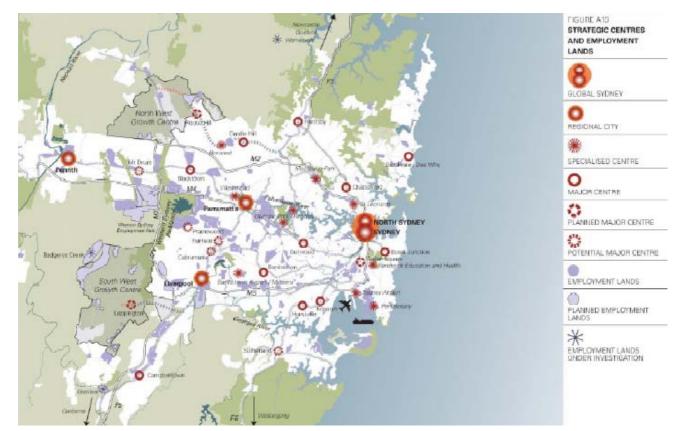


Figure 4. Metropolitan Strategy, Strategic Centres and Employment Lands Map

Source: Metropolitan Strategy supporting information document, p.53, 2005.

The Inner North Subregion to the south (includes the suburbs of Ryde, Willoughby, Lane Cove, North Sydney, Mosman) contains the Lower North and Macquarie Corridor strategic employment lands, which form part of the global economic corridor from Macquarie Park to Sydney Airport/Port Botany. It is expected that around 30% of future employment will be located in the global economic corridor with a concentration on finance, information, design and advanced manufacturing industries.

Employment lands within the North Subregion are collectively referred to as the 'North' strategic employment land precinct. The Metropolitan Strategy foresees a change in the distribution of employment within the sub-region, with an 11.6% reduction in employment that is located within the 'North' strategic employment lands. This reflects the constrained supply of employment land in the North Subregion and the changing nature of industry. In such locations, the Strategy suggests review of zoning or scale of development, may be required to meet future employment needs.

The Central Coast sub-region (subject to a separate regional strategy) will cater for a growth of 55,000 new jobs to 2031. Hornsby and Ku-ring-gai LGAs have the potential to capitalise on this employment growth, as the area is well linked to the Central Coast via the F3, which provides a transport corridor for businesses and employees.

In addition, Hornsby and Ku-ring-gai LGAs are undergoing rail and road infrastructure works to provide better accessibility to the rest of the Sydney region (Epping to Chatswood Rail line, F3 upgrades, F3 to M2 links).

Hornsby is identified as a Major Centre under the centres typology of the Strategy. Major Centres provide the significant shopping and office employment for the surrounding area with full scale shopping malls, council offices, taller office and residential buildings, central community facilities and a minimum of 8,000 jobs. The employment capacity target for the Hornsby Major Centre reflects a 27.5% increase from 9,412 jobs in 2001 to 12,000 jobs in 2031. The revised figures are discussed under the heading "Draft North Subregional Strategy 2007".

Employment Lands for Sydney Action Plan

The Employment Lands Sydney Action Plan addresses issues raised by a high-level task force of industry and government, who sought to advise the NSW Government on the current situation in regards to employment lands in NSW.

The plan provides 18 key recommendations and five actions, of which the main objectives are to provide suitable employment lands sites in strategic locations, increase innovation and skills development, and improve opportunities and access to jobs for disadvantaged communities.

The Employment Lands Development Program is to be established to focus on the release of more employment lands, regeneration of brownfield sites, provide more efficient processes for zoning and developing of sites, and have enhanced co-ordination across government levels and with the community.

The Action Plan identifies approximately 168 hectares of employment lands within Hornsby LGA, while Ku-ring-gai has no industrial lands. Both LGAs are located within the North Subregion, with no additions or deletions of employment lands being made in the past 20 years. Although Hornsby and Ku-ring-gai LGAs are located on the outer edge of Metropolitan Sydney, the area does not have the land capacity for future employment lands expansion, partly due to environmental constraints, such as National Parks.

Draft North Subregional Strategy, 2007

The Draft North Subregional Plan has recently been placed on public exhibition. When finalised, it will be the guiding document that provides a local level framework, based on Sydney Metropolitan Strategy directions, to manage growth to 2031. The North Subregion consists of Hornsby and Kuring-gai LGAs, as per the current Strategy.

The Key Directions for the North Subregion strive to:

- Provide better access to a variety of housing choices;
- Strengthen the Major Centre;
- Enhance the Local Centres;
- Provide better public transport access to, from and within the North Subregion; and



Manage rural and resource lands.

An employment capacity target of an additional 13,500 jobs, and a housing target of 21,000 additional dwellings, has been established for the North Subregion to 2031. An employment capacity target has also been set for Hornsby Major Centre, which is expected to accommodate approximately 3,000 additional jobs.

The Department of Planning and local councils within the North Subregion will continue to develop local planning instruments to ensure sufficient land zoned for business and enterprise in locations with high quality transport access, in order to accommodate expected employment growth. The North Subregion contains some knowledge and health infrastructure, namely Hornsby – Northern Sydney Institute of TAFE, University of Technology Sydney, Lindfield Campus, Hornsby Hospital and Sydney Adventist Hospital. The strategy considers ways to maximise the opportunities associated with these existing assets.

The economic future of the North Subregion will be influenced by the neighbouring Inner North Subregion, which encompasses the northern half of the Global Economic Corridor. Significant growth has occurred within the Inner North Subregion, particularly within Macquarie Park, and this is expected to continue. The completion of a number of transport infrastructure projects will also influence the future of the North Subregion. These include the proposed North West Rail link, new platforms at Hornsby Station, completion of the Chatswood to Epping Rail link, F3 widening between Mt Colah and Cowan and a potential link between the M2 and F3.

Key actions of relevance for the current strategy are:

- A.1.9.1 The Department of Planning and local councils to review planning controls for industrial areas, to enable higher intensity employment uses in areas with good public transport access.
- A.2.2.2 Councils to consider opportunities to strengthen existing business clusters
- B.3.4.1 Hornsby Council to plan for the protection of a core commercial area in the Hornsby Centre to be enhanced over time.

Hornsby Shire Council, Economic Development Strategy 2007-2011

The Economic Development Strategy 2007-2011 outlines initiatives and strategic planning that will enable Hornsby LGA to achieve its vision of 'investment opportunity of choice'. The Strategy has the overarching aim of attracting and retaining businesses and increasing employment opportunities within the Shire.

The Strategy provides the following profile of the LGA in 2006:

- There were 150,000 highly skilled residents with a median household income of \$66,000 p.a.;
- 10,000 businesses provided over 40,000 jobs (50% for local residents)
- 17% of businesses provide property and business services (key growth area), 13% retail trade,
 11% health and community services;
- Gross regional product of the LGA was \$7.2 billion;



- The Shire accommodated 7 Major Centres, with Hornsby Town Centre (130,000 sqm of retail floor space) being the main focal point of retail activity, commercial and community facilities; and
- 194ha are zoned for manufacturing (Mt Ku-ring-gai, Asquith, Waitara, Thornleigh), Council has no plans to expand land for manufacturing.

Figure 5 illustrates major commercial and industrial precincts as well as retail centres and major transportation infrastructure as identified in the Strategy. Hornsby Shire Council has developed a vision, principles and strategic actions for Hornsby 2011. These are outlined below:

Vision	Principles	Strategic Actions
■ Thriving and sustainable economy	 Development of 	■ Improve information and support services to
 Increased growth and wealth for 	broad policies	business and industry through development of a
residents	■ Working in	business directory and business audit
■ Wide range of retail, commercial,	partnership with	Marketing and promotion of Hornsby Council
industrial services & greater mix of	community, business	 Publication of service brochure
businesses	and other levels of	■ Target and support SME's (Small-Medium
Distinct retail sector focused on	government	Enterprises)
Hornsby Town Centre, Pennant	 Outcome oriented 	Facilitate new sustainable investments
Hills, Epping, Thornleigh,	focus	 Develop a register of development sites
Carlingford, Dural	 Constant monitoring, 	Promote growth in existing centres
■ Transport infrastructure links to	review and evaluation	 Update and/or prepare masterplans for the
Parramatta, Chatswood and other	of progress	Subregional and district centres
areas		 Investigate business clusters

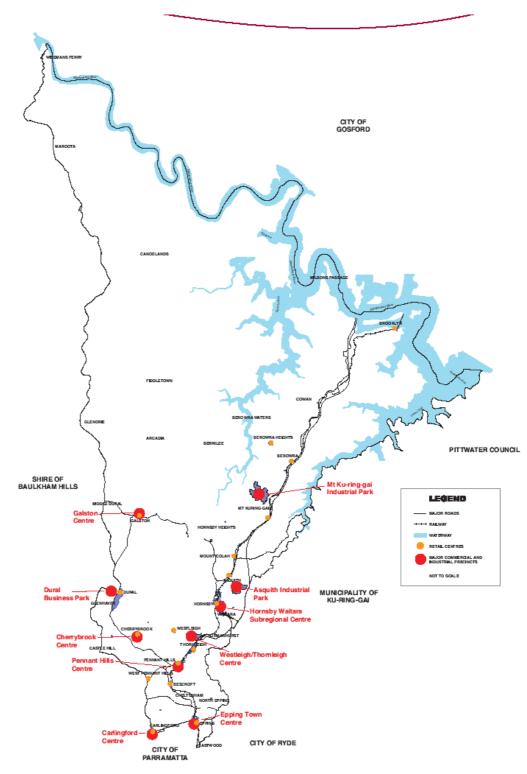


Figure 5. Hornsby Employment Areas

Source: Hornsby Shire Council, Economic Development Strategy 2007-2011, p. 19

Hornsby Local Environmental Plan 1994

Hornsby's Local Environmental Plan (LEP) 1994 divides the Shire into 8 broad land use zones as shown in Table 4. Hornsby contains a low proportion of employment lands (0.6%) with a substantial portion of the LGA being zoned for National Park and Environmental Protection lands (58%).

Table 4. Hornsby LEP zones and land areas

Zone	Area (Km2)	% of Shire
unzoned (waterway)	47.21	9.3
Rural	74.2	14.6
Residential	47.8	9.4
Business	1.32	0.3
Industrial	1.7	0.3
Special Uses	15.5	3.1
Open Space	24.6	4.8
Environmental Protection	73.1	14.4
National Park	223.3	43.9
Total	508.7	100

Source: Hornsby Council, 2007

Hornsby LEP 1994 includes seven business zones and two industrial zones. Business zones generally provide for diverse business uses except for Business E (Service Centre). Both industrial zones allow for light industrial uses and other large footprint uses such as plant and equipment hire premises, vehicle repair stations and warehouses and distribution.

The LEP provides for other employment generating activities such as tourism facilities in the Residential AT zone the Special uses (corridor) zone and medical support services in the Residential AM zone. High density residential zone does not permit mixed use development.

Ku-ring-gai Planning Scheme Ordinance (KPSO)

Ku-ring-gai Planning Scheme Ordinance (KPSO) sets out aims and objectives, land use zones, floor space ratios, heritage items, definitions and miscellaneous other provisions. Ku-ring-gai Council does not possess any employment lands. As such there are no provisions for industrial land in the PSO.

Draft Ku-ring-gai LEP 2006 (Town Centres)

Council has finalised planning for six centres in Ku-ring-gai. The draft plans are being reviewed and finalised by the Planning Panel, and then will be re-submitted to the Department of Planning. They will not come into effect until formal approval is received from the Department of Planning. The draft plans were prepared in response to a Direction from the Minister for Planning under Section 55 of the *Environmental Planning and Assessment Act 1979* which requested Council to:

- Provide more housing in and around key commercial centres; and
- Increase retail and commercial development to cater for the needs of the local community.



Council formally exhibited the draft Local Environmental Plan (LEP) and Draft Development Control Plans (DCP) for all six centres in accordance with the requirements of the *NSW Environmental Planning & Assessment Act 1979*. These plans will guide the future development within the centres of Ku-ring-gai LGA.

The Draft Ku-ring-gai LEP 2006 (Town Centres) which was adopted by Council on 8th November 2006 includes the following provisions and zoning for the Town Centres, as listed in Table 5.

The Draft LEP provides centre specific development controls on Draft LEP maps for the St Ives Town Centres related to:

- Minimum subdivision lot size and street frontages
- Building height
- FSR

Similar principal development standards are provided for Turramurra (adopted 13 Nov 2006), Gordon and Pymble (adopted 30 November 2006). Similarly, a draft amendment (Draft Amendment 3) has also been prepared for Roseville and Lindfield (adopted 18 December 2006)

Table 5. Ku-ring-gai LEP 2006 (Town Centres) Zones and Provisions

Zone	Objectives/ Provisions					
R3 Medium	Objectives:					
Density	To provide for housing needs of the community within a medium density residential environment					
Residential	■ To provide a variety of housing types within a medium density residential environment					
	■ To enable other land uses that provide facilities or services to meet the day to day need of residents					
	■ To provide housing that is compatible with the existing environmental character of Ku-ring-gai and the					
	desired future character of the locality					
	To provide a comfortable living environment for residents					
	Key permissible development for business uses:					
	Neighbourhood shops permitted with consent.					
R4 High	Objectives:					
Density	■ To provide for housing needs of the community within a high density residential environment					
Residential	■ To provide a variety of housing types within a high density residential environment					
	■ To enable other land uses that provide facilities or services to meet the day to day need of residents					
	■ To provide housing that is compatible with the existing environmental character of Ku-ring-gai and the					
	desired future character of the locality					
	■ To provide buildings within a landscape setting					
	To provide a comfortable living environment for residents					
	To appropriately integrate commercial land uses into residential areas adjacent to Town Centres					
	Key permissible development for business uses:					
	Neighbourhood shops, medical centres and shop-top housing permitted with consent.					
	Neighbourhood shops, medical centres and shop-top housing permitted with const					

Zone	Objectives/ Provisions					
B2 Local	Objectives:					
Centre	To provide a range of retail, business, entertainment and community uses which serve the needs of people who live in, work in and visit the area					
	■ To encourage employment opportunities in accessible locations					
	■ To maximise public transport patronage and encourage walking and cycling					
	■ To integrate residential development with retail and commercial development that is compatible with the					
	Village character of the centre					
	■ To provide a vibrant and pleasant public domain					
	Key permissible development for business uses:					
	Business premises, entertainment facilities, medical centres, mixed use developments, neighbourhood					
	shops, office premises retail premises, restaurants and public transport facilities are permitted with consent.					
B4 Mixed Use	Objectives:					
	■ To provide a mixture of compatible land uses.					
	To integrate suitable business, office, residential, retail and other development in accessible locations so as					
	to maximise public transport patronage and encourage walking and cycling.					
	To support the integrity and viability of adjoining Local Centres by providing for a range of 'out-of-centre'					
	retail uses such as bulky goods premises and compatible business activities.					
	■ To ensure that development contributes to efficient traffic and transport network.					
	To provide a vibrant and pleasant environment for residents.					
	Key permissible development for business uses:					
	Business premises; Child care centres; Community facilities; Educational establishments; Entertainment					
	facilities; Function centres; Home occupation (sex services); Hospitals; Hotel accommodation; Information					
	and education facilities; Light industry; Medical centres; Office premises; Passenger transport facilities;					
	Places of public worship; Pub; Public administration buildings; Public hall; Public utility undertakings;					
	Recreation areas; Recreation facilities (indoor); Registered clubs; Retail premises; Service stations; Sex					
	service premises; Signage; Spa pools; Swimming pools; Telecommunications facilities; Temporary					
	structures; Utility installations; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals;					
	Warehouse or distribution centres.					
B5 Business	Objectives:					
Development	To enable a mix of office, retail and warehouse uses in locations which are close to, and which support the					
	viability of centres.					
	■ To provide a range of community facilities, recreation and services industries to meet the needs and					
	demands of employees within centres.					
	Key permissible development for business uses:					
	■ Business premises; Child care centres; Community facilities; Earthworks; Educational establishments;					
	Entertainment facilities; Function centres; Home occupation (sex services); Hospitals; Hotel					
	accommodation; Information and education facilities; Light industry; Medical centres; Office premises;					
	Passenger transport facilities; Places of public worship; Pub; Public administration buildings; Public hall;					
	Public utility undertakings; Recreation areas; Recreation facilities (indoor); Registered clubs; Retail					
	premises; Roads; Service stations; Sex service premises; Signage; Spa pools; Swimming pools;					
	Telecommunications facilities; Temporary structures; Utility installations; Vehicle body repair workshops;					
	Vehicle repair stations; Veterinary hospitals; Warehouse or distribution centres.					



Zone	Objectives/ Provisions					
SP2	Objectives:					
Infrastructure	■ To provide for infrastructure and related uses.					
	■ To prevent development that is not compatible with or that may detract from the provision of infrastructure.					
	Key permissible development for business uses:					
	Roads; Telecommunications facilities; Public utility undertakings; Utility installations; The purpose shown on					
	the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for					
	that purpose.					
RE1 Public	Objectives:					
Recreation	To enable land to be used for public open space or recreational purposes.					
	■ To provide a range of recreational settings and activities and compatible land uses.					
	To protect and enhance the natural environment for recreational					
	Key permissible development for business uses:					
	Advertising structures; Caravan parks; Community facilities; Demolition of a building or work; Drainage;					
	Environmental facilities; Environmental protection works; Kiosks; Public utility undertakings; Recreation					
	areas; Registered clubs; Roads; Signage; Telecommunications facilities; Utility installations					

Ku-ring-gai Retail Centres Study, 2005

The Ku-ring-gai Retail Centres Study was prepared by Hill PDA Consulting and focuses on the demand for retail centres within Ku-ring-gai LGA. The detailed study analyses:

- retail trends (deregulation of shopping hours, larger supermarkets, centre retail shopping, discount department stores, diversification of shopping experience, internet shopping);
- the different existing retail centres in terms of their retail hierarchy within Ku-ring-gai (and Sydney wide);
- existing floor space and number of retail stores by type;
- profile of each retail centre (Gordon, St Ives, Turramurra, Pymble, Lindfield, Roseville, Wahroonga);
- household expenditure, including origin and destination for major proportion of shopping
- trade areas and escape expenditure;
- estimated turnover by retail centre and retail type;
- future demand for retail space (current and forecast for 2011 based on population and household spending); and
- required additional floor space, as well as escape expenditure.

The report focuses on establishing a retail hierarchy within the existing retail centres and considers three options for expansion. The Study recommends expanding Gordon to the principal retail centre, with the remaining centres retaining their existing function. It also makes some recommendations on revitalising retail centres and establishing criteria for assessing new developments.

The Study provides important information on:



Escape Expenditure:

 Ku-ring-gai is losing more than 40% of its residents' retail expenditure (\$ 418 Million in 2004); most expenditure is captured by Hornsby, Chatswood and Macquarie Shopping Centres (regional centres).

Retail Hierarchy

- According to the Retail Hierarchy, Ku-ring-gai is lacking department stores or discount department stores and large peripheral or bulky goods cluster.
- Undersupply of retail space
 - Undersupply is measured in price terms, above average price is considered as undersupply. St Ives trades at \$10,000/sqm (almost 50% more than national average); Gordon and Lindfield are trading at 30% above average.
- Estimated Demand for retail space
 - Ku-ring-gai's population is expected to grow by 10,000 households due to the recent rezoning.
 - Household expenditure is projected to create demand for a further 50,000sqm of shop front floor space in the LGA (without taking the escape expenditure into consideration).

The strategy considers three options for expansion

- Option 1- minimal expansion with no alteration to the retail hierarchy
- Option 2 Expand St Ives to the principal centre of 50,000-60,000sqm
- Option 3 Expand Gordon to the principal centre of 50,000-60,000sqm
 - Option 3 a establish a bulky goods cluster between Gordon and Mona Vale along the Pacific Highway
 - Option 3 b bulky goods cluster plus establish a factory outlet centre in the principal Centre



Table 6. Target Floorspace Increase (sqm)

	Option1 Minimal Expansion	Option 2 St Ives as the principal Centre	Option 3 Gordon as the principal Centre	Option 3 & 3a With Bulky Goods	Maximum Expansion**
Gordon	15,000	10,000	35,000	35,000	45,000
St Ives	15,000	35,000	12,000	12,000	12,000
Turramurra	4,000	4,000	4,000	4,000	4,000
Lindfield***	6,000	6,000	6,000	6,000	6,000
Others	5,000	5,000	5,000	5,000	5,000
Peripheral				25,000	25,000
APPROX. TOTAL	45,000	60,000	60,000	85,000	95,000

^{*} Shop front space including commercial services such as banks and real estate agents but excluding entertainment space such as cinemas

Source: Hill PDA, Ku-ring-gai Retail Centres Study, p. 8

The Study recommends option 3 mainly for the fact that Gordon is on the Railway line and centrally positioned in the LGA. It also mentions that Gordon is constrained by multiple land holdings, but offers no solution to the problem. The report recommends that Ku-ring-gai Council should try to

- Attract discount department stores to Gordon
- Establish factory outlets to Gordon
- Encourage cinemas to Gordon
- Expand St Ives retail floor space by 8,000 13,000 sqm and establish an additional supermarket, and
- Establish a medium to large supermarket in Pymble and Roseville.

2.4 Implications

The key findings of this section are summarised below:

- The sub-region has many of the 'keys to competitiveness'. The sub-region already has
 many of the attributes necessary for competitiveness. These include: enabling infrastructure,
 education and health, adequate labour pool, business sophistication and quality of life.
- The movement of low-density employers may favour the sub-region. With the growth in logistics and warehousing the amount of land consumed per employee has increased and this has accelerated demand for large lots on the urban fringe. At face value, high levels of land availability and good infrastructure access should position the area well of these industries
- The sub-region is well placed for high levels of home based work. The attraction of home based work is flexibility in work hours and the avoidance of a commute to work. Thus, incidence of home based work is usually highest in areas that are distant from employment centres. Home based work is also often high in areas with high quality natural environments. Home-based work is also attractive to mature age and disabled workers. With older populations of Hornsby and Ku-ring-gai may benefit from the lifestyle change that home-based work can offer. And with all fringe areas in the Sydney Metropolitan area it can provide greater



^{**} Allowing for 10,000sqm factory outlet in Gordon centre (first preference). Alternative locations (but less preferable) include St lives or the peripheral area.

^{***} Alternatively Lindfield could have minor or no expansion if Roseville (and to a lesser extent Pymble) were to have more significant expansion with a medium to large supermarket.

- employment opportunities, particularly in places where there is not a large variety of work options
- Policy direction to promote growth in centres. Both the Metropolitan Strategy and the Draft North Subregional Strategy provide a clear indication that economic growth should be concentrated in centres particularly those at the top end of the centres hierarchy. For the North Subregion, this means a renewed focus on Hornsby as an employment and activity centre. The strategy has a target of 13,500 additional jobs by 2031 with Hornsby centre expected to accommodate 3,000 of those jobs.

3 The Economy of the 'North Subregion'

3.1 Introduction

This section discusses the economy of the North Subregion. The aim is to outline the character of the sub-region in terms of its assets and infrastructure, its demographic and socio-economic profile, its industrial base and employment characteristics, and local business issues. This section draws heavily on ABS Census data from 2001 and 2006 together with TDC Journey to Work Data (2001). Information on local business issues is dawn from primary research into local business completed as part of this Study.

3.2 Assets and Infrastructure Overview

Figure 6 provides an overview of the existing assets and infrastructure in Ku-ring-gai LGA. The North Shore rail line runs through the centre of the LGA with stations at Roseville, Lindfield, Killara, Gordon, Pymble, Turramurra, Warrawree and Wahroonga. The Pacific Highway also follows the rail line through the LGA and the LGA's commercial centres are predominantly spread along this corridor. Proposed strategic bus corridors cross the LGA with the Mona Vale to Macquarie route running southwest to northeast and the Hornsby to Chatswood route running northwest to southwest

Areas of highest population growth exist in the 1002-2006 period exist in North Wahroonga, St Ives, Warrawee and Pymble. The two most significant 'magnet institutions' are the Sydney Adventist Hospital and UTS Lindfield campus.

Figure 7 provides an overview of the existing assets and infrastructure in Hornsby LGA. The Northern Line terminates at Hornsby with stations at Epping, Cheltenham, Beecroft, Pennant Hills, Thornleigh, Normanhurst and Hornsby. The North Shore line terminates at Berowra with stations at Waitara, Asquith, Mt Colah, Mount Ku-ring-gai and Berowra. North of Berowra, the Newcastle and Central Coast line has stations at Cowan and Hawkesbury. The Pacific Highway follows the rail line running north-south through the LGA. Proposed strategic bus corridors exist in the southern part of the LGA and are focussed on providing services to and from Hornsby

Areas of highest population growth in the 2001-2006 period exist at Westleigh, Hornsby and Waitara. Around Hornsby centre, Hornsby TAFE, Hospital and Energy Australia Precinct exist.

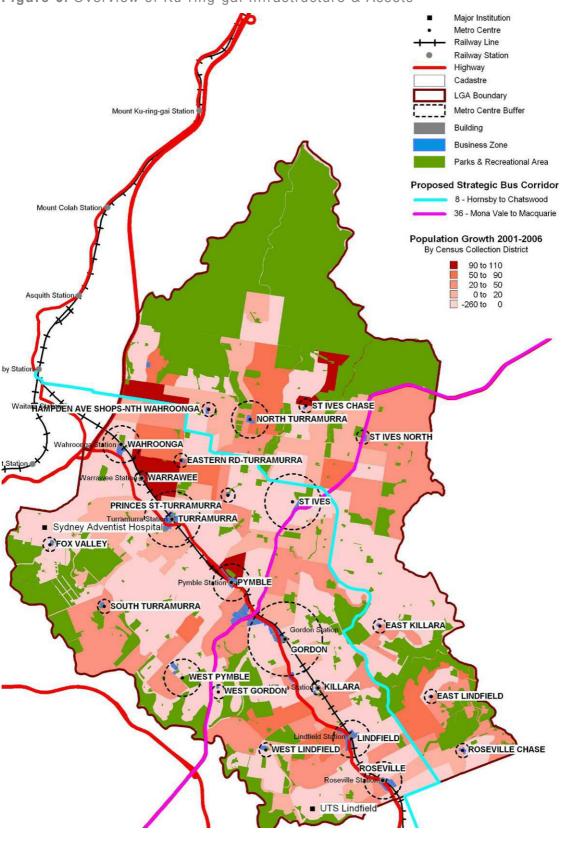


Figure 6. Overview of Ku-ring-gai Infrastructure & Assets



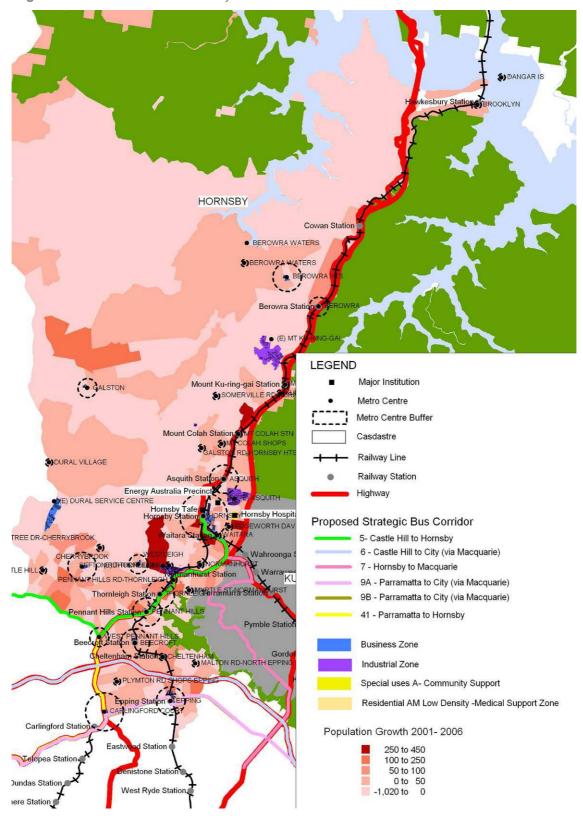


Figure 7. Overview of Hornsby Infrastructure & Assets



3.3 Demographic Profile

In 2006, the total population of Hornsby was approximately 152,000 and the population of Ku-ringgai was approximately 102,000. Both Hornsby North SLA and Ku-ring-gai LGAs experienced slight population decline over the past five years, while population in Hornsby – South SLA increased, possibly reflect the extent of high density residential development which occurred within this area. The division of Hornsby LGA into north and south SLAs highlights the population growth in the south compared to the slight decline of population in the north.

Table 7. Population and Population Change

Area	1996.	Average Annual Change 1996 to 2001	2001.	Average Annual Change 2001 to 2006	2006.
Hornsby – North SLA	61,340	1.31%	65,475	-0.10%	65,140
Hornsby – South SLA	76,293	1.40%	81,769	1.13%	86,479
Ku-ring-gai LGA	100,086	0.49%	102,540	-0.20%	101,534
Sydney SD	3,777,047	1.39%	4,046,627	0.72%	4,195,094

Source: ABS Time Series Profiles, Place of Enumeration, 2006

Figure 8 clearly shows the concentration of employment in the southern part of Hornsby and the central part of Ku-ring-gai along the Pacific Highway corridor.

The population profile for Ku-ring-gai LGA and Hornsby LGA is characterised by large numbers of children and middle-aged adults. Compared with Hornsby, there are fewer adults in the early working-age brackets in Ku-ring-gai.

Figure 10 shows that the age profile of Ku-ring-gai is fairly consistent with the typical demographic profile of its neighbouring LGA, Hornsby. Both LGAs have a slightly higher population of young children and teenagers in the 5-19 age cohorts and 45+ cohort compared to Sydney. Also, the combined LGAs have a below average concentration of young adults in the 25 – 34 years cohort (9%, LGAs combined) compared to Sydney Statistical Division (SD) (15%). Median age is shown in Table 8 and Figure 9.

Table 8. Median Age

Area	1996	2001	2006
Hornsby – North SLA	34	36	38
Hornsby – South SLA	36	37	38
Ku-ring-gai LGA	39	40	41
Sydney SD	33	34	35

Source: ABS Time Series Profiles, Place of Enumeration, 2006



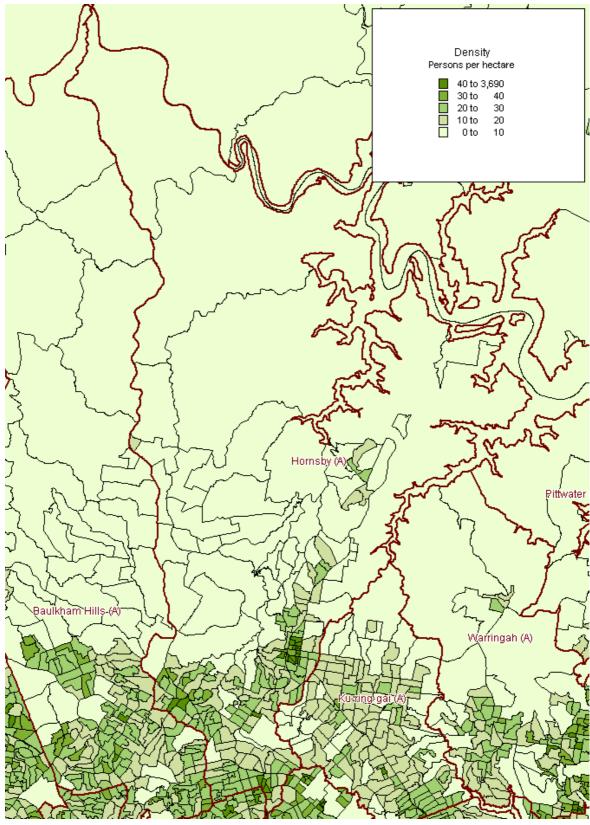
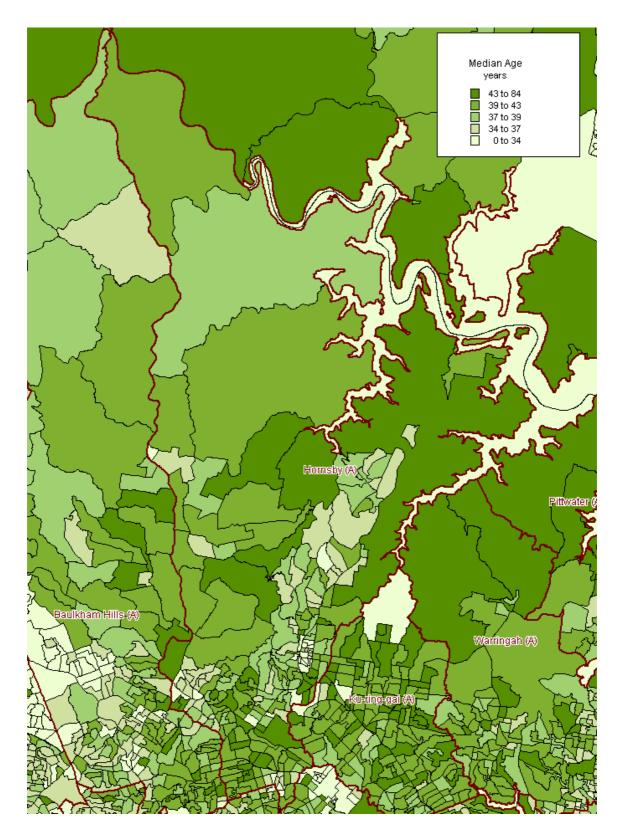


Figure 8. Population Density, 2006

Source: ABS, 2006

Figure 9. Median Age, 2006



Source: ABS 2006



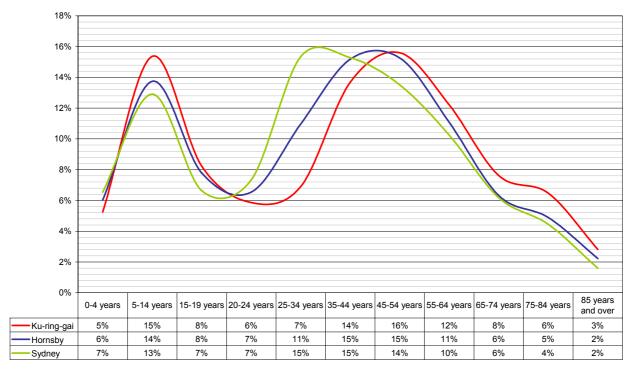


Figure 10. Age Profile, 2006

Source: ABS 2006

Socio-Economics

Key labour market characteristics with regard to employment participation are:

- Hornsby was home to approximately 101, 000 people of working age (67%) in 2006, Ku-ring-gai had approximately 71,000 (62%) residents of working age. In comparison, 62% of the total population of Sydney Statistical Division (SD) was of working age.
- In 2006 Hornsby had 78,972 residents participating in the labour force. This translates into a participation rate of 65.1%, a significant increase from the 2001 workforce participation rate of 58.7%. Workforce participation was 61% for Ku-ring-gai, which declined slightly from 2001 (63.3%).

Labour force participation rates by age are shown in Figure 6. Overall, participation rates for Hornsby and Ku-ring-gai LGAs are higher than Sydney Statistical Division (SD). However, the one exception is the 15-19 years age category for Ku-ring-gai LGA, of which 36.3% are labour force participants, compared to 42.9% for Sydney SD. This may reflect a higher propensity for students to remain in full-time study, whilst being supported by their family.



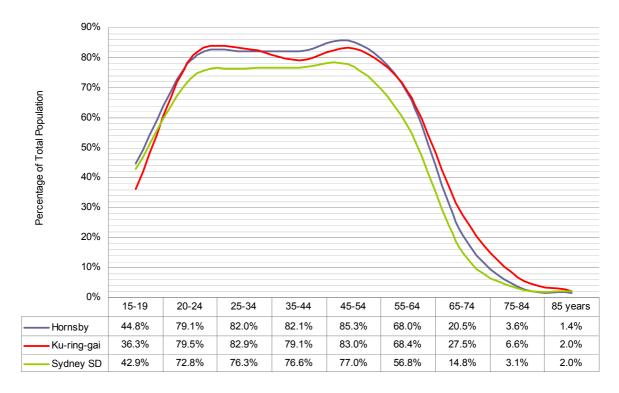


Figure 11. Labour Force Participation, 2006

Source: ABS 2006

The unemployment rate, by age category, is illustrated in Figure 12. Ku-ring-gai and Hornsby's unemployment rate is very low across all age groups when compared to Sydney. This was also the case in 2001.



In 2006, the unemployment rate for Ku-ring-gai LGA is generally half that of Sydney SD.

16% 14% 12% Percentage of Labour force 10% 8% 6% 4% 2% 0% -2% 15-19 20-24 25-34 35-44 45-54 55-64 65-74 75-84 85 years

3.0%

1.5%

4.4%

2.5%

1.5%

3.9%

2.7%

1.6%

4.0%

2.0%

1.7%

2.2%

2.3%

0.0%

2.7%

8.7%

0.0%

5.1%

Figure 12. Unemployment by Age, 2006

10.8%

6.2%

14.3%

6.1%

3.4%

8.3%

Source: ABS 2006

Hornsby

Ku-ring-gai

Sydney SD

In summary, Hornsby and Ku-ring-gai LGA residents have the following characteristics:

3.5%

1.3%

4.8%

- Overall, the population of Ku-ring-gai LGA and Hornsby LGA is characterised by large numbers of children and middle-aged adults. There is a below average concentration of young adults in the 25 – 34 years cohort.
- Within Hornsby LGA there is a high proportion of working-age residents (67%) compared with Ku-ring-gai and Sydney SD (62%). In 2006, Hornsby had 78,972 residents participating in the labour force. This translates into a participation rate of 65.1%, a significant increase from the 2001 workforce participation rate of 58.7%.
- Workforce participation was 61% for Ku-ring-gai, which declined slightly from 2001 (63.3%).
 Ku-ring-gai and Hornsby's unemployment rate is compared to Sydney very low across all age groups.
- Hornsby residents' household income distribution is aligned to Sydney's with a slightly higher percentage of households in the high income groups earning more than\$ 1,700 per week.
- Ku-ring-gai residents have a very high household income profile with 35% of weekly gross household incomes greater than \$2,500.



- Professionals are by far the largest occupation group in Ku-ring-gai (39.0%) and Hornsby (32.1%), followed by managers in Ku-ring-gai (21.3%).
- There is a higher concentration of university educated residents within the Study area compared to Sydney SD.

The Study area is home to a population which is relatively affluent and well educated when compared to Sydney. People who live within the area are more likely to have completed university qualifications and be employed as managers or professionals. A key implication for the current study is that people who live within Hornsby and Ku-ring-gai LGAs are likely to be decision-makers within their place of employment. Origin-destination analysis (discussed later in this paper) reveals the relationship between place of residence and place of work for different job types. There may be opportunities to encourage business owners and managers to relocate their businesses closer to home.

In addition, there may be opportunities to support more people to work from home, particularly in the more northern and western parts of the Hornsby local government area, where there are likely to be long commute times to centres of employment. Possible support for HBW is discussed in later sections.

3.4 Employment Profile

Industry Sectors

In 2006, Hornsby LGA hosted approximately 41,400 jobs, of which 13,600 were located in the northern SLA and 27,800 were located in the southern SLA. Ku-ring-gai employed 27,400 people in 2006, according to recently available Journey to Work (JTW) destination data. Previous Journey to Work data (2001), available at the travel zone level shows the employment density across the Study area (Figure 13).



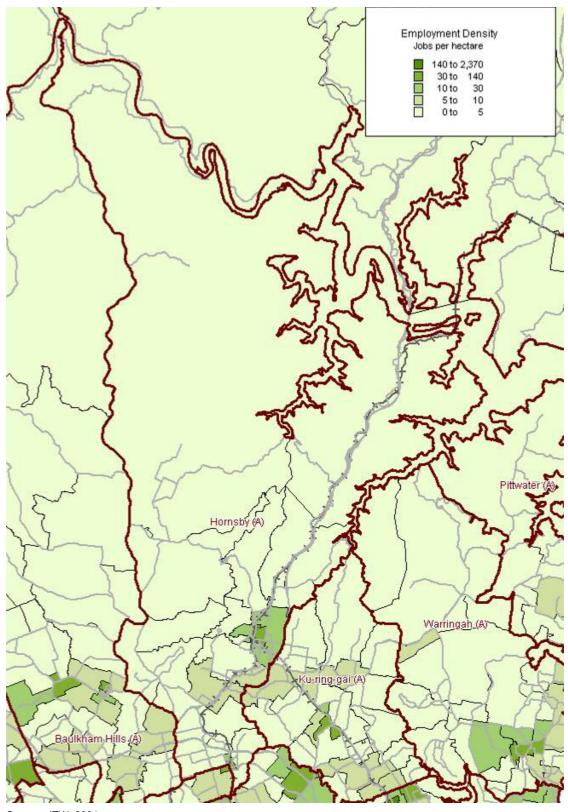


Figure 13. Employment Density, Ku-ring-gai & Hornsby LGA, 2001

Source: JTW, 2001

Figure 14 and Figure 16 show the percentage of jobs by industry in 2006 and the percentage change in employment between 2001 and 2006. In Hornsby LGA, key industries in 2006 were:

- Retail Trade (7.824 or 18.9%)
- Health Care and Community Services (6,154 or 14.9%)
- Education and Training (4,871 or 11.8%).
- Property & Business Services (4882, 11.8%)

This is similar to the nature of employment in Ku-ring-gai LGA where key industries are

- Health Care and Community Services (5,024 or 18.3%)
- Property & Business Services (4751, 17.3%)
- Education and Training (3,923 or 14.3%)
- Retail Trade (3,596, 13.1%)

Examining change in employment in the period 2001-2006 for Hornsby shows the biggest change in job numbers were in:

- Health & Community Services, +962
- Education, +861
- Retail Trade, +536
- Construction, -597
- Finance & Insurance, -526

Examining change in employment in the period 2001-2006 for Ku-ring-gai shows the biggest change in job numbers were in:

- Health & Community Services, +560
- Education, +532
- Construction, +307
- Retail Trade, -493
- Property & Business Services, -491

Figure 17 compares these employment dynamics to those for Sydney in the 2001-2006 period. The job growth in Education, Health & Community Services and Government & Administration are broadly in line with the Sydney pattern. The sharp drop in employment in Finance and Insurance in Hornsby is in contrast to a job growth in this sector in Sydney as a whole. The jobs growth in communication services in Hornsby runs counter the decline in employment in this sector in Sydney as a whole. The sharp percentage change in employment in electricity Gas & Water and Mining reflect changes in relatively small employment numbers and so should be viewed with some caution.

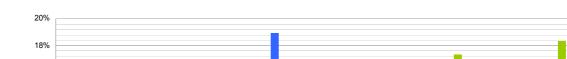


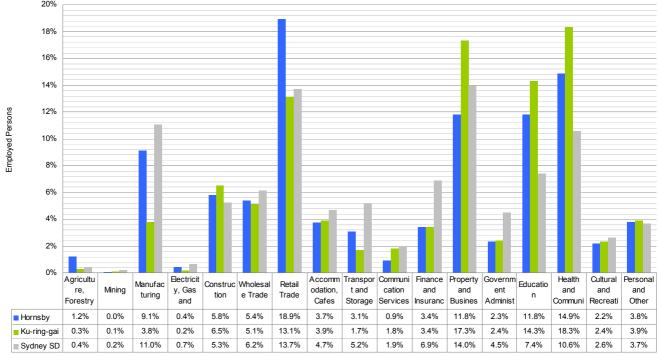
9,000 8,000 7,000 6,000 **Employed Persons** 4,000 3.000 2,000 1,000 Electricit Communi Property Health Cultural Manufact Educatio Construc Wholesal Retail re, Mining y, Gas odation, t and cation and and ent and and and Trade uring tion e Trade Forestry and Cafes Storage Services Insuranc Business Administr Communi Recreati Other Hornsby 516 15 3764 177 2410 2233 7834 1537 1286 386 1407 4882 969 4871 6154 898 1562 1031 51 1787 3596 1070 931 4751 655 3923 5024 649 1062 26 1402 468 490 Ku-ring-gai 71

Employment by Industry (1 digit ANZSIC, 2006) Figure 14.

Source: ABS, 2006

Figure 15.





Percentage Employment by Industry (1 digit ANZSIC, 2006)

Source: ABS, 2006

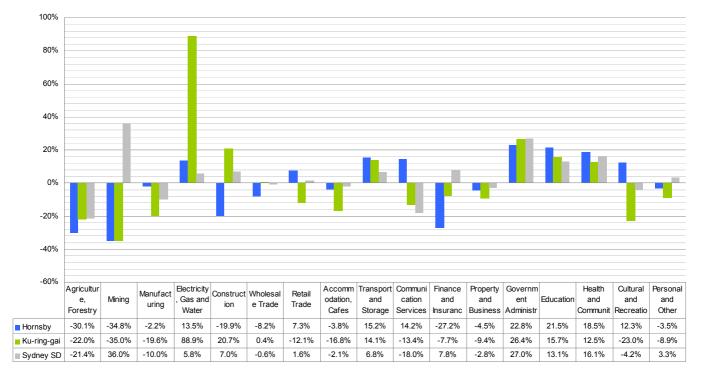


1,200 1,000 800 600 400 200 -200 -400 -600 -800 Health Agricultur ⊟ectricity Accomm Transport Communi Finance Property Governm Cultural Personal Construct Wholesal Retail Manufact Mining Gas and odation, cation and Education and and e, and and ent and e Trade Trade uring ion Forestry Water Cafes Storage Services Insuranc Business Administr Communit Other -8 -85 21 -597 -200 -61 170 -526 180 962 -57 Hornsby -20 -252 24 307 -493 -216 -76 -78 -491 137 532 560 -104 Ku-ring-gai

Figure 16. Employment by Industry, Change 2001 - 2006

Source: ABS, 2001,2006

Figure 17. Employment by Industry, Percentage Change 2001 - 2006



Source: ABS, 2001,2006



Industry Specialisation

Location quotient analysis is used to show relative employment specialisation of an area compared with a chosen benchmark area (in this case Sydney SD). A location quotient (LQ) which is greater than 1 illustrates the relative specialism in that sector. The results Location Quotient analysis are shown in Table 10.

 Table 9.
 Location Quotient Analysis (1 Digit ANZSIC)

		Employ	ees 2006	LQ		
		Hornsby	Ku-ring-gai	Hornsby	Ku-ring-gai	
Α	Agriculture, Forestry and Fishing	516	71	4.1	0.7	
В	Mining	15	26	0.3	0.7	
С	Manufacturing	3764	1031	0.9	0.4	
D	Electricity, Gas and Water Supply	177	51	0.6	0.1	
Е	Construction	2410	1787	1.4	1.0	
F	Wholesale Trade	2233	1402	1.0	0.8	
G	Retail Trade	7834	3596	1.3	1.1	
Н	Accommodation, Cafes and Restaurants	1537	1070	0.8	1.0	
ı	Transport and Storage	1286	468	0.5	0.3	
J	Communication Services	386	490	0.4	1.1	
K	Finance and Insurance	1407	931	0.7	0.5	
L	Property and Business Services	4882	4751	0.9	1.4	
М	Government Administration and Defence	969	655	0.4	0.4	
N	Education	4871	3923	1.3	1.7	
0	Health and Community Services	6154	5024	1.2	1.5	
Р	Cultural and Recreational Services	898	649	0.8	1.2	
Q	Personal and Other Services	1562	1062	1.1	1.2	
R	Non-Classifiable Economic Units	429	377	0.3	0.5	
&	not stated	59	53	4.2	4.8	
	Total	41389	27417			

0	0.25
0.26	0.5
0.51	0.75
0.76	1
1.01	1.25
1.26	1.5
1.51	1.75
1.76	max

For Hornsby, when benchmarked against employment in Sydney, broad industry specialism emerges in the following sectors:

- Agriculture forestry and fishing (LQ4.1, but with just 71 jobs)
- Construction (LQ1.4)
- Retail Trade (LQ1.3)
- Education (LQ1.3)



For Ku-ring-gai industry specialism emerges in:

- Property & Business services (LQ1.4)
- Education (LQ1.7)
- Health & Community Services (LQ1.5)

This 1digit ANZSIC analysis gives a picture of broad industry specialism. Examining LQ values at a 3 digit ANZSIC level gives an indication of fine grain specialism. The results of LQ analysis at a 3 digit ANZSIC level is shown in Table 10. Sorting the results by LQ gives a picture of peculiar local specialism in a Sydney SD context and can point to local industry clustering. Sorting by number of jobs gives a better indication of the importance of the specialist sectors to the local economy.

Table 10. Location Quotient Analysis (3 Digit ANZSIC, 2006)

Top 10 Industries, Hornsby LGA, Sorted by LQ*

COLLE	Corted by Eq.						
	Industry	Jobs	LQ				
114	Fruit and Vegetable Processing	396	10.0				
030	Forestry and Logging	42	8.2				
118	Sugar and Confectionery Manufacturing	249	7.4				
011	Nursery and Floriculture Production	165	5.6				
331	Agricultural Product Wholesaling	220	3.8				
051	Forestry Support Services	22	3.7				
013	Fruit and Tree Nut Growing	62	3.6				
223	Metal Container Manufacturing	83	2.8				
202	Ceramic Product Manufacturing	88	2.6				
860	Residential Care Services	1575	2.5				

Top 10 Industries, Ku-ring-gai LGA, Sorted by I O*

Sorte	Sorted by LQ*						
	Industry	Jobs	LQ				
772	Regulatory Services	99	5.5				
M00	Professional, Scientific and Technical Services, nfd	23	4.0				
954	Religious Services	276	2.7				
821	Adult, Community and Other Education	555	2.4				
802	School Education	2844	2.3				
697	Veterinary Services	85	2.3				
696	Management and Related Consulting Services	531	2.3				
601	Libraries and Archives	42	2.3				
540	Publishing (except Internet and Music), nfd	21	2.3				
332	Mineral, Metal and Chemical Wholesaling	171	2.3				

^{*} Industries with less than 20 employees have been omitted.

Top 10 Industries, Hornsby LGA, Sorted by Number of Employees

	Industry	Jobs	LQ
802	School Education	3,612	2.0
451	Cafes, Restaurants & Takeaway Food Services	2,092	1.3
860	Residential Care Services	1,575	2.5
840	Hospitals	1,301	0.9
411	Supermarket and Grocery Stores	1,264	1.4
692	Architectural, Engineering & Technical Services	800	1.2
853	Allied Health Services	762	1.6
693	Legal and Accounting Services	724	0.6
700	Computer System Design and Related Services	724	0.9
412	Specialised Food Retailing	695	1.5

Top 10 Industries, Ku-ring-gai LGA, Sorted by Number of Employees

	Industry	Jobs	LQ
802	School Education	2,844	2.3
840	Hospitals	1,856	1.9
451	Cafes, Restaurants and Takeaway Food Services	1,200	1.2
692	Architectural, Engineering & Technical Services	941	2.1
700	Computer System Design & Related Services	877	1.7
860	Residential Care Services	769	1.8
853	Allied Health Services	639	2.0
411	Supermarket and Grocery Stores	624	1.1
693	Legal and Accounting Services	612	0.8
851	Medical Services	559	1.8



Employment Self-Containment and Self-Sufficiency

Employment self containment and self sufficiency can be assessed by examining TDC 'Journey to Work' (JTW) data for employment 'origin' and 'destination' pairs. The most recent TDC JTW data is from the 2001 Census³. Overall, in 2001 a high number of Hornsby residents worked within the LGA. Of the workforce 19,539 or 37% are residents. Other key destination for Hornsby working residents are Sydney Inner (14%) and adjoining LGAs such as Ku-ring-gai (8%), Ryde (10%) and Baulkham Hills (8%).

In Ku-ring-gai, over a quarter of the total number of employees were also resident in 2001. Of all the LGA's resident workers, 16% commute to Inner Sydney for work, and approximately 25% are residents who work in neighbouring LGAs.

Table 11 shows how many jobs the LGA can provide for its own residents (employment self sufficiency), with 48% for Hornsby and 44% for Ku-ring-gai the rate is very high. The high figures might be explained by the relatively high proportion of jobs in community servicing industries, such as Retail Trade and Health and Community Services.

Table 11. Employment Self-Containment, Hornsby & Ku-ring-gai LGAs 2001

SLA	Resident Workers	Jobs in the LGA	No of resident workers	% Self- containment	% Self- sufficiency
Hornsby	52,342	40,340	19,549	37.4%	48%
Ku-ring-gai	46,355	27,529	12,208	26.3%	44%

Source: TDC, 2001

We can examine JTW data further to reveal the jobs to workers ratio in terms of both industry types and occupation types. This is shown in Table 12. In broad terms, this shows that there are fewer jobs in the Manager and Administrator and Professionals & Associate Professional categories than there are workers – suggesting a 'leakage' of employment. This is particularly marked for these occupation categories in the construction sector.

In contrast, there are generally more Trades and Related jobs in the LGA than there are resident workers in this occupation category. This is particularly pronounced for Property and Business Services and Education.



³ TDC JTW data from the 2006 Census is expected early in 2008

Table 12. Hornsby Jobs: Workers Ratio (1 Digit ANZSIC by 1 digit ASCO)

		Managers & Administrators	Professionals & Associate Professionals	Tradespersons & Related Workers	Clerical & Service Workers	Labourers, Production & Transport Workers	Other
Agriculture, Forestry and Fishing	&	0.36	0.55	1.23	0.41	0.76	0.03
Mining	Α	0.39	0.36	1.25	0.68	0.33	1.00
Manufacturing	В	0.24	0.31	•	0.60	-	-
Electricity, Gas and Water Supply	С	0.25	0.50	0.50	0.54	0.36	0.19
Construction	D	0.05	0.08	0.33	0.14	•	-
Wholesale Trade	Е	0.71	0.69	1.18	1.16	1.06	0.79
Retail Trade	F	0.35	0.62	0.54	0.55	0.41	1.30
Accommodation, Cafes and Restaurants	G	0.50	0.71	1.24	0.75	1.00	0.73
Transport and Storage	Н	0.26	0.76	1.61	0.70	1.16	1.00
Communication Services	I	0.25	0.27	0.23	0.48	0.41	0.36
Finance and Insurance	J	0.15	0.26	0.35	1.96	0.53	0.91
Property and Business Services	K	0.18	0.18	2.00	0.33		0.72
Government Administration and Defence	L	0.35	0.47	0.71	0.55	0.94	0.59
Education	М	0.13	0.45	2.67	0.54	4.00	0.39
Health and Community Services	Ν	0.55	0.82	1.67	1.02	2.94	0.60
Cultural and Recreational Services	0	0.58	0.68	1.53	1.22	1.99	0.76
Personal and Other Services	Р	0.33	0.53	1.07	0.63	0.48	0.50
Non-Classifiable Economic Units	Q	0.23	0.72	1.61	1.03	1.09	0.50
not stated	R	0.54	0.60	0.33	0.73	2.00	0.36

0	0.25
0.26	0.5
0.51	0.75
0.76	1
1.01	1.25
1.26	1.5
1.51	1.75
1.76	2

Source: TDC 2001.



For Ku-ring-gai, there is a broadly greater level of employment leakage and as with Hornsby, the leakage is more pronounced in the Managers and Administrators and Professionals & Associate Professionals categories. Again, Trades & Relates occupation and Labourers show the lowest levels of 'leakage'.

Table 13. Ku-ring-gai Jobs: Workers Ratio (1 Digit ANZSIC by 1 digit ASCO)

		Managers & Administrators	Professionals & Associate Professionals	Tradespersons & Related Workers	Clerical & Service Workers	Labourers, Production & Transport Workers	Other
Agriculture, Forestry and Fishing	&	0.43	0.30	0.47	0.56	0.40	0.04
Mining	Α	1.03	0.98	1.02	1.15	1.02	-
Manufacturing	В	0.14	0.33	1.00	0.19	-	-
Electricity, Gas and Water Supply	С	0.45	0.42	0.74	0.56	1.18	0.34
Construction	D	0.06	0.24	1.10	0.45	0.68	1.00
Wholesale Trade	Е	0.58	0.57	0.66	0.84	0.75	0.63
Retail Trade	F	0.50	0.39	0.54	0.56	0.86	0.33
Accommodation, Cafes and Restaurants	G	0.67	0.80	1.07	0.72	0.91	0.68
Transport and Storage	Н	0.37	0.61	0.53	0.60	0.88	-
Communication Services	1	0.24	0.25	1.26	0.45	0.94	0.75
Finance and Insurance	J	0.09	0.11	0.20	0.42	0.21	0.11
Property and Business Services	K	0.15	0.23	0.13	0.58	0.52	0.85
Government Administration and Defence	L	0.33	0.36	0.64	0.49	0.60	0.56
Education	М	0.11	0.28	0.36	0.41	0.87	0.18
Health and Community Services	Ν	0.57	0.62	0.55	0.70	0.88	0.25
Cultural and Recreational Services	0	0.57	0.59	1.12	0.78	0.84	0.65
Personal and Other Services	Р	0.28	0.43	0.35	0.57	0.61	0.33
Non-Classifiable Economic Units	Q	0.28	0.59	0.72	0.69	0.79	0.50
not stated	R	0.21	0.24	0.55	0.41	0.40	0.21

0	0.25
0.26	0.5
0.51	0.75
0.76	1
1.01	1.25
1.26	1.5
1.51	1.75
1.76	2

Source: TDC 2001.



Home Based Work

Levels of home based work can be seen in the TDC JTW dataset by examining mode of travel to work and 'worked at home' numbers. Again, the most recent TDC JTW data uses information from the 2001 Census. Home based work in Sydney SD regions in shown in Figure 18. Compared with other regions in Sydney GMR, Hornsby-Ku-ring-gai has the highest levels of home based work and has shown significant growth in the 1996-2001 period.

8000 7000 6000 5000 **2001** 4000 **1**996 3000 2000 1000 St George Cessnock/ Maitland/ Port Stephens Eastern Subburbs Fairfield-Holroyd Outer South West Gosford-Wyong Hornsby- Kurringai Baulkham Hills- Hawkesbury Central Western Sydney Newcastle (Remain) - Lake Macquarie Inner NW Sydney North Sydney Wollongong Blacktown Blue Mountains Canterbury-Bankstown Parramatta-Auburn Newcastle- Inner Northern Beaches Sutherland Inner City Sydney South Sydney- Botany Bay Inner Western Sydney Kiama/ Shellharbour

Figure 18. HBW by Region- 1996-2001

Source: TDC 2001

In 1996, retail was the industry with the most home based workers. This sector was followed by property and business services with also a large proportion of unclassified (or not stated) home based workers. Since 1996 home based retail work has grown by around 20% pa to 2001 but it has been overtaken by a number of other sectors in absolute terms. In particular, HBW in property and business services skyrocketed with growth of more than 70% pa and over 22,000 jobs by 2001. The next largest sectors in absolute terms were the manufacturing and construction sectors followed by retail and health & community services. The sectors with the lowest levels of HBW were the Mining and Electricity/ Gas/ Water industries, both sectors that require intensive operation and maintenance of on-site infrastructure, making HBW impractical. It is interesting to note the very low share of HBW in the government sector. Providing more opportunities for HBW may be necessary for it to successfully compete for good employees in the government sector.

The way that home based work is broken down by industry and occupation category for Hornsby is shown in Table 14.

Table 14. Hornsby Home Based Work by Industry (1 Digit ANZSIC) and Occupation (1 Digit ASCO)

	Industry	Managers and Administrators	Professionals and Associate Professionals	Tradespersons and Related Workers	Clerical and Service Workers	Labourers, Production and Transport Works	Other	total
&	Not stated	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.3%
Α	Agriculture, Forestry and Fishing	3.2%	0.4%	0.7%	0.5%	0.4%	0.0%	5.2%
В	Mining	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.2%
С	Manufacturing	1.8%	2.9%	2.0%	1.8%	0.9%	0.1%	9.4%
D	Electricity, Gas & Water Supply	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Е	Construction	1.3%	1.7%	0.8%	5.5%	0.3%	0.2%	9.7%
F	Wholesale Trade	4.0%	1.6%	0.3%	2.6%	0.3%	0.0%	8.7%
G	Retail Trade	0.6%	1.2%	0.7%	2.1%	0.5%	0.0%	5.1%
Н	Accommodation, Cafes & Rest.	0.0%	0.9%	0.0%	0.3%	0.0%	0.1%	1.4%
I	Transport & Storage	0.2%	0.3%	0.0%	0.9%	0.2%	0.0%	1.6%
J	Communication Services	0.2%	0.2%	0.0%	0.3%	0.0%	0.1%	0.7%
K	Finance & Insurance	0.7%	2.6%	0.0%	1.5%	0.0%	0.4%	5.1%
L	Property & Business Services	3.4%	18.3%	0.6%	9.0%	0.1%	0.5%	31.9%
М	Govt. Admin. & Defence	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.3%
N	Education	0.2%	4.1%	0.1%	0.3%	0.0%	0.3%	5.0%
0	Health & Community Services	0.3%	2.7%	0.0%	2.8%	0.2%	0.0%	6.0%
Р	Cultural & Recreational Services	0.5%	2.8%	0.2%	0.8%	0.0%	0.1%	4.4%
Q	Personal & Other Services	0.3%	2.3%	0.3%	1.1%	0.2%	0.0%	4.2%
R	Non-Classifiable Economic Units	0.0%	0.3%	0.1%	0.4%	0.0%	0.2%	0.9%
	Total	16.7%	42.3%	5.7%	30.6%	2.9%	1.8%	100%



In Hornsby, the highest incidence of home based work occurs in the Professionals and Associate professionals category followed by Clerical and Service workers. Particularly high levels occur in the Property & Business Services and Construction, Manufacturing and Wholesale Trade categories.

Table 15. Ku-ring-gai Home Based Work by Industry (1 Digit ANZSIC) and Occupation (1 Digit ASCO)

	Industry	Managers and Administrators	Professionals and Associate Professionals	Tradespersons and Related Workers	Clerical and Service Workers	Labourers, Production and Transport Works	Other	total
&	Not stated	0.1%	0.3%	0.0%	0.2%	0.0%	0.1%	0.6%
Α	Agriculture, Forestry and Fishing	0.3%	0.2%	0.0%	0.3%	0.0%	0.1%	0.8%
С	Mining	1.9%	3.1%	0.5%	0.9%	0.2%	0.1%	6.6%
Е	Manufacturing	0.9%	1.0%	0.3%	1.9%	0.3%	0.0%	4.4%
F	Electricity, Gas & Water Supply	3.5%	1.2%	0.1%	2.0%	0.0%	0.2%	7.0%
G	Construction	0.8%	1.8%	0.5%	1.8%	0.0%	0.0%	4.9%
Н	Wholesale Trade	0.3%	0.8%	0.0%	0.2%	0.1%	0.1%	1.4%
ı	Retail Trade	0.3%	0.3%	0.0%	0.7%	0.1%	0.0%	1.4%
J	Accommodation, Cafes & Rest.	0.1%	0.2%	0.0%	0.0%	0.0%	0.1%	0.3%
K	Transport & Storage	2.0%	3.8%	0.0%	2.2%	0.0%	1.8%	9.7%
L	Communication Services	5.5%	24.1%	0.3%	9.2%	0.2%	1.5%	40.8%
М	Finance & Insurance	0.0%	0.2%	0.0%	0.1%	0.0%	0.0%	0.3%
N	Property & Business Services	0.4%	4.7%	0.0%	0.7%	0.0%	0.0%	5.8%
0	Govt. Admin. & Defence	0.6%	3.9%	0.0%	3.2%	0.0%	0.1%	7.8%
Р	Education	0.9%	2.5%	0.3%	0.4%	0.0%	0.3%	4.4%
Q	Health & Community Services	0.2%	1.4%	0.2%	1.0%	0.1%	0.0%	2.8%
R	Cultural & Recreational Services	0.2%	0.4%	0.0%	0.4%	0.0%	0.1%	1.1%
	Personal & Other Services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Non-Classifiable Economic Units	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total		17.9%	49.7%	2.1%	25.0%	0.9%	4.3%	100.0%



In Ku-ring-gai, the highest incidence of home based work occurs in the Professionals and Associate Professionals category followed by Clerical and Service workers. Particularly high levels occur in the Communication Services industry category with significant proportions also in Government Administration & Defence.

As part of the Study, targeted consultation was completed with home base businesses operating within the Study area. Interviews were completed with ten firms. Initial contacts were selected after discussion with local chambers of commerce, with snowball sampling techniques providing contacts to explore emerging themes... This research highlighted the following key points:

• Home based business would benefit from support services. Many of the interviewed suggested that the provision of centralised business support would help their business. Suggestions included fax and copy service and the existence of a JP at the library.



- Most HBBs do not intend to 'graduate' to space in commercial/ industrial areas. Most firms suggested that they had not been forced in anyway to operate from home due to a lack of available business space elsewhere. While some suggested that it was much cheaper to operate from home rather than in a commercial centre, the drivers for the home-based operation were usually the lifestyle benefits that home based work allowed.
- Most HBBs are footloose, and could potentially operate from any location. Most of those interviewed suggested that, from a purely business perspective, they had very few ties to their location and that they could essentially run the business from any location. While for some, the ability for clients to visit the home was important, most of those interviewed suggested that they had no ties with surrounding businesses.
- **High quality telecommunications infrastructure is essential**. Businesses typically suggested that having access to high quality telecommunications infrastructure was far more important than access to road or rail infrastructure.

3.5 Business Environment

Market Conditions

Discussion with local real estate agents indicates that both the industrial and commercial markets are very slow. Both selling and leasing are occurring at a slow pace – most recently this is thought to have been affected by the election. However, local industrial agents have suggested that the market is unlikely to improve in the next two to three years. While industrial lands in proximity to Hornsby have remained stagnant, there has been some development occurring at Mt Ku-ring-gai and Thornleigh, and some sales and leasing activity in Asquith.

Within the Hornsby and Ku-ring-gai area there are limited large offices. Consultation with local commercial agents suggests that businesses are generally seeking smaller spaces from 50sqm to 150 sqm in size. Of those businesses seeking office space, approximately 50% are from within the local area. One agent suggested that Hornsby has a competitive advantage in that it is on the cross-roads, that is, from Hornsby you can catch the train to the city or to Parramatta; however it does not have any high quality office space.

While some office space was constructed as a component of large apartment buildings, this has mostly been sold or leased.

Business Survey

The business survey was conducted as part of the Study to highlight local business issues. The business survey was posted to all businesses listed on a Council held database. After a low initial response, a second round survey was hand delivered to business addresses. In addition, electronic copies of the survey were made available to home based businesses.



The survey response was 151, from 2,500 surveys – a response rate of 6%. The sample size is not large enough to be considered a statistically representative sample of business in Hornsby & Kuring-gai. Nevertheless, the results raise some interesting issues for further analysis as part of this Study. As a result of the relatively small number of total responses, the two LGAs have been combined for analysis of the business survey.

Figure 19 shows the distribution of businesses among industry categories. In the figure below 'Transport & Storage', 'Education', 'Cultural and Recreational Services', Personal & Other Services', 'Agricultural, Forestry & Fishing' and 'Other Business Activity' were amalgamated to one category, namely 'other'. Together they represent 6% of all businesses that responded to the survey.

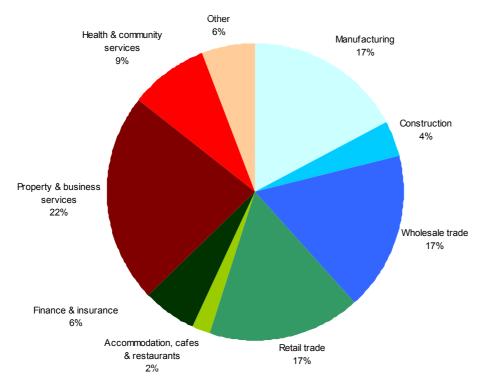


Figure 19. Business Responses by Broad Industry Sector

Source: SGS (2007), Hornsby Ku-ring-gai Business Survey

The largest number of responses were received from 'Property and Business Services'; approximately 22%, or 34 businesses. This was followed by the 'Retail Trade', 'Wholesale Trade' and 'Manufacturing', each representing 17% of responses. There were also some responses from 'Health and Community Services' and 'Finance and Insurance', accounting for 9% and 6% of responses respectively. Only one response was received from each of the following industries: 'Transport and Storage', 'Cultural and Recreational Services' and 'Agricultural, Forestry and Fishing'.

The business survey asked businesses to estimate what percentage of employees live in Hornsby. 140 businesses responded to this question, of these 40 businesses estimate that 100% of their employees also live within Hornsby and Ku-ring-gai LGAs. On average, 58% of employees working in Hornsby and Ku-ring-gai also live there. Cross-tabulation of data shows that there is no relationship between the size of business and the origin of employees.

The survey questioned businesses on whether they experience difficulties in attracting or retaining employees. Responses to this question are shown in Figure 20. Approximately 20% of respondents indicated that they had problems in attracting employees with the \$0-\$249 and \$250-\$599 income categories – a significant percentage. The majority of businesses indicated that they did not experience difficulties in attracting or retaining staff across all income categories.

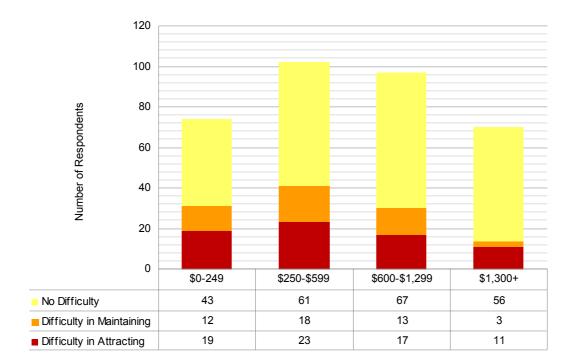


Figure 20. Attracting and Maintaining Employees, by weekly income

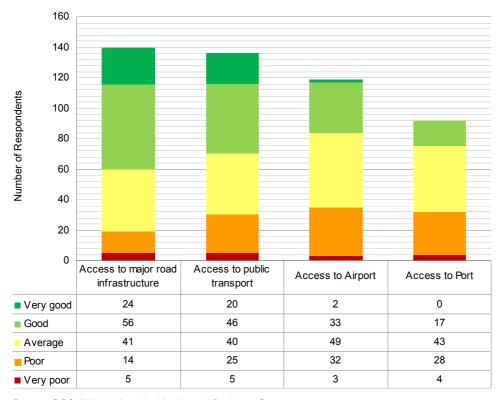
Source: SGS (2007), Hornsby Ku-ring-gai Business Survey

The survey asked businesses for their opinion on the quality of the local business climate. Aspects taken into account are availability of suitable land and business premises, proximity of supplier and market base, accessibility of transport infrastructure and the facilitating role of the Council. Businesses in Hornsby and Ku-ring-gai present a range of opinions on the business climate; on a scale of 1 (very poor) to 5 (very good) the average answer was around 3 for business location aspects, approximately 3.5 for road infrastructure and public transport (Figure 21, Figure 22 and Figure 23). Other aspects of the business climate were considered to be between poor and average. A very low proportion of respondents thought Council's planning and regulations were 'good' or 'very good'.

140 120 100 Number of Respondents 80 60 40 20 0 Availability of appropriate Availability of appropriate land and sites premises (buildings) ■ Very good 4 4 28 30 Good 49 49 Average 24 27 Poor 6 9 ■ Very poor

Figure 21. Rating of Business Location Aspects

Figure 22. Rating of Accessibility Aspects



Source: SGS (2007), Hornsby Ku-ring-gai Business Survey



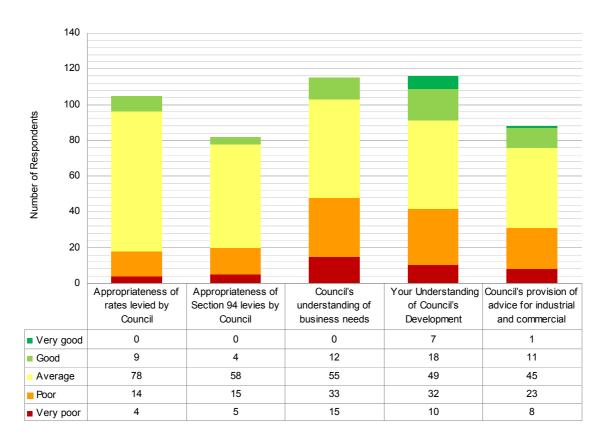


Figure 23. Rating of Council Planning and Regulations for Building

The survey asked the respondent businesses to comment on their future intentions. 132 of 151 respondents answered the question. Most respondents indicated that they expect their business will remain stable or expand. Broad expectations are positive with 43 per cent of respondents expecting to expand the number of employees, compared with only 4 per cent expecting to decrease (Figure 24).

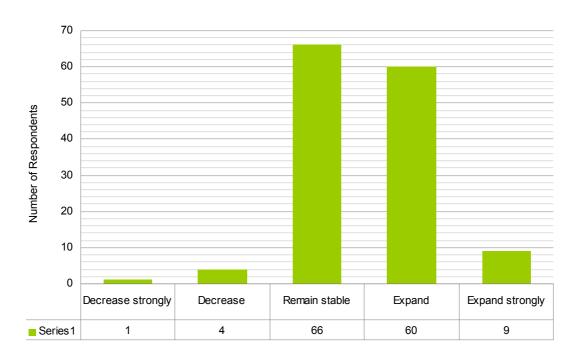


Figure 24. Business Expectations for the next 3 years: Number of Employees (by number of respondents)

While many businesses intend to expand the number of employees, fewer intend to expand the floor or land area they are currently using; 102 respondents expect future requirements for land and floorspace will remain the same. Only 28 of the responding businesses intend to expand their footprint (Figure 25) while 69 respondents expected to expand or strongly expand the number of employees in their business. This is an indication that business growth can be accommodated, at least in part, by intensification rather than increased land consumption.

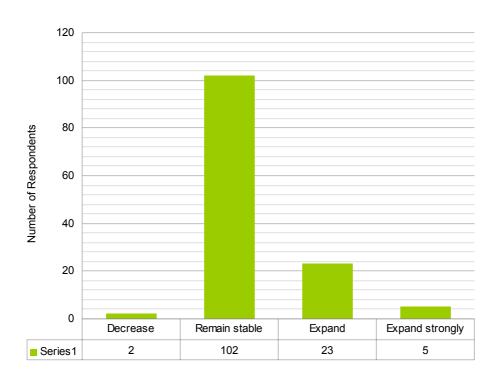


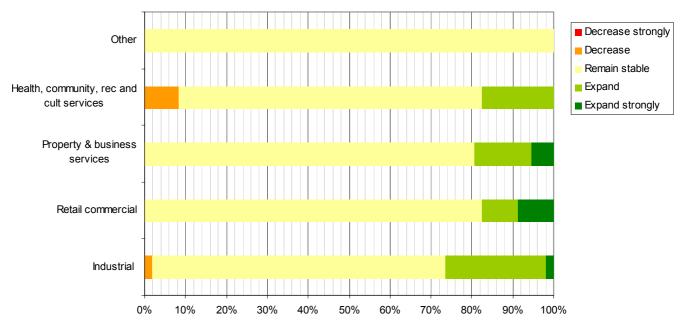
Figure 25. Business Expectations for next 3 years: Land / Floorspace Requirements, (by number of respondents)

Expansion intentions by industry sector are analysed in Figure 26 and Figure 27. In terms of employment expansion, industrial sectors (Manufacturing, Construction, Transport & Storage and Wholesale Trade) show the most positive result, with a large majority stating an intention to 'expand' or 'expand strongly'. This result is driven by the Manufacturing sector in particular. This industry grouping is followed by Property & Business services (Finance and Insurance and Property & Business Services) and Retail Commercial (Retail Trade and Accommodation, Cafes & Restaurants). Comparing this with the results for expansion in terms of land area, business intentions are much more modest with industry groupings that showed strong employment expansion (Industrial, Property & Business Services, Retail Commercial) showing much less strong land expansion intentions. Of all industry sectors, Wholesale Trade and Manufacturing showed the greatest intensification with a majority of respondents in these sectors reporting strong employment expansion and stable land expansion.

Decrease strongly Other Decrease Remain stable Health, community, rec and Expand cult services ■ Expand strongly Property & business services Retail commercial Industrial 0% 30% 40% 50% 60% 70% 80% 90% 10% 20% 100%

Figure 26. Expansion (employment) by Broad Industry Sector





Source: SGS (2007), Hornsby Ku-ring-gai Business Survey

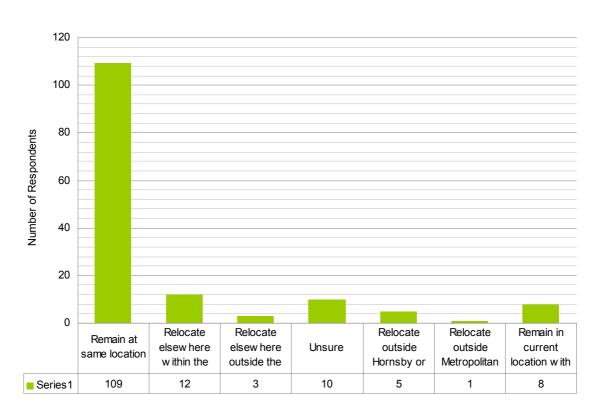


Figure 28. Business Expectations for next 3 years: Location (by number of respondents)

Figure 28 indicates that the majority of respondents intend to remain at their current location (109 of 148 respondents). The primary reasons for considering relocation of the business, mentioned by respondents, was that there was insufficient space to accommodate growth on the existing premises.

3.6 Implications

The key findings of this section can be summarised as follows:

• **Economic specialisation in health and education**. Employment in health and education is very high in the sub-region. In 2006, health and education were among the top 5 employing sectors in both LGAs. In addition, health and education industry sectors have displayed the strongest growth in the 2001-2006 period.

There are several key institutions responsible for some of these jobs. In Hornsby, the Hospital and TAFE are key employers. In Ku-ring-gai, the two most significant 'magnet institutions' are the Sydney Adventist Hospital and UTS Lindfield campus.

One of the challenges for the Study is that while these institutions are large employers, Councils will typically have limited control in their planning and future growth.



• Importance of arterial infrastructure. Both of the LGAs in the sub-region have arterial infrastructure as a spine for economic activity. The North Shore rail line, with the Pacific Highway running in parallel dominate Ku-ring-gai LGA with the commercial centres scattered along its length. Similarly, in Hornsby, the Northern Line and the North Shore line with the Pacific Highway running to the north dominate patterns of economic activity.

The accessibility of employment lands to this infrastructure is vital for many industries. Most obviously, time dependant industries such as transport and storage, distribution, and logistics functions require arterial road access. However, many other sectors require both accessibility to and visibility from he main roads. Examples here include Bulky Goods Retail, larger office functions and 'business park' land uses.

Proximity to transport nodes is important for land uses that generate large numbers of trips – especially those that draw activity from a wide catchment. These types of uses are higher order retail functions (larger shopping centres and Bulky Goods Retail), office functions and central community services.

• **'Leakage' of professional workers**. In broad terms, origin-destination analysis has shown that there are fewer jobs in the Manager and Administrator and Professionals & Associate Professional categories than there are workers – suggesting a 'leakage' of employment. This is particularly marked for these occupation categories in the construction sector. While this is true for both LGAs, for Ku-ring-gai, there is a greater level of employment leakage in general and as with Hornsby, the leakage is more pronounced in the Managers and Administrators and Professionals & Associate Professionals categories.

While the leakage of higher order employment may simply be related to the fact that the subregion has a disproportionate level of executive housing. On the business side of the equation, it is just as possible that there is a lack of higher order job opportunities in the sub-region for its executive resident workers.

High growth in retail and personal services. Outside of health and education, most of the
employment in the sub-region is driven by retail and services. However, the 2001-2006
picture is far from consistent at the LGA level. In Hornsby, retail trade grew by 536 jobs in the
2001-2006 period while in Ku-ring-gai retail trade fell by 493 jobs.

In terms of total employment 'Retail Trade', 'Property & Business Services', 'Education & Training and' and Health Care & Community Services' remain the most significant employing industry sectors.

- Suggested intensification potential for business operations. The business survey has shown that while many firms have 'expansion plans' in terms of jobs growth much fewer have plans to expand in terms of the physical space used.
- **Decline in professional services**. The decline of professional services employment in the sub-region gives some cause for concern. In the 2001-2006 period, in Ku-ring-gai property and business services fell by 491 jobs and in Hornsby, finance and insurance fell by 526 jobs.
- Very high degree of home based work. Compared with other regions in Sydney GMR, Hornsby-Ku-ring-gai has the highest levels of home based work and has shown significant growth in the 1996-2001 period. In Hornsby, the highest incidence of home based work occurs in the 'Professionals' and 'Associate Professionals' category followed by 'Clerical and Service' workers. Particularly high levels occur in the Property & Business Services and Construction,



'Manufacturing' and 'Wholesale Trade' categories. In Ku-ring-gai, the highest incidence of home based work occurs in the 'Professionals' and 'Associate Professionals' category followed by 'Clerical and Service' workers. Particularly high levels occur in the Communication Services industry category with significant proportions also in Government Administration & Defence.

Home based work does not appear to be a temporary state of business operation. Through consultation home based workers in the sub-region have suggested that work from home is driven by the benefits of this way of working rather than any shortage of suitable business space elsewhere.

4 Analysis of Land Use

4.1 Introduction

This section describes the 'supply-side' assessment completed as part of this employment study. The most important component of the supply-side assessment was the completion of a land-use audit of zoned employment land in the sub-region. For Ku-ring-gai, the audit included business zones in commercial centres. For Hornsby, the audit included all business and industrial zones.

This section begins with a discussion of the findings of previous employment studies before detailed the headline findings from the land use audit. Land use in the subegion's key centres and precincts are then discussed at the end of the section. Audit data is a key component for this Study. It provides a clear indication of both the volume and character of employment land use against which the demand forecasts can be examined.

4.2 Key Findings from Previous Studies

Information on average floorspace ratios and workspace ratios by industry type allows an assessment of 'capacity' within existing sites. Given the constrained nature of much employment land, this information is particularly invaluable, as infill development will make up a substantial component of future employment land development. SGS has conducted a review of existing studies of employment lands and commercial centres in Hornsby and Ku-ring-gai to identify information on existing floorspace and workspace ratios. The findings are summarised below.

Hornsby Studies

Previous employment land studies for Hornsby provide information on the total floorspace occupied in the Shire's key commercial centres, together with the total zoned land area. This data enables us to derive FSRs for some of the commercial centres. These are summarised below:

Table 16. FSR of selected Commercial Centres in Hornsby

Retail Centre Name	Centre Area (sqm)	Floorspace (Approx)	FSR
Berowra Heights Commercial Centre	39,730	3,500	0.09
Berowra Shopping Centre	21,148	1,600	0.08
Cherrybrook Shopping Centre	32,389	8,000	0.25
Dural Service Centre	36,588	3,040	0.08
Appletree Neighbourhood Centre	3,350	1,300	0.39

Source: Hirst Consulting (1998), SGS Economics and Planning



The Hornsby Shire Employment Land Review (1998) provides some insight into workspace ratios in District Centres in the Hornsby LGA, albeit indirectly. This information was extracted from the report and summarised in the Table below:

Table 17. Average Floorspace per person of District Centres in Hornsby LGA 1997

	Floorspace (1997)	Employment	Average Floorspace per person
Pennant Hills	68,478	2,990	22.9
Carlingford	34,566	1,350	25.6
Thornleigh	45,240	2,000	22.6
Epping	46,471	2,270	20.5
Dural	14,728	500	29.5
Hornsby	147,212	N/A	N/A

Workspace ratios in Hornsby District Centres range from 20.5sqm/job to 29.5 sqm/job. The average workspace ratio is 24.2 sqm/job.

The report also contains some discussion on generic floorspace per employee, citing three examples of average workspace ratios from Singapore, the Unites States and Australia. Average floorspace per person in Singapore ranged from 12-14 sqm, in the United States the average ranged from 20-22 sqm, whilst the Australian average was listed as 17sqm/employee. The workspace ratios identified in the table above are well above the Australian average. In general, little quantitative information on FSR's and workspace ratios is provided by previous studies of Hornsby. The 1997 Hornsby Shire Employment Lands Review – Floorspace Analysis describes the Gross Lettable Area for retail operations in Hornsby centres. An extract from this data is shown in Table 18.

Table 18. Total Retail Gross Lettable Area in Hornsby Centres

	Total Retail GLA
Brooklyn	1,209
Berowra Waters	3,327
Berowra	1,774
Westleigh	3,529
Mt Colah	1,703
Asquith	6,322
Thornleigh	15,972
Beecroft	6,833
Cherrybrook	6,060
West Pennant Hills	3,908

Ku-ring-gai Studies

The Ku-ring-gai Retail Centres Study undertaken in 2005 provides no information on existing floorspace or workspace ratios.

The main purpose of the Study is to forecast retail demand. This demand is calculated using an estimated turnover level by retail centre by store type in 2011.

The Study recommends that the majority of additional retail floor space requirements within Kuring-gai LGA would be most appropriately located in Gordon due to its proximity to the railway line and its central location within the LGA. This would translate into an increase of 35,000sqm retail floor space for Gordon and an expansion in St. Ives by 8,000 – 13,000 sqm.

The Study also finds that employment land for industrial purposes is highly constrained by natural bushland and national parklands. Previous studies find that sufficient land is available for industrial employment land and that highly sensitive lands (i.e. national park) should not be encroached upon for industrial employment land development.

4.3 Land Use Audit

Purpose

The employment lands audit has been completed to provide an up to date record of land use in the Study area. Audit data is important to show not only how much land is being used and by which industry sectors, but also the *way* in which land is being used. Key audit outputs include:

- Land use by industry and zone
- Site coverage ratios
- Actual FSRs
- Existing capacity under existing planning controls
- Vacant land/ floorspace

The audit produces vital data inputs for future land demand forecasting. For example, by combining floorspace used by sector with employment forecasts, floorspace forecasts by sector can be derived.



Audit Method

Audits were completed using a method developed in association with the Department of Planning. Three levels of information are collected about each lot:

	Data Collected	Source of Data
Level 1.	Zoning, size of lot,	Cadastre with LEP overlay
Level 2	Building envelope, above-ground car parking	GIS base for on-ground verification (digitised building outlines using aerial photographs)
Level 3	Building size, condition Land-use activity (categories of land-use)	On-ground field survey

The field work builds on the **Level 1** and **Level 2** data inputted via GIS. Each consultant in the field inputs data directly through the use of hand-held Palm Pilots. The audit has been completed for commercial centres, industrial/ business precincts, education precincts and health precincts.

The audit results for occupied sites report the total floorspace implied by the lot size and digitised site coverage (from level 1 and 2 GIS analysis) and the reported number of floors, building podiums and usage from the audit (Level 3 analysis). As internal building inspections were not completed, internal voids, circulation space, storage space, etc could not be determined. The reported figures are therefore *gross* floorspace figures and do not take into account building efficiency. For the analysis of supply demand gaps under existing controls, in later sections of this report, building efficiency has been taken into account and the gross current floorspace figures have been reduced accordingly.



Broad Land Use Categories (BLCs)

Data has been gathered at a fine grain 3 digit ANZSIC. For ease of analysis, these have also been translated to 1 digit ANZSIC.

Table 19. 1 Digit ANZSIC Categories

1 Digit Code	ANZSIC 1 Digit Category
Α	Agriculture, Forestry and Fishing
В	Mining
С	Manufacturing
D	Electricity, Gas and Water Supply
Е	Construction
F	Wholesale Trade
G	Retail Trade
Н	Accommodation, Cafes and Restaurants
1	Transport and Storage
J	Communication Services
К	Finance and Insurance
L	Property and Business Services
М	Government Administration and Defence
N	Education
0	Health and Community Services
Р	Cultural and Recreational Services
Q	Personal and Other Services

However, these industry categories are not the most useful way to understand land use patterns as the categories cut across land use types and zones. For example, for the manufacturing industry category, parts of a manufacturing business may be in heavy industrial areas, other parts may be in light industrial areas and jobs in head office/ administrative functions in the same manufacturing firms may be in commercial areas (in offices).

Different industries operate at different geographic scales and have different key drivers. Local service industries – automotive repairs, printing, domestic storage etc – need to be relatively close to customers, and are responsive to (and changes with) population growth. On the other hand, large transport and warehouse distribution centres are more sensitive to state or nationwide population growth and shifts in freighting technologies and dependencies. They have different locational and access needs. These issues have significant implications for forecasting the demand for industrial or employment lands.

Broad land use categories, initially developed with the Department of Planning in previous employment land planning investigations, have also been used. These are listed in Table 20.

Table 20. Broad Land Use Categories (BLCs)

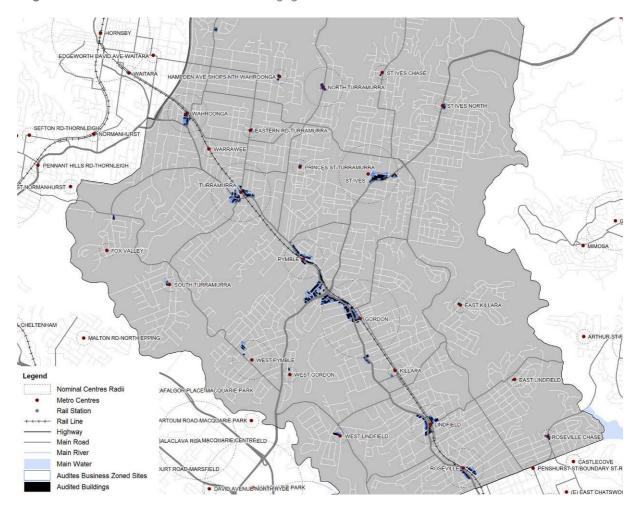
Land Use Category	Description
Freight and Logistics (FL)	 Warehousing and distribution activities. Includes buildings with a number of docking facilities; 'hard stand' areas with trucks or goods awaiting distribution; and large storage facilities. Warehousing and distribution is a metro level issue with activities preferably locating close to air, sea and inter-modal inland ports, or with access to the motorway system.
Local light industrial and urban support (LL)	 Car service and repair; joinery, construction and building supplies; and domestic storage. Wide range of businesses that service other business (components, maintenance and support) and Subregional populations. Needed at local (LGA) to Subregional level.
Manufacturing – Heavy (MH)	 Large scale production activity. Likely to be characterised by high noise emission; emission stacks; use of heavy machinery; and frequency of large trucks. Heavy manufacturing is in decline in Sydney, but will continue to cluster in some locations such as Wetherill Park, Campbelltown/ Ingleburn etc. There are strong arguments for collocation in terms of raw material delivery and to concentrate externalities (though impacts on surrounding uses are generally moderate).
Manufacturing – Light (ML)	 Clothing manufacturing, boat building and electrical equipment manufacturing Small scale production with lower noise and emission levels than heavy manufacturing.
Urban Services (US)	 Concrete batching, waste recycling and transfer, construction and local and state government depots, sewerage, water supply, electricity construction yards. These typically have noise dust and traffic implications and need to be isolated or buffered from other land uses. Needed in each sub-region.
Office (O)	 Administration, clerical, business services, research. Office buildings that are independent (i.e., are not ancillary to another use on site) and likely to accommodate a significant number of administration staff (>10 people).
Business / Office Parks (BP)	Integrated warehouse, storage, R&D, 'back-room' management and administration with up to 40% office component.
Retail - Main Street (RM)	 Retailing services traditionally found in main street locations (e.g., supermarkets) and small cluster or strips of stores located next to a street or road.
Retail – Big Box (RB)	Large shopping complexes, including Westfield.
Retail Bulky Goods (RBG)	Typically large, one-story buildings surrounded by car-parking, usually located out of centre and in high exposure (main road) locations.
Special Activities (S)	Tertiary level education, health, and community services. Typically require strategic locations and needed in each sub-region.
Dispersed Activities (D)	 Primary and secondary education, lower level health, social and community services, trades construction, other 'nomads'.
Residential (R)	Residential development.
Accommodation (Short Term) (AST)	Hotels and Motels (not including pubs), backpacker establishments.
Car park (CP)	Stand-alone car parking stations



Surveyed Areas

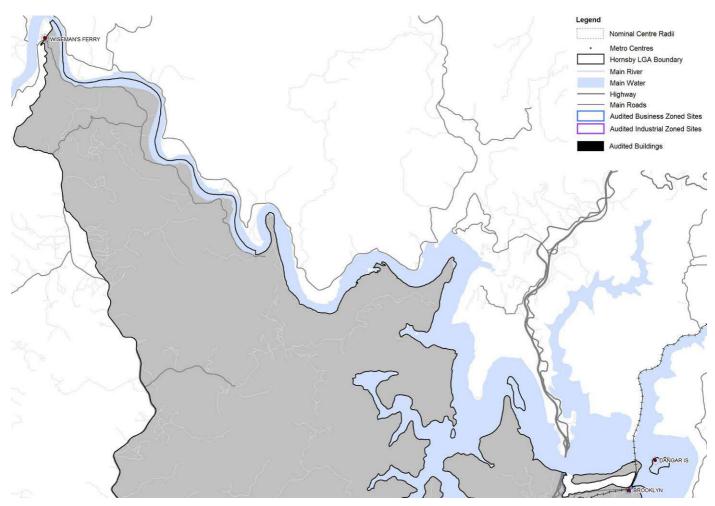
Figure 29 shows the areas audited as part of this Study within the Ku-ring-gai LGA.

Figure 29. Audited Sites in Ku-ring-gai



The areas audited in Hornsby LGA are displayed in Figure 30, Figure 31 and Figure 32.

Figure 30. Audited Sites in Hornsby (North)



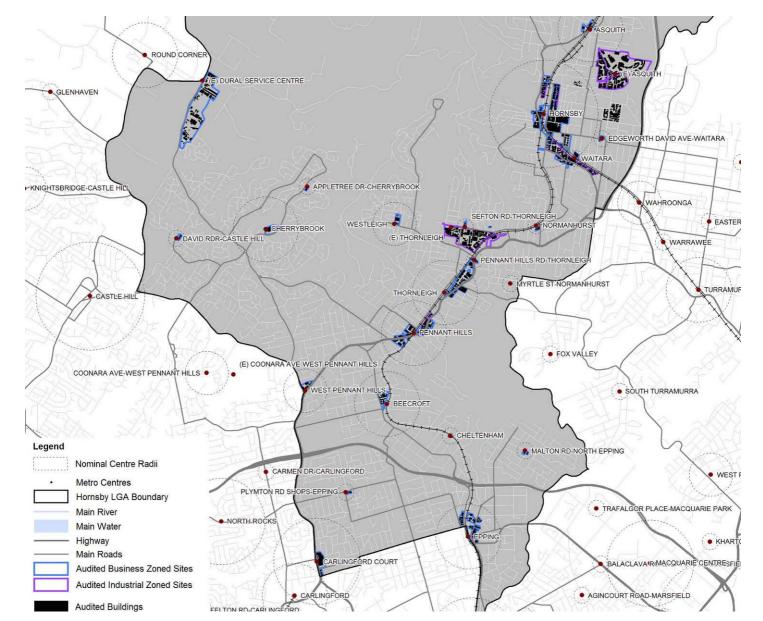


Figure 31. Audited Sites in Hornsby (South)



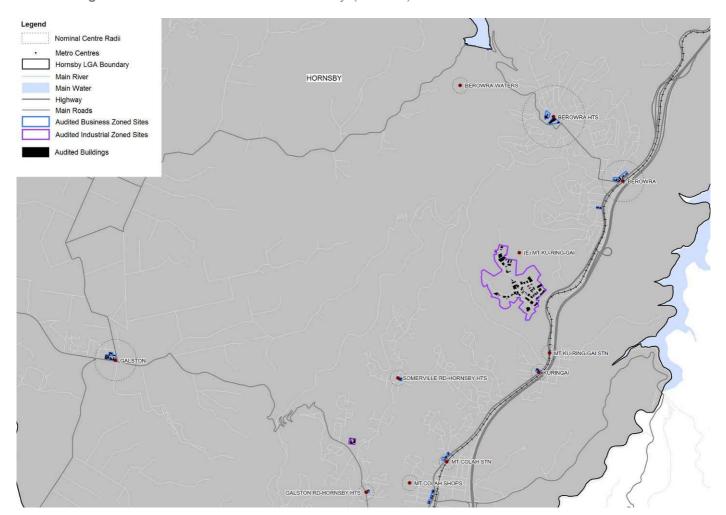


Figure 32. Audited Sites in Hornsby (Centre)



Floorspace by Industry Sector (1 digit ANZSIC)

Figure 33 shows floorspace usage by 1 digit ANZSIC category. Clearly, the 'other' category accounts for the greatest proportion of floorspace in the surveyed areas. This category includes car parking, floorspace in vacant buildings and residential floorspace. For Hornsby, 'Other' floorspace accounts for 551,357 sqm, 'Retail Trade' occupies 397,523, followed by 'Property & Business Services' with 196,806. For Ku-ring-gai, there is a very large amount of floorspace in the 'other' category (131,336 sqm). Other significant sectors include 'Retail Trade' (111,233 sqm) and 'Property and Business Services' (105,263 sqm).

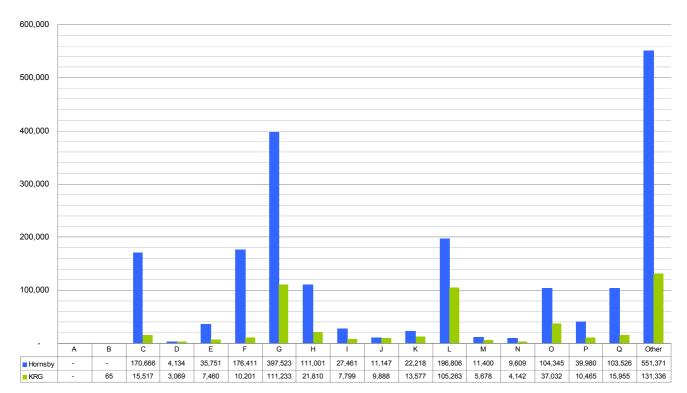


Figure 33. Floorspace by 1 Digit ANZSIC Category

Floorspace by BLC

Figure 34 shows the floorspace in employment zones by BLC. For Hornsby, big box retail (RB) occupies the largest amount of floorspace (371,003 sqm), followed by Main Street Retail (RM) (275,524 sqm) and freight and logistics (FL) (278,326 sqm). For Ku-ring-gai, Main Street Retail (RM) and office (O) land uses occupy the greatest amount of floorspace (178,354 sqm and 176,937 sqm respectively). Industrial uses occupy a very small amount of floorspace with local light industrial (LL) and freight and logistics (FL) the only industrial with recorded floorspace usage

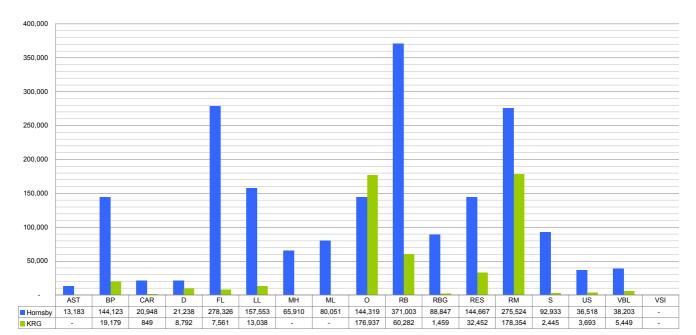


Figure 34. Hornsby Floorspace by BLC



ANZSIC-BLC Matrix

Figure 35 shows the Hornsby ANZSIC split by BLC. This displays the way that floorspace by ANZSIC industry sector is split across broad land use categories. For example, in the Construction (C) industry sector, 41% falls under the Light Manufacturing (ML) BLC and 38% falls under the Heavy Manufacturing (MH) BLC. The most important point to note from this analysis is that, as discussed at the start of this section, employment by ANZSIC category does not align neatly with land use patterns. Many ANZSIC industry sectors are split between industrial (pink coloured) and retail/ commercial (blue coloured) categories.

Other Q Р 0 Ν Μ L G F Ε D С В 300.000 600,000 100,000 200,000 400.000 500.000 Q Other ■VSI 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 ■VBL 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 38,203 0 0 4,149 3,887 7,418 303 4,247 120 2,943 2,502 0 588 3,380 0 0 478 6,504 US S 0 0 0 247 0 0 0 0 459 0 308 1.537 319 59.609 17.632 556 12.266 0 0 887 0 548 2.360 84.627 44.226 1.986 2.426 5.319 24.893 1.129 4,406 14.218 8 661 16.728 63.110 0 135,203 0 0 0 0 1,861 0 0 0 1,634 910 233 3,721 870 RES 0 0 0 0 751 3.335 69.069 0 536 0 0 4.021 0 1.416 1.235 0 8.483 RRG ■RB 0 0 0 0 0 0 137,245 47,471 0 1.608 570 31,559 0 0 13,428 4,113 68.564 66,445 2,183 0 0 700 908 6,871 2,207 455 2,965 54,572 4,805 260 2,714 59,681 **O** 0 0 5,256 0 0 70,751 0 2,294 1,924 2,798 0 0 0 0 0 0 0 0 0 2,284 ML ■ MH 0 0 64,128 0 1.783 0 0 0 0 0 0 0 0 0 0 0 0 0 0 12,013 7,683 9,024 81,548 1,262 4,214 707 1,030 19,490 0 118 951 0 19,512 0 0 7,540 9,751 11.460 143,185 607 17,173 2.870 5.223 14.533 1.895 1.392 62.394 FL 0 0 278 0 188 0 0 0 0 0 668 0 2,398 4,808 969 8,916 3,014 0 D CAR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 20,948 BP 0 0 8,010 0 2,719 9,408 6,381 3,390 148 581 5,170 44,034 1,852 0 1,772 3,393 3,944 53,322

Figure 35. Hornsby ANZSIC-BLC Floorspace Matrix

Source: SGS Land Use Audit (2007)

■AST

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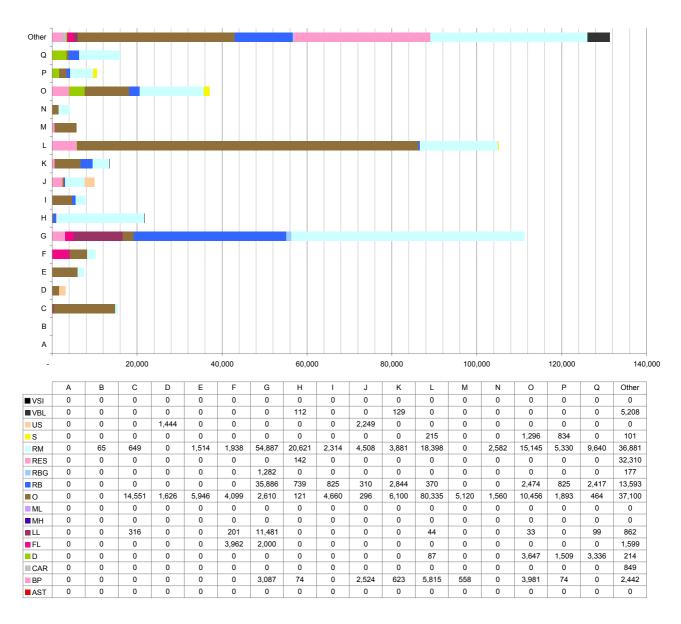
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Figure 36 shows the Ku-ring-gai ANZSIC-BLC matrix. This figure shows a similar picture with floorspace by ANZSIC category spread across the BLCs. Comparing the two LGAs, it is notable that Ku-ring-gai has a greater proportion of office (O) floorspace across all ANZSIC categories.

Figure 36. Ku-ring-gai ANZSIC-BLC Floorspace Matrix





Zone Split by BLC

Figure 37 shows the Hornsby floorspace in each zone split by BLC. As one might expect, in broad terms, industrial activities are concentrated in the industrial zones and commercial activities are concentrated in the business zones. However, use patterns in the zones are certainly not homogeneous. There is a significant proportion of bulky goods (RBG) and Main Street Retail (RM) in the Industrial (b) zones. In the Business (e) and Business (b) zones, there is a significant proportion of light manufacturing (ML) and freight and logistics (FL) activity. Both business and industrial zones also have significant residential floorspace totals.

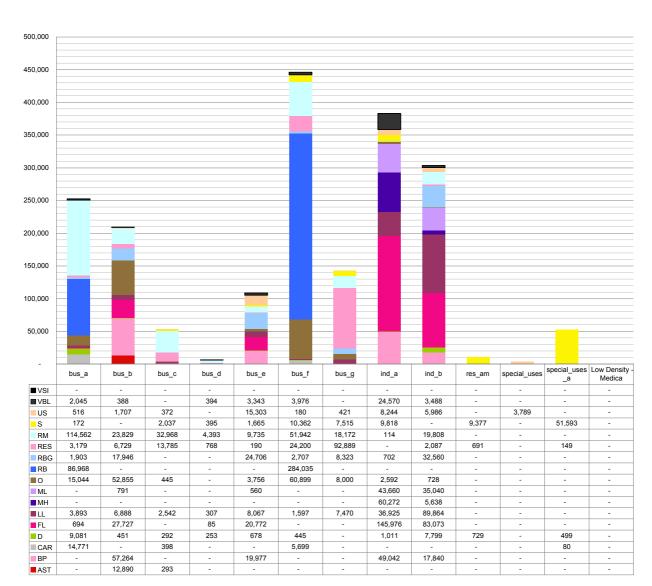


Figure 37. Hornsby Zone Split by BLC

Figure 38 shows the Ku-ring-gai floorspace zone split by BLC. In contrast, to the Hornsby pattern, there is a much greater proportion of office (O) and Main Street Retail (RM) spread across the zones.

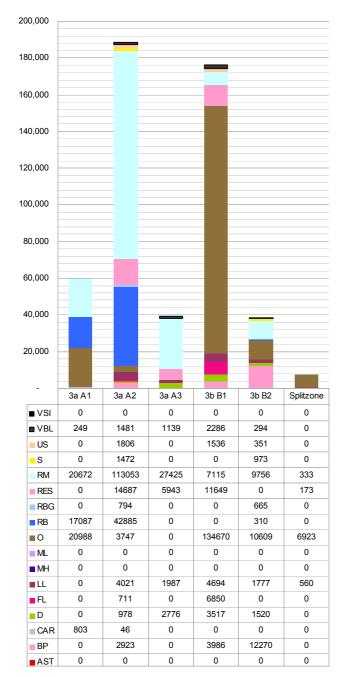


Figure 38. Ku-ring-gai Zone Split by BLC



Actual FSRs by BLC

Figure 39 shows the actual FSRs by BLC for Hornsby and Ku-ring-gai. In Hornsby, actual FSRs ratios vary from 0.4:1 for car parking stations (CAR) to 2.6:1 for big box retail (RB). In Ku-ring-gai, actual FSRs ratios vary from 0.02:1 for car parking stations (CAR) to 1.99:1 for big box retail (RB). Total ratios across all land use types are 0.75:1 for Hornsby and 1.08:1 for Ku-ring-gai.

3.0 2.5 2.0 1.5 1.0 0.5 TOTA AST BP D МН ML 0 RB **RBG RES** US **VBL** VSI L 1.61 1.20 0.40 0.93 0.60 0.67 0.45 0.43 1.60 2.60 0.46 1.65 0.86 0.60 0.37 0.58 0.00 0.75 ■ Hornsby ☐ Hornsby (emp only) 1.61 0.76 0.00 0.79 0.47 0.59 0.45 0.42 0.94 2.13 0.42 0.11 0.67 0.52 0.31 0.00 0.54 0.51 0.88 0.33 0.73 KRG 0.00 1.93 0.01 1.20 1.56 0.00 0.00 1.55 1.99 1.46 1.12 0.38 0.00 1.08 0.00 1.68 0.00 1.17 1.23 0.47 0.00 0.00 1.22 1.54 0.77 0.01 0.88 0.31 0.38 0.03 0.00 0.80 ☐ KRG (emp only)

Figure 39. Hornsby & Ku-ring-gai Actual FSRs (BLC by Current Zone)



Site Coverage by BLC

Figure 40 shows the site coverage ratios for Hornsby and Ku-ring-gai by BLC. In Hornsby, site coverage ratios vary from 0.11:1 for car parking stations (CAR) to 0.72:1 for big box retail (RB). In Ku-ring-gai, site coverage ratios range from 0.01:1 for car parking stations (CAR) to 0.82:1 for big box retail (RB). Total ratios across all land use types are 0.35:1 for Hornsby and 0.47:1 for Ku-ring-gai.

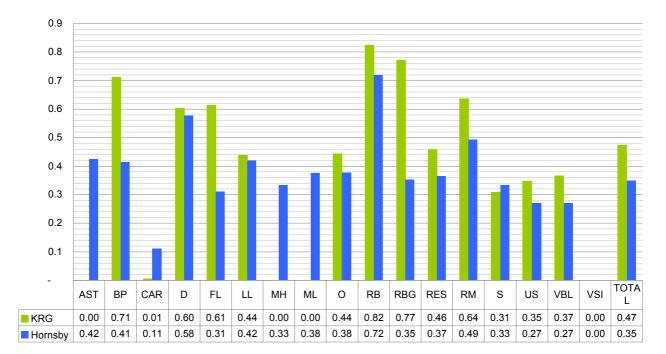


Figure 40. Hornsby & Ku-ring-gai Site Coverage Ratios by BLC

Source: SGS Land Use Audit (2007)

Available floorspace

There are three important components of the availability of floorspace:

- Vacant area. Vacant sites and vacant floorspace in buildings
- Capacity. The capacity for additional floorspace to be built on occupied sites
- **Opportunity areas.** The conversion of sites currently used for non-employment purposes (such as car parks or residential areas) to employment use.

The sum of floorspace from these three areas is the gross available floorspace – i.e. the total additional floorspace that could accommodate demand. The simplest calculation examines the gross available floorspace up to the FSR limit of the current controls. However, in practice developments will rarely occupy sites up to the FSR limit. To address this, we have explored 2 supply scenarios:

- **Development with intensification**. This assumes that there is some scope for business to use land more intensively but falls short of assuming development up to the FSR limit. For this Study the intensification limit is 80% of the maximum FSR under existing controls. The existing average observed FSR is 69% of max FSR in Ku-ring gai and 71% of max FSR in Hornsby
- **Development up to FSR limit**. This assumes that development is able to occur up the FSR limit under the existing planning controls.

Figure 41 shows a floorspace use summary for Hornsby and Ku-ring-gai. Within the limits of the current planning controls there is a total of 3,059,857 sqm in Hornsby and 750,813 sqm in Ku-ring-gai. Of this total 1,421,977 sqm and 379,153 sqm is used for employment purposes in Hornsby and Ku-ring-gai respectively. 169,536 sqm of floorspace is vacant in Hornsby with 24,813 sqm vacant in Ku-ring-gai.

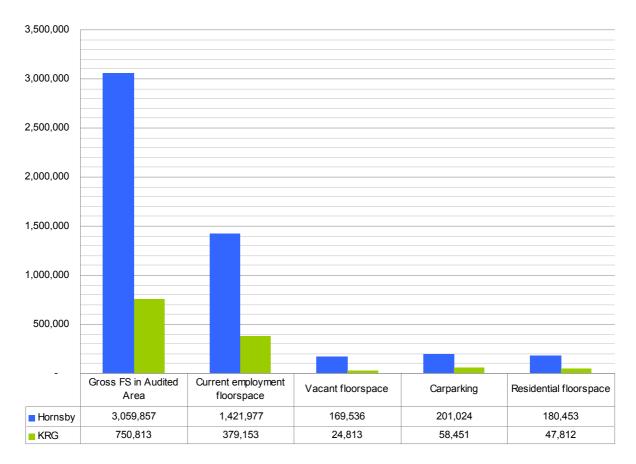


Figure 41. Floorspace Use in Hornsby and Ku-ring-gai

Source: SGS Land Use Audit (2007)

Figure 42 shows the supply potential for Hornsby and Ku-ring-gai. Under the max FSR scenario, Ku-ring-gai has a total of 391,869 sqm (under the draft LEP) and Hornsby has 1,689,969 sqm or 1,420,505 sqm when constrained land is taken into account. Under the 80% of max FSR scenario, Ku-ring-gai has 246,596 sqm and Hornsby has 697,278 sqm or 595,168 sqm when constrained land is taken into account.

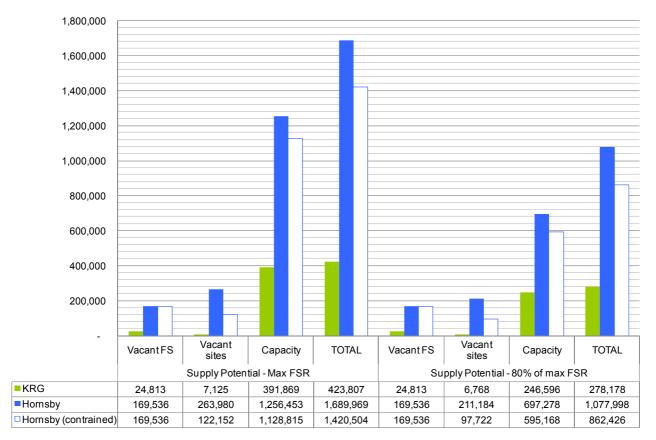


Figure 42. Potential Supply in Hornsby and Ku-ring-gai



In addition to the potential supply figures (the sum of vacant floorspace, vacant sites and capacity on occupied sites), both areas have considerable car parking and residential floorspace in employment zones. Some of these sites may have the potential to be used for employment purposes. Ku-ring-gai has 58,451 sqm of car parking and 47,812 sqm residential floorspace. Hornsby has 201,024 sqm car parking and 180,453 sqm residential floorspace.

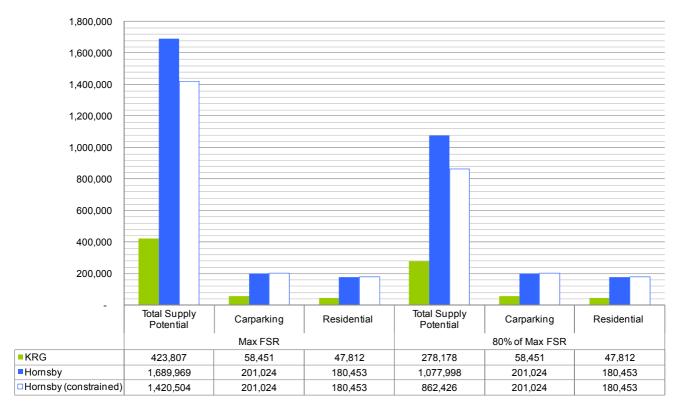


Figure 43. Potential Supply & 'Opportunity Areas' for Hornsby and Ku-ring-gai

Source: SGS Land Use Audit (2007)

4.4 Analysis of Key Centres/ Precincts

Background

The North Subregion's key centres (major and Town Centres) and precincts (as identified in the Subregional Strategy) are analysed in the following section. Land use is described by BLC and the 'principal land use' is described. This means that where use at a site is split between several use categories, the use with the largest share is shown. Analysis by principal land use is necessary for clear mapping. Full data is used in subsequent quantitative analysis. Detailed analysis for all centres above the Neighbourhood Centre classifications is provided in Appendix A.

Commercial Centres

Figure 44 shows land use patterns by BLC in Hornsby. The centre of Hornsby is dominated by the Westfield development (shown as the large blue 'Retail Big Box' category). Several 'Special Activities' exist along George Street (such as the library and recreational facilities such as the PCYC club, gym and bowling alley, which are included within the 'Special Activities' BLC). Significant cluster of 'Special Activities' BLC can also be seen to the east of Hornsby

centre, in proximity to Hornsby Hospital. Low scale



retail characterises the western side of Hornsby, which is shown as 'Retail Main Street'. Uses include takeaway shops, a cafe, pub, real estate agents, furniture retailers and a cinema. At the time of the audit, a small number of vacancies were noted - some in Waitara, and one on both Dural and Hunter Streets.

There are also a considerable number of residential lots in Hornsby centre (such as the Madison building on Hunter St, opposite Westfields). Recent residential development has occurred between Thomas and Romsey Streets in Waitara, with some slightly older residential buildings located along Pacific Highway, east of the railway line.

Light industrial uses support the centre. These uses are located along Hunter St (Figure 44), Jersey St and North West of Waitara Station. Light industrial uses support local business and provide services to residents, such as smash repairers, printers and Laundromats.



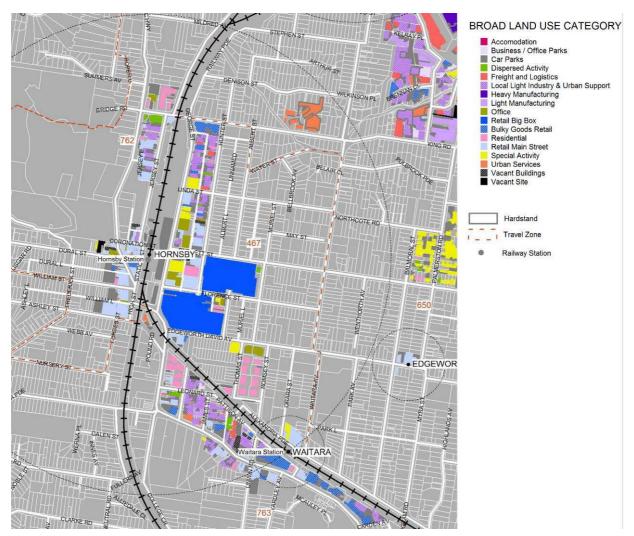


Figure 44. Hornsby Current Land Use (Principal Use) by BLC

The Draft North Subregional Strategy nominates Hornsby as the Major Centre for the Sub-region. The Chamber of Commerce argues that there is a shortage of commercial floorspace within the centre and Figure 44 illustrates the limited distribution of the 'Office' BLC. Some additional commercial floorspace has been approved or is under construction, and recently completed commercial floorspace has attracted businesses employing professionals such as accountants and consultants. Consultation indicates that these businesses tend to be fairly small, with fewer than 10 employees. Important land uses within Hornsby centre include Hornsby TAFE, Hornsby Girls High School, Hornsby Council Chambers, Hornsby Police Station, Hornsby Pool and surrounding park. The strategy suggests an expansion of Hornsby centre with a broadening of use in the industrial zoned areas. This is discussed in the recommendations section.

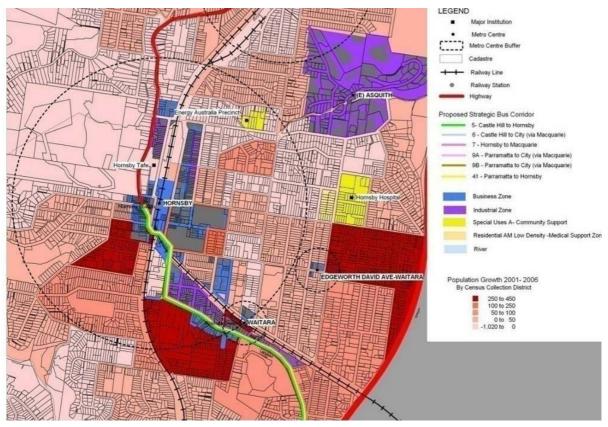


Figure 45. Hornsby Infrastructure

The diversity of businesses located in Hornsby is considered to be a strength of the area. It means there is more opportunity for people and businesses to source goods and services locally. Hornsby station is a major transport interchange, and is well connected by bus and taxi services. As a transport hub and with Major Centre designation, Hornsby is expected to accommodate a high percentage of office and retail land uses which provide services and facilities for a broad catchment area.

Figure 46 shows land use patterns by BLC in Epping. This centre is split between Parramatta and Hornsby LGAs. Business within the centre ranges from large firms such as Unilever to sole traders and a significant amount of 'Office' BLC is shown on the map below. 'Retail Main Street' is located opposite the eastern exit of the station, and along Oxford St. 'Dispersed Activity' includes medical services and places of worship. Parts of the centre which fall within Hornsby LGA are disconnected by the rail line and Beecroft Road.

Within the centre, but outside the LGA (Travel Zone 828), there are additional 'Retail Main Street' uses, including a supermarket. In the same area, there is also the Epping Club and Epping Hotel. The centre currently accommodates a significant proportion of the LGA's office floorspace and the development of the Chatswood to Epping Rail-line is likely to further drive the projected demand

for this land use. Intensification pressures in Epping should be addressed by increased FSR limits under the planning controls.

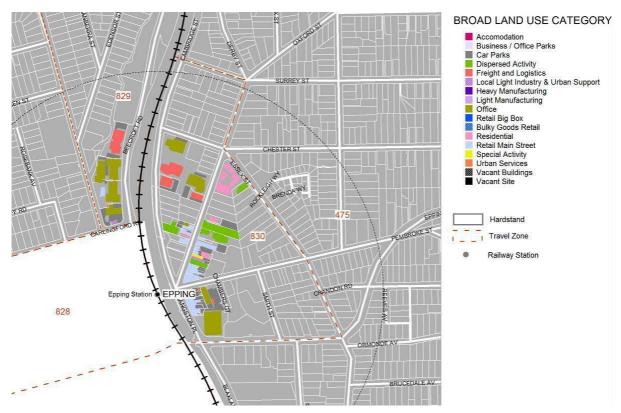


Figure 46. Epping Current Land Use (Principal Use) by BLC

Source: SGS Land Use Audit (2007)

Figure 47 shows land use patterns by BLC in Gordon. 'Retail Main Street' activity occurs along Pacific Highway and the Gordon Centre, marked in Figure 47 as 'Big Box Retail' includes a supermarket, as well as a range of specialty retailers. Public car parking is found around the station, and a library and police station are located along Pacific Highway, north of the shopping strip.

To the north of the centre is the Pymble/ Gordon business area which consists of a large amount of



'Office' activity. This area contains additional uses including a gym and post office. However, across the Study area, this location represents the largest concentration of commercial floorspace. Increasingly, medium to high density residential development is occurring in proximity to this centre. Intersecting strategic bus corridors and the existing train stations at Gordon and Pymble contributes to the intensification potential.

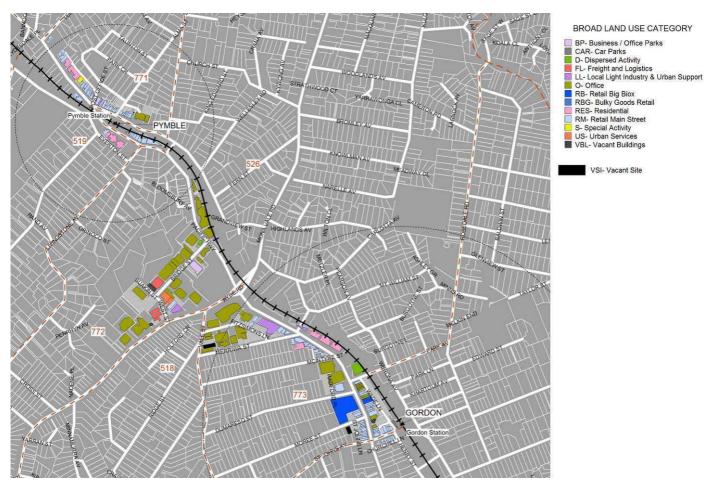


Figure 47. Gordon Current Land Use (Principal Use) by BLC



Figure 48. Gordon Infrastructure

Figure 49 shows the current land uses in Turramurra by BLC. The shows the predominantly retail based activity in the centre divided by the railway line. The centre includes a supermarket, cafes and restaurants, and local service providers, with a small amount of 'Special Activities' which encompasses uses such as the Senior Citizen Centre.

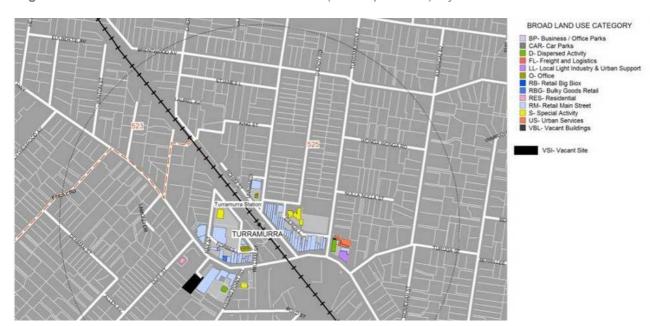


Figure 49. Turramurra Current Land Use (Principal Use) by BLC

Figure 50 shows the current land uses in St Ives by BLC. The map shows the very high proportion of big box retail at this centre dominating the land use pattern. Other uses at the centre include a small amount of Main Street Retail, light industrial and a small amount of office activity.

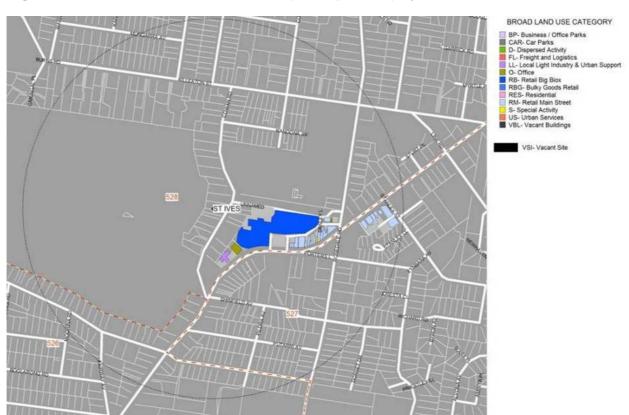


Figure 50. St Ives Current Land Use (Principal Use) by BLC

Figure 51 shows the current land uses in Lindfield by BLC. The map shows that the dominant land use in Lindfield is Main Street Retail. There is also some office land use at the centre and a very small amount of local light industry.



Figure 51. Lindfield Current Land Use (Principal Use) by BLC

Industrial, Business and Health Precincts

Figure 52 shows land use patterns by BLC in Hornsby Hospital precinct. The hospital itself is bounded by Palmerston, Lowe, and Derby Road and Burdett Street. It was established in 1933 and provides a range of services including for emergency services, services for children and adolescents, rehabilitation, maternity care, allied health services and mental health services. A new \$23 million Maternity, Paediatrics and Emergency building has been completed, and was opened in March 2007.

A number of other medical practices are located in the streets surrounding Hornsby Hospital, providing complementary services. The area is dominated by 'Special Activity' BLC, with numerous medical practitioners and specialists on Balmoral Street. Some 'Dispersed Activity' and 'Residential' BLCs occur.



Figure 52. Hornsby Hospital Current Land Use (Principal Use) by BLC

In Ku-ring-gai, the SAN site (Fox Valley Rd Wahroonga) is a hospital complex with a range of ancillary uses. The site is covered by 2 special use zones – for the church and the hospital. There are considerable environmental constraints on the site. Council believes there should be no further clearing, and therefore the developed area should not increase. The Hospital building is 10 stories with the rest of the hospital associated works around 3-4 storeys maximum.

The SAN hospital employs between 2,200 and 2,730 people which accounts for about a third of health related jobs in the region. The site is possibly the single largest employer in Ku-ring-gai. As such a significant employer, the SAN plays important role in catering for any future employment growth in Ku-ring-gai.

Figure 53 shows land use patterns by BLC in Mt Ku-ring-gai. There are a number of large vacant sites within this industrial precinct. Land uses are dominated by 'Freight and Logistics', 'Local Light Industry' and 'Light Manufacturing'. 'Urban Services' located at Mt Ku-ring-gai include the Shorelink bus depot. Much recent development has occurred in this area and some of the building stock is new.



Previous employment lands studies, as well as the Draft North Subregional Strategy, highlight that this area is constrained by environmental factors and proximity to Berowra Valley Regional Park and land zoned for environmental protection. The constrained land total has been taken into account in the supply-side analysis. However, strengths of this area include the separation from residential areas and easy access to the Pacific Highway and F3. In this regard, the area remains as an attractive location for manufacturing and freight and logistics operations.

BROAD LAND USE CATEGOR

Accomdation
Business Office Parks
Car Parks
Local Light Industry & Uthan Support
Leght Manufacturing
Ught Manufacturing
Office
Retail Big Box
Support
Hardstand
Vacant Site

Hardstand

Vacant Site

Railway Station

Figure 53. Mt Ku-ring-gai Current Land Use (Principal Use) by BLC

Source: SGS Land Use Audit (2007)

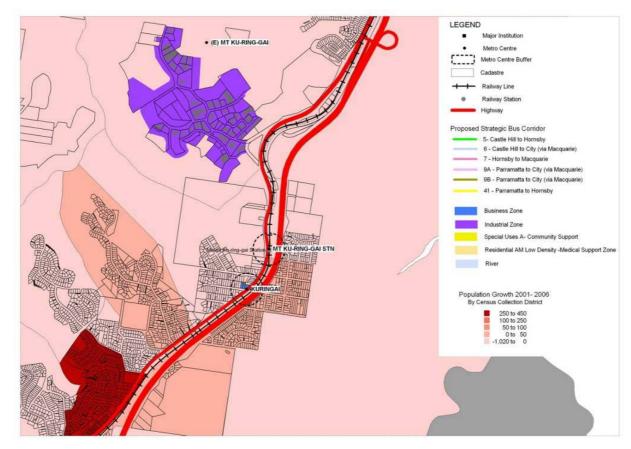


Figure 54. Mt Ku-ring-gai Infrastructure



Figure 55 shows land use patterns by BLC in Sefton Rd - Thornleigh.

Uses within this area include 'Light Manufacturing', 'Local Light Industry', 'Urban Services', 'Freight and Logistics' and 'Heavy Manufacturing'. Activities located here support the local population and include a Council depot and concrete batching plant.

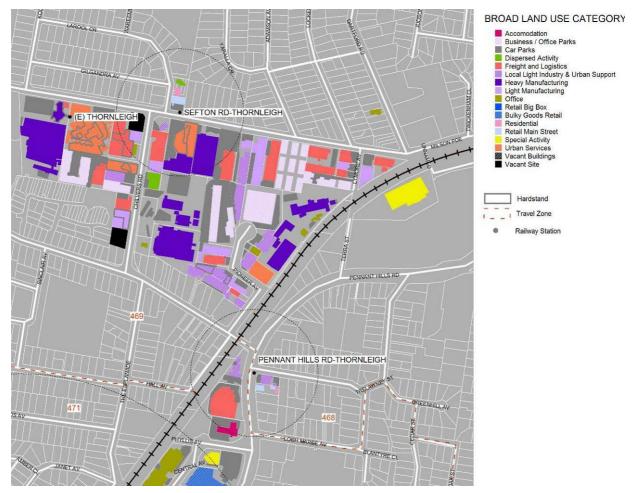


Figure 55. Thornleigh Current Land Use (Principal Use) by BLC

Thornleigh plays a vital role in providing urban services and in accommodating local light industry. However, the area is surrounded by low density residential areas and bounded by a train line on one side. The proximity of residential development will constrain industrial development at this location in future, as vehicles travelling to and from Sefton Rd - Thornleigh must pass through residential areas. Two vacant sites exist on Chilvers Road.

As with Sefton Road – Thornleigh, vehicles travelling to and from Asquith Employment Lands, must travel through residential areas. Figure 56 shows land use patterns by BLC in Asquith, which is located primarily along Leighton Place, Salisbury and King Roads. 'Freight and Logistics' features strongly in this area along with 'Light Manufacturing', 'Local Light Industry' and 'Heavy Manufacturing'. Additionally, some 'Bulky Goods Retail' has been identified within the area.

At the time of the audit, one vacant building and one vacant site were recorded. Topography may influence the types of businesses that seek to locate here in future, and like Mt Ku-ring-gai, expansion of these employment lands is limited by environmental constraints.

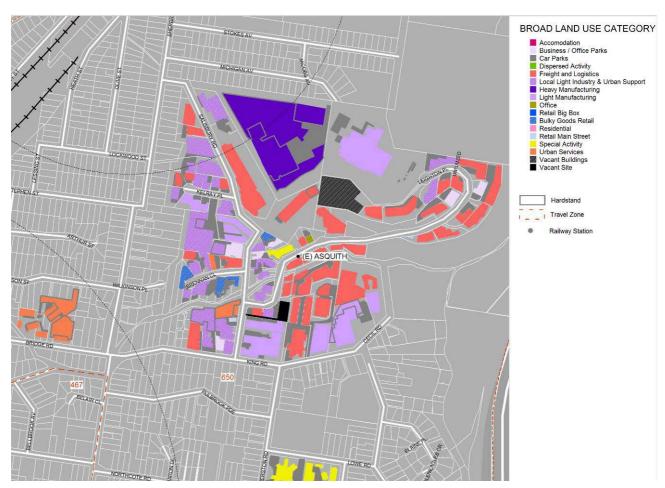


Figure 56. Asquith Current Land Use (Principal Use) by BLC

Figure 57 shows land use patterns by BLC in Dural Service Centre. 'Bulky Goods Retail' features in this area, along with 'Freight and Logistics' and 'Urban Services'. Additional uses identified include 'Local Light Industry', 'Business/Office Parks'. 'Light Manufacturing' and 'Special Activities'. The diversity of uses present indicates a lack of clarity in the role of this area.



Figure 57. Dural Service Centre Current Land Use (Principal Use) by BLC

Source: SGS Land Use Audit (2007)

The Dural Service Centre (DSC) was originally envisaged as a centre for rural business and local services for the local resident population. However, over the years land use in the area has moved away from a 'rural service' focus and many businesses now serve a much broader market than the immediately surrounding rural area. There are arguments that the current limitations of the planning controls may now be constraining the centre's economic potential and that a broader range of uses (such as non rural-related industry, higher office components, and a broader range of service industries) should be allowed. The Subregional Strategy identifies the DSC as land with potential to allow for a wider range of employment uses.

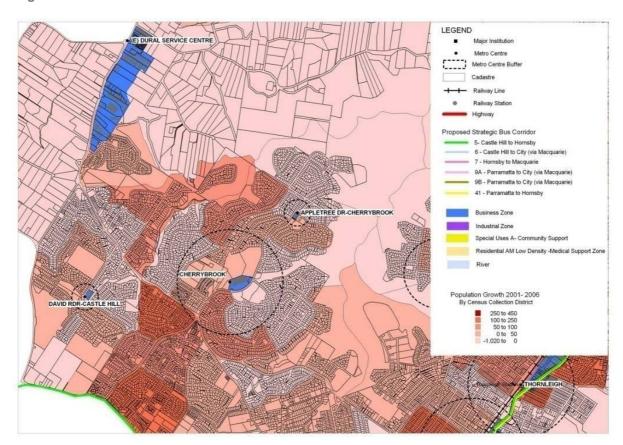


Figure 58. Dural Service Centre Infrastructure

Distance from transport nodes, strategic bus corridors and arterial road infrastructure suggest that the area would struggle to provide services and facilities for a broad catchment when compared against the competitive offer of other existing centres. It is not appropriate for the centre to provide a regional commercial function, nor is it appropriate for the centre to accommodate heavier industrial operations. However, there is still scope to allow for a wider range of employment activity. The availability of large land parcels will continue to prove attractive for many industries (as already evidenced by the existence of Bulky Goods Retail businesses). Light industrial operations with small office components and local level retail and services are appropriate application of a Light Industrial zones with some additional permissible uses with consent is appropriate. This is discussed in the recommendations section.

Business Locations

Business locations in Ku-ring-gai and Hornsby LGAs are shown in Figure 59 and Figure 60. These maps clearly illustrate the very high number of businesses operating outside of the business zones.

tham Hills Pittwater Warringah **BUSINESS COUNTS** by Industry Accommodation, Cafes and Restaurants"Agriculture, Forestry and Fishing" (250) (38) (58) Communication Services (1422) Construction Ku-ring-gai Cultural and Recreational Services (326)Education (258)(10) (174) (2) (1221) Electricity, Gas and Water Supply" Finance and Insurance
 Government Administration and Defence Health and Community Services Manufacturing (751)Mining (6) (28) (697) (1548) Not Available Personal and Other Services Property and Business Services
 Retail Trade (1711)Transport and Storage (139)Wholesale Trade (685)

Figure 59. Business Locations in Ku-ring-gai (2007)

Source: Sensis 2007

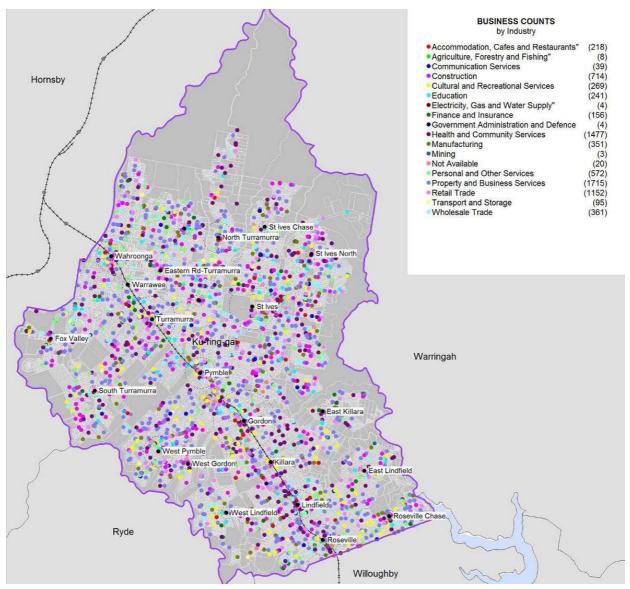


Figure 60. Business Locations in Hornsby South (2007)

Source: Sensis 2007

The fact that there is such a high degree of employment activity occurring outside the employment zones presents some issues for the employment study. Perhaps the most important is that there is there is no accurate way to generate a job:floorspace or job:land area ratio for the LGA using the audit data, as the land use information and the employment information relate to different geographies. As the smallest geography for employment statistics is the travel zone (TZ), it is not possible to calculate the numbers of jobs that are within the employment zones vs. those outside the employment zones. This makes the projection of floorspace and land area demand much more difficult. To overcome this, instead of applying a locally derived job: floorspace ratio to the employment forecasts, we have grown the existing floorspace in the audited area in proportion to the employment forecast. This is discussed in the following section.

4.5 Implications

The key findings from this section are summarised below:

- The largest land use category in employment zones does not generate employment. The 'other' category accounts for the greatest proportion of floorspace in the surveyed areas. This category includes car parking, floorspace in vacant buildings and residential floorspace. For Hornsby, 'Other' floorspace accounts for 551,357 sqm. For Ku-ring-gai, the 'other' category accounts for 131,336 sqm.
- Office uses dominate Ku-ring-gai's employment zones. For Ku-ring-gai, Main Street Retail (RM) and office (O) land uses occupy the greatest amount of floorspace (178,354 sqm and 176,937 sqm respectively).
- Retail uses dominate Hornsby's employment zones. For Hornsby, big box retail (RB) occupies the largest amount of floorspace (371,003 sqm), followed by Main Street Retail (RM) (275,524 sqm). Audit result are compared to the 1997 Hornsby Shire Employment Lands Study figures in Appendix
- Existing employment zones accommodate a wide range of land uses. In both LGAs, the various employment zones host a wide range of land uses. There is a significant proportion of bulky goods (RBG) and Main Street Retail (RM) in the Industrial (b) zones. In the Business (e) and Business (b) zones, there is a significant proportion of light manufacturing (ML) and freight and logistics (FL) activity. Both business and industrial zones also have significant residential floorspace totals.
- There are high levels of supply in both LGAs. Within the limits of the current planning controls there is a total of 3,059,857 sqm in Hornsby and 750,813 sqm in Ku-ring-gai. Of this total 1,421,977 sqm and 379,153 sqm is used for employment purposes in Hornsby and Ku-ring-gai respectively. 169,536 sqm of floorspace is vacant in Hornsby with 24,813 sqm vacant in Ku-ring-gai. Under the max FSR scenario, Ku-ring-gai has 265,396 sqm and Hornsby has 1,256,403 sqm or 1,114,575 when constrained land is taken into account. Under the 80% of max FSR scenario, Ku-ring-gai has 227,856 sqm and Hornsby has 644,421 sqm or 530,969 sqm when constrained land is taken into account.



5 Employment & Floorspace Forecasts

5.1 Introduction

This section describes employment and floorspace forecasts used in this Study. Both employment and floorspace forecasts are described for each LGA at the 1 digit ANZSIC level for the 2006-2031 period. Using the data from the land use audit these are then converted into BLCs. This is important step in the process as the BLCs allow for better spatial analysis.

The forecasts described in this section represent the demand side of the Study. These are weighed against the supply side data gathered from the land-use audit in the assessment of the subregion's capacity to absorb future economic growth. Importantly, these employment and floorspace forecasts are presented as 'baseline' forecasts. The role of policy intervention to change prevailing trends is discussed in later sections.

5.2 Employment Forecasts

Background

Employment forecasts for this Study have been sourced from the TDC. Produced in 2004, these forecasts provide an indication of the nature and distribution of employment across the Sydney Greater Metropolitan Region. The most significant assumptions have been made with respect to future trends by industry and future demand for retailing, driven by population and income growth. A description of the TDC forecast method is given in Appendix E.

The process of forecasting is based on the analysis and forecasting of share of total employment by industry, the share by sub-region of jobs by industry, the share of job in centres and dispersed jobs in each Subregional and industrial group. The process takes into account an analysis of space constraints for commercial floorspace, based on an analysis of employee-space ratios. It also takes into account user-defined additions of jobs to specific travel zones. Final travel zone forecasts are calculated based on these components.

Forecast Employment Growth

Figure 61 shows the cumulative additional employment forecast for Ku-ring-gai. 'Property & Business Services' are forecast to experience by far the greatest growth with an additional 2,888 jobs in the period 2006-2031. This is followed by 'Retail Trade' with a forecast additional 616 jobs in the 2006-2031 period. 'Personal & Other Services' and 'Finance & Insurance' are both forecast to have a decline in employment in this period with declines of 575 & 505 jobs respectively.

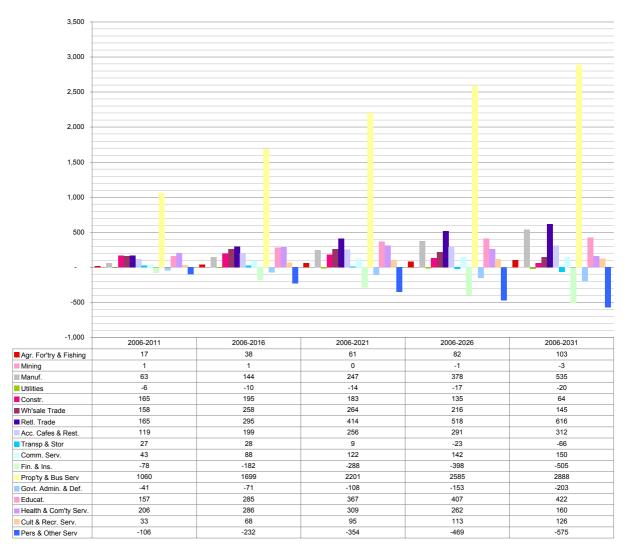


Figure 61. Ku-ring-gai Cumulative Additional Employment Forecast 2006-2031

Source: TDC 2004

Figure 62 shows the cumulative additional employment forecast for Hornsby. 'Property & Business Services' is forecast to have the highest job growth over the 2006-2031 period with 1,789 jobs. However, over the 15 years (2006-2021), 'Retail Trade' displays the strongest growth with 1677 jobs and 1462 jobs in the 2006-2031 period. 'Construction' and 'Education' also show strong forecast growth in this period. Employment decline is forecast in 'Transport & Storage', 'Manufacturing' and 'Government Administration & Defence' with losses of 1052, 880 and 607 jobs respectively over the 2006-2031 period.

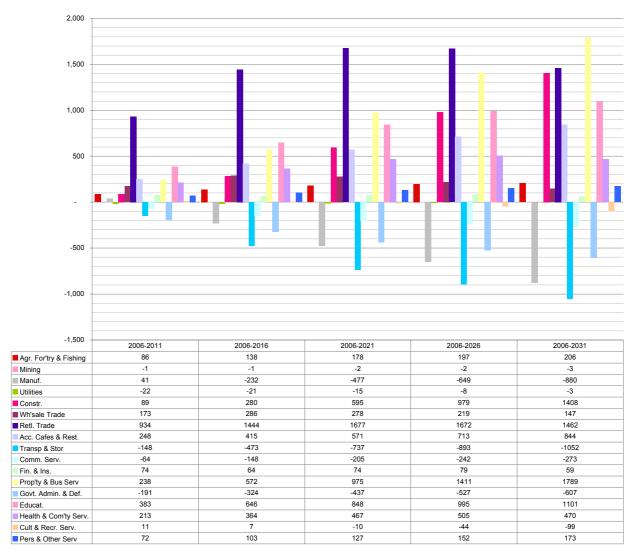


Figure 62. Hornsby Cumulative Additional Employment Forecasts 2006-2031

Source: TDC 2004

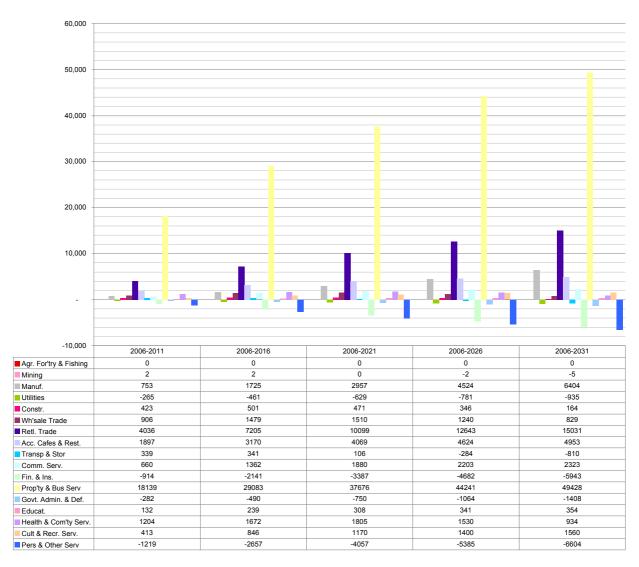
5.3 Floorspace Demand Forecasts

Floorspace Forecasts by ANZSIC

Using the TDC employment data, 'baseline' floorspace demand forecasts have been generated for the audited area as part of this Study. Percentage growth observed in the TDC data for industry sectors has been applied to the floorspace audited by industry sector. This produces floorspace forecasts based on the premise that the audited areas, in total, will account for the same proportion of total LGA floorspace in the future.

Figure 63 shows the cumulative additional floorspace forecast by 1digit ANZSIC for Ku-ring-gai for the period 2006-2031. In line with forecast employment growth, demand for floorspace from 'Property & Business Services' is high at 49,428 sqm over the 2006-2031 period. The next highest in terms of floorspace demand comes from the 'Retail Trade' sector with forecast demand for an additional 15,031 sqm in the 2006-2031 period. Forecast employment decline in 'Personal & Other Services' and 'Government Administration & Defence' translates to demand for 6,604 sqm and 1,408 sqm less floorspace in the 2006-2031 period for these sectors respectively.

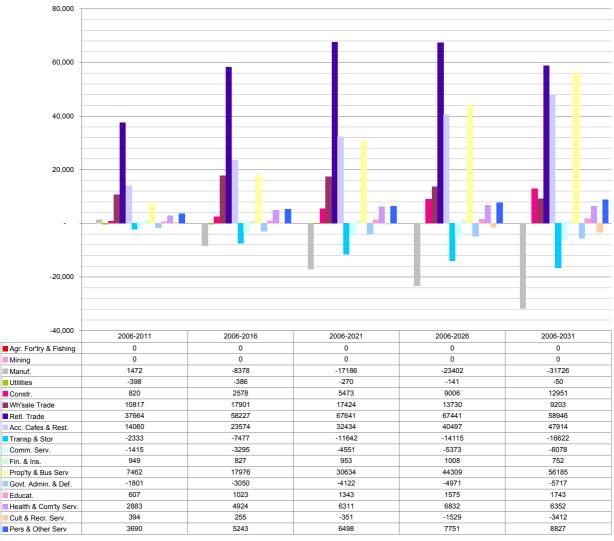
Figure 63. Ku-ring-gai Cumulative Additional Floorspace Forecasts 2006-2031(Audited Area Only)



Source: TDC 2004 and SGS 2007

Figure 64 shows the cumulative additional floorspace forecast by 1digit ANZSIC for Hornsby for the period 2006-2031. In line with forecast employment growth, demand for floorspace from 'Property & Business Services' and 'Retail Trade' is high at 56,185 sqm and 58,946 respectively over the 2006-2031 period. The next highest in terms of floorspace demand comes from the 'Accommodation Cafes & Restaurants' sector with forecast demand for an additional 47,914 sqm in the 2006-2031 period. Forecast employment decline in 'Manufacturing' and 'Transport & Storage' translates to demand for 31,726 sqm and 16,622 sqm less floorspace in the 2006-2031 period for these sectors respectively.

Figure 64. Hornsby Cumulative Additional Floorspace Forecasts 2006-2031(Audited Area Only)



Source: TDC 2004 and SGS 2007

Floorspace Demand by Broad Land Use Category

To understand the supply-demand gaps in the Study area we must first convert the floorspace demand by ANZSIC industry category into Broad Land Use Categories (BLCs). This is important as the assessment of the land's capacity to accommodate floorspace demand driven by employment growth is at the centre of this Study. Assessment of the competitive position of land supply to accommodate floorspace demand is best made in terms of land use categories rather than industry sectors. This is due to the fact that many industry sectors will occupy a range of land types – e.g. factory floor components of 'Manufacturing' industry sector will tend to be located in industrial land while head office functions will tend to be located on commercial land.

The relationship between ANZSIC industry sectors and BLCs has been determined for Hornsby and Ku-ring-gai through the land use audit.

Figure 65 shows the floorspace demand by BLC for Hornsby. Retail activities dominate the forecast with highest floorspace demand for big box retail (RB) Main Street Retail (RM) at 55,307 sqm and 38,343 sqm respectively. Driven by forecast decline in manufacturing employment, demand for heavy manufacturing (MH) and light manufacturing (ML) floorspace is forecast to decline by 11,275 sqm and 11,806 sqm respectively.

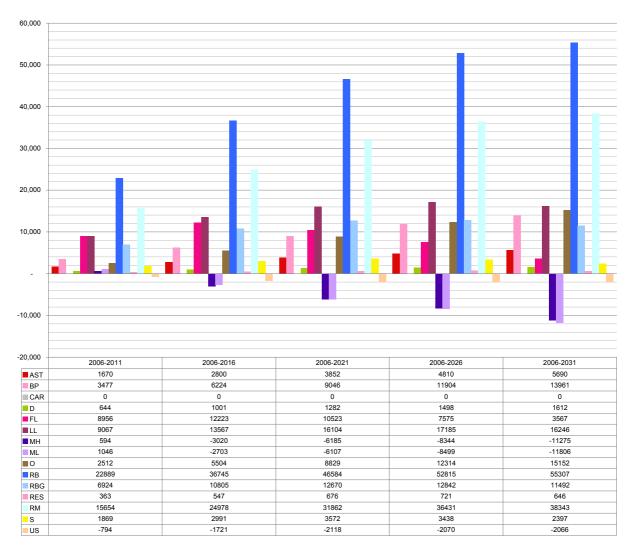


Figure 65. Hornsby Floorspace Demand by BLC (Audited Area Only)

Figure 66 shows the forecast floorspace demand by BLC in Ku-ring-gai. This figure shows the total floorspace demand across all of the audited areas and is based on the percentage growth in employment by industry sector in the TDC employment forecasts. Clearly, demand for office space (O) is by far the greatest BLC at 40,185 sqm over the 2006-2031 period. This is followed by Main Street Retail (RM) at 17,728 sqm.

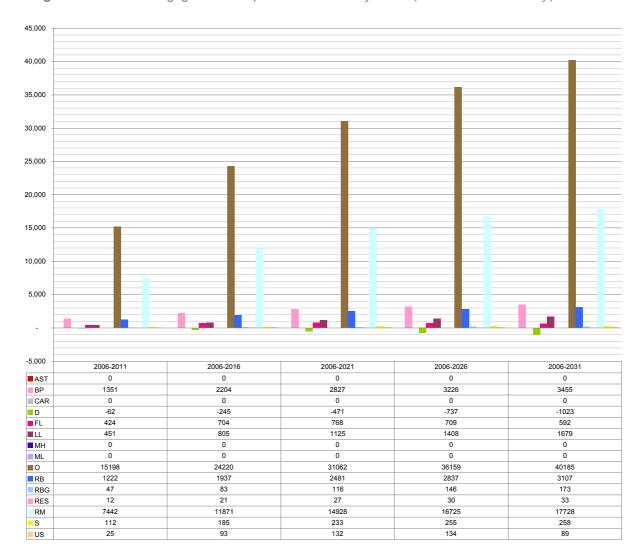


Figure 66. Ku-ring-gai Floorspace Demand by BLC (Audited Area Only)

5.4 Implications

The key findings from this section are summarised below:

• Strong forecast growth in property & business services. This sector displays very strong growth in Ku-ring-gai for the period 2006-2031. In line with forecast employment growth, demand for floorspace from 'Property & Business Services' is high at 49,428 sqm over the 2006-2031 period. The next highest in terms of floorspace demand comes from the 'Retail Trade' sector with forecast demand for an additional 15,031 sqm in the 2006-2031 period. In line with forecast employment growth, demand for floorspace from 'Property & Business Services' and 'Retail Trade' is high at 56,185 sqm and 58,946 respectively over the 2006-2031 period.

- **High demand for office space in Ku-ring-gai**. Demand for office space (O) is by far the greatest of the BLC in Ku-ring-gai at 40,185 sqm over the 2006-2031 period. This is followed by Main Street Retail (RM) at 17,728 sqm.
- **High demand for retail in Hornsby**. Retail activities dominate the forecast with highest floorspace demand for big box retail (RB) Main Street Retail (RM) at 55,307 sqm and 38,343 sqm respectively
- Decline in industrial sectors. Driven by forecast decline in manufacturing employment, demand for heavy manufacturing (MH) and light manufacturing (ML) floorspace is forecast to decline by 11,275 sqm and 11,806 sqm respectively. Declining industrial employment and associated land requirements will obviously impact on the demand for land in the industrial areas.

6 Gap Analysis

6.1 Introduction

This section discusses the gaps between forecast demand for floorspace by Broad Land Use Category (BLC) and the available supply as determined through the land use audit. The demand forecasts have been generated by converting TDC employment numbers into floorspace figures by both ANZSIC and BLC. This is made possible by using data from the land audit.

- [Demand Scenario 1] 'Baseline' from TDC forecasts. This converts the TDC employment numbers into floorspace demand figures by BLC. At a centre/ precinct level, the audited floorspace is grown forward in proportion to the TDC employment forecast for the LGA.
- [Demand Scenario 2] Baseline plus Subregional targets. This adds the Subregional employment targets to the scenario 1 demand forecast.
- [Demand Scenario 3] Share Adjustment between Centres. This scenario applies to the analysis at a centre/ precinct level only. After allowing for the forecast growth plus Subregional targets, the share of floorspace by BLC is adjusted between centres to better align with the centres hierarchy and economic opportunities.
- [Demand Scenario 4] Consideration of Housing Strategy. As a final step in the demand assessment we have determined the likely additional retail floorspace required for the additional dwellings proposed under the Hornsby and Ku-ring-gai housing strategies. The step is necessary as the TDC employment forecasts are based on 2004 population data and will not have considered the dwellings additions proposed in the housing strategies.

To accommodate the forecast demand for floorspace by BLC, we have examined the potential supply under 2 supply scenarios:

• [Supply Scenario 1] Development with intensification. Supply potential = vacant floorspace + capacity on vacant sites + capacity on developed sites. Intensification assumes that there is some scope for business to use land more intensively on developed and vacant sites but falls short of assuming development up to the FSR limit. On average, across the LGA, the actual FSRs are 69% of max FSR in Ku-ring-gai and 71% of max FSR in Hornsby. For this Study the intensification limit has been set at 80% of the maximum FSR under existing controls.

The 80% intensification figure is based on an assessment of development capacity in the North Subregion completed for a previous study. This is the recommended potential supply figure to be used in this Study.

• [Supply Scenario 2] Development up to FSR limit. This assumes that development is able to occur up the FSR limit under the existing planning controls. While this is an unrealistic

scenario, this is the notional maximum under the current controls. <u>This potential supply figure is included as a benchmark.</u>

6.2 Sub-region and LGA Level Gap Analysis

Sub-region and LGA Level Supply-Demand Gaps

Figure 67 shows the supply-demand gaps for both LGAs and the North Subregion in total after accounting for the forecast additional floorspace demand, the Subregional targets and the additional retail floorspace demand implied by in the dwelling numbers in the housing strategies. Under both supply scenarios, there is 'excess supply' in 2031 after accommodating the forecast additional floorspace in the 2006-2031 period. In Ku-ring-gai, the draft LEP results in slightly higher levels of excess supply than those resulting from the KPSO controls. These LGA level results add up to large levels of excess supply at the Subregional level under both supply scenarios.

1,800,000 1.600.000 1,400,000 1,200,000 1,000,000 800,000 600 000 400,000 200,000 80% of Max FSR Max FSR 80% of Max FSR 80% of Max FSR Max FSR 80% of Max FSR North Subregion KRG (DLEP) KRG (KPSO) 719.849 1.276.889 209.330 354.316 209700 355329 929,179 1.631.205 □ Baseline Forecast 604,038 1,161,078 350,323 205707 351336 1,511,401 205,337 809,375 Subregional Targets 603,982 1,161,022 205,395 350,381 205766 351395 809,377 1,511,403 Share Adjustment 583425 1140465 175,480 320,466 175,851 Housing Strategy 321,480 758,905 1,460,931

Figure 67. LGA Level Floorspace Supply-Demand Gaps (2006-2031)

Source: SGS 2008

6.3 Centre/ Precinct Level Gap Analysis

Capacity to Accommodate Forecast Demand

Table 21 shows the gaps between supply potential under the 2 supply scenarios and the forecast demand.

While at an LGA level, we have seen there is excess supply, there are several centres/ precincts where the existing supply potential is not sufficient to meet the forecast demand in the 2006-2031. Centres with supply shortfalls to meet the forecast demand period are the commercial centres of: Appletree Drive Cherrybrook, Carlingford Court, David Road, Castle Hill, Edgeworth David Avenue (Waitara), Epping, Galston, Galston Road (Hornsby Heights), Myrtle Street (Normanhurst), Normanhurst, Pennant Hills Road (Thornleigh), Plympton Road Shops, Epping, Somerville Road (Hornsby Heights), Thornleigh, Waitara, Wisemans Ferry, Yallambee Road.

However, the shortfall at most of these centres is relatively small. The centres with significant levels of supply shortfall are the commercial centres of: Carlingford Court, Galston, Epping, Pennant Hills, Waitara and Thornleigh.

Of particular note are the floorspace shortfalls in Epping as this has a Town Centre designation in the Subregional Strategy and as such would be expected to accommodate a large share of forecast growth (the specific implications of the Subregional Strategy targets are discussed in the following section).

There are also a number of centres/ precincts with very large levels of 'excess supply' after accommodating forecast demand growth. Centre/ precincts where supply potential is more than ten times forecast demand in the 2006-2031 period are the industrial areas of: Kookaburra Road, Asquith, Dural Service Centre, Mt Ku-ring-gai and Thornleigh; and the commercial centres of: Asquith, Beecroft Berowra, Berowra Heights, Berowra Waters, Brooklyn, Cherrybrook, Cowan, Hornsby, Mt Colah Shops, Sefton Road (Thornleigh), West Pennant Hills and Westleigh.



Table 21. Hornsby Forecast Supply-Demand Gaps by Centre (2006-2031)

HORNSBY (E) Asquith (E) Dural Service Centre (E) Mt Ku-ring-gai (E) Thornleigh Appletree Dr-Cherrybrook Asquith Beecroft Berowra Berowra Hts Berowra Waters Brooklyn Carlingford Court Cherrybrook Cowan Dangar Is David Rdr-Castle Hill Edgeworth David Ave-Waitara Epping	Floorspace 206,161 71,934 115,705 140,360 1,589 7,402 11,528 6,151 11,497 1,359 4,368 45,499 12,393 263	% Share 14.5% 5.1% 8.1% 9.9% 0.1% 0.5% 0.8% 0.4% 0.8% 0.1% 0.1% 0.3%	2031 226,352 78,979 127,038 154,107 1,744 8,127 12,657 6,754 12,623	Additional FS 20,191 7,045 11,332 13,747 156 725 1,129 602	80%FSR 179059 145414 354438 51637 -11 13610	Max FSR 267605 196809 467910 94372 324	80%FSR 158,868 138,369 343,105 37,890 - 167	Max FSR 247,414 189,764 456,578 80,625	Residential FS 0 190 1263
(E) Dural Service Centre (E) Mt Ku-ring-gai (E) Thornleigh Appletree Dr-Cherrybrook Asquith Beecroft Berowra Berowra Hts Berowra Waters Brooklyn Carlingford Court Cherrybrook Cowan Dangar Is David Rdr-Castle Hill Edgeworth David Ave-Waitara	71,934 115,705 140,360 1,589 7,402 11,528 6,151 11,497 1,359 4,368 45,499 12,393	5.1% 8.1% 9.9% 0.1% 0.5% 0.8% 0.4% 0.88 0.1%	78,979 127,038 154,107 1,744 8,127 12,657 6,754 12,623	7,045 11,332 13,747 156 725 1,129	145414 354438 51637 -11 13610	196809 467910 94372 324	138,369 343,105 37,890	189,764 456,578 80,625	19 126
(E) Mt Ku-ring-gai (E) Thornleigh Appletree Dr-Cherrybrook Asquith Beecroft Berowra Berowra Hts Berowra Waters Brooklyn Carlingford Court Cherrybrook Cowan Dangar Is David Rdr-Castle Hill Edgeworth David Ave-Waitara	71,934 115,705 140,360 1,589 7,402 11,528 6,151 11,497 1,359 4,368 45,499 12,393	8.1% 9.9% 0.1% 0.5% 0.8% 0.4% 0.8% 0.1%	127,038 154,107 1,744 8,127 12,657 6,754 12,623	11,332 13,747 156 725 1,129	354438 51637 -11 13610	467910 94372 324	343,105 37,890	456,578 80,625	126
(E) Thornleigh Appletree Dr-Cherrybrook Asquith Beecroft Berowra Berowra Hts Berowra Waters Brooklyn Carlingford Court Cherrybrook Cowan Dangar Is David Rdr-Castle Hill Edgeworth David Ave-Waitara	140,360 1,589 7,402 11,528 6,151 11,497 1,359 4,368 45,499 12,393	9.9% 0.1% 0.5% 0.8% 0.4% 0.8% 0.1%	154,107 1,744 8,127 12,657 6,754 12,623	13,747 156 725 1,129	51637 -11 13610	94372 324	37,890	80,625	
(E) Thornleigh Appletree Dr-Cherrybrook Asquith Beecroft Berowra Berowra Hts Berowra Waters Brooklyn Carlingford Court Cherrybrook Cowan Dangar Is David Rdr-Castle Hill Edgeworth David Ave-Waitara	140,360 1,589 7,402 11,528 6,151 11,497 1,359 4,368 45,499 12,393	0.1% 0.5% 0.8% 0.4% 0.8% 0.1%	154,107 1,744 8,127 12,657 6,754 12,623	13,747 156 725 1,129	51637 -11 13610	94372 324	37,890	80,625	
Appletree Dr-Cherrybrook Asquith Beecroft Berowra Berowra Hts Berowra Waters Brooklyn Carlingford Court Cherrybrook Cowan Dangar Is David Rdr-Castle Hill Edgeworth David Ave-Waitara	7,402 11,528 6,151 11,497 1,359 4,368 45,499 12,393	0.5% 0.8% 0.4% 0.8% 0.1%	1,744 8,127 12,657 6,754 12,623	156 725 1,129	13610				
Asquith Beecroft Berowra Berowra Hts Berowra Waters Brooklyn Carlingford Court Cherrybrook Cowan Dangar Is David Rdr-Castle Hill Edgeworth David Ave-Waitara	7,402 11,528 6,151 11,497 1,359 4,368 45,499 12,393	0.8% 0.4% 0.8% 0.1%	12,657 6,754 12,623	725 1,129				168	(
Berowra Berowra Hts Berowra Waters Brooklyn Carlingford Court Cherrybrook Cowan Dangar Is David Rdr-Castle Hill Edgeworth David Ave-Waitara	6,151 11,497 1,359 4,368 45,499 12,393	0.4% 0.8% 0.1%	6,754 12,623			19305	12,885	18,580	2875
Berowra Berowra Hts Berowra Waters Brooklyn Carlingford Court Cherrybrook Cowan Dangar Is David Rdr-Castle Hill Edgeworth David Ave-Waitara	6,151 11,497 1,359 4,368 45,499 12,393	0.4% 0.8% 0.1%	6,754 12,623		10301	15813	9,172	14,684	1950
Berowra Waters Brooklyn Carlingford Court Cherrybrook Cowan Dangar Is David Rdr-Castle Hill Edgeworth David Ave-Waitara	11,497 1,359 4,368 45,499 12,393	0.8% 0.1%		002	13166	17840	12,563	17,238	302
Brooklyn Carlingford Court Cherrybrook Cowan Dangar Is David Rdr-Castle Hill Edgeworth David Ave-Waitara	4,368 45,499 12,393		,	1.126	13242	18990	12,116	17,864	(
Brooklyn Carlingford Court Cherrybrook Cowan Dangar Is David Rdr-Castle Hill Edgeworth David Ave-Waitara	4,368 45,499 12,393		1,492	133	6583	8583	6,450	8,450	263
Cherrybrook Cowan Dangar Is David Rdr-Castle Hill Edgeworth David Ave-Waitara	45,499 12,393		4,795	428	4052	6396	3,625	5,968	1613
Cherrybrook Cowan Dangar Is David Rdr-Castle Hill Edgeworth David Ave-Waitara	12,393	3.2%	49,956	4,456	-3024	5370	- 7,480	914	(
Dangar Is David Rdr-Castle Hill Edgeworth David Ave-Waitara	262	0.9%	13.607	1,214	17690	24597	16,476	23,383	(
Dangar Is David Rdr-Castle Hill Edgeworth David Ave-Waitara	203	0.0%	289	26	198	360	173	334	223
David Rdr-Castle Hill Edgeworth David Ave-Waitara		0.0%	-	-	-108	14	- 108	14	595
Edgeworth David Ave-Waitara	3.013	0.2%	3.308	295	-116	496	- 411	201	(
	2,489	0.2%	2,732	244	-12	513	- 256	270	(
	62.550	4.4%	68,676	6.126	5167	21831	- 959	15,705	832
Galston	4.189	0.3%	4,599	410	-3792	-1759	- 4.202	- 2.170	8360
Galston Rd-Hornsby Hts	1,161	0.1%	1,274	114	-59	173	- 172	60	(
Hornsby	419,696	29.5%	460,801	41,105	218658	394835	177,553	353,730	141979
Hospital Precinct	59.788	4.2%	65.643	5.856	23936	42844	18.080	36.988	877
(E) Kookaburra Road	6.336	0.4%	6.957	621	4711	7235	4.090	6,615	(
Kuringai	1,114	0.1%	1,223	109	486	844	377	735	(
Malton Rd-North Epping	1.808	0.1%	1.985	177	208	644	31	467	(
Mt Colah Shops	2,978	0.2%	3,270	292	5859	8153	5,567	7,862	789
Mt Colah Stn	1,502	0.1%	1.649	147	438	1032	291	885	664
Myrtle St-Normanhurst	660	0.0%	724	65	-180	-85	- 245	- 149	(
Normanhurst	1.770	0.1%	1.944	173	-454	-83	- 627	- 256	432
Pennant Hills	84.349	5.9%	92,610	8.261	1158	19371	- 7.104	11.110	644
Pennant Hills Rd-Thornleigh	12,941	0.9%	14,209	1,267	-22	3013	- 1,290	1.746	1169
Plymton Rd Shops-Epping	1.522	0.1%	1.671	149	-25	292	- 175	143	(
Sefton Rd-Thornleigh	1,292	0.1%	1,419	127	8353	10823	8,227	10,697	429
Somerville Rd-Hornsby Hts		0.0%			-118	269	- 118	269	1665
Thornleigh	63,204	4.4%	69,394	6,190	-5361	6522	- 11,551	332	94
Waitara	33.929	2.4%	37.252	3,323	-4678	2136	- 8.001	- 1.187	3954
West Pennant Hills	7,385	0.5%	8,109	723	7732	11234	7,008	10,511	(
Westleigh	8.399	0.6%	9.222	823	6365	9741	5,542	8,918	
Wiseman's Ferry	3.051	0.2%	3.350	299	282	1043	- 17	745	169
Yallambee Road	559	0.0%	614	55	-102	209	- 157	154	869
TOTAL			1.561.244						
Mt Ku-ring-gai constrained land	1 421 977	1 1		1.39 260	1 ()/4 681	1 685 614	935 421	1 546 355	180453
TOTAL minus constrained land	1,421,977	1	1,001,244	139,260	1,074,681 138,865	1,685,614 198445	935,421	1,546,355	18045

Supply capacity is less than forecast 2006-2031 demand Supply capacity is more than ten times forecast 2006-2031 demand Table 22 shows the gaps between supply potential (vacant floorspace + capacity on vacant sites + capacity on developed sites) under the two scenarios of (i) development up to the FSR limit and development up to 80% of the FSR limit under existing controls for Ku-ring-gai.

For the LGA as a whole there is sufficient potential supply under both scenarios to accommodate the total forecast floorspace demand in the period 2006-2031.

There are several centres/ precincts where the existing supply potential is not sufficient to meet the forecast demand. These are the commercial centres of: East Lindfield, Fox Valley, Pymble Office Park, Roseville chase, West Gordon, West Lindfield. However, in most cases the shortfall is small. The one centre with significant supply shortfall is Pymble Office Park – with a shortfall of 12,058 sqm.

The centres with more than ten times the supply potential to meet the demand forecast are the commercial centres of: Hampden Avenue Shops, North Wahroonga, Killara, Roseville, South Turramurra, St Ives, St Ives North and Turramurra.

Of particular note is the fact that Ku-ring-gai's designated Town Centre – Gordon has capacity to accommodate demand under both supply scenarios.

Table 22. Ku-ring-gai Supply-Demand Gaps by Centre (2006-2031)

	200	06	2031 De	emand	Supply h	(PSO	Supply I	DLEP	20 31 Gap	KPSO	2031 Gap	DLEP	
KRG	Floorspace	% Share	2031	Add Req	80% of Max	Max	80% of Max	Max	80% of Max	Max	80% of Max	Max	Residential
East Killara	1,137	0.3%	4,263	142	720	1,141	720	1141	578	999	578	999	0
East Lindfield	1,309	0.3%	4,910	163	-295	- 91	-295	-91	-458	-254	-458	-254	0
Eastern Rd-Turramurra	1,290	0.3%	4,837	161	704	1,154	704	1154	543	993	543	993	0
Fox Valley	2,863	0.8%	10,735	-47	-121	456	-121	456	-75	503	-75	503	0
Gordon	99,034	26.1%	371,363	19409	97387	141,590	93726	137929	77978	122181	74317	118519	12712
Hampden Ave Shops-Nth Wahroonga	868	0.2%	3,255	110	1901	2,561	1761	2421	1792	2452	1651	2311	140
Killara	378	0.1%	1,416	47	509	717	509	717	462	670	462	670	0
Lindfield	37,631	9.9%	141,110	6291	30622	46,274	29941	45593	24331	39984	23651	39303	1772
North Turramurra	4,989	1.3%	18,708	349	1648	3,121	1648	3121	1299	2772	1299	2772	0
Princes St-Turramurra	1,328	0.4%	4,981	166	591	1,021	473	903	425	855	307	737	118
Pymble	18,775	5.0%	70,403	3021	12525	19,646	12302	19423	9504	16625	9281	16401	642
Pymble Office Park	88,999	23.5%	333,734	23313	6349	26,848	11255	31754	-16964	3535	-12058	8441	3386
Roseville	17,528	4.6%	65,729	2324	15802	23,258	15029	22486	13478	20934	12706	20162	1229
Roseville Chase	2,383	0.6%	8,937	304	249	817	249	817	-56	513	-56	513	0
South Turramurra	1,210	0.3%	4,536	156	2011	2,771	2011	2771	1856	2616	1856	2616	0
St Ives	47,122	12.4%	176,701	4215	38602	57,854	43048	62299	34387	53639	38832	58084	651
St Ives Chase	927	0.2%	3,476	119	172	411	172	411	53	293	53	293	0
St Ives North	2,092	0.6%	7,845	265	2086	3,052	2086	3052	1821	2787	1821	2787	0
Turramurra	28,712	7.6%	107,666	3317	54118	73,746	49490	69119	50801	70429	46173	65802	4758
Wahroonga	11,511	3.0%	43,164	1313	5782	9,674	5307	9198	4470	8361	3994	7886	475
West Gordon	961	0.3%	3,605	120	-83	100	-83	100	-203	-20	-203	-20	0
West Lindfield	4,485	1.2%	16,817	560	374	1,420	-480	567	-186	860	-1039	7	853
West Pymble	3,622	1.0%	13,583	458	3953	3,048	3953	3048	3495	2590	3495	2590	667
TOTAL	379,153	1	1,421,775	66277	275,606	420,592	275977	421606	209,330	354,316	209,700	355,329	27404

Supply capacity is less than forecast 2006-2031 demand
Supply capacity is more than ten times forecast 2006-2031 demand

Capacity to Accommodate Subregional Strategy Targets

The Subregional Strategy has the following employment targets:

- Hornsby LGA 9,000 jobs
- Ku-ring-gai LGA 4,500 jobs
- Hornsby Major Centre 3,000 jobs

Table 23 shows the floorspace demand as a result of the TDC employment forecasts for 2031 and the Subregional employment targets. In Hornsby LGA as a whole there is enough supply potential in each scenario to accommodate the floorspace demand implied by the Subregional Strategy employment target. For Hornsby centre, the employment target of 3,000 additional jobs results in an additional floorspace demand of 196,901 sqm. Supply in both the 80% of max FSR and the max FSR scenarios is able to accommodate this.

Again, there are a number of centres with a supply shortfall to accommodate the demand forecast in the 2006-2031 period. These are the commercial centres of: Appletree Drive Cherrybrook, Carlingford Court, David Road, Castle Hill, Edgeworth David Avenue (Waitara), Epping, Galston, Galston Road (Hornsby Heights), Myrtle Street (Normanhurst), Normanhurst, Pennant Hills Road (Thornleigh), Plympton Road Shops, Epping, Somerville Road (Hornsby Heights), Thornleigh, Waitara, Wisemans Ferry, Yallambee Road.

However, the supply shortfall at most of these centres is relatively small. The centres with significant levels of supply shortfall are the commercial centres of: Carlingford Court, Galston, Pennant Hills, Thornleigh and Waitara.

Of particular note is that after the Subregional targets have been applied – including the 3,000 jobs target for Hornsby centre, the demand shortfall is Epping is reduced. This is the result of Hornsby taking a greater share of the LGA total.

There are also a number of centres/ precincts with very large levels of 'excess supply' after accommodating forecast demand growth. Centre/ precincts where supply is more than ten times forecast demand in the 2006-2031 period are the industrial areas of: Asquith, Kookaburra Road, Dural Service Centre, Mt Ku-ring-gai, and Thornleigh, and the commercial centres of Asquith, Beecroft Berowra, Berowra Heights, Berowra Waters, Cherrybrook, Cowan, Mt Ku-ring-gai, Mt Colah Shops, Pennant Hills Road (Thornleigh), Sefton Road (Thornleigh), West Pennant Hills and Westleigh.

Table 23. Hornsby Supply-Demand Gaps by Centre After Accommodating Subregional Targets (2006-2031)

Employment Land (i)
Employment Land (ii)
Employment Land (i)
Employment Land (i)
Neighbourhood Centre
Village
Village
Small Village
Small Village
Neighbourhood Centre
Neighbourhood Centre
Stand Alone Shopping Centre
Village

Neighbourhood Centre Neighbourhood Centre Town Centre Neighbourhood Centre Neighbourhood Centre

Employment Land-

Major Centre

Neighbourhood Centre
Neighbourhood Centre
Neighbourhood Centre
Neighbourhood Centre
Neighbourhood Centre
Village
Neighbourhood Centre
Neighbourhood Centre
Neighbourhood Centre
Neighbourhood Centre
Neighbourhood Centre
Village
Village
Small Village
Small Village

Neighbourhood Centre

	200)6		2031 Demand		2031	Supply	G.A	NP .	
HORNSBY	Floorspace	% Share	TDC Forecast	TDC + SR Target	ADD REQ	80%FSR	Max FSR	80	Max	Residential
(E) Asquith	206161	14.5%	212,355	218,790	12,629	179059	267605	166,431	254,977	0
(E) Dural Service Centre	71934	5.1%	77,199	76,266	4,332	145414	196809	141,082	192,477	190
(E) Mt Ku-ring-gai	115705	8.1%	113,515	119,670	3,964	354438	467910	350,473	463,946	1263
(E) Thornleigh	140360	9.9%	134,966	139,319	- 1,041	51637	94372	52,678	95,413	0
Appletree Dr-Cherrybrook	1589	0.1%	1,814	1,761	173	-11	324	- 184	151	0
Asquith	7402	0.5%	8,550	8,204	802	13610	19305	12,809	18,503	2875
Beecroft	11528	0.8%	13,054	11,976	448	10301	15813	9,853	15,365	1950
Berowra	6151	0.4%	7,567	7,080	929	13166	17840	12,237	16,911	302
Berowra Hts	11497	0.8%	13,740	12,794	1,296	13242	18990	11,946	17,693	0
Berowra Waters	1359	0.1%	1,648	1,523	164	6583	8583	6,418	8,418	263
Brooklyn	4368	0.3%	5,368	4,782	414	4052	6396	3,638	5,982	1613
Carlingford Court	45499	3.2%	51,569	49,368	3,869	-3024	5370	- 6,892	1,502	0
Cherrybrook	12393	0.9%	14,408	12,995	601	17690	24597	17,088	23,995	0
Cowan	263	0.0%	299	282	19	198	360	180	341	223
Dangar Is	0	0.0%	ı	-	-	-108	14	- 108	14	595
David Rdr-Castle Hill	3013	0.2%	3,527	3,292	279	-116	496	- 395	217	0
Edgeworth David Ave-Waitara	2489	0.2%	2,843	2,678	189	-12	513	- 202	324	0
Epping	62550	4.4%	71,063	68,136	5,586	5167	21831	- 420	16,244	8321
Galston	4189	0.3%	4,686	4,219	30	-3792	-1759	- 3,822	- 1,790	8360
Galston Rd-Hornsby Hts	1161	0.1%	1,344	1,245	84	-59	173	- 143	89	0
Hornsby	419696	29.5%	491,149	616,597	196,901	218658	394835	21,756	197,934	141979
Hospital Precinct	59788	4.2%	63,518	63,355	3,567	23936	42844	20,369	39,277	877
(E) Kookaburra Road	6336	0.4%	6,488	6,764	427	4711	7235	4,284	6,808	0
Kuringai	1114	0.1%	1,291	1,156	43	486	844	443	801	0
Malton Rd-North Epping	1808	0.1%	2,117	1,891	83	208	644	125	561	0
Mt Colah Shops	2978	0.2%	3,376	3,094	116	5859	8153	5,743	8,038	789
Mt Colah Stn	1502	0.1%	1,752	1,671	169	438	1032	269	864	664
Myrtle St-Normanhurst	660	0.0%	762	690	30	-180	-85	- 210	- 115	0
Normanhurst	1770	0.1%	2,116	1,864	94	-454	-83	- 548	- 177	432
Pennant Hills	84349	5.9%	99,193	93,267	8,918	1158	19371	- 7,761	10,453	644
Pennant Hills Rd-Thornleigh	12941	0.9%	10,591	9,913	- 3,029	-22	3013	3,006	6,042	1165
Plymton Rd Shops-Epping	1522	0.1%	1,741	1,652	130	-25	292	- 155	162	0
Sefton Rd-Thornleigh	1292	0.1%	1,521	1,456	164	8353	10823	8,189	10,659	429
Somerville Rd-Hornsby Hts	0	0.0%	-	-	-	-118	269	- 118	269	1665
Thornleigh	63204	4.4%	73,574	70,647	7,443	-5361	6522	- 12,804	- 921	94
Waitara	33929	2.4%	39,725	37,799	3,869	-4678	2136	- 8,547	- 1,733	3954
West Pennant Hills	7385	0.5%	8,721	8,151	765	7732	11234	6,966	10,469	0
Westleigh	8399	0.6%	9,231	8,315	- 84	6365	9741	6,449	9,825	0
Wiseman's Ferry	3051	0.2%	4,146	3,683	632	282	1043	- 350	412	169
Yallambee Road	559	0.0%	642	624	65	-102	209	- 167	144	869
TOTAL			1,561,244	1,677,041	255,064			819,617	1,430,550	180453
Mt Ku-ring-gai constrained land								134,901	194,480	

 Mt Ku-ring-gai constrained land
 134,901
 194,480

 TOTAL minus constrained land
 604,038
 1,161,078

Supply capacity is less than forecast 2006-2031 demand Supply capacity is more than ten times forecast 2006-2031 demand

Table 24 shows floorspace demand in Ku-ring-gai as a result of the TDC employment forecasts for 2031 and the Subregional employment targets. In the LGA as a whole there is enough supply potential in each scenario to accommodate the floorspace demand driven by the Subregional Strategy employment target. For Gordon centre, there is sufficient supply under all three supply scenarios to accommodate the demand figure.

There are several centres/ precincts where the existing supply potential is not sufficient to meet the forecast demand. These are the commercial centres of: East Lindfield, Fox Valley, Pymble Office Park, Roseville chase, West Gordon, West Lindfield. However, in most cases the shortfall is small. The centre with significant supply shortfall to meet the forecast demand is Pymble Office Park.

The centres with more than ten times the supply potential to meet the demand forecast are the commercial centres of: Hampden Avenue Shops, North Wahroonga, Killara, Roseville, South Turramurra and Turramurra.

Table 24. Ku-ring-gai Subregional Target Supply-Demand Gaps by Centre (2006-2031)

		200	6		2031 Demand		Supply D	LEP	Supply K	(PSO	GAP D	LEP	Gap KF	PSO	
	KRG	Floorspace	% Share	TDC Forecast	TDC + SR Target	ADD REQ	80% of Max	Max	80% of Max	Max	80% of Max	Max	80% of Max	Max	Residential
Neighbourhood Centre	East Killara	1137	0.3%	4,263	1,250	113	720	1141	720	1141	607	1028	607	1028	0
Neighbourhood Centre	East Lindfield	1309	0.3%	4,910	1,478	168	-295	-91	-295	-91	-464	-259	-464	-259	0
Neighbourhood Centre	Eastern Rd-Turramurra	1290	0.3%	4,837	1,404	114	704	1154	704	1154	590	1041	590	1041	0
Neighbourhood Centre	Fox Valley	2863	0.8%	10,735	3,140	277	-121	456	-121	456	-399	179	-399	179	0
Town Centre	Gordon	99034	26.1%	371,363	121,115	22,081	97387	141590	93726	137929	75306	119508	71645	115847	12712
Neighbourhood Centre	Hampden Ave Shops	868	0.2%	3,255	944	76	1901	2561	1761	2421	1826	2486	1686	2345	140
Neighbourhood Centre	Killara	378	0.1%	1,416	482	104	509	717	509	717	405	613	405	613	0
Village	Lindfield	37631	9.9%	141,110	43,381	5,751	30622	46274	29941	45593	24871	40523	24191	39843	1772
Neighbourhood Centre	North Turramurra	4989	1.3%	18,708	5,966	977	1648	3121	1648	3121	671	2144	671	2144	0
Neighbourhood Centre	Princes St-Turramurra	1328	0.4%	4,981	1,496	167	591	1021	473	903	424	854	306	736	118
Small Village	Pymble	18775	5.0%	70,403	22,186	3,411	12525	19646	12302	19423	9114	16235	8891	16012	642
	Pymble Office Park	88999	23.5%	333,734	114,323	25,324	6349	26848	11255	31754	-18975	1524	-14070	6430	3386
Small Village	Roseville	17528	4.6%	65,729	20,067	2,539	15802	23258	15029	22486	13263	20720	12491	19947	1229
Neighbourhood Centre	Roseville Chase	2383	0.6%	8,937	2,639	255	249	817	249	817	-7	562	-7	562	0
Neighbourhood Centre	South Turramurra	1210	0.3%	4,536	1,385	176	2011	2771	2011	2771	1836	2596	1836	2596	0
Village	St Ives	47122	12.4%	176,701	50,754	3,632	38602	57854	43048	62299	34971	54222	39416	58668	651
Neighbourhood Centre	St Ives Chase	927	0.2%	3,476	1,016	89	172	411	172	411	82	322	82	322	0
Neighbourhood Centre	St Ives North	2092	0.6%	7,845	2,326	234	2086	3052	2086	3052	1852	2818	1852	2818	0
Village	Turramurra	28712	7.6%	107,666	30,848	2,136	54118	73746	49490	69119	51982	71611	47354	66983	4758
Small Village	Wahroonga	11511	3.0%	43,164	12,579	1,068	5782	9674	5307	9198	4714	8605	4238	8130	475
Neighbourhood Centre	West Gordon	961	0.3%	3,605	1,110	148	-83	100	-83	100	-232	-48	-232	-48	0
Neighbourhood Centre	West Lindfield	4485	1.2%	16,817	5,400	915	374	1420	-480	567	-542	505	-1395	-349	853
Neighbourhood Centre	West Pymble	3622	1.0%	13,583	4,136	514	3953	3048	3953	3048	3440	2534	3440	2534	667
	TOTAL	379153	100.0%	1,421,775	449,423	70,270	275606	420592	275977	421606	205,337	350,323	205,707	351,336	27404

Supply capacity is less than forecast 2006-2031 demand Supply capacity is more than ten times forecast 2006-2031 demand

6.4 Centre/ Precinct Positioning

Current Floorspace Shares between Centres

The current shares of BLC floorspace by centre are illustrated in Table 33 and Table 34.

Table 25. Hornsby Existing Floorspace (BLC) Shares Between Centres

	HORNSBY	AST	ВР	D	FL	LL	МН	ML	0	RB	RBG	RES	RM	S	US
Employment Land (i)	(E) Asquith	0.4%	13.1%	2.3%	32.8%	13.7%	31.1%	30.3%	10.8%	5.18%	9.9%	3.5%	5.61%	1.1%	19.4%
Employment Land (ii)	(E) Dural Service Centre	3.3%	3.6%	1.8%	6.0%	6.5%	2.0%	2.4%	2.7%	4.05%	6.1%	3.2%	4.34%	3.3%	12.4%
Employment Land (i)	(E) Mt Ku-ring-gai	0.2%	6.6%	0.8%	21.4%	6.1%	26.0%	24.8%	4.4%	0.89%	2.5%	0.9%	1.38%	0.5%	12.2%
Employment Land (i)	(E) Thomleigh	0.0%	8.9%	2.0%	11.6%	8.2%	35.7%	33.3%	7.3%	3.18%	5.4%	4.0%	3.75%	4.3%	12.4%
Neighbourhood Centre	Appletree Dr-Cherrybrook	0.1%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.12%	0.2%	0.3%	0.13%	0.4%	0.0%
Village	Asquith	0.3%	0.3%	0.3%	0.1%	0.8%	0.0%	0.1%	0.3%	0.66%	1.1%	0.6%	0.63%	0.6%	0.2%
Village	Beecroft	0.5%	0.6%	1.0%	0.2%	0.8%	0.0%	0.1%	0.6%	0.97%	1.0%	1.2%	0.88%	1.2%	0.3%
Small Village	Berowra	1.6%	0.3%	0.1%	0.3%	0.4%	0.0%	0.0%	0.3%	0.56%	0.4%	0.3%	0.66%	0.4%	0.3%
Small Village	Berowra Hts	1.8%	0.3%	1.6%	0.1%	0.9%	0.0%	0.1%	0.4%	1.04%	1.3%	0.9%	1.30%	0.5%	0.3%
Neighbourhood Centre	Berowra Waters	0.4%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.13%	0.1%	0.1%	0.17%	0.1%	0.0%
Neighbourhood Centre	Brooklyn	1.4%	0.2%	0.2%	0.0%	0.2%	0.0%	0.0%	0.1%	0.46%	0.2%	0.2%	0.52%	0.3%	0.1%
Stand Alone Shopping Centre	Carlingford Court	0.8%	1.5%	1.3%	0.6%	5.1%	0.0%	0.4%	0.9%	4.11%	7.1%	3.2%	3.91%	2.3%	1.4%
Village	Cherrybrook	1.1%	0.4%	0.8%	0.1%	1.1%	0.0%	0.1%	0.2%	1.26%	1.5%	1.0%	1.12%	0.3%	0.3%
-	Cowan	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.03%	0.0%	0.0%	0.03%	0.0%	0.0%
-	Dangar Is	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%	0.0%	0.0%	0.00%	0.0%	0.0%
Neighbourhood Centre	David Rdr-Castle Hill	0.4%	0.1%	0.3%	0.0%	0.2%	0.0%	0.0%	0.1%	0.27%	0.3%	0.4%	0.28%	0.6%	0.1%
Neighbourhood Centre	Edgeworth David Ave-Waitara	0.0%	0.0%	0.1%	0.0%	0.3%	0.0%	0.0%	0.0%	0.25%	0.4%	0.1%	0.21%	0.0%	0.1%
Town Centre	Epping	0.4%	8.8%	3.6%	7.4%	3.1%	0.1%	0.4%	10.4%	2.80%	1.7%	6.1%	3.01%	1.9%	1.6%
Neighbourhood Centre	Galston	0.1%	0.1%	0.4%	0.1%	0.3%	0.0%	0.0%	0.1%	0.38%	0.5%	0.4%	0.31%	0.3%	0.1%
Neighbourhood Centre	Galston Rd-Hornsby Hts	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.12%	0.2%	0.0%	0.10%	0.0%	0.0%
Major Centre	Hornsby	63.3%	35.6%	59.1%	11.8%	34.4%	3.4%	5.4%	38.0%	53.59%	40.0%	36.8%	48.51%	32.7%	30.6%
-	Hospital Precinct	0.0%	0.9%	14.7%	0.0%	0.0%	0.0%	0.0%	3.2%	2.09%	0.9%	20.6%	3.34%	40.2%	-1.0%
Employment Land	(E) Kookaburra Road	0.0%	0.3%	0.0%	1.4%	0.4%	0.7%	0.7%	0.2%	0.14%	0.4%	0.1%	0.15%	0.0%	0.2%
-	Kuringai	0.3%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.12%	0.1%	0.0%	0.12%	0.0%	0.1%
Neighbourhood Centre	Malton Rd-North Epping	0.2%	0.0%	0.1%	0.0%	0.2%	0.0%	0.0%	0.0%	0.20%	0.2%	0.1%	0.16%	0.0%	0.1%
Neighbourhood Centre	Mt Colah Shops	0.0%	0.1%	0.2%	0.0%	0.3%	0.0%	0.0%	0.0%	0.30%	0.5%	0.2%	0.23%	0.1%	0.1%
Neighbourhood Centre	Mt Colah Stn	0.1%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.1%	0.14%	0.2%	0.1%	0.13%	0.1%	0.1%
Neighbourhood Centre	Myrtle St-Normanhurst	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.06%	0.1%	0.0%	0.04%	0.0%	0.1%
Neighbourhood Centre	Normanhurst	0.4%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.1%	0.18%	0.1%	0.1%	0.18%	0.1%	0.1%
Village	Pennant Hills	11.0%	8.7%	3.3%	2.1%	5.5%	0.2%	0.5%	9.4%	6.38%	5.4%	8.7%	7.68%	3.7%	3.1%
Neighbourhood Centre	Pennant Hills Rd-Thornleigh	2.9%	0.3%	0.0%	0.8%	0.5%	0.0%	0.0%	0.16%	0.70%	0.3%	0.1%	0.95%	0.1%	1.2%
Neighbourhood Centre	Plymton Rd Shops-Epping	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.15%	0.3%	0.1%	0.13%	0.0%	0.1%
Neighbourhood Centre	Sefton Rd-Thornleigh	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	0.08%	0.1%	0.1%	0.08%	0.1%	0.0%
Neighbourhood Centre	Somerville Rd-Hornsby Hts	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%	0.0%	0.0%	0.00%	0.0%	0.0%
Village	Thornleigh	2.4%	6.4%	3.2%	2.1%	5.4%	0.6%	0.9%	7.9%	4.56%	5.7%	3.7%	4.78%	1.6%	2.9%
Village	Waitara	4.1%	1.5%	0.6%	0.4%	3.1%	0.0%	0.3%	1.0%	3.08%	4.2%	2.0%	3.37%	2.3%	0.9%
Small Village	West Pennant Hills	0.5%	0.5%	0.5%	0.1%	0.6%	0.0%	0.0%	0.6%	0.65%	0.8%	0.5%	0.64%	0.3%	0.2%
Small Village	Westleigh	0.3%	0.3%	1.3%	0.2%	0.6%	0.0%	0.0%	0.5%	0.68%	0.7%	0.5%	0.64%	0.6%	0.3%
Neighbourhood Centre	Wiseman's Ferry	1.6%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.37%	0.1%	0.0%	0.47%	0.0%	0.0%
	Yallambee Road	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.06%	0.1%	0.0%	0.05%	0.0%	0.0%
				100.00%						100.00%	100.00%				100.00%

Village
Town Centre
Major Centre

Table 26. Ku-ring-gai Existing Floorspace (BLC) Shares Between Centre

	KRG	AST	BP	D	FL	LL	MH	ML	0	RB	RBG	RES	RM	S	US
Neighbourhood Centre	East Killara	0.5%	0.1%	0.1%	0.1%	0.4%	0.0%	0.1%	0.0%	0.5%	0.7%	0.1%	0.4%	0.0%	0.1%
Neighbourhood Centre	East Lindfield	0.0%	0.1%	0.2%	0.1%	0.5%	0.0%	0.1%	0.0%	0.5%	0.8%	0.4%	0.4%	0.4%	0.1%
Neighbourhood Centre	Eastern Rd-Turramurra	0.0%	0.1%	0.1%	0.1%	0.6%	0.0%	0.1%	0.0%	0.5%	0.9%	0.2%	0.4%	0.0%	0.1%
Neighbourhood Centre	Fox Valley	2.2%	0.1%	1.7%	0.1%	0.4%	0.0%	0.1%	0.2%	0.8%	0.6%	1.8%	0.9%	3.4%	0.1%
Town Centre	Gordon	41.7%	35.6%	23.5%	17.1%	25.2%	4.1%	5.5%	38.2%	28.5%	22.8%	26.0%	28.5%	20.7%	18.5%
Neighbourhood Centre	Hampden Ave Shops-Nth Wahroonga	0.3%	0.1%	0.2%	0.1%	0.3%	0.2%	0.2%	0.1%	0.3%	0.4%	0.1%	0.3%	0.1%	0.1%
Neighbourhood Centre	Killara	0.5%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.2%	0.0%	0.3%
Village	Lindfield	7.4%	8.3%	10.6%	7.9%	9.3%	0.6%	1.5%	8.4%	10.0%	10.6%	13.0%	10.3%	16.0%	16.3%
Neighbourhood Centre	North Turramurra	3.7%	1.1%	1.9%	0.5%	1.0%	0.0%	0.1%	1.2%	1.6%	1.1%	2.0%	1.6%	3.2%	0.2%
Neighbourhood Centre	Princes St-Turramurra	0.0%	0.1%	0.2%	0.1%	0.5%	0.0%	0.1%	0.0%	0.5%	0.8%	0.4%	0.4%	0.5%	0.1%
Small Village	Pymble	8.6%	5.4%	7.4%	4.7%	4.5%	1.7%	1.9%	5.5%	4.9%	4.1%	5.9%	5.4%	6.0%	2.8%
	Pymble Office Park	0.0%	33.3%	16.7%	50.6%	22.3%	92.7%	84.9%	32.7%	13.2%	9.4%	14.0%	15.6%	10.5%	44.1%
Small Village	Roseville	11.9%	3.0%	12.0%	2.4%	3.4%	0.5%	0.8%	3.2%	5.2%	4.1%	5.2%	5.9%	8.7%	2.0%
Neighbourhood Centre	Roseville Chase	1.1%	0.2%	0.4%	0.1%	0.9%	0.0%	0.1%	0.1%	1.0%	1.3%	0.4%	0.8%	0.2%	0.2%
Neighbourhood Centre	South Turramurra	0.0%	0.0%	0.0%	0.1%	0.6%	0.0%	0.1%	0.0%	0.5%	0.9%	0.2%	0.4%	0.0%	0.1%
Village	St Ives	2.3%	5.0%	9.7%	5.6%	16.1%	0.0%	2.3%	3.7%	15.6%	23.2%	15.1%	13.4%	13.6%	4.4%
Neighbourhood Centre	St Ives Chase	0.0%	0.0%	0.1%	0.0%	0.4%	0.0%	0.1%	0.0%	0.4%	0.6%	0.2%	0.3%	0.1%	0.1%
Neighbourhood Centre	St Ives North	2.5%	0.1%	0.4%	0.1%	0.6%	0.0%	0.1%	0.0%	0.9%	0.9%	0.4%	0.8%	0.4%	0.1%
Village	Turramurra	6.9%	4.6%	10.8%	6.6%	7.0%	0.2%	1.1%	4.1%	8.3%	8.8%	8.7%	7.7%	10.2%	5.8%
Small Village	Wahroonga	2.3%	1.8%	2.2%	2.4%	3.4%	0.1%	0.5%	1.6%	3.5%	4.3%	3.6%	3.3%	2.8%	3.2%
Neighbourhood Centre	West Gordon	1.9%	0.1%	0.2%	0.2%	0.1%	0.0%	0.0%	0.0%	0.4%	0.2%	0.3%	0.4%	0.5%	0.0%
Neighbourhood Centre	West Lindfield	4.0%	0.8%	0.9%	1.1%	1.1%	0.0%	0.1%	0.7%	1.5%	1.3%	1.2%	1.6%	1.7%	0.8%
Neighbourhood Centre	West Pymble	2.0%	0.2%	0.5%	0.2%	1.3%	0.0%	0.2%	0.1%	1.4%	2.0%	0.9%	1.3%	1.0%	0.3%
	TOTAL	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%



Table 27. Hornsby Existing Floorspace (BLC) Shares Within Centres

	HORNSBY	AST	BP	D	FL	LL	MH	ML	0	RB	RBG	RES	RM	S	US	TOTAL
Employment Land (i)	(E) Asquith	0.0%	6.7%	0.2%	35.3%	10.4%	8.3%	9.8%	5.3%	9.1%	4.4%	0.2%	6.9%	0.5%	2.7%	100.0%
Employment Land (ii)	(E) Dural Service Centre	0.9%	5.4%	0.5%	18.5%	14.2%	1.5%	2.3%	3.8%	20.5%	7.9%	0.4%	15.3%	3.8%	4.9%	100.0%
Employment Land (i)	(E) Mt Ku-ring-gai	0.0%	6.2%	0.1%	42.2%	8.5%	12.7%	14.7%	3.9%	2.9%	2.1%	0.1%	3.1%	0.4%	3.1%	100.0%
Employment Land (i)	(E) Thornleigh	0.0%	7.2%	0.3%	19.6%	9.7%	15.0%	16.9%	5.7%	8.8%	3.8%	0.3%	7.2%	2.7%	2.7%	100.0%
Neighbourhood Centre	Appletree Dr-Cherrybrook	1.3%	1.8%	1.8%	1.0%	10.5%	0.0%	0.4%	2.3%	27.1%	9.3%	1.6%	20.4%	22.0%	0.5%	100.0%
Village	Asquith	0.7%	4.0%	0.7%	2.3%	15.7%	0.0%	0.5%	3.6%	31.2%	12.8%	0.7%	20.8%	6.2%	0.8%	100.0%
Village	Beecroft	0.9%	5.8%	1.8%	3.7%	11.3%	0.0%	0.3%	5.8%	31.3%	8.5%	1.1%	19.7%	9.1%	0.7%	100.0%
Small Village	Berowra	4.7%	4.8%	0.4%	8.8%	9.0%	0.1%	0.5%	4.0%	30.4%	6.0%	0.5%	25.2%	4.5%	1.2%	100.0%
Small Village	Berowra Hts	2.8%	2.9%	2.6%	2.7%	11.9%	0.0%	0.4%	3.4%	31.4%	9.7%	0.8%	27.4%	3.4%	0.6%	100.0%
Neighbourhood Centre	Berowra Waters	5.0%	3.3%	0.4%	1.8%	9.4%	0.0%	0.3%	0.6%	34.2%	7.7%	0.5%	29.2%	7.0%	0.5%	100.0%
Neighbourhood Centre	Brooklyn	6.0%	4.1%	0.8%	2.2%	7.0%	0.0%	0.2%	2.4%	36.9%	5.1%	0.4%	29.5%	4.7%	0.6%	100.0%
Stand Alone Shopping Centre	Carlingford Court	0.3%	3.4%	0.6%	2.7%	17.0%	0.0%	0.6%	2.0%	32.2%	14.2%	0.7%	21.3%	4.1%	0.9%	100.0%
Village	Cherrybrook	1.7%	3.1%	1.2%	2.5%	13.7%	0.0%	0.5%	1.6%	37.4%	11.4%	0.8%	23.1%	2.3%	0.8%	100.0%
-	Cowan	3.1%	1.9%	0.0%	3.9%	15.3%	0.0%	0.5%	0.6%	35.3%	12.3%	0.3%	25.5%	0.1%	1.2%	100.0%
-	Dangar Is	-	#DIV/0!													
Neighbourhood Centre	David Rdr-Castle Hill	2.5%	2.0%	1.8%	1.0%	9.4%	0.0%	0.3%	2.0%	31.4%	8.2%	1.3%	22.7%	16.8%	0.5%	100.0%
Neighbourhood Centre	Edgeworth David Ave-Waitara	0.0%	1.7%	0.5%	1.9%	19.2%	0.0%	0.7%	0.7%	36.5%	16.3%	0.5%	21.0%	0.0%	1.0%	100.0%
Town Centre	Epping	0.1%	14.5%	1.1%	25.6%	7.5%	0.1%	0.4%	16.3%	15.9%	2.4%	1.0%	11.9%	2.4%	0.7%	100.0%
Neighbourhood Centre	Galston	0.5%	3.8%	1.9%	3.2%	13.0%	0.0%	0.4%	3.0%	35.2%	10.6%	1.0%	20.1%	6.5%	0.8%	100.0%
Neighbourhood Centre	Galston Rd-Hornsby Hts	0.9%	1.9%	0.7%	1.8%	17.5%	0.0%	0.6%	0.7%	37.7%	14.7%	0.4%	22.2%	0.0%	1.0%	100.0%
Major Centre	Hornsby	2.1%	6.5%	2.0%	4.5%	9.3%	0.3%	0.6%	6.6%	33.6%	6.4%	0.6%	21.2%	4.7%	1.5%	100.0%
-	Hospital Precinct	0.0%	1.7%	4.9%	0.0%	0.1%	0.0%	0.0%	5.3%	12.7%	1.3%	3.5%	14.2%	56.6%	-0.5%	100.0%
Neighbourhood Centre-	Kookaburra Road	0.0%	4.4%	0.0%	50.1%	9.0%	6.4%	7.8%	2.5%	8.0%	5.2%	0.1%	5.8%	0.0%	0.8%	100.0%
-	Kuringai	4.7%	2.5%	0.7%	2.6%	10.6%	0.0%	0.3%	0.9%	39.1%	8.3%	0.2%	28.3%	0.0%	1.7%	100.0%
Neighbourhood Centre	Malton Rd-North Epping	1.8%	2.1%	1.2%	1.6%	14.8%	0.0%	0.5%	0.9%	40.2%	12.4%	0.4%	23.3%	0.1%	0.8%	100.0%
Neighbourhood Centre	Mt Colah Shops	0.0%	1.9%	1.2%	1.8%	17.2%	0.0%	0.6%	1.0%	37.7%	14.6%	0.5%	20.4%	2.1%	1.0%	100.0%
Neighbourhood Centre	Mt Colah Stn	1.3%	4.3%	0.6%	2.4%	14.8%	0.0%	0.5%	4.2%	31.7%	11.7%	0.7%	21.5%	5.4%	0.9%	100.0%
Neighbourhood Centre	Myrtle St-Normanhurst	0.0%	2.9%	1.6%	6.5%	17.0%	0.8%	1.5%	1.2%	34.8%	11.9%	0.4%	17.3%	0.1%	4.1%	100.0%
Neighbourhood Centre	Normanhurst	4.0%	4.8%	1.4%	2.4%	8.9%	0.0%	0.2%	4.3%	37.8%	6.5%	0.4%	25.5%	2.9%	1.0%	100.0%
Village	Pennant Hills	2.4%	10.5%	0.8%	5.3%	9.7%	0.2%	0.4%	10.8%	26.4%	5.7%	1.0%	22.2%	3.6%	1.0%	100.0%
Neighbourhood Centre	Pennant Hills Rd-Thornleigh	5.9%	3.0%	0.0%	20.0%	8.9%	0.0%	0.1%	1.7%	27.2%	3.4%	0.1%	25.7%	0.5%	3.5%	100.0%
Neighbourhood Centre	Plymton Rd Shops-Epping	0.0%	1.7%	0.4%	1.9%	19.5%	0.0%	0.7%	0.7%	36.0%	16.5%	0.5%	21.0%	0.0%	1.0%	100.0%
Neighbourhood Centre	Sefton Rd-Thornleigh	1.1%	9.4%	1.3%	16.4%	8.5%	0.0%	0.3%	10.9%	21.8%	4.8%	0.8%	15.4%	9.0%	0.4%	100.0%
Neighbourhood Centre	Somerville Rd-Hornsby Hts	#DIV/0!														
Village	Thornleigh	0.7%	10.2%	1.0%	7.1%	12.7%	0.5%	0.9%	12.0%	25.0%	8.0%	0.6%	18.2%	2.0%	1.2%	100.0%
Village	Waitara	2.2%	4.5%	0.3%	2.5%	13.7%	0.1%	0.5%	2.9%	31.5%	11.0%	0.6%	24.0%	5.4%	0.7%	100.0%
Small Village	West Pennant Hills	1.3%	6.7%	1.3%	3.2%	13.1%	0.0%	0.4%	7.5%	30.8%	9.5%	0.6%	21.0%	3.7%	0.8%	100.0%
Small Village	Westleigh	0.7%	4.6%	3.4%	4.3%	11.2%	0.0%	0.3%	6.2%	31.8%	8.4%	0.7%	20.8%	6.7%	0.9%	100.0%
Neighbourhood Centre	Wiseman's Ferry	8.6%	4.1%	0.0%	1.3%	5.7%	0.0%	0.1%	2.5%	39.2%	3.7%	0.1%	34.2%	0.1%	0.3%	100.0%
0	Yallambee Road	0.0%	1.6%	0.0%	1.9%	20.5%	0.0%	0.7%	0.6%	34.5%	17.4%	0.5%	21.3%	0.0%	1.1%	100.0%
	TOTAL	1.2%	6.7%	1.3%	14.1%	9.9%	3.5%	4.2%	6.4%	23.0%	5.9%	0.6%	16.1%	5.3%	1.8%	100.0%



Table 28. Ku-ring-gai Existing Floorspace (BLC) Shares Within Centres

	KRG	AST	BP		D	FL	LL	MH	ML	0	RB	RBG	RES	RM	S	US	TOTAL
Neighbourhood Centre	East Killara	1.3%	1.9%	0.0%	0.5%	1.7%	17.2%	0.0%	0.6%	0.7%	37.2%	14.5%	0.4%	23.1%	0.0%	0.9%	100.0%
Neighbourhood Centre	East Lindfield	0.0%	1.6%	0.0%	0.6%	1.6%	17.7%	0.0%	0.6%	1.2%	31.5%	15.2%	0.9%	20.2%	7.9%	0.9%	100.0%
Neighbourhood Centre	Eastern Rd-Turramurra	0.0%	1.7%	0.0%	0.5%	1.9%	19.4%	0.0%	0.7%	0.7%	36.3%	16.4%	0.5%	21.0%	0.0%	1.0%	100.0%
Neighbourhood Centre	Fox Valley	2.3%	1.9%	0.0%	2.5%	0.6%	5.7%	0.0%	0.2%	3.0%	24.3%	5.3%	2.1%	20.6%	31.1%	0.3%	100.0%
Town Centre	Gordon	1.1%	13.3%	0.0%	0.9%	5.2%	10.0%	0.3%	0.5%	16.2%	22.3%	5.0%	0.8%	17.7%	5.0%	1.7%	100.0%
Neighbourhood Centre	Hampden Ave Shops-Nth Wahroonga	1.1%	3.5%	0.0%	1.0%	2.2%	14.8%	1.9%	2.6%	2.8%	34.2%	11.7%	0.5%	20.6%	2.2%	0.9%	100.0%
Neighbourhood Centre	Killara	3.1%	8.5%	0.0%	0.1%	9.3%	8.9%	0.0%	0.1%	8.9%	26.4%	4.2%	0.2%	23.9%	0.2%	6.2%	100.0%
Village	Lindfield	0.5%	8.7%	0.0%	1.1%	6.8%	10.3%	0.1%	0.4%	10.0%	21.8%	6.5%	1.1%	17.8%	10.7%	4.1%	100.0%
Neighbourhood Centre	North Turramurra	2.0%	8.5%	0.0%	1.5%	2.9%	8.2%	0.0%	0.2%	10.4%	24.8%	5.1%	1.2%	19.6%	15.4%	0.4%	100.0%
Neighbourhood Centre	Princes St-Turramurra	0.0%	1.6%	0.0%	0.7%	1.6%	17.2%	0.0%	0.6%	1.3%	31.1%	14.8%	1.0%	20.1%	9.2%	0.9%	100.0%
Small Village	Pymble	1.2%	11.1%	0.0%	1.5%	7.9%	9.8%	0.7%	0.9%	12.8%	20.8%	4.9%	1.0%	18.2%	7.9%	1.4%	100.0%
	Pymble Office Park	0.0%	13.2%	0.0%	0.7%	16.4%	9.4%	7.0%	7.9%	14.7%	10.9%	2.2%	0.4%	10.2%	2.7%	4.2%	100.0%
Small Village	Roseville	1.9%	6.7%	0.0%	2.8%	4.5%	8.3%	0.2%	0.4%	8.2%	24.8%	5.4%	0.9%	22.1%	12.6%	1.1%	100.0%
Neighbourhood Centre	Roseville Chase	1.3%	3.1%	0.0%	0.7%	2.0%	15.7%	0.0%	0.5%	2.5%	35.2%	12.9%	0.5%	22.3%	2.5%	0.8%	100.0%
Neighbourhood Centre	South Turramurra	0.0%	1.6%	0.0%	0.0%	1.9%	20.5%	0.0%	0.7%	0.6%	34.5%	17.4%	0.5%	21.3%	0.0%	1.1%	100.0%
Village	St Ives	0.1%	4.4%	0.0%	0.9%	4.1%	15.3%	0.0%	0.5%	3.7%	29.2%	12.2%	1.1%	19.7%	7.8%	0.9%	100.0%
Neighbourhood Centre	St Ives Chase	0.0%	1.7%	0.0%	0.7%	1.7%	18.3%	0.0%	0.6%	1.0%	34.3%	15.6%	0.7%	20.5%	4.0%	1.0%	100.0%
Neighbourhood Centre	St Ives North	3.5%	2.1%	0.0%	0.8%	1.3%	12.3%	0.0%	0.4%	1.0%	36.6%	10.2%	0.6%	25.8%	4.7%	0.7%	100.0%
Village	Turramurra	0.7%	6.8%	0.0%	1.6%	7.9%	11.0%	0.0%	0.4%	6.9%	25.7%	7.7%	1.0%	18.8%	9.6%	2.1%	100.0%
Small Village	Wahroonga	0.6%	6.5%	0.0%	0.8%	7.1%	13.1%	0.0%	0.4%	6.4%	26.3%	9.1%	1.0%	19.4%	6.4%	2.7%	100.0%
Neighbourhood Centre	West Gordon	5.6%	2.6%	0.0%	1.0%	7.5%	5.7%	0.0%	0.3%	1.9%	30.8%	4.4%	0.9%	26.7%	12.4%	0.3%	100.0%
Neighbourhood Centre	West Lindfield	2.4%	6.6%	0.0%	0.7%	7.2%	9.8%	0.0%	0.3%	6.8%	26.3%	6.7%	0.8%	21.6%	9.2%	1.7%	100.0%
Neighbourhood Centre	West Pymble	1.6%	1.8%	0.0%	0.6%	1.5%	15.5%	0.0%	0.5%	1.1%	33.0%	13.1%	0.8%	22.8%	6.9%	0.8%	100.0%
	TOTAL	0.7%	10.1%	0.0%	1.0%	8.3%	10.7%	1.9%	2.4%	11.5%	21.1%	5.9%	0.8%	16.7%	6.5%	2.4%	100.0%



There are a number of issues emerging with the analysis of shares of floorspace between and within centres in the Subregion. These can be summarised as follows:

- Some higher order retail exists at lower levels in the hierarchy. In general terms there are higher levels of retail activity (RB, RM and RBG) in the smaller centres. Typically, we would expect to see more RB and RBG land uses in the larger centres as these draw trade from larger catchment areas. However, some of the smaller centres in Ku-ring-gai have higher proportions in these categories.
- Broadly higher levels of office BLC floorspace at higher levels in the hierarchy. As we
 would expect, the larger centres in the sub-region have a greater proportion of their total
 floorspace taken up by office functions.
- Consistent levels of residential BLC floorspace throughout the hierarchy. There is a
 consistent and small proportion of total audited floorspace in the centres taken up by
 residential use.
- **High office shares at the Town Centre level**. Both Epping and Gordon have high levels of office floorspace. While we would expect some office floorspace at this level in the hierarchy the Town Centres would not typically be expected to have a more pronounced office profile than the Major Centre. In Gordon, office BLC floorspace makes up 16.2% of total employment floorspace. This reflects the important employment role that Gordon plays in the LGA. Epping also has a high share of office BLC floorspace at 16.3%.
- Low office shares in Hornsby Major Centre. The low share of office floorspace within Hornsby centre is a contrast to the levels of office floorspace in Epping. Within Hornsby, just 6.6% of total employment floorspace is in the office BLC category.
- **High level of industrial BLC floorspace in Epping**. Industrial land use is high in Epping. This is driven by a high proportion of freight and logistics business at the centre.

Adjusting BLC Floorspace Shares

Not all of the patterns emerging from the audit data in terms of the BLC shares by centre are consistent with the centres hierarchy or indeed the competitive position of the centres to seize the economic opportunities discussed in this Study. For these reasons, we have examined the implications of adjusting the land use split in centres.

The first step in adjusting the BLC floorspace shares by centre in the sub-region is to re-examine the centres hierarchy. The Metropolitan Strategy's broad description of the characteristics of centres is summarised below:

- Major Centre. Major shopping and business centre serving immediate Subregional residential
 population usually with a full scale shopping mall, council offices, taller office and residential
 buildings, central community facilities and a minimum of 8,000 jobs.
- **Town Centre**. Town Centres have one or two supermarkets, community facilities, medical centres, schools, etc. They contain between 4,500 and 9,500 dwellings and are usually a residential origin rather than an employment destination.

- **Stand Alone Shopping Centre**. Internalised, privately owned centres, located away from other commercial areas, containing many of the attributes of Town Centres but without housing and public open space they may have the potential to become a traditional Town Centre in the long term.
- **Village**. A strip of shops and surrounding residential area within a 5-10 minute walk contains a small supermarket, hairdresser, and take-away food shops. They contain between 2,100-5,500 dwellings.
- **Small Village**. A small strip of shops and adjacent residential area within a 5-10 minute walk. Contain between 800 and 2,700 dwellings.
- **Neighbourhood Centre**. One or a small cluster of shops and services. They contain between 150 and 900 dwellings.

The sub-region's centres generally fit within this framework. There are however, a number of emerging issues. These are summarised as follows:

- **Ku-ring-gai 'Village' centres perform some higher order functions**. Lindfield, Turramurra and St Ives, each with Village status, host a significant share of the total LGA's office floorspace 8.4%, 4.1% and 3.7% respectively. Although the absolute totals in these centres are still small, within the context of the LGA, these centres are clearly housing some higher order functions that would not be expected given their status in the centres hierarchy.
 - St Ives hosts very high shares of the LGA's RB and RBG functions both of which would be expected to draw trade from wide catchments and generate significant trips. However, St Ives does not occupy the best strategic position with respect to public transport infrastructure. Despite the existence of planned strategic bus corridors for the centre, we would suggest that Gordon is a better prospect to accommodate shares of forecast growth in these categories.
- **Epping and Hornsby profiles**. Although the total volume of office and retail activity are acceptable in the sense of Epping and Hornsby's respective places in the centres hierarchy, the share of land uses *within* each centre does not reflect their relative positions. Epping has a very high proportion of its total floorspace taken up by office functions and a relatively low level of retail floorspace. The situation in Hornsby is reversed, with the Major Centre having a relatively small office profile. While the picture for Epping may be partially explained away by the fact that some of centre lies within Parramatta LGA and was not audited, for Hornsby, the low office proportion gives some cause for concern given the Major Centre status. There is scope for some policy intervention to redress the balance of land use in Hornsby centre.
- **Pymble office park**. Pymble office park sits between Gordon and Pymble on the North Shore train line and Pacific Highway and does not have its own classification in the Subregional Strategy. However, Pymble office park hosts a significant proportion of the total office space in the LGA (15%) in addition to substantial business park and light industrial land uses. This amount of office space outside a large centre is unusual.
- **Dural Service Centre**. Dural service centre is operates as a predominantly as a centre for local services but also houses significant Bulky Goods Retail, some freight and logistics and some light industry. Its distance from arterial infrastructure and transport nodes presents a problem for hosting functions that generate high numbers of trips drawn from a wide



catchment yet its industrial zoning at the moment presents problems for the functioning of the centre

After confirming the hierarchy, we will now examine the share of BLC floorspace in more detail. Table 29 summarises the broad spatial requirements of the BLCs.

Table 29. BLCs and Suitable Spatial Attributes

	Description	Location Requirements
AST	Hotels and Motels (not including pubs), backpacker establishments.	Good accessibility and visibility. Businesses in this category tend to be in high population density areas, on close to arterial infrastructure.
BP	Integrated warehouse, storage, R&D, 'back-room' management and administration with up to 40% office component	Traditional business park environments offer large land parcels and attractive site aspects. Business park locations are heavily driven by strategic positioning with respect to arterial infrastructure. For business park land uses with higher industrial components proximity to population centres is not desirable.
CAR	Stand-alone car parking stations	Busy commercial centre locations
D	Primary and secondary education, lower level health, social and community services, trades construction, other 'nomads'	Institutions are dispersed but need to be accessible and well served by public transport.
FL	Warehousing and distribution activities. Includes buildings with a number of docking facilities; 'hard stand' areas with trucks or goods awaiting distribution; and large storage facilities	Warehousing and distribution is a metro level issue with activities preferably locating close to air, sea and inter-modal inland ports, or with access to the motorway system
LL	Car service and repair; joinery, construction and building supplies; and domestic storage	Wide range of businesses that service other business (components, maintenance and support) and Subregional populations. Need to be accessible for population centres
МН	Large scale production activity. Likely to be characterised by high noise emission; emission stacks; use of heavy machinery; and frequency of large trucks	Industrial areas. Heavy manufacturing is in decline in Sydney, but will continue to cluster in some locations such as Wetherill Park, Campbelltown/ Ingleburn etc. There are strong arguments for collocation in terms of raw material delivery and to concentrate externalities (though impacts on surrounding uses are generally moderate).
ML	Small scale production with lower noise and emission levels than heavy manufacturing	Industrial areas but with a lower requirement for distance from population than heavy manufacturing/
0	Office buildings	Typically require commercial centre locations. Need to have good accessibility for office workers
RB	Large shopping complexes	Commercial centre locations. Require high visibility high traffic locations. Should be easily accessible with good public transport links
RBG	Typically large, one-story buildings surrounded by carparking,	Usually located out of centre and in high exposure (main road) locations.
RES	Residential development	
RM	Main Street Retailing services.	Traditionally found in main street locations (e.g., supermarkets) and small cluster or strips of stores located next to a street or road
S	Tertiary level education, health, and community services	Typically require strategic locations and needed in each sub-region.
US	Concrete batching, waste recycling and transfer, construction and local and state government depots, sewerage, water supply, electricity construction yards	These typically have noise dust and traffic implications and need to be isolated or buffered from other land uses. Needed in each subregion

Table 30 simplifies this further by describing levels in the centre hierarchy where particular BLCs would be encouraged or discouraged. For example, big box retail BLC (e.g. shopping centres) would be strongly encouraged in Major Centres and discouraged at Village level and lower in the hierarchy.

Table 30. Centre Hierarchy and Suitability for Employment BLCs

		Major	Town	Village	S Village	Neighbourhood	Industrial	Specialised	Health/ Uni
	Big Box								
	Main Street								
Retail	Bulky Goods								
	Office								
Comm	Business Park								
	Local Light Ind								
	Manuf Heavy								
	Manuf Light								
Industrial	Freight Logistics								
	Dispersed								
	Special Uses								
	Urban Services								
Other	Short term accom								

No	
indifferent	
Yes	
Strong Yes	

The shares of BLC floorspace with centres have been re-examined using this broad framework in addition to:

- the existing economic profile and forecast employment growth
- existing and planned population concentrations
- proximity to magnet institutions
- access to infrastructure and services

The BLC split within each centre type before and after adjustments have been made are shown in Table 31 and Table 32. Once the adjustment has been made, the floorspace by BLC at a centre level is shown in Table 33 and Table 34

Table 31. [Before Adjustment] BLC Split within Centre Types

Hornsby	AST	BP	D	FL	LL	MH	ML	0	RB	RBG	RES	RM	S	US	TOTAL
Major Centre	2%	6%	2%	5%	9%	0%	1%	7%	34%	6%	1%	21%	5%	1%	100.0%
Town Centre	0%	14%	1%	26%	8%	0%	0%	16%	16%	2%	1%	12%	2%	1%	100.0%
Village	2%	6%	1%	11%	11%	1%	2%	6%	27%	7%	1%	20%	3%	2%	100.0%
Small Village	2%	5%	2%	5%	11%	0%	0%	6%	31%	8%	1%	22%	5%	1%	100.0%
Neighbourhood	2%	3%	1%	8%	13%	0%	1%	2%	33%	10%	1%	22%	3%	1%	100.0%
Industrial Precincts	0%	6%	0%	29%	11%	9%	11%	5%	10%	5%	0%	8%	2%	3%	100.0%
Health & Education Precincts	0%	2%	5%	0%	0%	0%	0%	5%	13%	1%	4%	14%	57%	0%	100.0%

KRG	AST	BP	D	FL	LL	MH	ML	0	RB	RBG	RES	RM	S	US	TOTAL
Major Centre															
Town Centre	1%	13%	1%	5%	10%	0%	0%	16%	22%	5%	1%	18%	5%	2%	100.0%
Village	0%	6%	1%	6%	13%	0%	0%	5%	27%	10%	1%	19%	9%	2%	100.0%
Small Village	2%	6%	1%	4%	11%	0%	0%	7%	26%	8%	1%	21%	11%	2%	100.0%
Neighbourhood	1%	3%	1%	2%	15%	0%	1%	2%	33%	13%	1%	22%	6%	1%	100.0%
Industrial Precincts															
Health & Education Precincts															

Table 32. [After Adjustment] BLC Split within Centre Types

Hornsby	AST	BP	D	FL	LL	МН	ML	0	RB	RBG	RES	RM	S	US	TOTAL
Major Centre	2%	7%	2%	3%	8%	0%	1%	9%	34%	6%	1%	21%	5%	1%	100.0%
Town Centre	0%	13%	1%	19%	7%	0%	0%	12%	24%	2%	1%	13%	2%	1%	100.0%
Village	2%	6%	1%	11%	15%	1%	2%	5%	25%	7%	1%	21%	3%	2%	100.0%
Small Village	2%	5%	2%	4%	12%	0%	0%	5%	31%	6%	1%	24%	5%	1%	100.0%
Neighbourhood	2%	3%	1%	8%	13%	0%	1%	2%	32%	10%	1%	22%	3%	1%	100.0%
Industrial Precincts	0%	6%	0%	31%	11%	10%	11%	3%	10%	5%	0%	8%	2%	3%	100.0%
Health & Education Precincts	0%	2%	6%	0%	0%	0%	0%	5%	13%	1%	4%	14%	63%	0%	100.0%

KRG	AST	BP	D	FL	LL	MH	ML	0	RB	RBG	RES	RM	S	US	TOTAL
Major Centre															
Town Centre	1%	13%	1%	5%	10%	0%	0%	16%	24%	7%	1%	17%	5%	2%	100.0%
Village	0%	6%	1%	6%	14%	0%	0%	6%	26%	9%	1%	20%	9%	2%	100.0%
Small Village	2%	6%	1%	4%	11%	0%	0%	6%	26%	5%	1%	21%	12%	2%	100.0%
Neighbourhood	1%	3%	1%	2%	15%	0%	1%	2%	33%	13%	1%	22%	6%	1%	100.0%
Industrial Precincts															
Health & Education Precincts															

Increased share	
Decreased share	

Table 33. Hornsby Adjusted Shares by Centre

Employment Land (i)
Employment Land (ii)
Employment Land (i)
Employment Land (i)
Neighbourhood Centre
Village
Village
Small Village
Small Village
Neighbourhood Centre
Neighbourhood Centre
Stand Alone Shopping Centre
Village

-

Neighbourhood Centre Neighbourhood Centre Town Centre Neighbourhood Centre Neighbourhood Centre Major Centre

Neighbourhood Centre-

Neighbourhood Centre Neighbourhood Centre Neighbourhood Centre Neighbourhood Centre Neighbourhood Centre Village Neighbourhood Centre Neighbourhood Centre Neighbourhood Centre Neighbourhood Centre Village Village Small Village Small Village Neighbourhood Centre

HORNSBY	2006		Adj	usted Targe	et	Su	pply	G	ΔP
	Floorspace	% Share	Adjusted Target	% Share	Addl F.Space	80%FSR	Max FSR	80	Max
(E) Asquith	206,161	14.5%	223,322	13.3%	17,161	179,059	267,605	161,899	250,445
(E) Dural Service Centre	71,934	5.1%	76,266	4.5%	4,332	145,414	196,809	141,082	192,477
(E) Mt Ku-ring-gai	115,705	8.1%	125,475	7.5%	9,769	354,438	467,910	344,668	458,140
(E) Thornleigh	140,360	9.9%	132,879	7.9%	- 7,482	51,637	94,372	59,118	101,854
Appletree Dr-Cherrybrook	1,589	0.1%	1,761	0.1%	173	- 11	324	- 184	151
Asquith	7,402	0.5%	11,921	0.7%	4,519	13,610	19,305	9,092	14,786
Beecroft	11,528	0.8%	15,595	0.9%	4,067	10,301	15,813	6,234	11,746
Berowra	6,151	0.4%	6,693	0.4%	541	13,166	17,840	12,624	17,299
Berowra Hts	11,497	0.8%	11,635	0.7%	138	13,242	18,990	13,104	18,852
Berowra Waters	1,359	0.1%	1,523	0.1%	164	6,583	8,583	6,418	8,418
Brooklyn	4,368	0.3%	4,782	0.3%	414	4,052	6,396	3,638	5,982
Carlingford Court	45,499	3.2%	49,368	2.9%	3,869	- 3,024	5,370	- 6,892	1,502
Cherrybrook	12,393	0.9%	12,830	0.8%	436	17,690	24,597	17,254	24,160
Cowan	263	0.0%	282	0.0%	19	198	360	180	341
Dangar Is	-	0.0%	-	0.0%	-	- 108	14	- 108	14
David Rdr-Castle Hill	3,013	0.2%	3,292	0.2%	279	- 116	496	- 395	217
Edgeworth David Ave-Waitara	2,489	0.2%	2,678	0.2%	189	- 12	513	- 202	324
Epping	62,550	4.4%	70,639	4.2%	8,089	5,167	21,831	- 2,922	13,742
Galston	4,189	0.3%	4,219	0.3%	30	- 3,792	- 1,759	- 3,822	- 1,790
Galston Rd-Hornsby Hts	1,161	0.1%	1,245	0.1%	84	- 59	173	- 143	89
Hornsby	419,696	29.5%	615,681	36.7%	195,984	218,658	394,835	22,673	198,851
Hospital Precinct	59,788	4.2%	61,112	3.6%	1,324	23,936	42,844	22,612	41,520
(E) Kookaburra Road	6,336	0.4%	6,568	0.4%	232	4,711	7,235	4,479	7,003
Kuringai	1,114	0.1%	1,156	0.1%	43	486	844	443	801
Malton Rd-North Epping	1,808	0.1%	1,891	0.1%	83	208	644	125	561
Mt Colah Shops	2,978	0.2%	3,094	0.2%	116	5,859	8,153	5,743	8,038
Mt Colah Stn	1,502	0.1%	1,671	0.1%	169	438	1,032	269	864
Myrtle St-Normanhurst	660	0.0%	690	0.0%	30	- 180	- 85	- 210	- 115
Normanhurst	1,770	0.1%	1,864	0.1%	94	- 454	- 83	- 548	- 177
Pennant Hills	84,349	5.9%	87,154	5.2%	2,805	1,158	19,371	- 1,648	16,565
Pennant Hills Rd-Thornleigh	12,941	0.9%	9,151	0.5%	- 3,790	- 22	3,013	3,768	6,804
Plymton Rd Shops-Epping	1,522	0.1%	1,652	0.1%	130	- 25	292	- 155	162
Sefton Rd-Thornleigh	1,292	0.1%	1,456	0.1%	164	8,353	10,823	8,189	10,659
Somerville Rd-Hornsby Hts	-	0.0%	-	0.0%	ı	- 118	269	- 118	269
Thornleigh	63,204	4.4%	67,906	4.0%	4,702	- 5,361	6,522	- 10,063	1,820
Waitara	33,929	2.4%	40,300	2.4%	6,370	- 4,678	2,136	- 11,048	- 4,234
West Pennant Hills	7,385	0.5%	7,099	0.4%	- 287	7,732	11,234	8,019	11,521
Westleigh	8,399	0.6%	7,869	0.5%	- 530	6,365	9,741	6,895	10,271
Wiseman's Ferry	3,051	0.2%	3,683	0.2%	632	282	1,043	- 350	412
Yallambee Road	559	0.0%	624	0.0%	65	- 102	209	- 167	144
TOTAL	1,421,897	100.0%	1,677,024	100.0%	255,127	1,074,681	1,685,614	819,554	1,430,487
Mt Ku-rin-gai constrained land				_				129,096	188,675
TOTAL minus constrained land								603,982	1,161,022

Supply capacity is less than forecast 2006-2031 demand Supply capacity is more than ten times forecast 2006-2031 demand

Table 34. Ku-ring-gai Adjusted Shares by Centre

Neighbourhood Centre Neighbourhood Centre Neighbourhood Centre Neighbourhood Centre Town Centre Neighbourhood Centre Neighbourhood Centre Village Neighbourhood Centre Neighbourhood Centre Small Village

Small Village
Neighbourhood Centre
Neighbourhood Centre
Village
Neighbourhood Centre
Neighbourhood Centre
Village
Small Village
Neighbourhood Centre
Neighbourhood Centre
Neighbourhood Centre

	1/00							21.52		1/200				700
	KRG	200			Adjusted Tar	_	Supply		Supply		Gap D		Gap K	
		Floorspace	% Share	Share	Floorspace	Addl FSpace	80%	Max	80%	Max	80% Max	Max	80%	Max
е	East Killara	1,137	0.3%	0.3%	1,250	113	720	1,141	720	1141	607	1028	607	1028
е	East Lindfield	1,309	0.3%	0.3%	1,478	168	- 295	- 91	-295	-91	-464	-259	-464	-259
е	Eastern Rd-Turramurra	1,290	0.3%	0.3%	1,404	114	704	1,154	704	1154	590	1041	590	1041
е	Fox Valley	2,863	0.8%	0.7%	3,140	277	- 121	456	-121	456	-399	179	-399	179
	Gordon	99,034	26.1%	28.4%	127,659	28,625	97,387	141,590	93726	137929	68762	112964	65101	109303
е	Hampden Ave Shops	868	0.2%	0.2%	944	76	1,901	2,561	1761	2421	1826	2486	1686	2345
е	Killara	378	0.1%	0.1%	482	104	509	717	509	717	405	613	405	613
	Lindfield	37,631	9.9%	9.7%	43,381	5,751	30,622	46,274	29941	45593	24871	40523	24191	39843
е	North Turramurra	4,989	1.3%	1.3%	5,966	977	1,648	3,121	1648	3121	671	2144	671	2144
е	Princes St-Turramurra	1,328	0.4%	0.3%	1,496	167	591	1,021	473	903	424	854	306	736
	Pymble	18,775	5.0%	4.7%	21,236	2,462	12,525	19,646	12302	19423	10063	17184	9840	16961
	Pymble Office Park	88,999	23.5%	25.5%	114,580	25,581	6,349	26,848	11255	31754	-19232	1267	-14326	6173
	Roseville	17,528	4.6%	3.9%	17,363	- 165	15,802	23,258	15029	22486	15967	23424	15195	22651
е	Roseville Chase	2,383	0.6%	0.6%	2,639	255	249	817	249	817	-7	562	-7	562
е	South Turramurra	1,210	0.3%	0.3%	1,385	176	2,011	2,771	2011	2771	1836	2596	1836	2596
	St Ives	47,122	12.4%	10.6%	47,573	451	38,602	57,854	43048	62299	38151	57403	42597	61848
е	St Ives Chase	927	0.2%	0.2%	1,016	89	172	411	172	411	82	322	82	322
е	St Ives North	2,092	0.6%	0.5%	2,326	234	2,086	3,052	2086	3052	1852	2818	1852	2818
	Turramurra	28,712	7.6%	7.0%	31,458	2,746	54,118	73,746	49490	69119	51372	71001	46745	66373
	Wahroonga	11,511	3.0%	2.8%	12,579	1,068	5,782	9,674	5307	9198	4714	8605	4238	8130
е	West Gordon	961	0.3%	0.2%	1,110	148	- 83	100	-83	100	-232	-48	-232	-48
е	West Lindfield	4,485	1.2%	1.2%	5,174	689	374	1,420	-480	567	-316	731	-1169	-122
е	West Pymble	3,622	1.0%	0.8%	3,727	104	3,953	3,048	3953	3048	3849	2944	3849	2944
	TOTAL	379,153	100.0%	100.0%	449,364	70,211	275,606	420,592	275977	421606	205,395	350,381	205,766	351,395

Si Si

Supply capacity is less than forecast 2006-2031 Supply capacity is more than ten times forecast

After share adjustment, the centres in Hornsby with a significant supply shortfall are: Carlingford Court, Epping, Galston, Pennant Hills, Thornleigh, and Waitara. However, the shortfall in Carlingford Court and Galston is driven by a recorded current supply demand gap rather than strong demand after the share adjustment.

The centres with more than ten times the supply potential to accommodate forecast demand are the industrial areas of: Asquith, Kookaburra Road, Dural Service Centre, Mt Ku-ring-gai, Thornleigh (employment land) and the commercial centres of: Asquith, Beecroft, Berowra, Berowra Heights, Berowra Waters, Cherrybrook, Cowan, Hospital Precinct, Mt Ku-ring-gai centre, Mt Colah Shops, Pennant Hills Road (Thornleigh), Sefton Road (Thornleigh), West Pennant Hills and Westleigh.

After share adjustment, the Ku-ring-gai centres where the existing supply potential is not sufficient to meet the forecast demand are: East Lindfield, Fox Valley, Pymble Office Park, Roseville chase, West Gordon, West Lindfield. However, in most cases the shortfall is small. The only centre with significant supply shortfall to meet the forecast demand is Pymble Office Park.

The centres with more than ten times the supply potential to meet the demand forecast are: Hampden Avenue Shops, Roseville North Wahroonga, Killara, Roseville, South Turramurra, St Ives and Turramurra.

Consideration of Housing Strategies

The additional dwellings proposed in the housing strategies are illustrated in Table 35.

Table 35. Dwelling Additions Implied by the Housing Strategies

Hornsby Centres	Dwelling Additions	Ku-ring-gai Centres	Dwelling Additions
Total	3,625	Total	9,105
TDC	9,161	TDC	8,573
Dwellings Difference	-5,546	Dwellings Difference	532
Persons	-11,036	Persons	1,058

Projected dwelling increases implied by the TDC forecasts have been compared to these additional dwelling numbers to calculate the additional population that is not already accounted for in the 2004 TDC figures.

The notional retail expenditure of this population has been calculated using figures from the ABS Household expenditure survey (inflating to current dollars using CPI and deriving a per capita number). The resultant retail expenditure at each level in the retail hierarchy is shown in Table 37 and Table 36.

Table 36. Hornsby Retail Demand Implied by Housing Strategy Dwelling Additions

Additional Persons in Catchment:
-11,036
Annual P.Capita Expenditure on Shopfront Retailing (NSW Ave.)

\$12,185
Total Annual Catchment Expenditure on Shopfront Retailing
-\$134,473,660

	Percent Share of Total Expenditure*	Expenditure Capture	Retail Turnover Density (\$/sqm)	Supportable Floorspace (sqm)	Existing Floorspace (sqm)	Floorspace Differential (sqm)
Outside Region e.g. Sydney	9.5%	-\$12,774,998	NA	NA	0	NA
Major	36.5%	-\$49,082,886	\$6,000	-8,180	0	-8,180
Town	25.0%	-\$33,618,415	\$5,850	-5,747	0	-5,747
Village	16.0%	-\$21,515,786	\$5,250	-4,098	0	-4,098
Small Village	10.0%	-\$13,447,366	\$4,600	-2,923	0	-2,923
Neighbourhood	3.0%	-\$4,034,210	\$3,850	-1,048	0	-1,048

100.0%

Floorspace Required for new population -21,997

Assumed 10% Capture of 'Major Centre' Spend by Hornsby 78

Total Floorspace Required -21,918

Table 37. Ku-ring-gai Retail Demand Implied by Housing Strategy Dwelling Additions

Additional Persons in Catchment: 1,058
Annual P,Capita Expenditure on Shopfront Retailing (NSW Ave.) \$12,185
Total Annual Catchment Expenditure on Shopfront Retailing \$12,891,730

	Percent Share of Total Expenditure*	Expenditure Capture	Retail Turnover Density (\$/sqm)	Supportable Floorspace (sqm)	Existing Floorspace (sqm)	Floorspace Differential (sqm)
Outside Region e.g. Sydney	9.5%	\$1,224,714	NA	NA	0	NA
Major	36.5%	\$4,705,481	\$6,000	784	0	784
Town	25.0%	\$3,222,933	\$5,850	551	0	551
Village	16.0%	\$2,062,677	\$5,250	393	0	393
Small Village	10.0%	\$1,289,173	\$4,600	280	0	280
Neighbourhood	3.0%	\$386,752	\$3,850	100	0	100

100 0%

Floorspace Required for new population 1,325

Assumed 60% Capture of 'Major Centre' Spend by Gordon 471

Total Floorspace Required 1,795

In this modelling we have assumed that 100% of the town, Village, Small Village and neighbourhood expenditure is captured within each LGA. For retail expenditure at the Major Centre, for Hornsby we have assumed 100% capture of expenditure from Hornsby residents plus 10% capture of the Major Centre expenditure of Ku-ring-gai residents. For Ku-ring-gai we have assumed that Gordon is able to capture 60% of the 'Major Centre' expenditure that would otherwise leak from the LGA. We should point out that these assumptions are optimistic in terms of retail expenditure capture, in practice the expenditure capture and thus the required retail floorspace is likely to be smaller.



The resultant retail floorspace demand is added to the total adjusted floorspace target for each centre. The distribution of retail is made according to the adjusted retail shares within each centre/ precinct in each LGA and the supply-demand gaps are recalculated.

Given the assumptions outlined above, this part of the analysis should be thought of as a worst case scenario in terms of additional retail demand for the purposes of testing the capacity of the current controls. The results of this process are shown in Table 38 and Table 39

Table 38. Hornsby Supply-Demand Gaps After Consideration of Housing Strategy

Employment Land (i)
Employment Land (ii)
Employment Land (i)
Employment Land (i)
Neighbourhood Centre
Village
Village
Small Village
Small Village
Neighbourhood Centre
Neighbourhood Centre
Stand Alone Shopping
Village

-

Neighbourhood Centre Neighbourhood Centre Town Centre Neighbourhood Centre Neighbourhood Centre Major Centre

Employment Land

-

Neighbourhood Centre Neighbourhood Centre Neighbourhood Centre Neighbourhood Centre Neighbourhood Centre Village Neighbourhood Centre Neighbourhood Centre Neighbourhood Centre Neighbourhood Centre Village Village Small Village Neighbourhood Centre

	j		2031	Demand		_Su	pply	Ga	ap
Hornsby	2006 FS	Target FS	Addl	Target & Addl	Addl F.Space	80% of	Max FSR	80% of Max	Max FSR
(E) Asquith	206161	223,322	-1328	221994	15833	179059	267605	163,227	251,773
(E) Dural Service Centre	71934	76,266	-974	75292	3358	145414	196809	142,056	193,451
(E) Mt Ku-ring-gai	115705	125,475	-212	125263	9558	354438	467910	344,880	458,352
(E) Thornleigh	140360	132,879	-692	132186	-8174	51637	94372	59,811	102,546
Appletree Dr-Cherrybrook	1589	1,761	-29	1732	143	-11	324	154	180
Asquith	7402	11,921	-155	11766	4364	13610	19305	9,246	14,941
Beecroft	11528	15,595	-208	15387	3859	10301	15813	6,441	11,954
Berowra	6151	6,693	-127	6566	414	13166	17840	12,752	17,426
Berowra Hts	11497	11,635	-231	11405	-93	13242	18990	13,335	19,082
Berowra Waters	1359	1,523	-32	1492	133	6583	8583	6,450	8,450
Brooklyn	4368	4,782	-100	4682	315	4052	6396	3,738	6,081
Carlingford Court	45499	49,368	-974	48394	2895	-3024	5370	5,918	2,475
Cherrybrook	12393	12,830	-272	12558	164	17690	24597	17,526	24,433
Cowan	263	282	-6	276	13	198	360	186	347
Dangar Is	0		0	0	0	-108	14	108	14
David Rdr-Castle Hill	3013	3,292	-60	3233	219	-116	496	335	277
Edgeworth David Ave-Waitara	2489	2,678	-58	2620	132	-12	513	144	382
Epping	62550	70,639	-844	69795	7245	5167	21831	2,078	14,586
Galston	4189	4,219	-81	4138	-50	-3792	-1759	3,741	1,709
Galston Rd-Hornsby Hts	1161	1,245	-27	1218	57	-59	173	116	116
Hornsby	419696	615,681	-10919	604761	185065	218658	394835	33,592	209,770
Hospital Precinct	59788	61,112	-471	60641	853	23936	42844	23,083	41,991
(E) Kookaburra Road	6336	6,568	-37	6531	195	4711	7235	4,516	7,040
Kuringai	1114	1,156	-26	1131	17	486	844	469	827
Malton Rd-North Epping	1808	1,891	-42	1849	41	208	644	167	603
Mt Colah Shops	2978	3,094	-66	3028	50	5859	8153	5,808	8,103
Mt Colah Stn	1502	1,671	-32	1639	137	438	1032	301	895
Myrtle St-Normanhurst	660	690	-13	677	17	-180	-85	197	102
Normanhurst	1770	1,864	-38	1826	56	-454	-83	510	139
Pennant Hills	84349	87,154	-1437	85717	1368	1158	19371	211	18,002
Pennant Hills Rd-Thornleigh	12941	9,151	-140	9011	-3931	-22	3013	3,908	6,944
Plymton Rd Shops-Epping	1522	1,652	-35	1617	94	-25	292	120	197
Sefton Rd-Thornleigh	1292	1,456	-18	1438	146	8353	10823	8,207	10,677
Somerville Rd-Hornsby Hts	0	-	0	0	0	-118	269	118	269
Thornleigh	63204	67,906	-1071	66835	3631	-5361	6522	8,992	2,891
Waitara	33929	40,300	-806	39493	5564	-4678	2136	10,242	3,428
West Pennant Hills	7385	7,099	-121	6978	-407	7732	11234	8,139	11,642
Westleigh	8399	7,869	-142	7727	-672	6365	9741	7,037	10,413
Wiseman's Ferry	3051	3,683	-83	3600	549	282	1043	267	494
Yallambee Road	559	624	-13	610	51	-102	209	153	157
TOTAL	1421897	1,677,024	-21997	1655027	233131	1074681	1685614	841,550	1,452,483
Mt Ku-rin-gai constrained land						138865	198445	129,308	188,887
TOTAL minus constrained land						859109	1416149	625,900	1182940

Supply capacity is less than forecast 2006-2031 demand
Supply capacity is more than ten times forecast 2006-2031

Table 39. Ku-ring-gai Supply-Demand Gaps after Consideration of Housing Strategy

				2031	1 Demand		Supply D	LEP	Supply I	(PSO	Gap [DLEP	Gap KPSO	
	KRG	2006 FS	Addl Retail	Target FS	Target & Addl	Total Addl FS	80% of Max	Max	80% of Max	Max FSR	80% of Max	Max FSR	80%of Max	Max FSR
Neighbourhood Centre	East Killara	1137	6	1,250	1256	119	720	1141	720	1141	601	1,022	601	1,022
Neighbourhood Centre	East Lindfield	1309	7	1,478	1484	175	-295	-91	-295	-91	- 470	- 266	- 470	- 266
Neighbourhood Centre	Eastern Rd-Turramurra	1290	7	1,404	1411	121	704	1154	704	1154	583	1,034	583	1,034
Neighbourhood Centre	Fox Valley	2863	11	3,140	3151	288	-121	456	-121	456	- 409	169	- 409	169
Town Centre	Gordon	99034	881	127,659	128540	29507	97387	141590	93726	137929	67,881	112,083	64,219	108,422
	Grosvenor Street	0	0	-	0	0	0	0	0	0	-	-	-	-
Neighbourhood Centre	Hampden Ave Shops	868	4	944	948	80	1901	2561	1761	2421	1,822	2,482	1,681	2,341
Neighbourhood Centre	Killara	378	2	482	484	106	509	717	509	717	403	611	403	611
Village	Lindfield	37631	135	43,381	43516	5886	30622	46274	29941	45593	24,737	40,389	24,056	39,708
Neighbourhood Centre	North Turramurra	4989	20	5,966	5986	997	1648	3121	1648	3121	652	2,124	652	2,124
Neighbourhood Centre	Princes St-Turramurra	1328	7	1,496	1502	174	591	1021	473	903	417	847	299	729
Small Village	Pymble	18775	59	21,236	21296	2521	12525	19646	12302	19423	10,004	17,125	9,781	16,902
	Pymble Office Park	88999	180	114,580	114760	25761	6349	26848	11255	31754	- 19,412	1,088	- 14,506	5,993
Small Village	Roseville	17528	60	17,363	17423	-106	15802	23258	15029	22486	15,907	23,364	15,135	22,592
Neighbourhood Centre	Roseville Chase	2383	13	2,639	2651	268	249	817	249	817	- 19	550	- 19	550
Neighbourhood Centre	South Turramurra	1210	7	1,385	1392	183	2011	2771	2011	2771	1,829	2,589	1,829	2,589
Village	St Ives	47122	187	47,573	47760	638	38602	57854	43048	62299	37,964	57,216	42,409	61,661
Neighbourhood Centre	St Ives Chase	927	5	1,016	1021	94	172	411	172	411	78	318	78	318
Neighbourhood Centre	St Ives North	2092	11	2,326	2337	245	2086	3052	2086	3052	1,841	2,807	1,841	2,807
Village	Turramurra	28712	108	31,458	31566	2854	54118	73746	49490	69119	51,264	70,893	46,636	66,265
Small Village	Wahroonga	11511	46	12,579	12626	1115	5782	9674	5307	9198	4,667	8,559	4,192	8,084
Neighbourhood Centre	West Gordon	961	5	1,110	1114	153	-83	100	-83	100	- 236	-53	- 236	- 53
Neighbourhood Centre	West Lindfield	4485	18	5,174	5192	708	374	1420	-480	567	- 334	712	- 1,187	- 141
Neighbourhood Centre	West Pymble	3622	16	3,727	3743	121	3953	3048	3953	3048	3,832	2,927	3,832	2,927
	TOTAL	379153	1325	449,364	450689	71536	275606	420592	275977	421606	204,071	349,057	204,441	350,070

Supply capacity is less than forecast 2006-2031 demand Supply capacity is more than ten times forecast 2006-2031

After taking account of the additional retail floorspace implications of the housing strategy, the centres in Hornsby with a significant supply shortfall are the commercial centres of: Carlingford Court, Epping, Galston, Thornleigh and Waitara. However, again, we should note that the shortfall in Carlingford Court and Galston is driven by a recorded current supply demand gap rather than strong forecast demand growth.

The centres with more than ten times the supply potential to accommodate forecast demand are the industrial areas of: Asquith, Kookaburra Road, Dural Service Centre, Mt Ku-ring-gai, Thornleigh and the commercial centres of: Berowra, Berowra Heights, Berowra Waters, Brooklyn, Cherrybrook, Cowan, Hospital Precinct, Ku-ring-gai, Malton Road, Mt Colah Shops, Pennant Hills Road (Thornleigh), Sefton Road (Thornleigh), West Pennant Hills and Westleigh.

After taking account of the additional retail floorspace implications of the housing strategy, the Kuring-gai centres where the existing supply potential (under the Draft LEP) is not sufficient to meet the forecast demand are: East Lindfield, Fox Valley, Pymble Office Park, Roseville chase, St Ives chase, West Gordon and West Lindfield. However, in most cases the shortfall is small and the only centre with significant supply shortfall to meet the forecast demand is Pymble Office Park.

The centres with more than ten times the supply potential to meet the demand forecast are: Hampden Avenue Shops, Roseville, South Turramurra, St Ives, Turramurra and West Pymble.

In Ku-ring-gai, the HillPDA Retail strategy has previously derived retail floorspace forecasts for the requirements for key retail centres. Comparison of the outputs of this study with the Hill PDA figures is given in Table 40.

Table 40. Comparing Projected Floorspace Additions (sqm)

	HillPDA	SGS (baseline & SR targets)	SGS (after share adjustment)	SGS (after share adjustment + housing strategy addl retail)
Gordon	45,000	22,081	28,625	29,507
St Ives	12,000	3,632	451	638
Turramurra	4,000	2,135	2,746	2,854
Lindfield	6,000	5,751	5,751	5,886

The SGS additional floorspace forecasts are generally lower than the Hill PDA forecasts when the additional retail requirements of the housing strategy are considered. This is likely to be the result of optimistic retail expenditure capture assumptions in the Hill PDA retail modelling. Likely differences are also driven by the different methodological approaches of the two studies. In the HillPDA work, retail floorspace requirements have been calculated from the estimated capture of retail expenditure and the translation of these dollar values to floorspace figures given the estimated retail turnover densities for retail operations. In this study, the floorspace requirements have been calculated from TDC forecast employment figures with an adjustment for any difference between TDC assumed population numbers and current planning for residential development.

The difference between the SGS and Hill PDA figures for Gordon reflect the high aspirations for Gordon in the HillPDA work (in contrast, the minimal expansion figures in the HillPDA study are for 15,000 sqm). The greatest contrast between the two sets of figures is for St Ives. At the share

adjustment phase in this study, attention has been focussed on the largest centres and most accessible centres for office type land uses and higher order retail. For St Ives, this means a reduced share of the projected growth in higher order retail and office based employment and floorspace. This gives a low additional floorspace total of 638 sqm. Without any share adjustment, the total additional floorspace requirement for St Ives is 2,135 sqm.

7 Recommendations

7.1 Economic Trends & Opportunities

Industry & Occupation Trends

The research completed as part of this Study has uncovered a numbers of economic trends and opportunities for the sub-region. These are summarised as follows:

- Balance of 'local service' and 'employment destinations'. Both the Metropolitan Strategy and the Draft North Subregional Strategy provide a clear indication that economic growth should be concentrated in centres particularly those at the top end of the centres hierarchy. For the North Subregion, this means a renewed focus on Hornsby as an employment and activity centre. However, the land use audit has clearly shown that many of the smaller centres in the sub-region are fulfilling 'higher order' functions providing destination employment opportunities and in some cases regional service functions.
- **Importance of health and education**. Employment in health and education is very high in the sub-region. In 2006, health and education were among the top 5 employing sectors in both LGAs. In addition, health and education industry sectors have displayed the strongest growth in the 2001-2006 period.

There are several key institutions responsible for some of these jobs. In Hornsby, the Hospital and TAFE are key employers. In Ku-ring-gai, the two most significant 'magnet institutions' are the Sydney Adventist Hospital and UTS Lindfield campus.

One of the challenges for the Study is that while these institutions are large employers, Councils will typically have limited control in their planning and future growth

• Leakage of employment activity. In broad terms, origin-destination analysis has shown that there are fewer jobs in the Manager and Administrator and Professionals & Associate Professional categories than there are workers – suggesting a 'leakage' of employment. This is particularly marked for these occupation categories in the construction sector. While this is true for both LGAs, for Ku-ring-gai, there is a greater level of employment leakage in general and as with Hornsby, the leakage is more pronounced in the Managers and Administrators and Professionals & Associate Professionals categories.

While the leakage of higher order employment may simply be related to the fact that the subregion has a disproportionate level of executive housing. On the business side of the equation, it is just as possible that there is a lack of higher order job opportunities in the sub-region for its executive resident workers.

 Declining Industrial employment. Driven by forecast decline in manufacturing employment, demand for heavy manufacturing (MH) and light manufacturing (ML) floorspace is forecast to decline by 11,275 sqm and 11,806 sqm respectively. Declining industrial employment and associated land requirements will obviously impact on the demand for land in the industrial areas. • Home based work. Compared with other regions in Sydney GMR, Hornsby-Ku-ring-gai has the highest levels of home based work and has shown significant growth in the 1996-2001 period. In Hornsby, the highest incidence of home based work occurs in the 'Professionals' and 'Associate Professionals' category followed by 'Clerical and Service' workers. Particularly high levels occur in the 'Property & Business Services' and 'Construction', 'Manufacturing' and 'Wholesale Trade' categories. In Ku-ring-gai, the highest incidence of home based work occurs in the 'Professionals' and 'Associate Professionals' category followed by 'Clerical and Service' workers. Particularly high levels occur in the Communication Services industry category with significant proportions also in Government Administration & Defence.

Home based work does not appear to be a temporary state of business operation. Through consultation home based workers in the sub-region have suggested that work from home is driven by the benefits of this way of working rather than any shortage of suitable business space elsewhere.

The attraction of home based work is flexibility in work hours and the avoidance of a commute to work. Thus, incidence of home based work is usually highest in areas that are distant from employment centres. Home based work is also often high in areas with high quality natural environments. Home-based work is also attractive to mature age and disabled workers. With older populations of Hornsby and Ku-ring-gai may benefit from the lifestyle change that home-based work can offer and as with all fringe areas in the Sydney Metropolitan area it can provide greater employment opportunities, particularly in places where there is not a large variety of work options.

While home based work certainly present economic opportunities in the sub-region, it is also important to note that (i) home based occupations are not necessarily 'higher order' jobs and (ii) that the promotion of home based work should not compromise centres strategy.

• Actual and perceived accessibility. Both of the LGAs in the sub-region have arterial infrastructure as a spine for economic activity. The North Shore rail line, with the Pacific Highway running in parallel dominate Ku-ring-gai LGA with the commercial centres scattered along its length. Similarly, in Hornsby, the Northern Line and the North Shore line with the Pacific Highway running to the north dominate patterns of economic activity.

The accessibility of employment lands to this infrastructure is vital for many industries. Most obviously, time dependant industries such as transport and storage, distribution, and logistics functions require arterial road access. However, many other sectors require both accessibility to and visibility from he main roads. Examples here include Bulky Goods Retail, larger office functions and 'business park' land uses.

Proximity to transport nodes is important for land uses that generate large numbers of trips – especially those that draw activity from a wide catchment. These types of uses are higher order retail functions (larger shopping centres and Bulky Goods Retail), office functions and central community services.

• Movement of low-density operations. With the growth in logistics and warehousing the amount of land consumed per employee has increased and this has accelerated demand for large lots on the urban fringe. At face value, high levels of land availability and good infrastructure access should make the sub-region an attractive location for these industries.



7.2 Strategic Directions

Table 41. Strategic Directions

Strategic Direction	Issue	Action
	- Evidence of residential encroachment in commercial centre	- Zone commercial core to discourage residential development with adjoining Business Development zone to 'free up employment opportunities
	- There is a leakage of professional jobs from the sub-region	- Provide planning incentives for office activity
Strengthen Hornsby's Position as the Major Centre	- Hornsby centre has a low level of existing office activity	- Examine potential to redevelop sites in public ownership ('build in' additional commercial floorspace potential)
	- Hornsby is the administrative centre for the LGA	- Initiate place making activity
	- Hornsby has a strategic position with respect to transport infrastructure	- Work with owners and target pre-commitments for strategic commercial sites
	- Gordon/ Pymble acts as a key employment centre for Ku-ring-gai	- Increase FSRs in Pymble Office Park
	- Gordon is the administrative centre for the LGA	- Encourage retention of office in north Gordon
Consolidate the Position of Gordon/	- Gordon has a strategic position with respect to transport infrastructure	- Improve connectivity between Gordon and Pymble office park
Pymble Office Park	- Gordon and Pymble office park are currently considered as separate centres	- Discourage retail development at Pymble office park
		- Consider combined approach to Pymble/ Gordon as a single centre
	- Gordon and Epping should have some higher order retail and office activity	- Limit development capacity at centres with very high excess supply
Strengthen Town		- Increase FSRs at Epping
Centre Roles with Office and Higher Order Retail	- Office activity at Epping should not detract from Hornsby's Major Centre status	- Encourage centralised services for HBW and livework developments in centres
Older Retail		- Limit development capacity at St Ives
	- Growth at St Ives should not detract from growth at Gordon	- No change to development capacity at Carlingford Court
Reinforce the Local Service Role of Villages, Small	- Significant higher order retail and employment use exists at some smaller centres - these would be more appropriate at town & Major Centres	- Limit development capacity at Village, Small Village and Neighbourhood Centres that have very high excess supply
Villages & Neighbourhood		- Encourage centralised services for HBW in centres
Centres		- No change to development capacity at Galston
	- Current zoning does not permit significant retail or service activity	- Apply Light Industrial and Local Centre zones to broaden permissible uses
Expand the Local Service Role of Dural Service Centre	- Centre has inadequate infrastructure for higher order retail and employment functions	- Discourage uses that draw on a wide catchment and generate significant trips
		- Broaden the range of permissible uses to include local level retail and professional services
Protect Existing	- There is forecast decline in industrial employment in the subregion	- Maintain capacity at strategic industrial areas
Strategic Industrial Centres	- Hornsby Shire's industrial land is competitively placed to attract industrial activity	- Initiate economic development activity to target industrial users

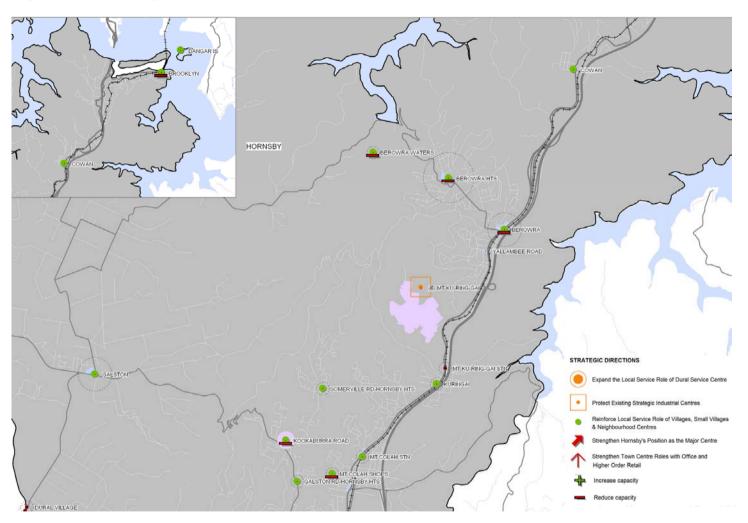


Figure 68. Strategic Directions for Hornsby North

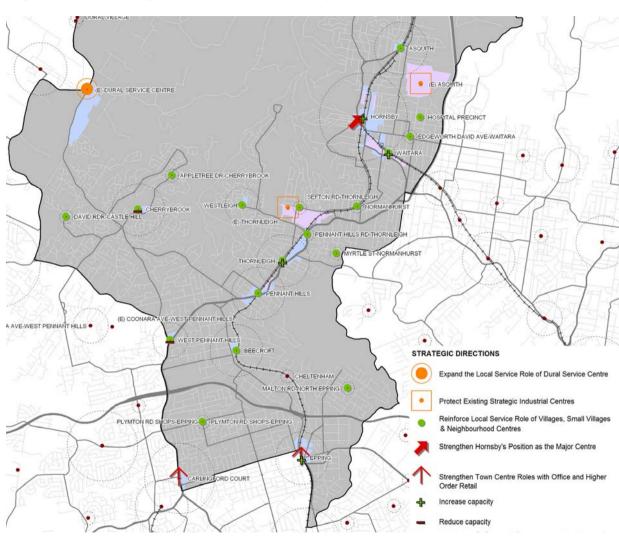


Figure 69. Strategic Directions for Hornsby South

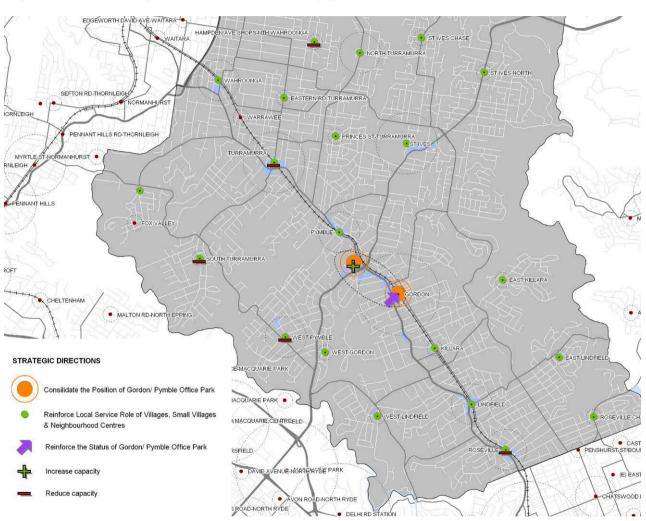


Figure 70. Strategic Directions for Ku-ring-gai

Consideration of Subregional Strategy

 Table 42. Consideration of Subregional Strategy elements

Subregional Strategy Direction	Notes
Job target of 13,500 jobs for the sub-region	There is sufficient potential supply to accommodate the Subregional target
	and forecast demand in the period 2006-2031.
Job target of 4,500 jobs for Hornsby	There is sufficient potential supply to accommodate the Subregional target
	and forecast demand in the period 2006-2031.
Job target of 3,000 jobs for Ku-ring-gai	There is sufficient potential supply to accommodate the Subregional target
	and forecast demand in the period 2006-2031.
Wider uses at Dural Service Centre	The Standard Instrument contains three industrial zonings. The IN3 Heavy
	Industrial zone includes a number of heavy and hazardous usages and as
	a result is unlikely to be appropriate in Hornsby. Therefore there are just
	two industrial zones that can be used throughout the industrial areas of the LGA.
	Recommended zoning for the Dural Service Centre is IN2 – light industrial.
	In order to allow a wider range of uses a specific area could be set aside as B2 Local Centre to permit additional desirable uses that are not permissible in the IN2 zone.
Wider uses for Hornsby industrial zones	Given the proximity to rail and Hornsby commercial centre, additional employment uses are desirable in these locations. B5 Business Development zone is proposed for the area north of Linda Street bound by Hunter and George Streets and for the industrial strip running along Jersey Street.
	By permitting light industry uses in the B5 Business Development zone this change of zoning will not restrict the operation of business currently in the area.
	It might typically be expected that retail uses are restricted in the B5 zone (perhaps to neighbourhood shops and bulky retail) to ensure these areas do not draw retail away from established centres. However given the dominance of retailing in the southern portion of the Hornsby this restriction may not be necessary in the Hornsby version of the Standard Instrument.
Expansion of Hornsby commercial centre	The expansion of Hornsby centre is appropriate given its status in the centres hierarchy. Attention should be given to the low proportion of office floorspace in the centre. B3 is recommended for the central area. As a Major Centre Hornsby needs to provide opportunities for significant future, employment, growth, particularly, office, based, employment.
	future employment growth, particularly office based employment. A designated commercial core area must be protected from residential encroachment if the centre is to realise this aspiration. In additional to a commercial core on the eastern side of the centre,

	increasing opportunities for large-scale commercial development on the western side of the centre, in locations close proximity to the station, would increase capacity of the centre considerably and should be considered. Hornsby Station itself and the adjacent areas currently occupied by commuter parking would also be a potential catalyst location for commercial development. Redevelopment of the station would provide the means of achieving a better knitting together of the eastern and western sides of the centre. Exclusion of residential development and expansion of the commercial core area would provide a strong signal to the market that Hornsby has serious aspirations as a Major Centre.
Enterprise Corridors	Enterprise Corridors are appropriate on Pennant Hills Road at Thornleigh, Pennant Hills and along the Pacific Highway at Waitara. Enterprise Corridors zoning should generally be applied to areas that are immediately adjacent busy roads and therefore have high expose to passing traffic and good access to major arterial routes. In these locations in Hornsby the Enterprise Corridor zoning should be applied to those lots that immediately adjacent the busy road. Other employment land that is located within the same corridor but not immediately adjoining the road may be zoned for industrial use or an alternative commercial zoning as is appropriate.

'Major' and 'Town' Centres

• **Current position**. As detailed in the Subregional Strategy, a Major Centre is expected to be a major shopping and business centre serving immediate and the Subregional residential population usually with a full range shopping mall, council offices, taller office and residential buildings, central community facilities, and a minimum of 8,000 jobs.

Hornsby is the Major Centre in the sub-region. It accounts for a very high proportion of the total employment and floorspace in all non-industrial BLCs. Hornsby provides as an administrative and commercial centre for the sub-region, hosts as TAFE and hospital precinct and has a target of 3,000 additional jobs in the 2006-2031 period. Hornsby centre currently has a predominantly retail focus with the Westfield shopping centre contributing to a substantial total retail floorspace figure. The broad split of land uses is 15% industrial, 61% retail, 13% office, 10% special uses, 1% residential.

Town Centres are expected to have one or two supermarkets, community facilities, medical centre, schools, etc. They are expected to contain between 4,500 and 9,500 dwellings and are usually a residential origin rather than an employment destination.

Epping Town Centre with a total of 62,550 sqm of employment floorspace is much smaller than Hornsby but still accounts for a significant share of office floorspace (over 10% of the total in the Shire). This proportion is high considering the existence of Hornsby as a Major Centre and



the Town Centre status of Epping. At a very broad level, the land use split in Epping is 34% industrial, 30% retail, 31% office, 4% special uses, and 1% retail.

In Ku-ring-gai, Gordon is the only Town Centre. Gordon is the administrative centre for the LGA and provides large volumes retail and service floorspace. However, the bulk of the office floorspace is provided at the neighbouring Pymble office park. In the case of Gordon Town Centre, its role as a residential origin rather than employment destination is not well defined. In very broad terms, the split of land use in Gordon is 16% industrial, 45% retail, 30% office, 9% special uses, and 1% residential.

• **Forecast**. For Hornsby centre, after taking into account the baseline TDC forecast, the Subregional targets, additional retail demand implied by the housing strategy and adjusting for a greater share of office employment, there is still excess supply of 33,592 sqm.

For Epping centre, after taking into account the baseline TDC forecast, the Subregional targets, additional retail demand implied by the housing strategy and adjusting for a greater share of office employment, there is a small supply shortfall of 2,078 sqm.

For Gordon centre, after taking into account the baseline TDC forecast, the Subregional targets, additional retail demand implied by the housing strategy and adjusting for a greater share of office employment, there is still excess supply of 67,887 sqm.

• Opportunities and threats. For Hornsby, there is an opportunity to increase the profile of the centre as a commercial office centre as well as retail centre. From an economic development perspective this may play an important role in helping to achieve a higher proportion of resident professional workers remaining within the Shire. Hornsby centre has the advantage of its central position, railway station, and status as the administrative and service centre of the LGA. However, the centre is divided by the railway line and is perceived as a retail rather than employment centre.

For Gordon, the existence of the Pymble office park, while helping to grow employment, may also threaten to shift the centre of gravity away from the 'Village heart' of the centre. Care should be taken to limit the degree of retail development permissible in Pymble Office Park.

For the development of Hornsby and Gordon/ Pymble Office Park as employment destination, we must also consider the 'threat' of competitor employment locations outside of the subregion. Macquarie Park and Chatswood should be considered the most significant threats to retail/ business attraction to Gordon/ Pymble Office Park and both have the advantage of high quality arterial road access.

There is an opportunity for Gordon to create a distinct 'niche' here – to become a unique destination, not compete head to head with Major Centres. It could aim to develop as an 'upmarket' fashion and food precinct. A limited 'non retail' employment base at Gordon reduces the effective catchment of this Town Centre if it operates predominantly for resident shopping, and residents work elsewhere; need to create a more complex Town Centre dynamic with mix of retail and other employment, and attractive centre for nearby residents

- **Strategy**. To re-position Hornsby as a commercial (office) centre as well as a regional retail and service centre will require some intervention. There are several strands to this, including:
 - Application of the zones recommended in this Study. The 'accepted' wisdom for commercial centre is that they don't really work where residential development is also a permissible use. This is for a couple of reasons (i) Potential for residential development pushes up land values making commercial development less (and usually



not) viable, (ii) Larger commercial tenants are looking for purely commercial address/environment, i.e. they want to operate their business among commercial developments. For these reasons, a zoned commercial core is important.

- Planning incentives for office activity. Some planning control incentives, such as FSR bonuses, may also be beneficial in attracting a higher share of office activity.
- Achieving critical mass through key site development. A critical mass of potential commercial development is probably also important. A small commercial 'core' will always struggle to achieve the same quality of business address when compared to larger centres. Of course, overcoming the inertia of the centre will be difficult. The development of key sites in public ownership can play a key role here. The council offices on George Street may have some potential in this respect.
- Economic development action to attract 'pre-commitments' to the commercial sites.
 After a site by site assessment of development sites and amalgamation possibilities, industry targeting would be appropriate to encourage pre-commitments for commercial development sites.
- Place making activity. Dominance of retail (particularly in Hornsby) is also likely to reduce the appeal for large scale commercial development. The perception of the centre as a retail destination, whilst convenient for workers, may not attract 'big business'. Some of the required action here is at the marketing level and links with the economic development point above. Also important here is some consideration of the environment for business in the centre. Increased modal spilt to public transport, improved links between the east and west side of the centre and other urban design improvements will assist in re-positioning the centre.

In additional to a commercial core on the eastern side of the centre, increasing opportunities for large-scale commercial development on the western side of the centre, in locations close proximity to the station, would increase capacity of the centre considerably and should be considered.

Hornsby Station itself and the adjacent areas currently occupied by commuter parking would also be a potential catalyst location for commercial development. Redevelopment of the station would provide the means of achieving a better knitting together of the eastern and western sides of the centre.

Exclusion of residential development and expansion of the commercial core area would provide a strong signal to the market that Hornsby has serious aspirations as a Major Centre.

It is important here that the activity is seen as part of a *real change* in the centre and not merely superficial activity. For this reason, the actions should combine as a suite of activity to re-position the centre as an employment destination.

For Epping, developing strategic directions is difficult (if not impossible) without having equally detailed knowledge of land use on the Parramatta LGA side centre. While the centre is strategically located with respect to transport infrastructure, its position as employment centre should not be allowed to compromise the position of Hornsby centre if the strategy for Hornsby centre is to succeed. Epping's location also makes the centre a good candidate for increased residential density to encourage local population growth and support growth in local retail and services. While we expect that retail activity on the Parramatta side of the centre gives the



centre a better economic balance than is evident in the analysis of the Hornsby LGA side's data alone, increased residential density will further drive the need for local retail and services. Coordination with Parramatta Council is recommended to achieve consistent approaches to zoning, development densities, parking rates and public domain strategies. We understand that the Department of Planning, in conjunction with Hornsby Council, is progressing a study of Epping and its immediate environs.

For Gordon, Business Park zoning in the adjacent Pymble office park with strict limits on retail activity will assist in promotion of economic growth in Gordon centre. Gordon should be positioned to accommodate a greater share of the LGA's growth in the future – particularly against the growth of St Ives given Gordon's position with respect to transport infrastructure and its status as the administrative centre of the LGA. However, it is not reasonable to expect Gordon to recapture *all* of the retail expenditure that currently 'escapes' outside of the LGA. As stated above, there may be opportunity for Gordon to position itself as a centre with a 'premium' retail offer aimed at the upper end of the socio-economic spectrum. Possible interventions to help achieve this might include:

- Increased activity around the station. Taking the retail activity closer to the station entrance will enhances safety and security and will create passing traffic for retailers. Ground level retail frontages to both sides of Wade Lane are desirable (this will require some reconfiguration, the creation of arcades, amalgamation of shops, and new servicing arrangements. Opportunities should also be seized to take retailing closer to the station entrance.
- Limitation of the length of the centre 'strip'. The length of the retail at Gordon should be limited to about 600 metres (the current distance between Merriwa Street and Church Hill Lane) to provide for as compact and 'walkable' a centre as possible.
- Encourage further development of community/ cultural hub. Develop civic precinct as
 a community activities 'hub' in any redevelopment, e.g. look to redevelop library in
 time as a learning / education centre (with private colleges etc, to bring additional
 activity to centre).
- Promotion of Gordon Centre as the Retail Anchor. The enclosed Gordon centre should be supported as the retail anchor. The existing bridge connection across the road may be too narrow to create a sense of continuity of activity.
- Increased connectivity between Gordon and Pymble Office Park. There is an
 opportunity to help develop Gordon and Pymble Office Park through considering the
 two areas together in planning activity and encouraging a greater level of connectivity
 between the two.

In further developing strategy for Gordon and Pymble Office Park it may be appropriate to consider both areas together. An expanded role for the Gordon/ Pymble Office Park area may help to address the noted decline in professional services jobs that Ku-ring-gai has experienced in the inter-censal period. This aim should be to promote greater connectivity between the two areas while recognising the different economic and social function that each area performs.

Villages and Small Villages

• **Current position**. As described in the Subregional Strategy, a Village Centre is expected to have a strip of shops, and surrounding residential area, within a 5 to 10 minute walk and containing a supermarket, hairdresser, take-away food shops, and containing between 2,100 to 2,700 dwellings. A Small Village is expected to consist of a small strip of shops and adjacent residential area within a 5 to 10 minute walk and contain between 800 and 2,700 dwellings

In both Hornsby and Ku-ring-gai, centres at the Village and Small Village level host relatively high proportions of land uses usually found in larger centres. This is particularly pronounced in Ku-ring-gai where Lindfield, Turramurra and St Ives, each with Village status, host a significant share of the total LGA's office floorspace 8.4%, 4.1% and 3.7% respectively.

Despite the high office component however, Villages and Small Villages in the sub-region do have higher retail (especially Main Street Retail) proportions than town and Major Centres. This is in line with expectations of the role of centres at this position in the hierarchy.

- **Forecast**. Forecast growth at the Village and Small Village level is generally much lower than the potential supply at this level. Many of the centres at this level in the hierarchy have more than ten times the supply to accommodate the forecast demand in the 2006-2031 period.
- **Opportunities and threats**. With such high growth potential at this level in the hierarchy, there is a risk that floorspace uptake will jeopardise the strategy to concentrate growth in the major and Town Centres.
- **Strategy**. In Hornsby, consideration should be given to reducing capacity at the employment land in the commercial centres of: Berowra, Berowra Heights, West Pennant Hills and Cherrybrook as these centres have more than ten times the supply potential to accommodate demand. Westleigh is not included here as it is an area of high historic population growth. Capacity should also be increased at Thornleigh given the supply shortfall.

In Ku-ring-gai consideration should be given to reducing capacity at Roseville, and Turramurra as these centres have more than ten times the supply potential to accommodate demand. While capacity reduction at St Ives may also be considered given the high excess capacity at this centre we are aware of the considerable planning for growth around this centre given the proposed residential additions and strategic bus corridors. We recommend that capacity is not increased and that careful attention should be given to development that might jeopardise strategy for Gordon centre.

Reducing capacity at some of these centres with very high levels of excess supply will help to focus economic activity on the key centres as identified in the centres hierarchy.

Neighbourhood Centres

Current position. As described in the Subregional Strategy, Neighbourhood Centres are
expected to consist of one or a small cluster of shops and services with between 150 and 300
dwellings. We would expect Neighbourhood Centres to host predominantly local service
functions with very small trade areas.

In Hornsby, the Neighbourhood Centres typically fit the template, with retail activities (usually Main Street Retail) dominating activity. In very broad terms the land use split in Neighbourhood Centres is: 22% industrial, 64% retail, 6% office, 8% special uses and 1%



residential. Industrial activity at this level is almost exclusively local light industry. Similarly, office land uses are typically small service operations rather than major employers.

In Ku-ring-gai, the Neighbourhood Centres have a similar profile. In broad terms, the land use split is: 18% industrial, 67% retail, 5% office, 9% special uses and 1% residential. Again, industrial activity at this level is almost exclusively local light industry.

• **Forecast**. The forecast floorspace demand at some of the Neighbourhood Centres in both LGAs is low compared to the available supply. In Hornsby, there are 6 Neighbourhood Centres with capacity at more than ten times the demand forecast in the 2006-2031 period. These are Berowra Waters, Brooklyn, Mt Colah Shops, Pennant Hills Road (Thornleigh), and Sefton Road (Thornleigh).

In Ku-ring-gai, most of the Neighbourhood Centres are closer to the demand forecast – though several Neighbourhood Centres show small supply shortfalls. Hampden Avenue Shops, South Turramurra and West Pymble are the only Neighbourhood Centres with capacity at ten times forecast demand.

- **Opportunities and threats**. As with some of the Village and Small Village Centres, there are numerous centres at the neighbourhood level that perform some higher order functions.
- **Strategy**. In Hornsby, consideration should be given to reducing capacity at the commercial centre of: Berowra Waters, Hornsby Heights, My Colah shops, where there are very high levels of excess supply. Pennant Hills Road (Thornleigh) and Sefton Road (Thornleigh) have been excluded from this list as Thornleigh centre itself has a supply shortfall. Increasing capacity at Galston is not recommended given its out of centre location.

In Ku-ring-gai, consideration should be given to reducing capacity at Hampden Avenue shops where there is a very high level of excess supply.

Reducing capacity in some of these centres with very high levels of excess supply will help to focus economic activity on the key centres as identified in the centres hierarchy.

Industrial Areas

- **Current position**. Industrial areas identified as 'employment lands' in the Subregional Strategy are expected to be traditional industrial areas and business and technology parks for higher order employment. They are expected to incorporate light industries, heavy industry manufacturing, urban services, warehousing and logistics and high tech based activities.
 - In broad terms, the industrial areas in the sub-region fit this template. The broad land use split in the industrial areas is: 60% industrial, 23% retail, 11% office, and 6% special uses. However, the 'retail' category here is dominated by Bulky Goods Retail. Similarly, the office component is mostly the 'business park' (BP) land use.
- Forecast. Hornsby has four identified 'employment lands' in the Subregional Strategy, Asquith, Dural Service Centre, Mt Ku-ring-gai and Thornleigh. In addition, Kookaburra Road is a light industrial area identified as a Neighbourhood Centre in the Subregional Strategy. Four of these areas have supply potential more than ten times the forecast additional demand in the 2006-2031 period Dural Service Centre, Mt Ku-ring-gai (after taking account of constrained land), Kookaburra Road and Thornleigh. This position is largely driven by the very low employment forecasts for industrial sectors.



• **Opportunities and threats**. Although, the employment forecasts for industrial sectors are poor, Hornsby's industrial areas should have the potential to attract some of those businesses requiring cheaper land, larger lots and arterial access. Transport, logistics, warehousing and distribution are key sectors here.

For Dural Service Centre, a broader range of permissible uses is appropriate given its role in providing service for the surrounding community. However, uses at this centre should not jeopardise the strategy to encourage economic growth in existing centres, especially where Dural Service Centre is less well served by transport infrastructure than many other centres in the LGA. For this reason, commercial functions at the centre should not draw trade from a wide catchment. Industrial zoning with a focus on light industry and additional local service functions is appropriate.

• **Strategy**. The potential for the attraction of transport, distribution sectors should be explored through a targeted economic development strategy. This should take into account the competitive position of Hornsby's land offer in terms of site and location attributes against the nature of competing industrial areas elsewhere.

Economic development action should build from this study to establish value-chain details and the links between industrial land and location needs and the existing 'offer' of the sub-region's sites in light of competition elsewhere.

Other (non employment) Zones

• **Current position**. There are a number of 'other' significant areas for employment activity in the sub-region that do not fall under the centres hierarchy and are not industrial areas. The most obvious of these are the health and education precincts.

In Hornsby, the broad land use split in the hospital precinct is 61% special uses, 28% retail, 7% office and 7% residential. In Ku-ring-gai, the SAN is a major employer, with an estimated 2,200 to 2,730 jobs – the single largest employer in the LGA.

There are numerous education employers scattered throughout the sub-region. In Hornsby, the TAFE and in Ku-ring-gai the Lindfield UTS campus are significant employers.

In addition, we have seen that there is significant employment in residential zones in the form of home-based work.

• **Forecast**. The TDC baseline employment forecast anticipates strong growth in education employment in both Hornsby and Ku-ring-gai LGAs. Hornsby in particular is expected to experience very strong growth in education employment in the 2006-2031 period. Growth in health and community services employment is more moderate.

The position of the existing health and education land to accommodate the floorspace demand forecast is not possible to quantify completely as not all of the health and education land was audited. Indeed, in practice this would be difficult as many of these institutions are small and dispersed.

• **Opportunities and threats**. The proposed development at the SAN has the potential to adversely affect strategy for the promotion of economic growth in centres.

The potential closure of UTS Lindfield will obviously result in a loss of education jobs in the LGA.



Home based work presents an opportunity for economic growth to build on the sub-region's assets but also may present a threat to centres if growth in home-based work occurs at the expense of growth in employment in centres.

Strategy. Recommended zoning for the hospital precincts (both Hornsby and the SAN) is Infrastructure zoning: SP2 (Health Service Facility). Permissible land uses would then be: The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose. It would be the role of the DOP to determine whether the retail, commercial and residential uses proposed are "ordinarily incidental or ancillary to development".

In Ku-ring-gai, in considering the proposal for the development at the SAN site, a key issues to be considered is the potential impact of this development of other higher order centres (particularly those with better public transport access). Would this development and/or the associated retail, commercial and residential components be better accommodated in existing higher order centres and how likely is it that this would be the case? We feel that a specialised centre status for the SAN site is not justified and would risk encouraging out of centre development that may adversely impact on the centres strategy.

In terms of facilitating home based work, provided that 'home occupation' and/ or 'home business' are permissible in the appropriate residential areas, there is little else that can be done to facilitate HBW in residential zones (In the NSW LEP template 'home occupation' involves only residents of the dwelling where as 'home business' can involve up to two non-residents)

The 50 sqm maximum area control in the Hornsby LEP is probably unnecessary as the limiting factor of 2-4 people and amenity criteria should be sufficient.

From consultation with home based business it is clear that, the role of business services in centres is likely to have a greater impact than any adjustment to planning controls. Services such as post offices, photocopying/printing/binding services or even fully fledged (but small scale) business centres are likely to make HBW a viable option for more people.

7.3 Planning Controls

Comment on Current Controls

In Ku-ring-gai, the following comments are made where adjustment to the Draft LEP is recommended:

B2 Local Centre. In general, we support the list of permissible land uses in this zone. However, there is some question whether 'Vehicle showrooms' are desirable in Local Centre zoned areas. Perhaps here it is better to restrict this use to specific locations on edges of centres, through either use of the B5 Business Development zoning or identifying specific locations where this use is desirable using Clause 2.5 and Schedule 1 of the Standard Instrument "Additional permitted uses for particular land".

There is also a question about the desirability of 'Multi dwelling housing' in Local Centre zoned areas as this has the potential to deliver lower dwelling yields than are desirable within centres. Although housing choice is desirable in and around centres (apartments, townhouses, detached housing), 'prime' locations that are close to local services and public transport should generally aim to deliver high yields.

- B4 Mixed Use. In the current iteration of the Standard Instrument, both 'Seniors housing' and 'Shop top housing' and compulsory land uses in the B4 Mixed Use zone. If the intention is to prohibit future additional residential development in these areas, a non-residential zone such as B5 Business Development or B7 Business Park should be used. Additional zone objectives should be introduced to ensure that the amenity of existing residential development in these areas is protected. Use of the B4 zone should be restricted to areas where a mix of residential and non-residential uses to be encouraged in the future.
- **B5 Business Development**. Depending on where there zoning is used, Council may wish to consider restricting the types of retail premises that are permissible. That is, rather than using the group term 'Retail premises', specific types of premises should be selected that are desirable in these locations. The main concern here is to ensure that other commercial zones (e.g. B1, B2, B3) are the focus areas for retail activities by limiting retail activities in B5 (and possible B4 and B7) zoned areas.
- **B7 Business Park**. The zone objective of the B5 Business Development zone suggests a mix of uses that includes specialised retail, where as the B7 Business Park zoning suggests a more 'traditional' employment focus with support retail only. Given that Pymble Office Park is a key concentration of office employment, and there is demand for growth of this type of employment, the B7 zoning is thought to be more appropriate. Additional retail uses could be added to this zoning.

The area south of Ryde Road could be zoned either B5 or B7 depending on the desired mix of land uses. As suggested above, whichever zoning is used for this area, additional zone objectives relating to the amenity of existing residential development should be considered. The area to the south of Fitzsimmons land and north of Merriwa Street could be zoned B4 – mixed use.



For Hornsby, the following issues have been identified in the current planning controls:

- Residential land uses in commercial zones. It's generally accepted that the development
 of commercial centre is hampered where residential development is also a permissible.
 Permitting residential development in the Business F (Town Centre) and Business G (Town
 Centre Support) zones is therefore not ideal for the core of an aspiring Major Centre.
- Floor space ratios. Existing floor space ratios are generally low for commercially zoned land areas, particularly in areas where mixed use residential developments might be desirable (in centres and near transport). For example: Business A (General) 1.0:1 and Business B (Neighbourhood) 0.5:1. It is noted that there are some exceptions to these standards in Schedule B of the 1994 LEP, however again these are generally modest.

Floor space ratios in Hornsby centre are generally higher (between 2 and 5:1, which minimum requirement for 'employment generating' uses). As suggested above, consideration should be given to prohibiting residential uses completely from the core area. Higher floor space ratios for larger site areas might also be a useful incentive for site amalgamation.

The floor space ratio in the Business G (Town Centre Support) 1.0 is also modest given the proximity of this location to the centre and major transport infrastructure.

- Parking rates. It is understood that rates apply to land uses 'across the board' however as a
 result parking rates for development in centres that are located on major transport routes are
 high. In particular, rates for commercial, retail and food & beverage outlets should be lower
 where good public transport access is available. High parking rates add to development costs
 and encourage private vehicle usage.
- Active frontage, awnings, retail frontage widths. Detailed controls for centres generally lack guidance of important public domain interface issues such as the location (and definition) of active frontages, location of awnings and maximum frontage widths for retail areas. The latter is particularly true in areas where consolidation of adjoining allotments is likely however retaining 'fine grain' development is an import expression of traditional main street character of a centre.
- Work from home and out of centre activity. The 50 sqm maximum area control in the Hornsby LEP is probably unnecessary. The limiting factor of 2-4 people and amenity criteria should be sufficient.

The role of business services in centres is worth considering here. Functions such as post offices, photocopying/printing/binding services or even fully fledged (but small scale) business centres are likely to make HBW a viable option for more people.

Provided that 'home occupation'* and/or 'home business'* are permissible in the appropriate residential areas, there is little else that can be done to facilitate HBW in residential zones. Additional zone objectives could be added in the Standard Instrument residential zones to help facilitate home based work/employment but also protect residential amenity. (*In the NSW LEP template 'home occupation' involves only residents of the dwelling where as 'home business' can involve up to two non-residents.)

Application of the Template Zones

Table 43 and Table 44 show zones drawn from the template to be applied in the areas surveyed as part of this Study in Hornsby and Ku-ring-gai. Additional land uses permissible with consent are



highlighted in red text. Similarly, recommended prohibited land uses are highlighted in red text. This is not an exhaustive list but is intended to be a guide from a strategic perspective.



Table 43. Zones to be Applied in Hornsby

	ZONE	Zone objectives	Compulsory land uses permissible with consent	Recommended additional land uses, permissible with consent	Recommended prohibited land uses.	Application of zone.
B1	Neighbourhood	To provide a range of small-scale	Business premises	Health Consulting Rooms	Office premise	Commercial areas of
	Centre	retail, business and community	Child care centres	Mixed use development	Vehicle repair stations	Neighbourhood Centres. Range
		uses that serve the needs of	Community facilities	Multi unit housing	Warehouse or distribution centre	of services should limited so as
		people who live or work in the	Neighbourhood shops	Service Station	+additional land uses as	not to detract draw activity away
		surrounding neighbourhood.	Shop top housing	+additional land uses as	appropriate	from higher order centres.
				appropriate		
B2	Local Centre	To provide a range of retail,	Business premises	Medical Centre	Bulky goods premises	Commercial areas of Villages,
		business, entertainment and	Child care centres	Mixed use development	Vehicle showroom	Small Villages and in some
		community uses that serve the	Community facilities	Multi unit housing	Warehouse or distribution centre	cases Neighborhood Centres.
		needs of people who live in, work	Educational establishments	Residential flat buildings	+additional land uses as	(Generally Neighbourhood
		in and visit the local area.	Entertainment facilities	+additional land uses as	appropriate	Centre in more remote locations
			Function centres	appropriate		where a broader range of land
		To encourage employment	Information and education facilities			uses in would be appropriate).
		opportunities in accessible	Office premises			
		locations.	Passenger transport facilities			
			Recreation facilities (indoor)			
		To maximise public transport	Registered clubs			
		patronage and encourage walking	Retail premises			
		and cycling.	Service stations			
			Shop top housing			
			Tourist and visitor accommodation			

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ВЗ	Commercial	To provide a wide range of retail, business, office, entertainment, community and other suitable land uses that serve the needs of the local and wider community. To encourage appropriate employment opportunities in accessible locations. To maximise public transport patronage and encourage walking and cycling.	Business premises Child care centres Community facilities Educational establishments Entertainment facilities Function centres Hotel or motel accommodation Information and education facilities Office premises Passenger transport facilities Recreation facilities (indoor) Registered clubs Retail premises	Medical Centre Public administration building Sex Service Premises +additional land uses as appropriate	Residential flat building Multi unit housing	Core of Hornsby Major Centre and potentially areas within Epping Town Centre pending the outcome of further planning investigations being completed by the Department of Planning, Parramatta and Hornsby Councils.
B4	Mixed Use	To provide a mixture of compatible land uses. To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling.	Boarding houses Business premises Child care centres Community facilities Educational establishments Entertainment facilities Function centres Hotel or motel accommodation Information and education facilities Office premises Passenger transport facilities Recreation facilities (indoor) Registered clubs Retail premises Seniors housing Shop top housing	Multi unit housing Residential flat buildings +additional land uses as appropriate	Bulky goods premises Warehouse or distribution centre	Areas in higher order centres where a mix of residential and appropriate non-residential uses is desirable. May be applicable in Village and Small Village Centres

B5	Business Development	To enable a mix of business and warehouse uses, and specialised retail uses that require a large floor area, in locations that are close to, and that support the viability of, centres.	Child care centres Passenger transport facilities Warehouse or distribution centres	Bulky goods premises Depot Food and drink premises Office premises Light industries Neighbourhood shops Medical centre Recreation facility (indoor) Service station Vehicle showroom +additional land uses as appropriate	Residential flat building Multi unit housing +additional land uses as appropriate	Areas generally adjacent centres which can support a range of retail, industrial and other employment and service functions. Retail uses should be managed so as not to detract from core areas. In the case of Hornsby Town Centre, the area recommended for this zone may eventually transition to the B3 or B4
B6	Enterprise Corridor	To promote businesses along main roads and to encourage a mix of compatible uses. To provide a range of employment uses (including business, office, retail and light industrial uses) and residential uses (but only as part of a mixed use development). To maintain the economic strength of centres by limiting retailing activity.	Business premises Community facilities Hotel or motel accommodation Landscape and garden supplies Light industries Passenger transport facilities Timber and building supplies Warehouse or distribution centres	Bulky Goods Premises Function centre Recreation Facility (indoor) Registered club Service station Vehicle showroom +additional land uses as appropriate	Residential flat building Multi unit housing +additional land uses as appropriate	Areas immediately adjacent busy arterial roads where a range of retail, industrial and other employment and service functions are appropriate. In Hornsby these areas are generally thought to be inappropriate for residential development due to traffic volumes and the need to retain these areas for employment and service uses.

IN1	General Industrial	To provide a wide range of industrial and warehouse land uses. To encourage employment opportunities. To minimise any adverse effect of industry on other land uses.	Depots Freight transport facilities Light industries Neighbourhood shops Warehouse or distribution centres	Industries Materials recycling or recovery centre Vehicle body repair workshops Vehicle repair stations +additional land uses as appropriate	Bulky good premises Heavy industry Hazardous industry Offensive industry +additional land uses as appropriate	Industrial areas, or parts thereof, where heavier industrial uses are appropriate.
IN2	Light Industrial	To provide a wide range of light industrial, warehouse and related land uses. To encourage employment opportunities and to support the viability of centres. To minimise any adverse effect of industry on other land uses.	Depots Light industries Neighbourhood shops Warehouse or distribution centres	Food and drink premises Landscape and garden supplies Timber and building supplies Vehicle body repair workshops Vehicle repair stations +additional land uses as appropriate	Bulky goods premises +additional land uses as appropriate	Industrial areas, or parts thereof, where light industrial uses and selected retail uses are appropriate.
		To enable other land uses that provide facilities or services to meet the day to day needs of workers in the area.				

SP1	Special	To provide for special land uses	The purpose shown on the Land	Zone for special land uses or
	Activities	that are not provided for in other	Zoning Map, including any	sites that cannot be
		zones.	development that is ordinarily	accommodate within other
			incidental or ancillary to	zones.
		To provide for sites with special	development for that purpose.	
		natural characteristics that are not		
		provided for in other zones.		
		To facilitate development that is in		
		keeping with the special		
		characteristics of the site or its		
		existing or intended special use,		
		and that minimises any adverse		
		impacts on surrounding land.		
SP2	Infrastructure	To provide for infrastructure and	The purpose shown on the Land	Zone for infrastructure such as
		related uses.	Zoning Map, including any	health service facilities, arterial
			development that is ordinarily	roads and rail.
		To prevent development that is	incidental or ancillary to	
		not compatible with or that may	development for that purpose.	
		detract from the provision of		
		infrastructure.		

Table 44. Zones to be Applied in Ku-ring-gai

B1	ZONE Neighbourhood Centre	Zone objectives To provide a range of small-scale retail, business and community uses that serve the needs of people who live or work in the surrounding neighbourhood.	Land uses permissible with consent Business premises Child care centres Community facilities Neighbourhood shops Shop top housing	Recommended additional land uses, permissible with consent Health Consulting Rooms Mixed use development Multi unit housing Service Station +additional land uses as appropriate	Recommended prohibited land uses. Office premise Vehicle repair stations Warehouse or distribution centre +additional land uses as appropriate	Where zone will generally be used. Commercial areas of Neighbourhood Centres. Range of services should limited so as not to detract draw activity away from higher order centres.
B2	Local Centre	To provide a range of retail, business, entertainment and community uses that serve the needs of people who live in, work in and visit the local area. To encourage employment opportunities in accessible locations. To maximise public transport patronage and encourage walking and cycling.	Business premises Child care centres Community facilities Educational establishments Entertainment facilities Function centres Information and education facilities Office premises Passenger transport facilities Recreation facilities (indoor) Registered clubs Retail premises Service stations Shop top housing Tourist and visitor accommodation +additional land uses as appropriate	Medical Centre Mixed use development Multi unit housing Residential flat building +additional land uses as appropriate	Bulky goods premises Vehicle showroom Warehouse or distribution centre +additional land uses as appropriate	Commercial areas of Villages and Small Villages.

B4	Mixed Use	To provide a mixture of compatible land uses. To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling.	Boarding houses Business premises Child care centres Community facilities Educational establishments Entertainment facilities Function centres Hotel or motel accommodation Information and education facilities Office premises Passenger transport facilities Recreation facilities (indoor) Registered clubs Retail premises Seniors housing Shop top housing	Multi unit housing Residential flat buildings +additional land uses as appropriate	Warehouse or distribution centre	Areas in higher order centres where a mix of residential and appropriate non-residential uses is desirable. (Recommended use of this zone is limited to a small area to the north of the Gordon Town Centre.)
B5	Business Development	To enable a mix of business and warehouse uses, and specialised retail uses that require a large floor area, in locations that are close to, and that support the viability of, centres.	Child care centres Passenger transport facilities Warehouse or distribution centres	Bulky goods premises Depot Food and drink premises Office premises Light industries Neighbourhood shops Medical centre Recreation facility (indoor) Service station Vehicle showroom +additional land uses as appropriate	Residential flat building Multi unit housing +additional land uses as appropriate	Areas generally adjacent centres which can support a range of retail, industrial and other employment and service functions. Retail uses should be managed so as not to detract from core areas.

В7	Business Park	To provide a range of office and light industrial uses. To encourage employment opportunities. To enable other land uses that provide facilities or services to meet the day to day needs of workers in the area.	Child care centres Light industries Neighbourhood shops Office premises Passenger transport facilities Warehouse or distribution centres	Function centre Health consulting rooms Medical centre Recreation facility (indoor) Registered clubs Restaurant +additional land uses as appropriate	Residential flat building Multi unit housing +additional land uses as appropriate	Likely to be utilized at the Pymble Office Park. Protect the core employment function of this area by the application of a specific employment zoning that prohibits residential development and limits retail land uses.
SP1	Special Activities	To provide for special land uses that are not provided for in other zones. To provide for sites with special natural characteristics that are not provided for in other zones. To facilitate development that is in keeping with the special characteristics of the site or its existing or intended special use, and that minimises any adverse impacts on surrounding land.	The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose.			Zone for special land uses or sites that cannot be accommodate within other zones.
SP2	Infrastructure	To provide for infrastructure and related uses. To prevent development that is not compatible with or that may detract from the provision of infrastructure.	The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose.			Zone for infrastructure such as health service facilities, arterial roads and rail.

The application of the Standard zones by centre is shown in Table 45 and Table 46.

The study recommends the application of five commercial zones in Hornsby (B1, B2, B3, B4, B5, B6). It is not intended the this study provides a direct correlation between the existing zones and the template zones, however in general the following relationship could be used as a general guide:

EXISTING ZONE	PROPOSED ZONE
Business A (General)	B2 Local Centre
Business B (Special) Business C (Neighbourhood)	B3 Commercial Core and/or B1 Neighbourhood Centre
Business F (Town Centre)	B3 Commercial Core
Business G (Town Centre Support)	B5 Business Development

We recommend the retention of two separate industrial zonings that roughly correspond to Industrial A and Industrial B. through the use of IN1 General Industry and IN2 Light Industry.

The full details of zone objectives and permissible and prohibited land uses are required before decisions regarding appropriate application of these zones can be been determined.

Table 45. Application of Zones by Centre in Hornsby

Hornsby	Designation	Planning Controls	Notes
(E) Asquith	Employment Land (i) IN1	IN2	The Shire's largest industrial precinct with 206,161 sqm floorspace. The precinct has almost one third of the total freight and logistics floorspace for the Shire (32.8%) with significant shares of heavy manufacturing and light manufacturing floorspace (31% and 30% respectively. Within the precinct itself, freight and logistics land uses take up a large proportion (35% of the precinct's floorspace). The precinct has a potential supply of 179,059 sqm. In light of forecast demand in the 2006-2031 period, the precinct has 'excess supply' of 163,227 sqm. Recommended zoning for the precinct is IN1 – general industrial and IN2 - light industrial reflecting the current division between Industrial A and B.
(E) Dural Service Centre	Employment Land (ii) IN2	B2	Dural Service Centre has a mixed industrial and local service profile. The precinct accounts for a significant share of the Shires Urban Services (US) floorspace (12.4%) with significant shares of Freight and Logistics (6%) and Bulky Goods Retail (6.1%). Within the centre, big box retail, Bulky Goods Retail and freight logistics occupy the majority of the land. The precinct has 145,414 sqm potential floorspace supply. In light of forecast demand in the 2006-2031 period, the precinct has excess supply of 142,056 sqm of floorspace. This precinct has supply potential more than ten times the demand forecast in the 2006-2031 period
			There is no zone within the Standard Instrument that, either through its objectives or compulsory permissible land uses, reflects the current range of land uses permissible under the Business E zoning that currently applies to the Dural Service Centre. The recommended strategy for future zoning of this area would be to apply the IN2 zoning and as far is possible including as many permissible land uses in the zone that would be desirable in this area, bearing in mind that these uses would then also be permissible on all other IN2 zoned land. In order to introduce some additional variety of local service uses, a part of the Dural Service Centre could be zoned B2 Local Centre. The area of land with this commercial zoning should be limited so as not to encourage significant additional employment and services in an out of centre locations. In addition to the permissible uses (with consent) in the LEP standard instrument, we have added a range of additional retail and local service uses. Additional zone objectives should be introduced reflect the broader range of anticipated uses.
(E) Mt Ku-ring-gai	Employment Land (i) IN1		Mt Ku-ring-gai is a significant industrial precinct with 115,705 sqm of floorspace. The precinct has high shares of the total heavy and light manufacturing in the Shire (26% and 25% respectively). Within the precinct, the predominant land is freight and logistics which accounts for 42% of the total floorspace. The precinct has very high potential floorspace supply of 354,438 sqm. However, some of the land in this precinct is constrained. After taking this into account, the potential floorspace supply figure is 138,865 sqm. Using this smaller potential supply figure, the precinct still has an excess supply of 129,309 sqm to accommodate forecast demand. This precinct has supply potential more than ten times the demand forecast in the 2006-2031 period. Recommended zoning for the precinct is IN1 – general industrial.

(E) Thornleigh	Employment Land (i)	IN1	IN2
(E) Kookaburra Road	Employment Land	IN2	
Appletree Dr-Cherrybrook	Neighbourhood Centre	B1	
Appletice Bi Gliefly brook	reignoumou contro	ы	
Asquith	Village	B2	
Beecroft	Village	B2	
Berowra	Small Village	B2	
	······g-		

Thornleigh is the Shire's second largest industrial precinct with a total floorspace of 140,360 sqm. The precinct has significant shares of the heavy and light manufacturing with 36% and 33% of the total Shire's floorspace in these categories. Within the precinct itself, the predominant land uses are freight and logistics (20%), light manufacturing 17% and 'heavy manufacturing' 15%. The precinct has a floorspace supply potential of 51,637 sqm. In light of forecast demand in the 2006-2031 period, the precinct has excess supply of 59,811 sqm. This precinct has supply potential more than ten times the demand forecast in the 2006-2031 period. This result is driven by a forecast decline in demand for the predominant industrial land uses. Recommended zoning for the precinct is IN1 – general industrial and IN2 - light industrial reflecting the current division between Industrial A and B.

Kookaburra Rd is a small light industrial area with 6,336 sqm of employment floorspace. Within the centre the predominant use is freight and logistics (50%). The centre has a floorspace supply potential of 4,711 sqm. After the share adjustment, the centre has excess supply of 4,516 sqm. Recommended zoning for the area is IN2 – light industrial.

Appletree Drive, Cherrybrook is a small Neighbourhood Centre with 1,589 sqm of floorspace. Within the centre the predominant land uses are big box retail (27%), Main Street Retail (20%) and special uses (22%). The centre has supply potential of -11sqm in the 80% of max FSR scenario. This apparent shortfall is typically the result retail operations having significant proportions of *internal* space that do not count towards the total floorspace in the FSR calculations. The centre has a supply shortfall of 154 sqm to accommodate the forecast demand in the 2006-2031 period. We would not suggest altering controls to accommodate the small floorspace gap. Recommended zoning is B1 - Neighbourhood Centre.

Asquith is a Village Centre with 7,402 sqm of floorspace. Within the centre the predominant land uses are big box retail (31%), Main Street Retail (21%). The centre has a supply potential of 13,610 sqm. In light of forecast demand in the 2006-2031 period, the centre has excess supply of 9,246 sqm. Recommended zoning is B2 - Local Centre.

Beecroft is a Village Centre with 11,528 sqm of floorspace. Within the centre, the predominant land uses are big box retail (31%), Main Street Retail (20%). The centre has a supply potential of 10,301 sqm. In light of forecast demand in the 2006-2031 period, the centre has excess supply of 6,441 sqm. Recommended zoning is B2 - Local Centre.

Berowra is a Small Village with 6,151 sqm of floorspace. Within the centre, the predominant land uses are: big box retail (30%) and Main Street Retail (25%). The centre has a supply potential of 13,155 sqm. In light of forecast demand in the 2006-2031 period, the centre has an excess supply of 12,752 sqm. This centre has floorspace supply potential more than ten times the demand forecast – attention should be given to reducing some of the supply capacity. Recommended zoning is B2 – Local Centre.

Berowra Hts Small Village B2

Berowra Waters Neighbourhood Centre B1

Brooklyn Neighbourhood Centre **B1**

Carlingford Court Stand Alone Shopping Centre B2 B5

Berowra Heights is a Small Village with 11,497 sqm of floorspace. Within the centre, the predominant land uses are big box retailing (31%) and Main Street Retail (27%). The centre has a floorspace supply potential of 13,242 sqm. In light of forecast demand in the 2006-2031 period, the centre has excess supply of 13,335 sqm. This centre has floorspace supply potential more than ten times the demand forecast – attention should be given to rezoning some of the existing employment land Recommended zoning at this centre is B2 – Local Centre. As the potential supply at this centre is more than ten times the forecast demand, some reduction of the employment area is recommended.

Berowra Waters is a Neighbourhood Centre with 1,359 sqm of floorspace. Within the centre, the predominant uses are big box retail (34%) and Main Street Retail (29%). The centre has a floorspace supply potential of 6,583 sqm. In light of forecast demand in the 2006-2031 period, the centre has an excess supply of 6,450 sqm. This centre has floorspace supply potential more than ten times the demand forecast – attention should be given to rezoning some of the existing employment land Recommended zoning in B1 – Neighbourhood Centre.

Brooklyn is a Neighbourhood Centre with 4,368 sqm of floorspace. Within the centre, the predominant uses are: big box retail (37%) and Main Street Retail (30%). The centre has supply potential of 4,052 sqm. In light of forecast demand in the 2006-2031 period, the centre has an excess floorspace supply of 3,738 sqm – attention should be given to reducing capacity at this centre. Recommended zoning at the centre is B1 – Neighbourhood Centre.

The status of this centre as Neighbourhood Centres reflects the relatively modest local residential catchments and limited non-residential development. The commercial areas of these centre could be zoned B2 Local Centre (as opposed to B1) as such a broader range of land uses may be appropriate in these more remote Neighbourhood Centre locations.

Carlingford Court is a stand alone shopping centre with 45,499 sqm of floorspace. The centre accounts for a significant share of the total Shire bulky goods and big box retail (7% and 4% respectively). The centre also hosts a significant share of the Shire's local light industry at 5%. Within the centre itself, the predominant uses are: big box retail (32%) and Main Street Retail (21%). The centre has a supply potential of -3,024 sqm. This apparent existing shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls. In light of forecast demand in the 2006-2031 period, the centre has a supply shortfall of 5,918 sqm.

B2- Local Centre and B5 – Business Development zoning is appropriate generally corresponding to the existing Business A and Business B areas respectively; this will permit a range of retail, light industrial. No change to the FSR controls is recommended, this will limit the amount of office activity as the centre is already close or at capacity.

The designation of Carlingford Court as a stand alone shopping centre acknowledges that whilst this facility provides the functions of a local or subregional centre, it does not have the spatial structure, public domain quality or civic character of a traditional Local Centre.

Cowan Neighbourhood Centre B1

David Rd-Castle Hill Neighbourhood Centre B1

Edgeworth David Ave-Waitara Neighbourhood Centre B1

Epping Town Centre B2 B4

Cherrybrook is a Village Centre with 12,393 sqm of floorspace. Within the centre, the dominant uses are: big box retail (37%) and Main Street Retail (23%). The centre has potential floorspace supply of 17,690 sqm. In light of forecast demand in the 2006-2031 period, the centre has an excess supply of 17,526. This centre has floorspace supply potential more than ten times the demand forecast – attention should be given to rezoning some of the existing employment land Recommended zoning for the centre is B2 – Local Centre.

Cowan is a Neighbourhood Centre with 263 sqm of floorspace – predominantly in the retail trade categories. Potential supply at the centre is 183sqm. In light of forecast demand in the 2006-2031 period, the centre has excess supply of 186 sqm to accommodate the forecast demand in the period 2006-2031. Recommended zoning for the centre is B2 – Local Centre.

David Road, Castle Hill is a Neighbourhood Centre with 3,013 sqm of employment floorspace. Within the centre the predominant uses are: big box retail (311%) and Main Street Retail (23%). The centre has supply potential of -116 sqm. This apparent existing shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls. In light of forecast demand in the 2006-2031 period, the centre has a supply shortfall of 335 sqm. Given the very small supply-demand gap we would not suggest altering the planning controls. Recommended zoning for the centre is B1 – Neighbourhood Centre.

Edgeworth David Avenue, Waitara is a Neighbourhood Centre with 2,489 sqm of employment floorspace. Within the centre, the predominant uses are: big box retail (37%) and Main Street Retail (21%) and the centre also has a significant proportion of local light industry (19%). The centre has floorspace supply potential of -12 sqm. This apparent existing shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls. In light of forecast demand in the 2006-2031 period, the centre has a supply shortfall of 144 sqm. Given the very small supply-demand gap we would not suggest altering the planning controls. Recommended zoning for the centre is B1 – Neighbourhood Centre.

Epping is a Town Centre with 62,550 sqm of employment floorspace (in the surveyed area within Hornsby LGA). The centre accounts for high shares of the total Shire floorspace in office (10%), business park (9%) and freight and logistics (7%) categories. Within the centre, uses with the most significant shares of floorspace are: freight and logistics (26%), office (16%) and big box retail (16%). Epping has potential floorspace supply of 5,167sqm. In light of forecast demand in the 2006-2031 period, the centre has a supply shortfall of 2,078 sqm. This is driven largely by very strong forecast demand for office space. Increasing FSR limits would accommodate the supply-demand gap. Recommended zoning for the centre is predominantly B2 – Local Centre. The B4 mixed use zone would apply in areas of existing and future high density residential and where future residential growth and additional retail and commercial floor space is desirable given transport infrastructure and amenity and in light of Subregional dwelling and employment targets. B3 zoning may be appropriate spending on the outcomes of the joint Council and DoP study.

Galston Local Centre B1

Galston Rd-Hornsby Hts Neighbourhood Centre B1

Hornsby Major Centre B3 B4 B5

Galston is a Neighbourhood Centre with 4,189 sqm of floorspace. Within the centre, the predominant uses are: big box retail (35%) and Main Street Retail (20%). The centre has a potential floorspace supply of -3,792 sqm. This apparent existing shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls. In light of forecast demand in the 2006-2031 period, the centre has a supply shortfall of 3,741 sqm. Given Galston's existing status in the hierarchy, economic profile, size, location and infrastructure access alterations to the controls to address the supply-demand gap are not recommended. Recommended zoning for the centre is B2 – Local Centre.

Galston Rd, Hornsby Heights is a Neighbourhood Centre with 1,161 sqm of employment floorspace. Within the centre, the predominant uses are: big box retail (38%) and Main Street Retail (22%). The centre has a floorspace supply potential of -59sqm. This apparent existing shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls. In light of forecast demand in the 2006-2031 period, the centre has a supply shortfall of 116 sqm. We do not recommend changing the planning controls to address this gap. Recommended zoning for the centre is B1 – Neighbourhood Centre.

Hornsby is the sub-region's Major Centre and has a total of 419,696 sqm of employment floorspace. The centre is by far the centre in the Shire and in terms of floorspace accounts for: 63% of the short term accommodation, 59% of dispersed activities, 34% of local light industry, 54% of big box retail, 40% of Bulky Goods Retail and 48% of Main Street Retail. Within the centre, the predominant uses are: big box retail 34% and Main Street Retail; (21%). Hornsby centre has floorspace supply potential for 218,658 sqm. In light of forecast demand in the 2006-2031 period (including the accommodation of Subregional Strategy targets), the centre has excess supply of 33,592 sqm.

Recommended zoning for the central commercial area (the east side of the railway line) encompassing Westfield up to Linda Street is B3 – Commercial Core. A dedicated commercial core is important given the need to increase the degree of office land use in the centre. B3 - Commercial core zoning or B4 – Mixed use zoning should also be considered on the west side, given that further commercial activity on the east side is compromised by residential development. B3 zoning here would be a more conservative option to try to 'secure' commercial development on the west side.

Recommended zoning for the area north of Linda Street bound by Hunter and George Streets is B5 – Business Development. This will allow a range of commercial and industrial uses that require larger lot sizes to operate close to the centre. This area would also serve as land bank for the future expansion of the commercial core area to the north. Some B4 – mixed use zoning may be appropriate outside the commercial core where high density residential is desirable in addition to commercial operations. The industrial strip running along Jersey Street is recommended to be zoned B5 – Business Development.

Hospital Precinct	Health Services Facility	SP2
Mt Ku-ring-gai Shops	Neighbourhood Centre	B1
Malton Rd-North Epping	Neighbourhood Centre	B1
Mt Colah Shops	Neighbourhood Centre	B1
Mt Colah Stn	Neighbourhood Centre	B1
Myrtle St-Normanhurst	Neighbourhood Centre	B1

Linetth Commisses Facility CD3

Hannital Descions

The hospital precinct has 59,788 sqm of employment floorspace and accounts for substantial share of the Shire's special use floorspace (40%). Within the precinct, the predominant use is special use (57%). The precinct has floorspace supply potential of 23,936 sqm. In light of forecast demand in the 2006-2031 period, there is excess supply of 23,083 sqm. Recommended zoning for the precinct is SP2 – Health Services Facility. Permissible land uses would then be: The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose.

The Mt Ku-ring gai shops area is a small Neighbourhood Centre with 1,114 sqm of employment floorspace. The centre has some small retail businesses and has potential floorspace supply of 486 sqm. In light of forecast demand in the 2006-2031 period, the centre has an excess supply of 469 after accommodating the forecast demand in the 2006-2031 period. Recommended zoning for the centre is B1 – Neighbourhood Centre.

Malton Road, North Epping is a Neighbourhood Centre with 1,808 sqm of employment floorspace. The centre has some small retail businesses and has potential floorspace supply of 167 sqm. In light of forecast demand in the 2006-2031 period, the centre has an excess supply of 89sqm. Recommended zoning for the centre is B1 – Neighbourhood Centre.

Mt Colah shops is a Neighbourhood Centre with 2,978 sqm of employment floorspace. The centre has some small retail businesses and has potential floorspace supply of 5,859 sqm. In light of forecast demand in the 2006-2031 period, the centre has an excess supply of 5,808 sqm after accommodating the forecast demand in the 2006-2031 period. The centre has capacity of more than ten times the demand forecast and some reduction in capacity is recommended. Recommended zoning for the centre is B1 – Neighbourhood Centre.

The status of this centre as Neighbourhood Centres reflects the relatively modest local residential catchments and limited non-residential development. The commercial areas of these centre could be zoned B2 Local Centre (as opposed to B1) as such a broader range of land uses may be appropriate in these more remote Neighbourhood Centre locations.

Mt Colah station is a Neighbourhood Centre with 1,502 sqm of employment floorspace. The centre has some small retail businesses and has potential floorspace supply of 438 sqm. In light of forecast demand in the 2006-2031 period, the centre has an excess supply of 301 sqm. Recommended zoning for the centre is B1 – Neighbourhood Centre.

Myrtle Street, Normanhurst is a Neighbourhood Centre with 660 sqm of employment floorspace. The centre has some small retail businesses and has potential floorspace supply shortfall of 180 sqm. This apparent existing shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls In light of forecast demand in the 2006-2031 period, the centre has a supply shortfall of 197 sqm after accommodating the forecast demand in the 2006-2031 period. Given the very small shortfall, no adjustment to the planning controls is recommended zoning for the centre is B1 – Neighbourhood Centre.

Normanhurst Neighbourhood Centre B1

Pennant Hills Village B2 B5 B6

Pennant Hills Rd-Thornleigh Enterprise Corridor **B6 B5**

Normanhurst is a Neighbourhood Centre with 1,770sqm of employment floorspace. The centre has some small retail businesses and has potential floorspace supply shortfall of 454 sqm. This apparent existing shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls. The centre has a supply shortfall of 510 sqm after accommodating the forecast demand in the 2006-2031 period. Given the very small shortfall, no adjustment to the planning controls is recommended. Recommended zoning for the centre is B1 – Neighbourhood Centre.

Pennant Hills is a Village Centre with 84,349 sqm of employment floorspace. The centre accounts for a significant share of the total office floorspace in the Shire with 9%. The centre also has a significant share of total residential floorspace (in employment zones) with 9% and 11% of short term accommodation floorspace. Within the centre, the predominant uses are: big box retail (26%) and Main Street Retail (22%). The centre has potential floorspace supply of 1,158 sqm. The centre has a shortfall of 211 sqm to accommodate forecast demand in the 2006-2031 period. We would not recommend adjusting the controls at this centre.

Recommended zonings are: B2 for the 'traditional' centre (area generally north of Pennant Hills Road and West of the rail line); B5 for the triangular area generally south of Pennant Hills Road and West of the rail line; and B6 for areas that are immediately adjacent Pennant Hills Road, generally north of the Crescent. B6 may also be appropriate for land that is current commercially zoned, adjacent Pennant Hills Road and south of Fischer Avenue.

NOTE: These recommendations are only intended to provide broad guidance regarding the spatial application of different land use zones within the centre. Further on the ground analysis is recommended to determine the optimal utilisation of the new Standard Instrument zones.

Pennant Hills Rd, Thornleigh is a Neighbourhood Centre with 12,941 sqm of employment floorspace. Within the centre, the predominant uses are: big box retail (27%) and Main Street Retail (26%). The centre has floorspace supply shortfall of 22 sqm. This apparent shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls. The centre has excess supply of 3,908 sqm to accommodate the demand forecast in the period 2006-2031.

Pennant Hills Road, Thornleigh is recommended as an Enterprise Corridor by virtue of it's location on and exposure to Pennant Hills Road. The B6 Enterprise Corridor Zoning should be applied to those areas immediately adjacent to Pennant Hills Road (currently both Business B and C). Other adjacent employment land, located adjacent the rail line and not immediately adjacent Pennant Hills Road may be zoned B5 Business Development. The proposed Bulky Goods Retail development at 180-190 Pennant Hills Road should be within a proposed B6 Enterprise Corridor zone. Bulky Goods Retail should be included as a permissible development in the B6 zone. As such we do not feel that it would jeopardise the viability of the industrial precinct or the centre.

Plympton Rd Shops-Epping

Neighbourhood Centre

B1

Sefton Rd-Thornleigh

Neighbourhood Centre

B1

Thornleigh

Village

B2

B5

B6

Plympton Road shops, Epping is a Neighbourhood Centre with 1522 sqm of employment floorspace and characterised by a selection of small retail and service businesses. The centre has floorspace supply shortfall of 25 sqm. This apparent existing shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls. In light of forecast demand in the 2006-2031 period, the centre has a supply shortfall of 120 sqm. Adjustment to the planning controls to accommodate the small supply demand gap is not recommended. Recommended zoning for the centre is B1 – Neighbourhood Centre.

Sefton Road, Thornleigh is a Neighbourhood Centre with 1,292 sqm of employment floorspace. Within the centre, the predominant uses are local retail and services with a significant proportion of freight and logistics activity. The centre has floorspace supply potential of 8,353 sqm. After share adjust6ment, the centre has excess supply of 8,207 sqm. This centre has floorspace supply potential more than ten times the demand forecast. Recommended zoning the centre is B1 – Neighbourhood Centre.

Thornleigh is a Village Centre with 63,204 sqm of employment floorspace. The centre accommodates a significant share of the Shire's total office and business park floorspace (9% and 9%). Within the centre, the key uses are big box retail (25%) and Main Street Retail (18%). The centre has a floorspace supply shortfall of 5,361 sqm. This apparent existing shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls. In light of forecast demand in the 2006-2031 period the centre has a supply shortfall of 8,992 sqm. The demand at Thornleigh is largely driven by growth in demand for office space at the centre. Increasing FSRs could address the demand supply gap. Recommended zoning is a combination of B2 - Local Centre for the area immediately adjacent to the station; B6 Enterprise Corridor for areas that are immediately adjacent to Pennant Hills Road.

NOTE: These recommendations are only intended to provide broad guidance regarding the spatial application of different land use zones within the centre. Further on the ground analysis is recommended to determine the optimal utilisation of the new Standard Instrument zones.

Waitara is a Village Centre with 33,929 sqm of employment floorspace. Within the centre the predominant land uses are: big box retail (32%) and Main Street Retail (24%). The centre has a floorspace supply shortfall of 4,678 sqm. This apparent existing shortfall is the result of some of the internal space of buildings not counting towards the floorspace in the FSR calculation under the existing controls. Some action to address the shortfall is advised for Waitara bust this should compromise the growth of Hornsby – especially in terms of the re-positioning of Hornsby as an employment destination. In light of forecast demand in the 2006-2031 period the centre has a supply shortfall of 10,242 sqm.

Alexandria Parade, Waitara is a Village Centre reflecting the size of the residential population within walking distance of this centre. The existing industrial land is recommended as an Enterprise Corridor by virtue of it's location on and exposure to the Pacific Highway. The northern portion of this area that is further from the Pacific Highway may be retained as industrial zoned land if there is thought to be a need to provide for a wider range of uses in the area.

Waitara

Village B2

B6

West Pennant Hills Small Village B2

Westleigh Small Village B2

Wiseman's Ferry Neighbourhood Centre B1

Yallambee Road Neighbourhood Centre B1

West Pennant Hills, on Pennant Hills Road, has been classified as a Small Village. In 2006, total employment floorspace on business zoned land was 7,569 sqm, which is a relatively small share of all floorspace across the LGA. Retailing in the primary land use within this centre, with some Local Light. There is scope to accommodate future demand within existing controls. Zone B2 – Local Centre and Zone B4 – Mixed Use are the most appropriate zone for this location. This centre has floorspace supply potential more than ten times the demand forecast – attention should be given to rezoning some of the existing employment land – attention should be given to rezoning some of the existing employment land. There is sufficient capacity under existing controls to accommodate future demand.

Located on Duffy Avenue, this small centre consists primarily of Retail Main Street, and includes a supermarket. In 2006, total employment floorspace on business zoned land was 8,315 sqm. The centre accounts for a relatively small share of all floorspace across the LGA. Zone B2 – Local Centre is most appropriate zones for this location. While this centre has floorspace supply potential more than ten times the demand forecast this is also an area of high historical population growth. No action to reduce capacity is recommended.

Wiseman's Ferry is one of many small Neighbourhood Centres, it also plays a role as a day-trip destination. In 2006, total employment floorspace on business zoned land was 3,622 sqm. The centre only account for a very small share of all floorspace across the LGA. There is insufficient potential floorspace within the centre to meet future demand, with a shortfall of 267 sqm. This reflects limited capacity within the existing controls. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

Yallambee Rd contains a very small share of Hornsby LGA's total floorspace. In 2006, total employment floorspace on business zoned land was 624 sqm. Retailing is the primary land use. Demand forecasts indicate a small increase in the required floorspace, which is unable to be accommodated within the current controls. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

Table 46. Application of Zones by Centre in Ku-ring-gai

KRG	Designation	Planning Controls	Notes
East Killara	Neighbourhood Centre B1		East Killara is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land was 1,137sqm in this centre, which only accounts for a very small share of all floorspace across the LGA. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 601 sqm. This reflects the relatively low forecast of future demand within this centre. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.
East Lindfield	Neighbourhood Centre B1		East Lindfield is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land, in this centre, was 1,309 sqm. The centre accounts for a very small share of all floorspace across the LGA. Within the centre the primary BLC is Retail Main Street, with some Local Light industry. There is insufficient potential floorspace within the centre to meet future demand, with unmet demand for 470 sqm. This reflects the relatively limited potential supply. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.
Eastern Rd-Turramurra	Neighbourhood Centre B1		Eastern Road Turramurra is a small Neighbourhood Centre with a predominantly retail focus. In 2006, the centre had a total of 1,290sqm. After taking account of the forecast demand in the 2006-2031 period, this centre has an excess supply of 583 sqm. Recommended zoning for this centre is B1 – Neighbourhood Centre.
Fox Valley	Neighbourhood Centre B1		Fox Valley is a small Neighbourhood Centre, located in proximity to the SAN hospital. In 2006, total employment floorspace on business zoned land, in this centre, was 2,863. Special Activities (31%) and Retail Main Street are the primary land uses within this centre. There is insufficient potential floorspace within the centre to meet future demand, with unmet demand for 409 sqm. This reflects the relatively limited potential supply. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.
Gordon	Town Centre B2	B7 B4	Gordon is the primary centre within Ku-ring-gai LGA and will be the focus for future retail, commercial and residential growth. In 2006, total employment floorspace on business zoned land was 99,034 sqm. Retail Big Box, Retail Main Street, Office and Business Park are the primary uses within Gordon Town Centre, with Gordon accommodating 38.2% of Ku-ring-gai LGA's total office floorspace. The centre also includes over 40% of the LGA's floorspace which is used for short-term accommodation, 35.6% of the LGA's Business Park and 28.5% of the LGA's Retail Big Box.
			There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 67,881 sqm. This reflects the relatively large potential supply of floorspace under the Draft LEP. While for Ku-ring-gai's principal centres, there is ample floorspace to accommodate 2031 forecast demand, some intensification around transport nodes may be desirable for broader planning purposes. In Gordon, increased FSRs may be appropriate. Zone B2 – Local Centre would be appropriate for the Main Street Retail areas. Zone B7 – Business park would be appropriate for the area north of Fitzsimmons Lane. Zone B4 – Mixed Use is recommended for the area north of Merriwa Street and South of

Fitzsimmons Lane.

Hampden Ave -N Wahroonga Neighbourhood Centre B1 Killara Neighbourhood Centre B1 Lindfield Village North Turramurra Neighbourhood Centre B2 Princes St-Turramurra Neighbourhood Centre B1

Hampden Avenue Shop, North Wahroonga is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land was 868 sqm. The centre only accounts for a very small share of all floorspace across the LGA. Land uses within the centre are primarily Retail Main Street and Local Light. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 1,822 sqm. This centre has floorspace supply potential more than ten times the demand forecast – attention should be given to rezoning some of the existing employment land. This reflects the relatively low forecast of future demand within this centre. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

Killara is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land, in this centre, was 378sqm. The centre accounts for a very small share of all floorspace across the LGA. Retail Main Street is the primary land use. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 403 sqm. This reflects the relatively low forecast of future demand within this centre. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

Lindfield, located on the train line, contains a range of retailing to meet the needs of local residents. In 2006, total employment floorspace on business zoned land in the centre was 37,631 sqm. Lindfield accounts for 16% of the LGA's Special land uses, and approximately 10% of the LGA's Main Street Retail and Dispersed activities. Within the centre, the primary land use is Main Street Retail. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 24,737 sqm. This reflects the large potential supply of floorspace. Zone B2 – Local Centre would be appropriate for this location.

North Turramurra is one of many Neighbourhood Centres, and it contains a range of retailers and service providers to meet the needs of local residents. In 2006, total employment floorspace on business zoned land, in this centre, was 4,989 sqm. Retail Main Street is the primary land use within this centre. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 652 sqm. This reflects the relatively low forecast of future demand within this centre. Zone B2 – Local Centre would be appropriate for this location.

Princess Street Turramurra is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land, in this centre, was 1,328 sqm. The centre only accounts for a very small share of all floorspace across the LGA. Retail Main Street is the primary land use within the centre. There is sufficient potential floorspace to meet future demand in this location, with excess capacity of 417 sqm. This reflects the relatively low forecast of future demand within this centre. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

Pymble Small Village B2

Pymble Office Park Business Park B7

Small Village

B2

Roseville Chase Neighbourhood Centre B1

Roseville

Located on the train line, Pymble accommodates predominantly retailers and service providers, however, there are also some office buildings within the centre. In 2006, total employment floorspace on business zoned land was 18,775 sqm. Pymble accommodates over 5% of the LGA's floorspace within the following categories: Business Park, Dispersed activities, Office, Retail Main Street and Special use. Within the centre the primary land use is Retail Main Street. Office accounts for 12.8% of floorspace within the centre. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 10,004 sqm. This reflects the relatively low forecast of future demand within this centre. The centre contains some office buildings and potential for further office space should be considered in the application of zoning. Zone B2 – Local Centre would be appropriate

Pymble office park is located in proximity to the junction of Lane Cove Road and Pacific Highway. It accommodates a range of businesses in modern commercial buildings. In 2006, total employment floorspace in this area, on business zoned land, was 88,999 sqm. The key land uses are Freight and Logistics, Office, Business Park and Local Light. The area accounts for one third of the LGA's Office and Business Park floorspace. Considering future demand and potential supply, there is a shortfall of 19,412 sqm in this area. This is driven by increasing office based employment. We recommend increasing FSRs to accommodate this shortfall. Zone B7 – Business park is recommended with retail restricted to neighbourhood shops.

Roseville centre is divided by Pacific Highway and the train line. Roseville Cinema is a key attractor to this centre. In 2006, total employment floorspace on business zoned land was 17,528 sqm. Retail Main Street is the primary land use within the centre. Roseville accounts for approximately 5% of the LGA's retail floorspace. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 15,907 sqm. This reflects the forecast of negative future demand within this centre (-165sqm). This centre has floorspace supply potential more than ten times the demand forecast – attention should be given to reducing capacity at this centre. Zone B2 – Local Centre would be appropriate for this location.

Roseville Chase is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land, in this centre, was 2,383 sqm. The centre accounts for a very small share of all floorspace across the LGA. Retail Main Street is primary land use. There is a very small shortfall of 19 sqm when capacity against the demand forecast. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

Seventh Day Adventist Site

Health Services Facility

SP2

South Turramurra

Neighbourhood Centre

B1

St Ives

Village

B2

St Ives Chase

Neighbourhood Centre

B1

Recommended zoning for the hospital precincts (both Hornsby and the SAN) is Infrastructure zoning: SP2 (Health Services Facility). Permissible land uses would then be: The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose. It would be the role of the DOP to determine whether the retail, commercial and residential uses proposed are "ordinarily incidental or ancillary to development".

In terms of the proposed expansion of the precinct, the question is whether this development and/or the associated retail, commercial and residential components are better accommodated in existing higher order centres. We feel that a specialised centre status for the SAN site is not justified and would risk encouraging out of centre development that may adversely impact on the centres strategy.

South Turramurra is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land was 1,210 sqm. The centre only accounts for a very small share of all floorspace across the LGA. Retailing was the primary land use within this centre. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 1,829 sqm. This centre has floorspace supply potential more than ten times the demand forecast – attention should be given to rezoning some of the existing employment land. This reflects the relatively low forecast of future demand within this centre. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

St Ives is the key location offering comparison goods retailing within Ku-ring-gai LGA. It consists of an enclosed shopping centre and some Main Street Retailing. St Ives Village Shopping centre performs strongly, with a relatively high retail turnover density (RTD). In 2006, total employment floorspace on business zoned land was 47,122 sqm. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 37,946 sqm. This reflects the relatively low forecast of future demand within this centre following share adjustment. While there may be pressure for increasing floorspace, particularly at the shopping centre based on demand for retail, this is not in line with the Metropolitan or Subregional Strategies which seek to locate retailing in areas which are easily accessible by public transport. Zone B2 – Local Centre would allow for appropriate uses in this location.

St Ives Chase is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land, in this centre was 927 sqm. The centre only accounts for a very small share of all floorspace across the LGA. Retailing was the primary land use within this centre. There is sufficient potential floorspace within the centre to meet future demand, with a supply shortfall of 78 sqm. This reflects the relatively low forecast of future demand within this centre. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

St Ives North Neighbourhood Centre B1 Turramurra Village B2 Small Village Wahroonga B2 West Gordon Neighbourhood Centre B1 West Lindfield Neighbourhood Centre B1 West Pymble Neighbourhood Centre B1

St Ives North is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land was 2,092 sqm.

The centre accounts for a very small share of all floorspace across the LGA. Retailing is the primary land use within this centre. St Ives North has sufficient potential floorspace within the centre to meet future demand, with excess capacity of 1,841 sqm. This reflects the relatively low forecast of future demand within this centre. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

Located on the train line, Turramurra offers a range of retailing including a supermarket. In 2006, total employment floorspace on business zoned land was 28,712 sqm. Retailing is the primary land use, with some Local Light, Business Park and Office. Turramurra accommodates approximately 8% of the LGA's retail floorspace and over 10% of the LGA's Dispersed activities. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 51,264 sqm. Given that capacity is ten times the demand forecast in the 2006-2031 period, attention should be given to reducing capacity at this centre. Zone B2 – Local Centre would allow for appropriate uses in this location.

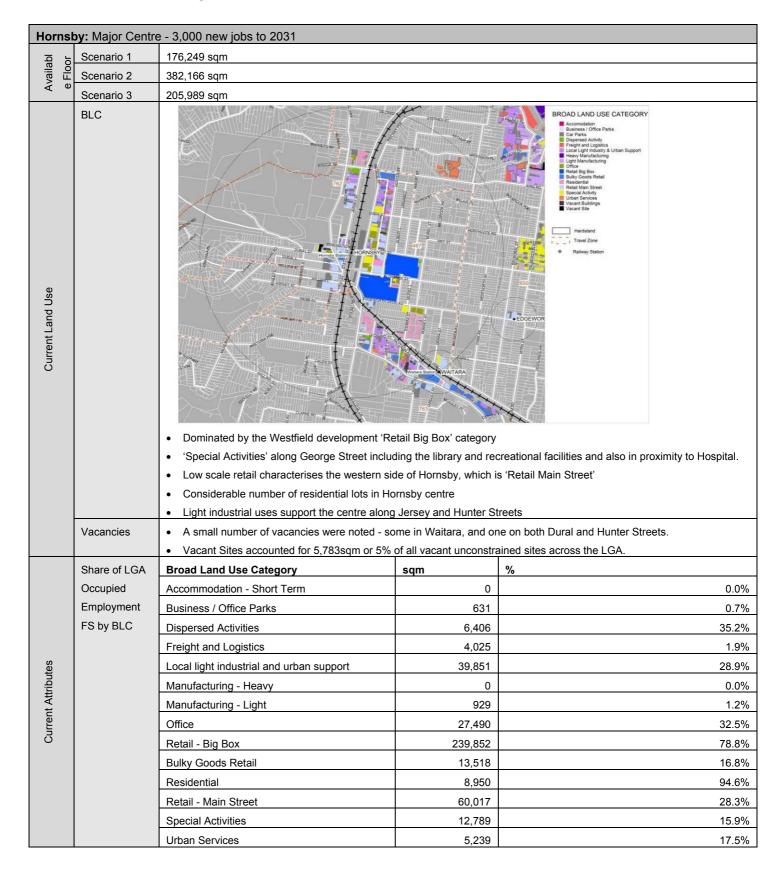
Located on the train line, Wahroonga offers a range of retailing and encompasses high quality open space. In 2006, total employment floorspace on business zoned land, in this centre, was 11,510 sqm. Retail Main Street is a key land use. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 4,667 sqm. This reflects the relatively large potential supply of floorspace. Zone B2 – Local Centre is the most appropriate zone for this location.

West Gordon is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land, in this centre was 961 sqm. The centre only accounts for a very small share of all floorspace across the LGA. Retailing is the primary land use within this centre. There is insufficient potential floorspace within the centre to meet future demand, with a capacity shortfall of 236 sqm. This reflects a relatively small demand forecast, but fairly limited supply. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

West Lindfield is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land was 4,484sqm. The centre accounts for a very small share of all floorspace across the LGA. Retailing is the primary land use within this centre. There is insufficient potential floorspace within the centre to meet future demand, with a capacity shortfall of 334 sqm. Zone B1 – Neighbourhood Centre is the most appropriate zone for this location.

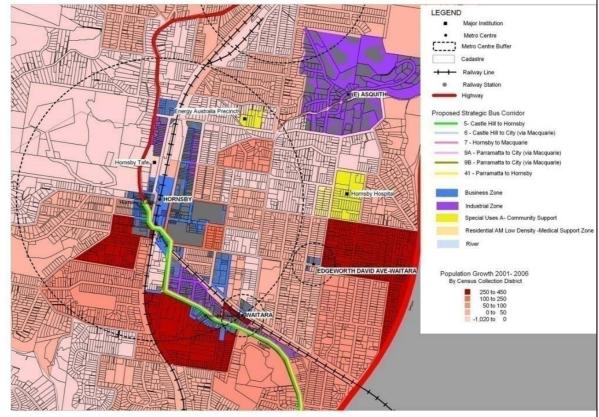
West Pymble is one of many small Neighbourhood Centres. In 2006, total employment floorspace on business zoned land was 3,622 sqm.. The centre only account for a very small share of all floorspace across the LGA. Retailing is the primary land use within this centre. There is sufficient potential floorspace within the centre to meet future demand, with excess capacity of 3,832 sqm. This reflects the relatively low forecast of future demand within this centre. Zone B1 – Neighbourhood Centre would allow for appropriate uses in this location.

Appendix A – Assessment of Key Centres (Village and Larger)

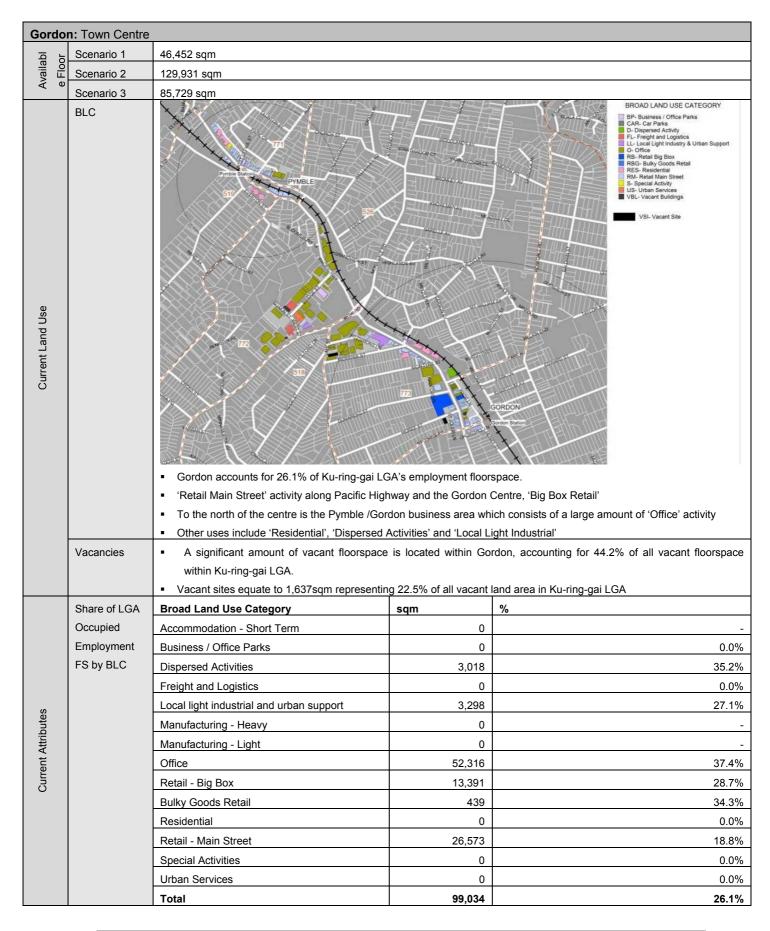


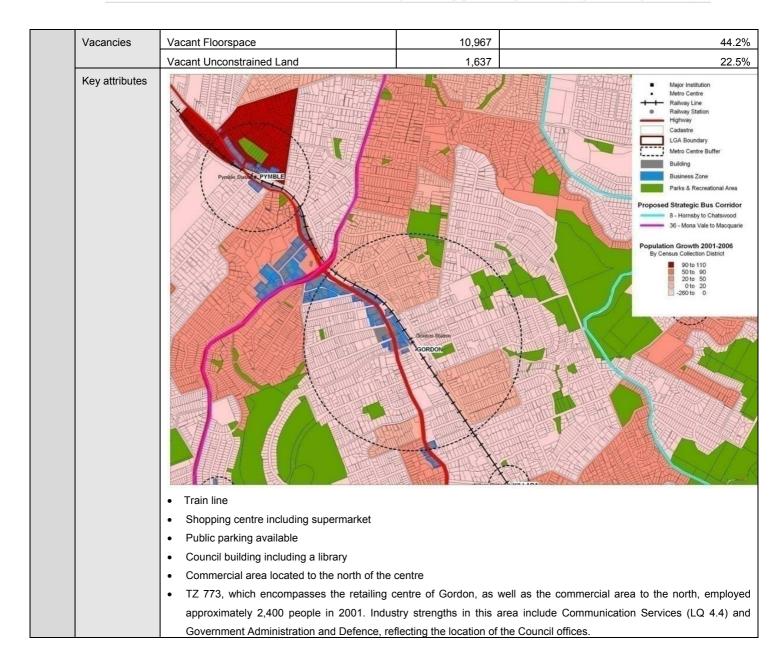
	Total	419,696	29.5%
Vacancies	Vacant Floorspace	56,372	33.3%
	Vacant Unconstrained Land	5,783	4.9%

Key attributes



- Good public transport connections, with further investment occurring to provide an additional platform at Hornsby Station
- TAFE and Council buildings including Library
- Large enclosed shopping centre and pedestrian mall
- Small amount of adjacent industrial land along Hunter and Jersey Street. The sub regional strategies identify an opportunity to broaden permissible uses in these locations.
- High density residential development occurring in proximity to the centre
- Small scale retailing on western side of station
- Employment lands within Hornsby Major Centre are located within TZs 467,762 and 763. In this area, 2001 employment numbers show a relative concentration of employment in 'Retail Trade', 'Education' and 'Government Administration and Defence', reflecting Hornsby's role a retail centre, as well as the presence of the TAFE and government buildings including the Council Chambers.

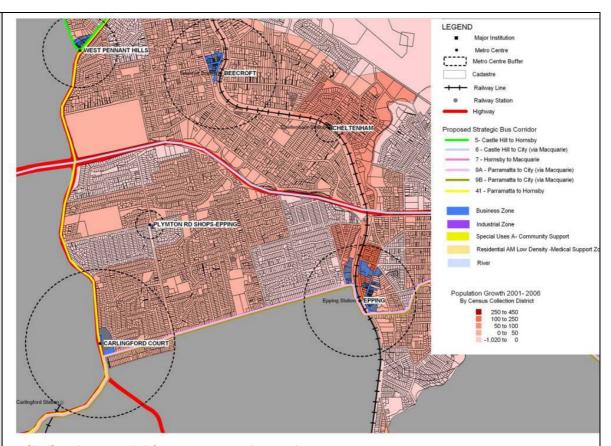




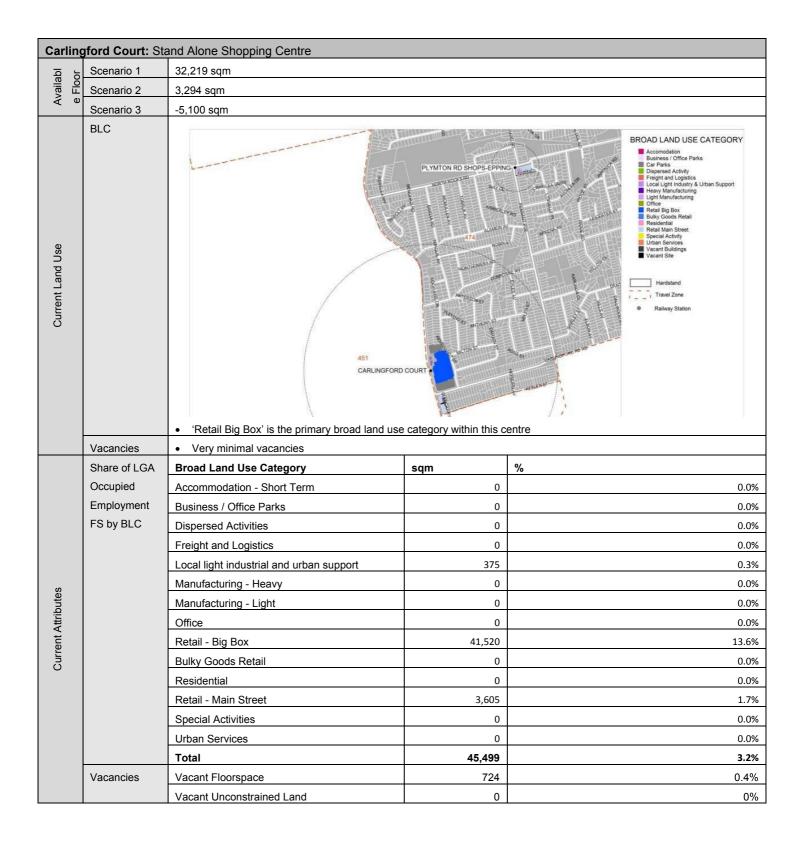
Epping	g: Town Centre						
Availabl e Floor	Scenario 2	21,831 sqm					
e §	Scenario 3	5,167 sqm					
Current Land Use	BLC	Epping accounts for 38.1% of the LGA's floorspace within the office land use category, while only accounting for 4.4% of total floorspace. A significant amount of 'Office' BLC 'Retail Main Street' is located opposite the eastern exit of the station, and along Oxford St. 'Dispersed Activity' includes medical services and places of worship. Within the centre, but outside the LGA (Travel Zone 828), there are additional 'Retail Main Street' uses, including a					
	 supermarket. In the same area, there is also the Epping Club and Epping Hotel. Vacancies There is very limited capacity at Epping in terms of vacant floorspace or vacant sites 						
	Share of LGA	Broad Land Use Category	sqm	%			
	Occupied	Accommodation - Short Term	0	0.0%			
	Employment Business / Office Parks		0	0.0%			
	FS by BLC	Dispersed Activities	6,699	36.8%			
		Freight and Logistics	16,227	7.5%			
		Local light industrial and urban support	324	0.2%			
		Manufacturing - Heavy	0	0.0%			
ntes		Manufacturing - Light	0	0.0%			
vttrib		Office	32,272	38.1%			
Current Attributes		Retail - Big Box	0	0.0%			
Surre		Bulky Goods Retail	0	0.0%			
J		Residential	0	0.0%			
		Retail - Main Street	6,818	3.2%			
		Special Activities	172	0.2%			
		Urban Services	38	0.1%			
		Total	62,550	4.4%			
	Vacancies	Vacant Floorspace	2,721	1.6%			
		Vacant Unconstrained Land	492	0.4%			



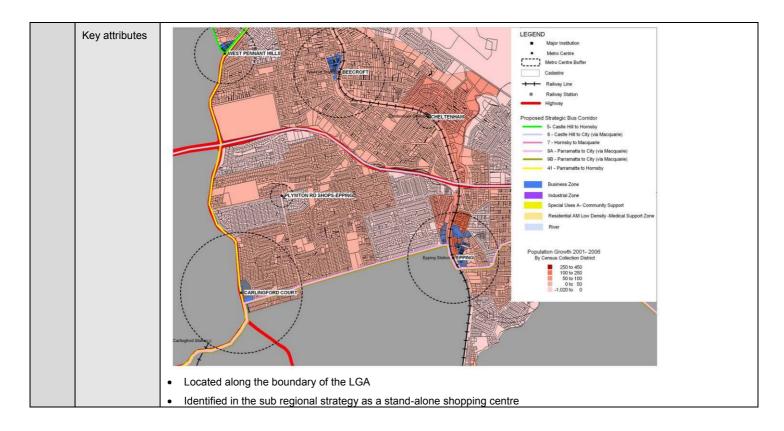


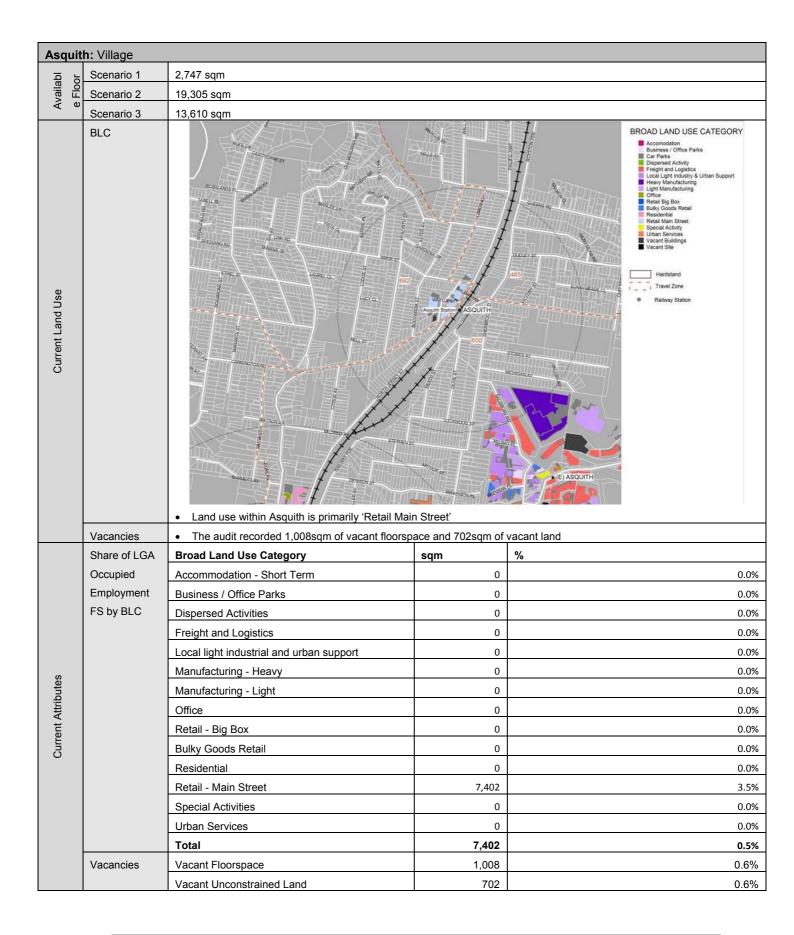


- Significant investment in infrastructure new rail connection
- Proximity to Macquarie Park where significant growth is expected to occur
- 20 km (an estimated 25 minutes travel time) from Sydney CBD
- · Centre is split between LGAs
- In 2001, TZs 829 and 830 employed approximately 2,100 people, within a concentration of employment in the 'Finance and Insurance' industry.

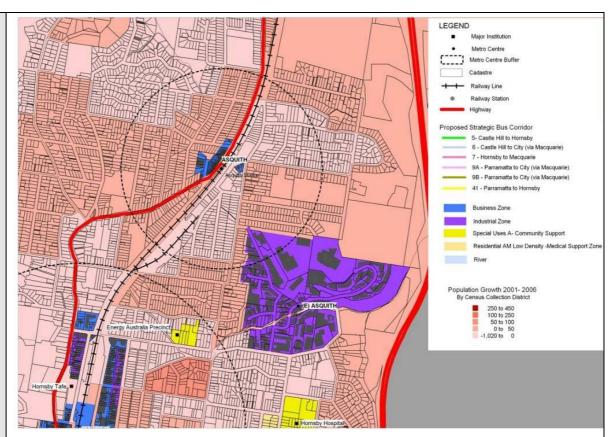




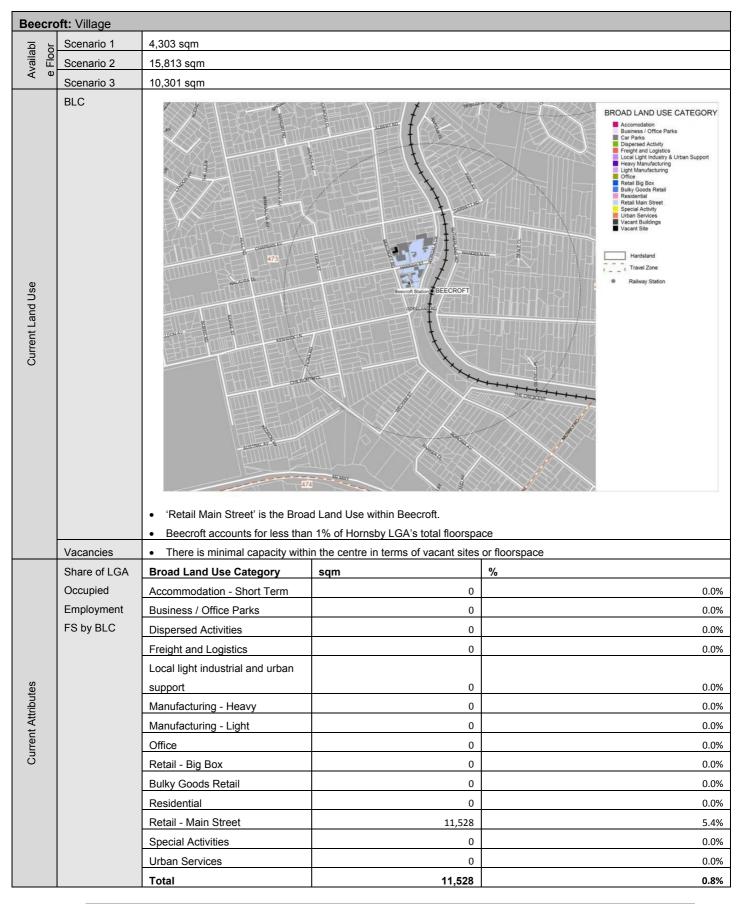




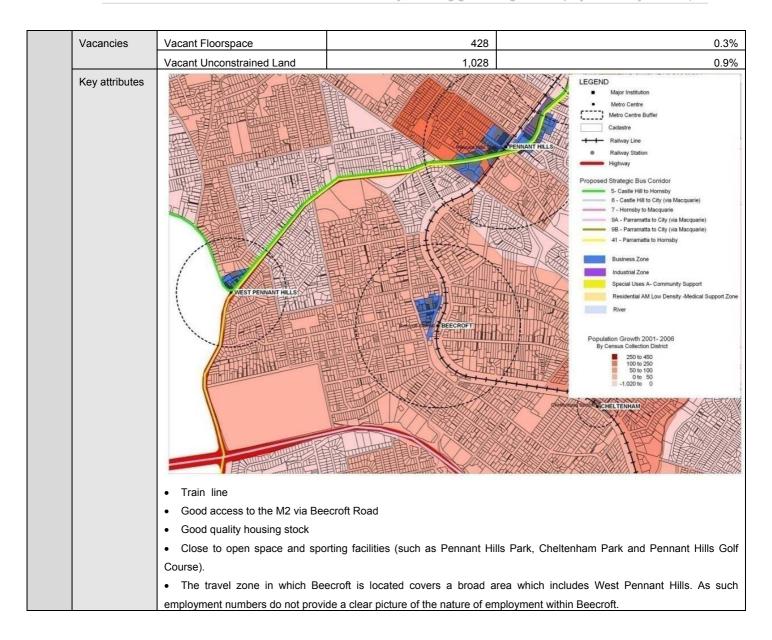


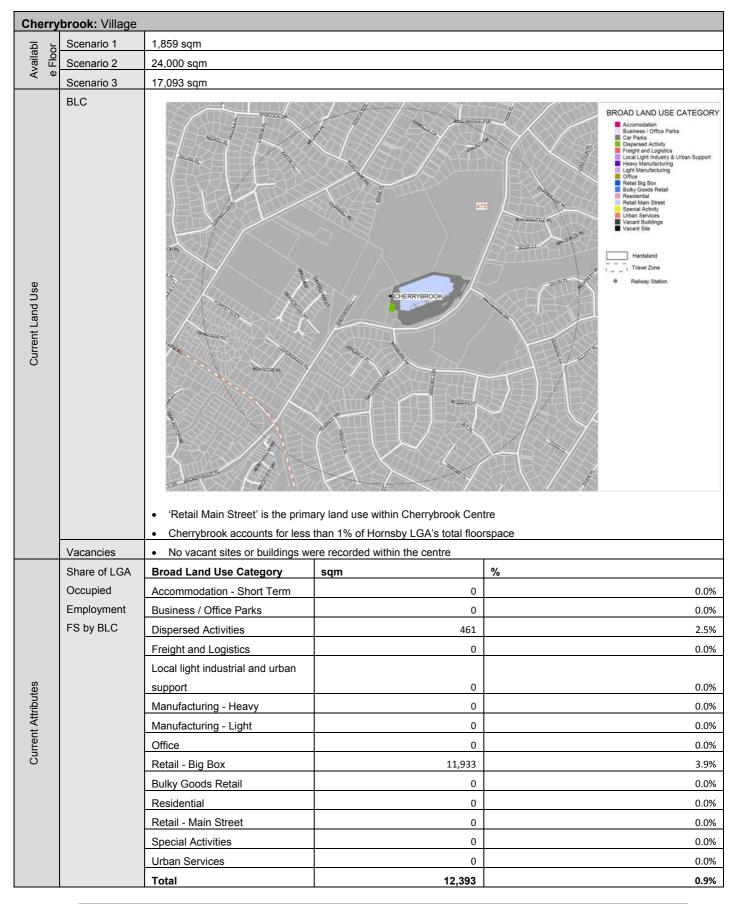


- Poorly performing centre, in close proximity to Hornsby
- Provides local services, including doctor's surgery, post office and dry cleaners.
- Train line
- Entry to F3 south-bound from Ku-ring-gai Chase Road
- Proximity to employment lands
- TZ 692 employed approximately 900 people in 2001, with apparent strengths in a range of industry sectors, however in terms of the absolute numbers; these represent a small number of employees. The travel zone also covers an area significant wider than Asquith centre.

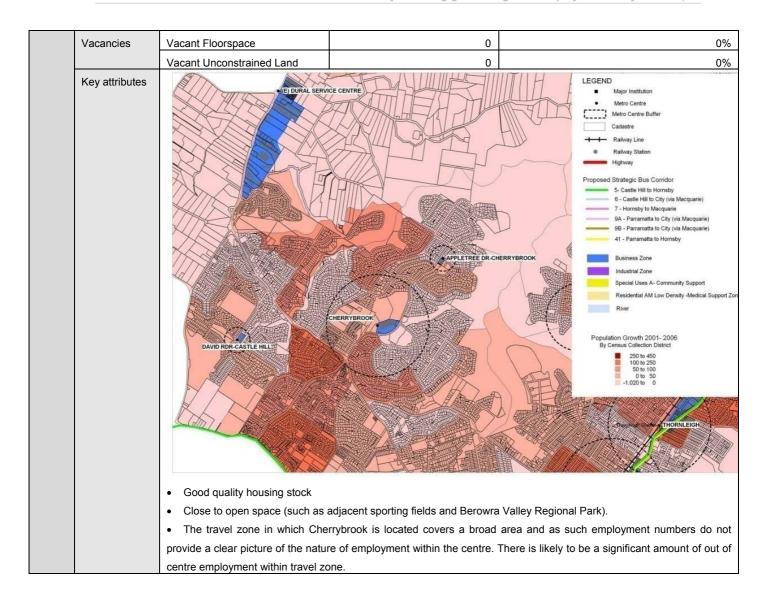


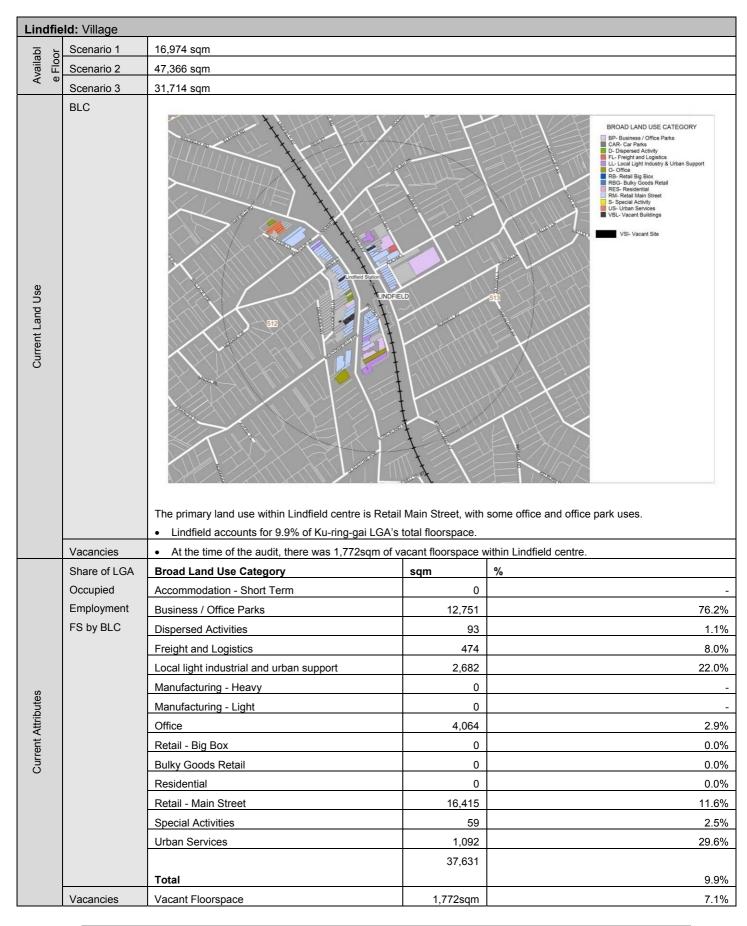




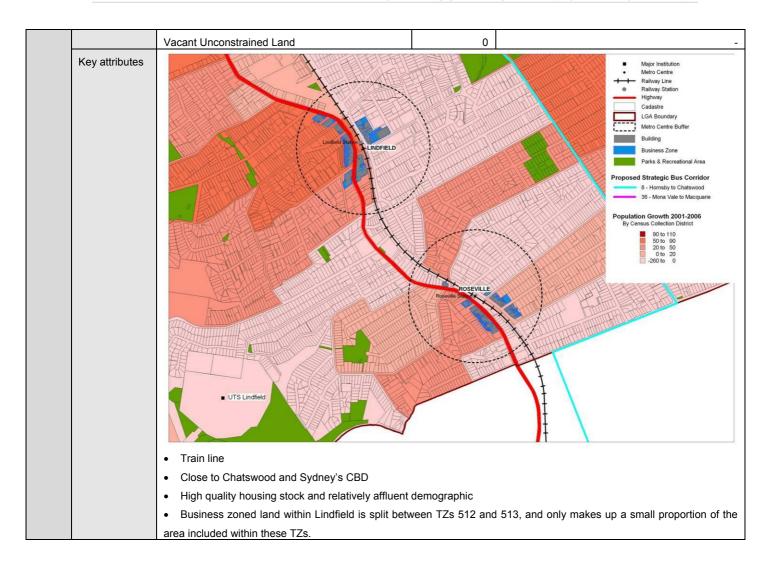


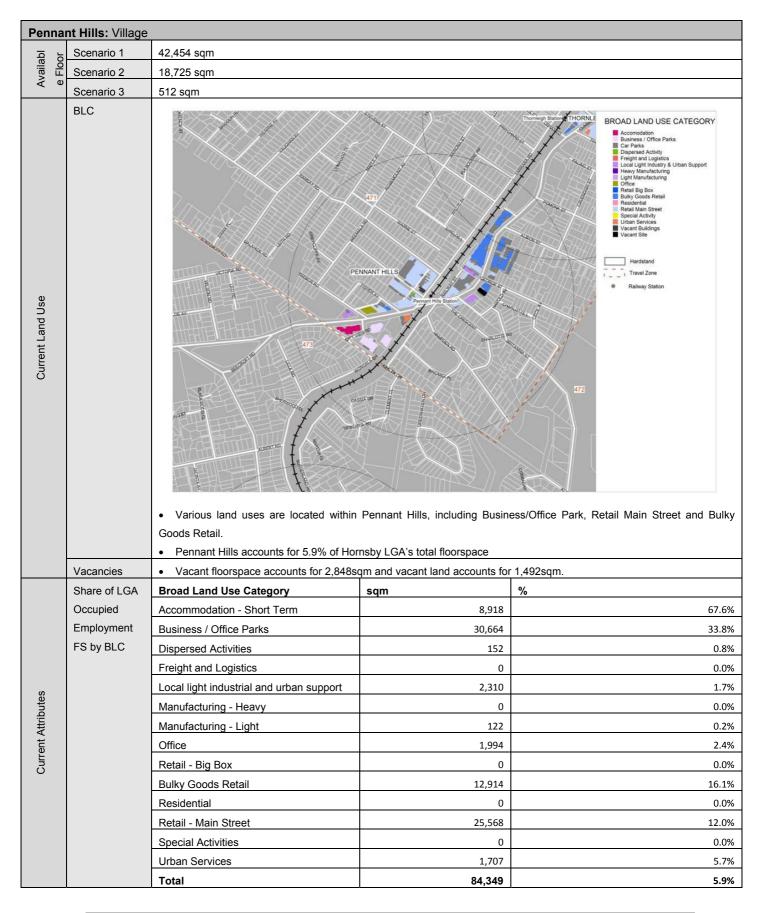




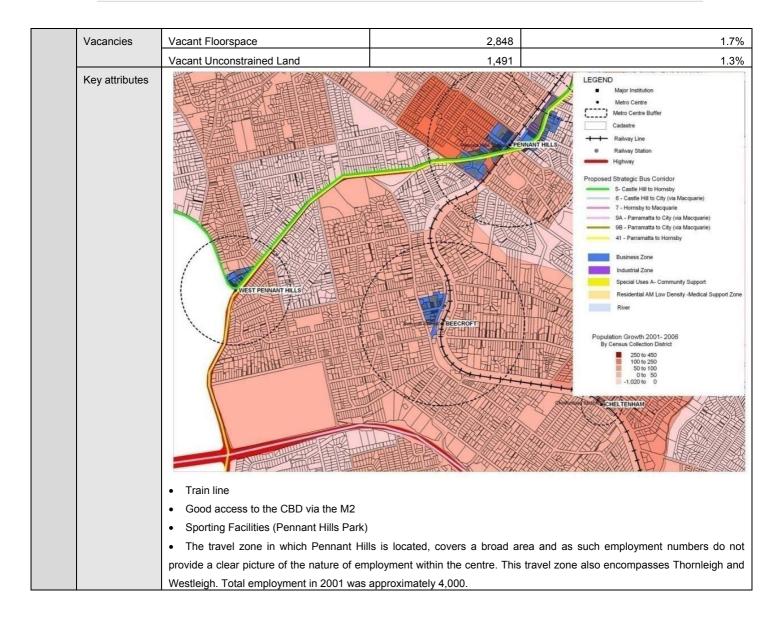


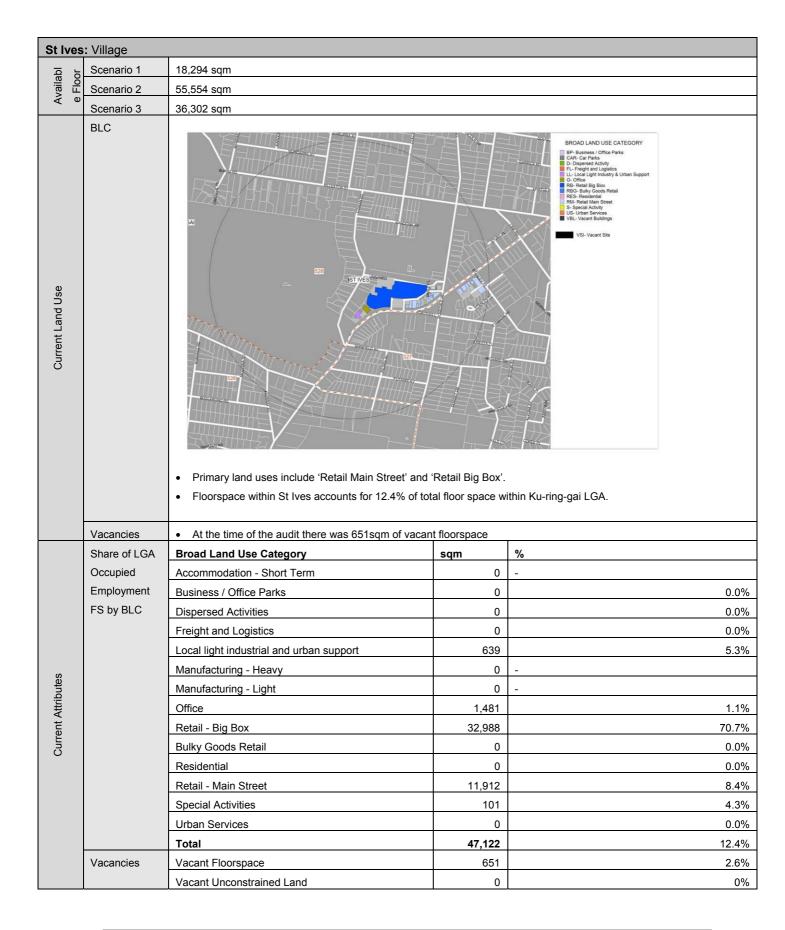








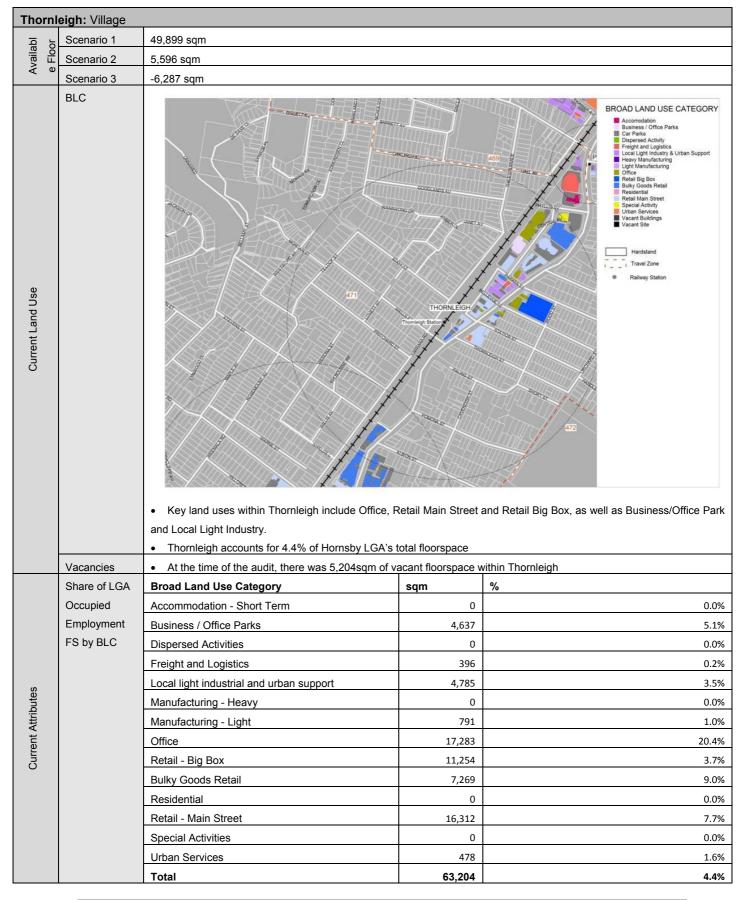




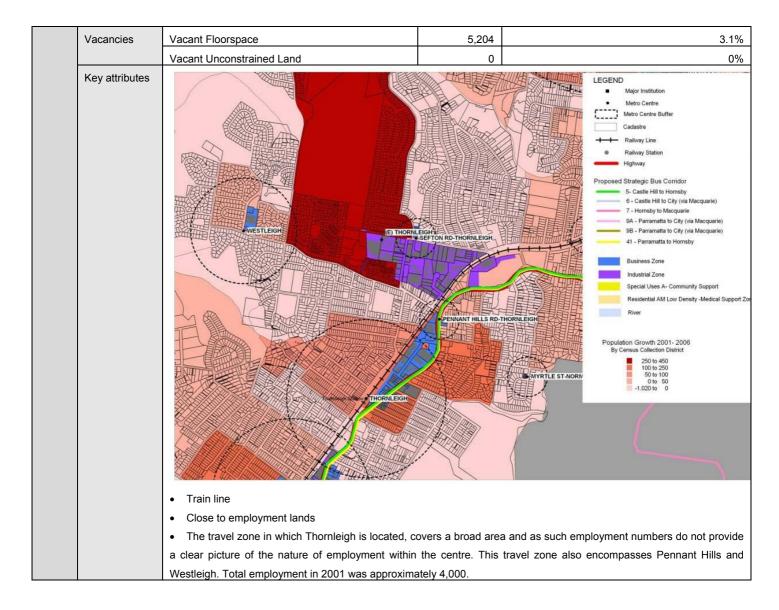




- Well performing shopping centre in a relatively affluent area
- High quality housing stock
- Access to open space (St Ives Village Green and Pymble Golf Course)
- Poor public transport access
- Some Council owned carparking
- St Ives is mostly located within TZ 528, which in 2001, had approximately 800 retail employees





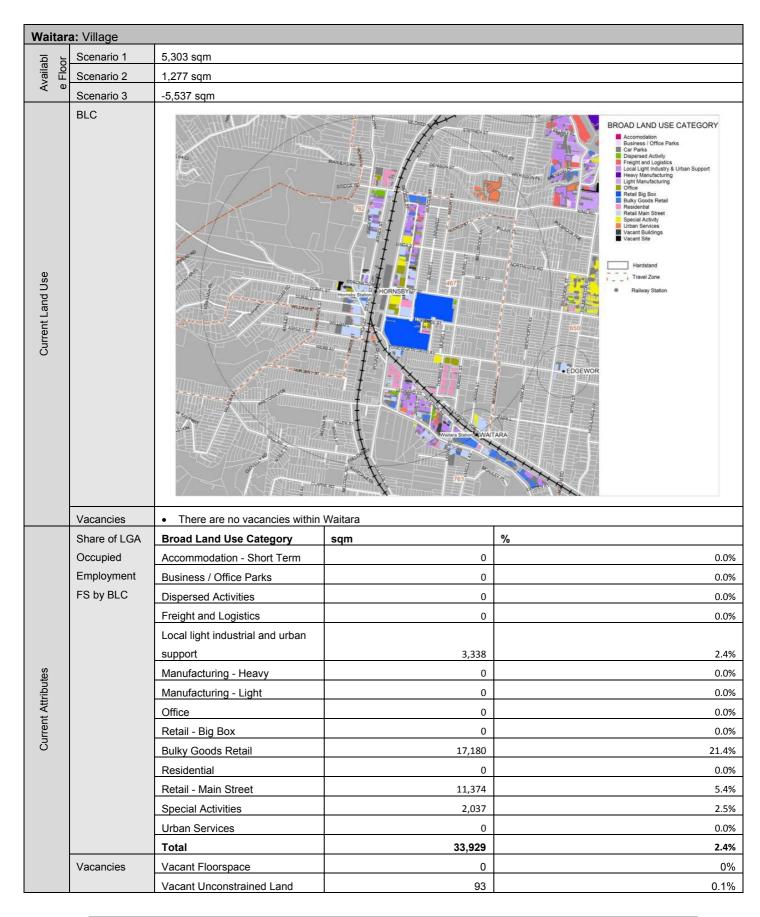


Turran	nurra: Village			
	Scenario 1	13,166 sqm		
Availabl e Floor	Scenario 2	68,980 sqm		
é o	Scenario 3	49,352 sqm		
Current Land Use	BLC		Il amount of 'Special Activitie	BROAD LAND USE CATEGORY BP-Business / Office Parks CAR- Car Parks D- Dispersed Activity FI- Freight and Logistics LL- Local Light Industry & Urban Support O- Office RB- Retail flag Bion RB- Retail
	Vacancies	the audit.		26.5% of all vacant land recorded by the LGA in
	Share of LGA	A significant amount of vacant floorsp Broad Land Use Category		
	Occupied	Broad Land Use Category	sqm	<u> </u>
	Employment	Accommodation - Short Term	0	0.0%
	FS by BLC	Business / Office Parks Dispersed Activities	1,570	18.3%
		Freight and Logistics	0	0.0%
		Local light industrial and urban support	628	5.2%
		Manufacturing - Heavy	0	-
utes		Manufacturing - Light	0	-
ttrib		Office	1,031	0.7%
ant A		Retail - Big Box	0	0.0%
Current Attributes		Bulky Goods Retail	177	13.8%
		Residential	0	0.0%
		Retail - Main Street	23,199	16.4%
		Special Activities	1,755	74.9%
		Urban Services	351	9.5%
		Total	28,712	7.6%
	Vacancies	Vacant Floorspace	4,758	19.2%
		Vacant Unconstrained Land	1,932	26.5%

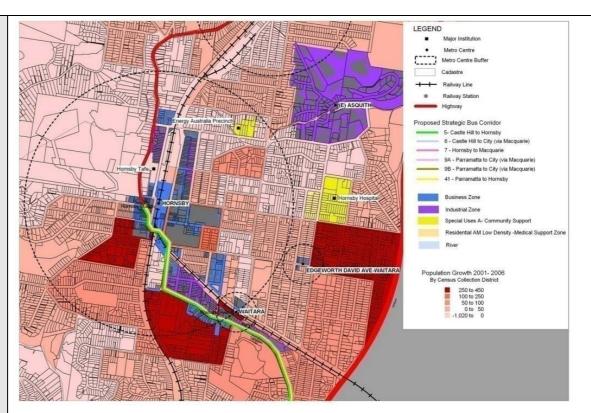




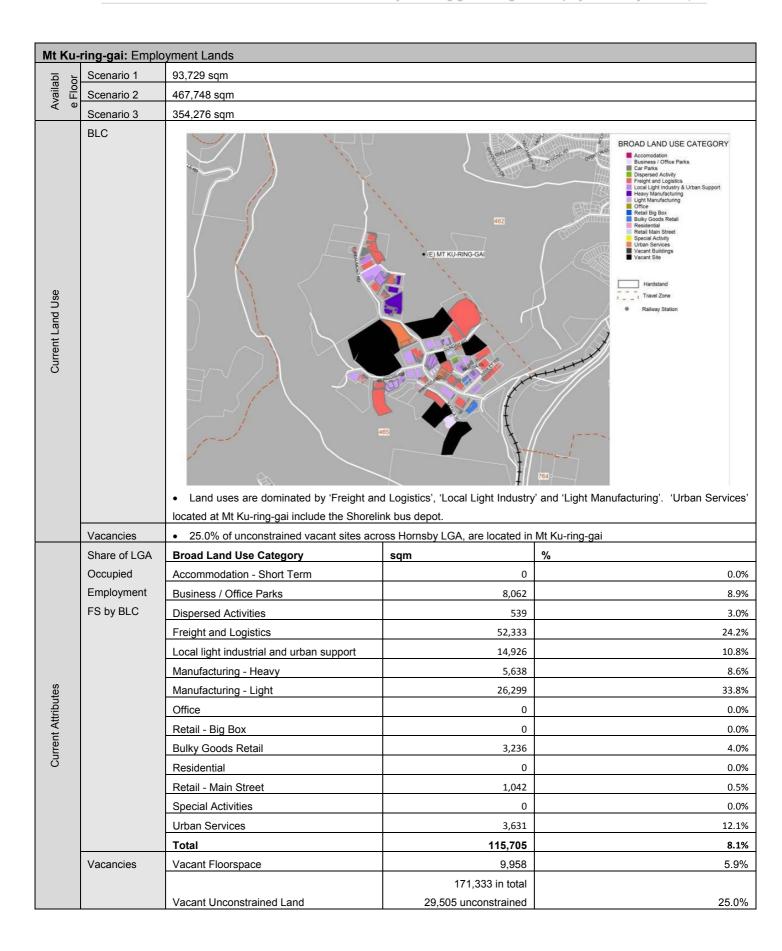
- Train line
- Community facilities including a Senior Citizens Centre and Health Centre.
- Access to the F3
- High quality housing stock
- Public carpark
- Turramurra is divided into two travel zones, 522 and 525, both of which cover a broad area, hence it is difficult to determine precise employment numbers for these centres.



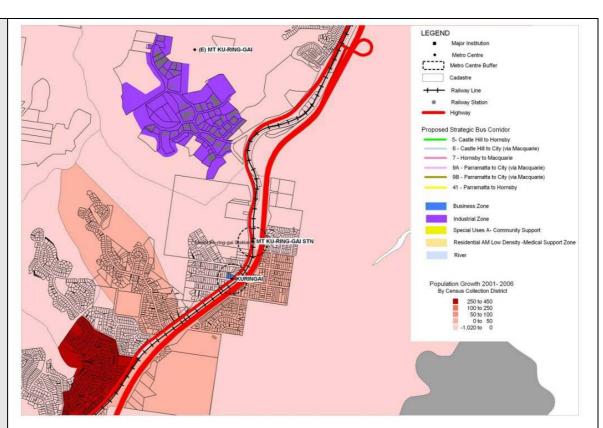




- Significant high density residential development
- Close proximity to Hornsby Centre
- Rail-line
- · Access to the F3
- Good access to a range of public, private and catholic schools.
- The suburb is divided by the train line and Pacific Highway
- Waitara is located within Travel Zone 763 which employed approximately 1,800 people in 2001, with a relative concentration of employment in 'Education' located in Special Use Zones.

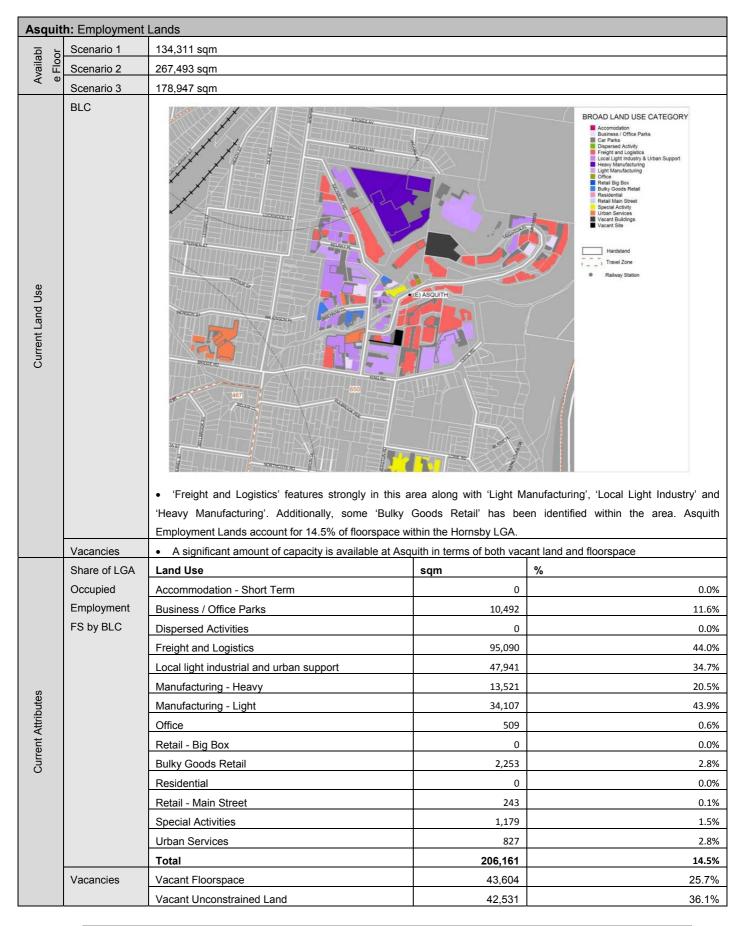




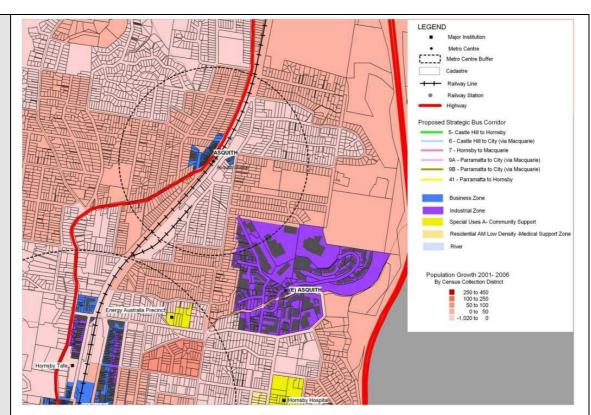


- Easy access to Pacific Highway and the F3.
- Separated from residential uses.
- Much recent development has occurred in this area, and some of the building stock is new.
- Previous employment lands studies, as well as the Draft North Subregional Strategy, highlight that this area is constrained by Berowra Valley Regional Park and land zoned for environmental protection.
- Mt Ku-ring-gai is located within travel zone 465. This covers a broad area and employees approximately 1,800 people in 2001. Relative concentrations of employment occur in manufacturing, wholesale trade and construction.

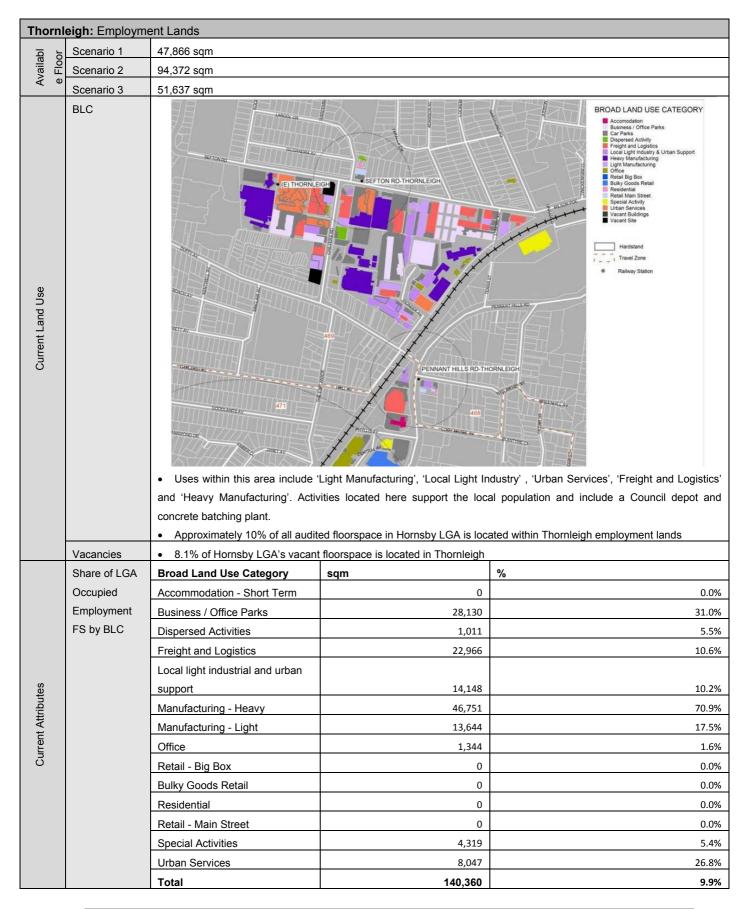




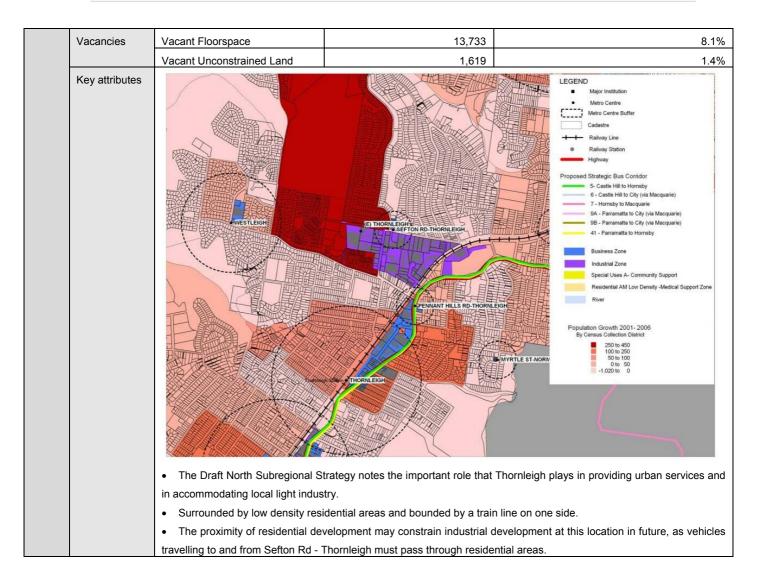


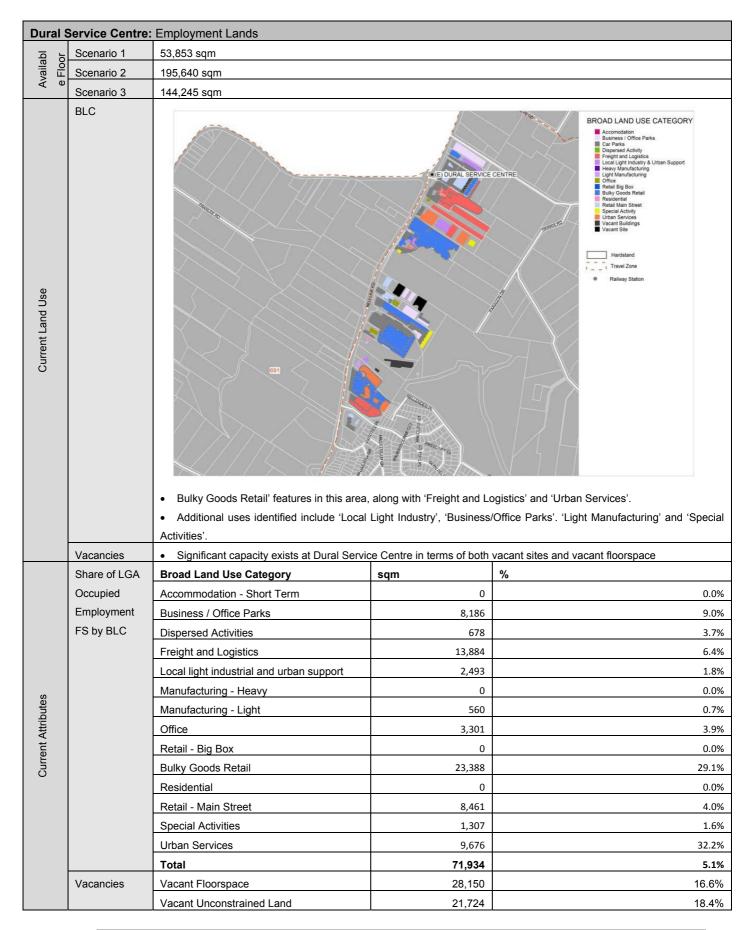


- Located primarily along Leighton Place, Salisbury and King Roads.
- Vehicles travelling to and from Asquith Employment Lands, must travel through residential areas. At the time of the audit, one vacant building and one vacant site were recorded. Topography may influence the types of businesses that seek to locate here in future, and like Mt Ku-ring-gai, expansion of these employment lands is limited by environmental constraints.
- The travel zone in which Asquith is located (650), covers a broad area including Hornsby Hospital.

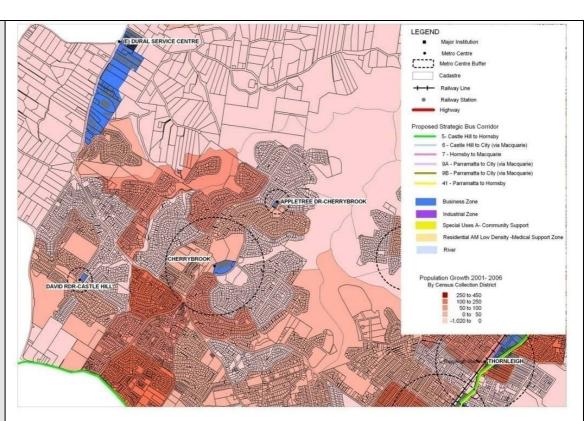








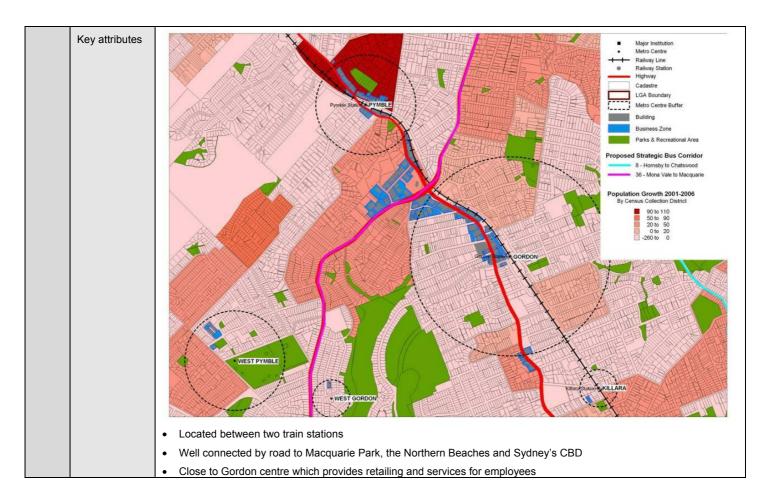


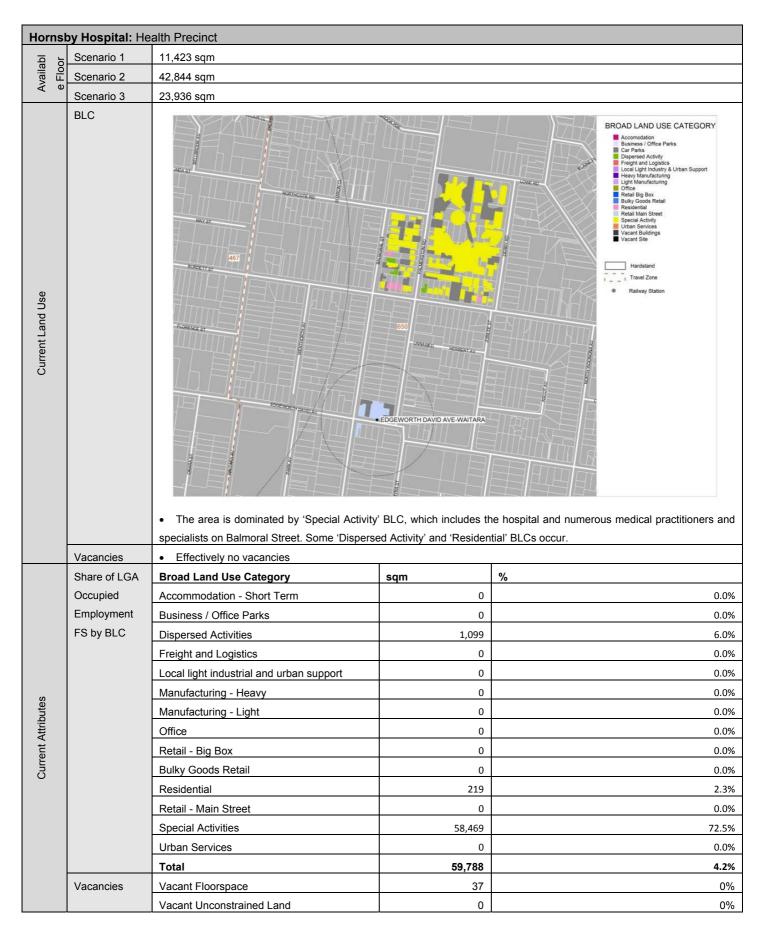


- · Area is undergoing change
- · Desirable rural residential location
- The Dural Service Centre (DSC) was originally envisaged as a centre for rural business and local services for the local resident population. However, over the years land use in the area has moved away from a 'rural service' focus and many businesses now serve a much broader market than the immediately surrounding rural area.
- There are arguments that the current limitations of the planning controls may now be constraining the centres economic potential and that a broader
- The diversity of uses present indicates a lack of clarity in the role of this area. This issue will be considered within the broader picture of supply and demand for employment lands across the whole study area.
- The Subregional Strategy identifies the DSC as land with potential to allow for a wider range of employment uses.

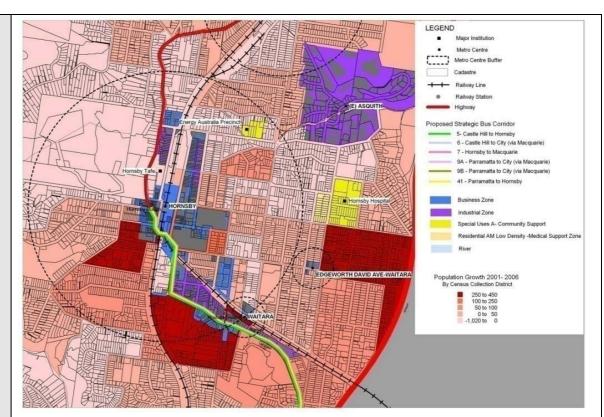
Pymble	e Office Park			
ıbl	Scenario 1	34,386 sqm		
Availabl e Floor	Scenario 2	23,462 sqm		
₹ Φ	Scenario 3	2,963 sqm		
Current Land Use	BLC	The primary land use within this area is 'office', with some 'from This area account for 23.5% of Ku-ring-gai LGA's employments.		BROAD LAND USE CATEGORY BP-Business / Office Parks Do Dispersed Activity FL. Freight and Logistics LL-Local Light Industry & Urban Support O-Office RRG-Busy Goods Retail RRJ-Residential RRJ-Residential RRJ-Residential VSL-Vacant Buildings VSI-Vacant Site
	Vacancies	3,386sqm of vacant floorspace is located within this area	1	
	Share of LGA	Broad Land Use Category	Pymble Office Park	%
	Occupied	Accommodation - Short Term	0	-
	Employment	Business / Office Parks	3,986	23.8%
	FS by BLC	Dispersed Activities	500	5.8%
		Freight and Logistics	5,488	92.0%
		Local light industrial and urban support	1,396	11.5%
"		Manufacturing - Heavy	0	-
outes		Manufacturing - Light	0	-
Current Attributes		Office	75,440	53.9%
ent /		Retail - Big Box	0	0.0%
Surr		Bulky Goods Retail	0	0.0%
		Residential	0	0.0%
		Retail - Main Street	654	0.5%
		Special Activities	0	0.0%
		Urban Services	1,536	41.6%
		Total		
	Managair.	Vaccut Flaggers	88,999	23.5%
	Vacancies	Vacant Unconstrained Land	3,386	13.6%
		Vacant Unconstrained Land	0	0%











- The hospital itself is bounded by Palmerston, Lowe, and Derby Road and Burdett Street. It was established in 1933 and provides a range of services including for emergency services, services for children and adolescents, rehabilitation, maternity care, allied health services and mental health services. A new \$23 million Maternity, Paediatrics and Emergency building has been completed, and was opened in March 2007.
- A number of other medical practices are located in the streets surrounding Hornsby Hospital, providing complementary services.

Appendix B – Employment Densities

Employment Density Benchmarks

Typical Floorspace and Workspace Ratios for Industrial Uses

			SQM Floorspace		Floorspace	
Activity	Sector	Jobs	for Every Job	Floorspace	to Site Area Ratio	Site Area (Business)
Manufacturing			00.0		1 0000	(= 0.0)
	Meat and dairy products	1	100	100	50%	200
	Other food products	1	80	80	50%	161
	Beverages, tobacco products	1	80	80	50%	161
	Textiles	1	60	60	50%	120
	Clothing and footwear	1	90	90	50%	180
	Wood and wood products	1	45	45	50%	90
	Paper, printing and publishing	1	70	70	50%	140
	Petroleum and coal products	1	200	200	50%	400
	Chemicals	1	200	200	50%	400
	Rubber and plastic products	1	150	150	50%	300
	Non-metallic mineral products	1	80	80	50%	160
	Basic metals and products	1	120	120	50%	240
	Fabricated metal products	1	30	30	50%	60
	Transport equipment	1	50	50	50%	100
	Other machinery and equipment	1	60	60	50%	120
	Miscellaneous manufacturing	1	65	65	50%	130
Freight Oriented						
	Wholesale trade	1	220	220	30%	733
	Transport and storage	1	220	220	30%	733
	Sub-Total	2		440		1,467
Service Industry						
	Construction	1	150	150	60%	250
	Repairs	1	55	55	60%	92
Utilities						
	Electricity, gas and water	1	120	120	30%	400
	Communication services	1	120	120	40%	300
Total Industrial		22		2,366		5,470

Source: SGS Composite

Typical Floorspace and Workspace Ratios for Retail/Commercial Uses



Activity	Sector	Jobs	SQM Floorspace for Every Job	Floorspace	Floorspace to Site Area Ratio	Site Area (Business)
Office						
	Finance and insurance	1	25	25	100%	25
	Property and business services	1	25	25	100%	25
	Government administration	1	35	35	100%	35
Retail						
	Supermarkets	1	30	30	40%	76
	Department Stores	1	57	57	40%	143
	Other Food	1	13	13	40%	33
	Clothing and Soft Goods	1	32	32	40%	81
	Household Goods	1	58	58	40%	144
	Other Retail	1	29	29	40%	73
Hospitality						
	Hospitality and Services	1	29	29	40%	73
	Accommodation	1	29	29	40%	73
	Sub-Total	2		58		145
Total Activity Centre		11		364		781

Source: SGS Composite

The tables above are derived from various land uses studies undertaken by SGS Economics and Planning. Experience in other land use audits suggests that the floor area per employee estimates are widely applicable, but that the floor space to site area ratios (FSR) vary widely with local market conditions. In particular, they are much lower (i.e. use more land for the same floor area) in lower cost regional centres and metropolitan fringe locations. Similarly, areas where supply is restricted and demand is high, would typically expect to yield higher land uses densities, than areas with less demand and greater supply of land for employment uses.

Studies undertaken by the City of Sydney (2001), Arup Economics + Planning (2001) and Gerald Eve (2001) reveal that higher office workspace ratios are evident in the ICT, Finance and Business Services sectors, whilst manufacturing offices record the lowest densities because of the costs of occupation generally tend to be lower in industrial parks, ports and larger manufacturing plants.

Generally sectors such as warehousing and transport have a larger floor area per employee than manufacturing. There are typically differences in site coverage for different sectors as well.



Factors Affecting Employment Densities

It is clear employment densities vary considerably across different land use categories and industry sectors. However within each of these categories and sectors, employment densities have expanded and contracted over time as result of technological advancement and changing work practices. These factors have affected industrial and office/commercial uses differently.

Factors Affecting Office Employment Densities

The most equivocal and widely researched factor in office employment densities is the impact on New Work Practices (NwP). New Work Practices is a generic name that is used to describe the way in which work practices are changing. It is associated with technological improvements but also the rise in flexible labour markets. Specifically, the gradual incorporation of new information communication technologies (ICTs) has had an impact on 'how' work is organised by presenting an unprecedented range of organisational options for companies and institutions. New work practices include:

- 24 hour working;
- Team working a team assembled for a specific project and disbanded on its completion;
- Teleworking and homeworking advances in communication allowing employees to work away from the office;
- Hot-desking workstations are not delegated to specific employees but instead served on a first come first served basis, where connectivity and basic essentials are provided;
- Hotelling reserving in advance a workstation with support
- Virtual office a laptop with connectivity

Many of these new work practices are space saving techniques, that also allow for more interaction, collaboration, and flexibility associated with how work is performed in the knowledge economy. The result, over time, has been an increase in office employment densities.

Factors Affecting Industrial Employment Densities

There has been a long term trend to higher developed floor area per employee in many of the industrial sectors. This has been driven by greater capital intensiveness of most industry sectors leading to larger floor area per employee, with technological change underpinning the productivity increases required to maintain competitiveness.

There has also been a tendency for firms relocating to the fringe of urban areas to increase their land take relative to their previous location, including 'occupying' more land than immediately required to allow some room for future expansion without relocating again. In effect they are privately banking land for their own future use, the relatively lower cost of the land making this affordable. Over time, they will intensify this land use again, but in the short term there is a significant increase in land use for each firm that relocates.

Factors Affecting the Intensification of Industrial Land Use

Intensification typically occurs as an individual firm's activity grows while remaining on the same site. Many firms are motivated to remain at a site as long as possible due to:

- Availability of additional space on site
- High relocation costs
- Closeness to market or suppliers/familiar location for customers
- Closeness to location of employees

Intensification usually involves increasing the site coverage, rather than increasing the number of employees per unit of built floor area⁴. In fact, as will be seen below, the trend is toward larger floor area per employee. Intensification will therefore be strongest on sites that currently have relatively large land areas for the size of the buildings on site.

However, when a firm does move due to expansion, it inevitably moves to a larger site, usually (but not always) further from the centre of town.

Intensification is reinforced by high land values. Firms located in higher cost locations tend to use the available land more intensively to offset the higher cost. Zoning allowances in higher cost areas may also permit greater site coverage and smaller set backs than in lower cost outer areas.

Intensification is most evident in larger urban areas where a central location may be important for quick market access and land costs are high. It also occurs to a lesser extent in smaller centres, where a high visibility central location offers a market advantage for some industrial operations with a local market focus.

⁴ Intensification of employees per unit of floor area can occur by working more hours (six/seven day operation or multiple shifts). This is more likely to occur in already capital intensive firms to better utilise equipment or in areas of very high land cost (central parts of urban areas).



Appendix C - Glossary

TDC Transport Data Centre. A State Government Unit devoted to interpreting ABS Census data and producing

population and employment analysis.

ABS Australian Bureau of Statistics

ANZSIC Australian and New Zealand Standard Industrial Classification

ASCO Australian Standard Occupation Classification

BLC Broad Land Use Category

CD Collection District

DoP NSW Department of Planning

FSR Floorspace ratio. The ratio of built floorspace to site area.

HBB Home based business
HBW Home based work
LGA Local Government Area

LQ Location quotient. A statistical measure of the relative concentration of an particular industry in an area.

SD Statistical Division

SME Small to Medium Sized Enterprise

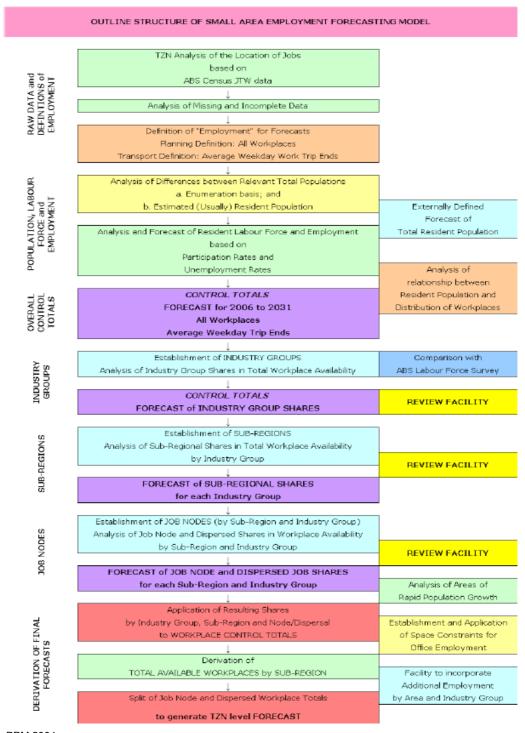
SSD Statistical Sub-division

TZ Travel Zone. The smallest statistical geography available fo r ABS Census employment data.

Appendix D - TDC Employment Forecast Method

Figure 71 shows the method used for the TDC employment forecasts.

Figure 71. TDC Employment Forecast Method Diagram



Source: PPM 2004

Employment forecasts for this Study have been sourced from the TDC. Produced in 2004, these forecasts provide an indication of the nature and distribution of employment across the Sydney Greater Metropolitan Region. The most significant assumptions have been made with respect to future trends by industry and future demand for retailing, driven by population and income growth.

The process of forecasting is based on the analysis and forecasting of share of total employment by industry, the share by sub-region of jobs by industry, the share of job in centres and dispersed jobs in each Subregional and industrial group. The process takes into account an analysis of space constraints for commercial floorspace, based on an analysis of employee-space ratios. It also takes into account user-defined additions of jobs to specific travel zones. Final travel zone forecasts are calculated based on these components.

Appendix E – Working Party

The Working Party for this project consisted of the following:

Antony Fabbro Ku-ring-gai Council Terri Southwell Ku-ring-gai Council Craige Wyse Ku-ring-gai Council Mayor Nick Ebbeck Ku-ring-gai Council James Farrington Hornsby Shire Council Karen Harragon Hornsby Shire Council Katherine Vickery Hornsby Shire Council Peter Adrian Department of Planning Cllr Janelle McIntosh Hornsby Shire Council

Appendix F – Land Audit Results (Centre Floorspace by ANZSIC and BLC)

The following tables show the audit result for floorspace by BLC and ANZSIC category for centres and precincts n Hornsby and Ku-ring-gai. ANZSIC and BLC descriptions are given below.

Table 47. 1 Digit ANZSIC Categories

A Agriculture, Forestry and Fishing
B Mining
C Manufacturing
D Electricity, Gas and Water Supply
E Construction
F Wholesale Trade
G Retail Trade
H Accommodation, Cafes and Restaurants
I Transport and Storage
J Communication Services
K Finance and Insurance
L Property and Business Services
M Government Administration and Defence
N Education
O Health and Community Services
P Cultural and Recreational Services
Q Personal and Other Services

Table 48. Broad Land Use Categories (BLCs)

Land Use Category	Description
Freight and Logistics (FL)	 Warehousing and distribution activities. Includes buildings with a number of docking facilities; 'hard stand' areas with trucks or goods awaiting distribution; and large storage facilities. Warehousing and distribution is a metro level issue with activities preferably locating close to air, sea and inter-modal inland ports, or with access to the motorway system.
Local light industrial and urban support (LL)	 Car service and repair; joinery, construction and building supplies; and domestic storage. Wide range of businesses that service other business (components, maintenance and support) and Subregional populations. Needed at local (LGA) to Subregional level.
Manufacturing – Heavy (MH)	 Large scale production activity. Likely to be characterised by high noise emission; emission stacks; use of heavy machinery; and frequency of large trucks. Heavy manufacturing is in decline in Sydney, but will continue to cluster in some locations such as Wetherill Park, Campbelltown/ Ingleburn etc. There are strong arguments for collocation in terms of raw material delivery and to concentrate externalities (though impacts on surrounding uses are generally moderate).
Manufacturing – Light (ML)	 Clothing manufacturing, boat building and electrical equipment manufacturing Small scale production with lower noise and emission levels than heavy manufacturing.
Urban Services (US)	 Concrete batching, waste recycling and transfer, construction and local and state government depots, sewerage, water supply, electricity construction yards. These typically have noise dust and traffic implications and need to be isolated or buffered from other land uses. Needed in each sub-region.
Office (O)	 Administration, clerical, business services, research. Office buildings that are independent (i.e., are not ancillary to another use on site) and likely to accommodate a significant number of administration staff (>10 people).
Business / Office Parks (BP)	 Integrated warehouse, storage, R&D, 'back-room' management and administration with up to 40% office component.
Retail - Main Street (RM)	 Retailing services traditionally found in main street locations (e.g., supermarkets) and small cluster or strips of stores located next to a street or road.
Retail – Big Box (RB)	Large shopping complexes, including Westfield.
Retail Bulky Goods (RBG)	Typically large, one-story buildings surrounded by car-parking, usually located out of centre and in high exposure (main road) locations.
Special Activities (S)	Tertiary level education, health, and community services. Typically require strategic locations and needed in each sub-region.
Dispersed Activities (D)	 Primary and secondary education, lower level health, social and community services, trades construction, other 'nomads'.
Residential (R)	Residential development.
Accommodation (Short Term) (AST)	Hotels and Motels (not including pubs), backpacker establishments.
Car park (CP)	Stand-alone car parking stations

Table 49. Hornsby Floorspace by 1 Digit ANZSIC

	А	В	С	D	Е	F	G	Н	I	J	K	L	M	N	0	Р	Q	Total	1997 ELS Data
(E) Asquith	0	0	53148	0	12282	70757	37133	607	6050	603	257	21346	0	303	0	1848	1826	206161	
(E) Dural Service Centre	0	0	1657	0	8839	7368	27438	4514	5636	3669	148	5069	0	0	2042	3915	1638	71934	11354
(E) Mt Ku-ring-gai	0	0	44860	0	8036	47323	5282	209	2864	0	209	5968	0	0	0	956	0	115705	
(E) Thornleigh	0	0	63175	0	4271	21260	21111	0	1758	1536	0	15887	3380	0	2088	5894	0	140360	
Appletree Dr-Cherrybrook	0	0	0	0	0	0	794	159	0	0	0	0	0	0	635	0	0	1589	
Asquith	0	0	0	0	0	0	5220	379	0	0	0	643	0	0	594	338	229	7402	6322
Beecroft	0	0	0	0	0	0	4931	756	305	0	400	1358	0	0	1626	176	1975	11528	6833
Berowra	0	0	0	0	132	450	1985	2278	110	86	0	569	0	0	436	106	0	6151	1774
Berowra Hts	0	0	0	0	0	0	6373	2432	53	0	575	0	0	1040	624	0	399	11497	3327
Berowra Waters	0	0	0	0	0	0	570	526	0	0	0	0	0	0	0	263	0	1359	
Brooklyn	0	0	0	0	0	0	1162	1947	85	62	0	216	0	0	120	365	411	4368	1209
Carlingford Court	0	0	0	0	0	83	35181	1133	0	0	667	1601	0	134	563	4113	2025	45499	
Cherrybrook	0	0	0	0	0	0	7577	1505	0	0	570	0	0	0	461	0	2281	12393	6060
Cowan	0	0	0	0	0	0	178	59	27	0	0	0	0	0	0	0	0	263	
Dangar Is	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
David Rdr-Castle Hill	0	0	0	0	0	0	1318	565	0	0	0	0	0	0	904	0	226	3013	
Edgeworth David Ave-	0	0	0	0	0	0	2249	0	0	0	0	0	0	0	0	0	240	2489	
Epping	0	0	171	38	0	14962	3342	570	369	0	4966	25746	2177	293	1996	172	7746	62550	
Galston	0	0	0	0	0	0	2248	146	86	0	177	134	0	0	436	0	963	4189	
Galston Rd-Hornsby Hts	0	0	0	0	0	0	946	73	0	0	0	0	0	0	0	0	142	1161	
Hornsby	0	0	4816	3849	1766	8514	143799	60158	1827	707	6708	67591	3380	4464	27876	11751	72490	419696	
Hospital Precinct	0	0	0	247	0	0	0	0	0	0	0	0	0	905	58635	0	0	59788	
Kookaburra Road	0	0	1315	0	0	3618	1403	0	0	0	0	0	0	0	0	0	0	6336	
Kuringai	0	0	0	0	0	0	495	371	0	124	0	0	0	0	0	0	124	1114	
Malton Rd-North Epping	0	0	0	0	0	0	1209	227	0	0	0	0	0	0	0	0	372	1808	
Mt Colah Shops	0	0	0	0	0	0	2328	0	0	0	0	0	0	0	104	0	546	2978	1703
Mt Colah Stn	0	0	0	0	0	0	981	145	0	28	0	155	0	0	145	0	47	1502	
Myrtle St-Normanhurst	0	0	0	0	75	0	411	0	0	0	0	0	0	0	0	0	174	660	
Normanhurst	0	0	0	0	0	0	592	505	0	77	0	169	0	0	84	0	343	1770	
Pennant Hills	0	0	430	0	0	0	23651	15316	349	2014	6621	23226	1852	647	1961	4418	3864	84349	12195
Pennant Hills Rd-	0	0	0	0	0	0	1374	3972	7227	0	0	368	0	0	0	0	0	12941	
Plymton Rd Shops-Epping	0	0	0	0	0	0	1410	0	0	0	0	0	0	0	0	0	112	1522	
Sefton Rd-Thornleigh	0	0	0	0	0	216	270	108	0	0	0	383	0	0	208	0	108	1292	
Somerville Rd-Hornsby Hts	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Thornleigh	0	0	1006	0	350	1858	25752	3291	77	2143	838	21330	610	1222	1499	535	2692	63204	15972
Waitara	0	0	89	0	0	0	20402	5752	0	0	0	2548	0	0	0	5050	89	33929	
West Pennant Hills	0	0	0	0	0	0	3788	703	0	98	82	1444	0	125	457	0	689	7385	3908
Westleigh	0	0	0	0	0	0	3383	425	638	0	0	851	0	476	851	0	1776	8399	3529
Wiseman's Ferry	0	0	0	0	0	0	679	2170	0	0	0	202	0	0	0	0	0	3051	
Yallambee Road	0	0	0	0	0	0	559	0	0	0	0	0	0	0	0	0	0	559	
TOTAL	0	0	170666	4134	35751	176411	397523	111001	27461	11147	22218	196806	11400	9609	104345	39980	103526	142197	

Table 50. Hornsby Floorspace by BLC

	AST	BP	CAR	D	FL	LL	MH	ML	0	RB	RBG	RES	RM	S	US	TOTAL	1997 ELS Data
(E) Asquith	0	10492	0	0	95090	47941	13521	34107	509	0	2253	0	243	1179	827	206161	
(E) Dural Service Centre	0	8186	0	678	13884	2493	0	560	3301	0	23388	0	8461	1307	9676	71934	11354
(E) Mt Ku-ring-gai	0	8062	0	539	52333	14926	5638	26299	0	0	3236	0	1042	0	3631	115705	
(E) Thornleigh	0	28130	0	1011	22966	14148	46751	13644	1344	0	0	0	0	4319	8047	140360	
Appletree Dr-Cherrybrook	0	0	0	0	0	0	0	0	0	0	0	0	1589	0	0	1589	
Asquith	0	0	0	0	0	0	0	0	0	0	0	0	7402	0	0	7402	6322
Beecroft	0	0	0	0	0	0	0	0	0	0	0	0	11528	0	0	11528	6833
Berowra	0	0	0	0	560	1156	0	0	0	0	0	0	4436	0	0	6151	1774
Berowra Hts	0	0	0	0	53	0	0	0	0	0	532	0	10912	0	0	11497	3327
Berowra Waters	0	0	0	0	0	307	0	0	0	0	0	0	1052	0	0	1359	
Brooklyn	0	0	0	412	85	0	0	0	0	0	74	0	3483	315	0	4368	1209
Carlingford Court	0	0	0	0	0	375	0	0	0	41520	0	0	3605	0	0	45499	
Cherrybrook	0	0	0	461	0	0	0	0	0	11933	0	0	0	0	0	12393	6060
Cowan	0	0	0	0	0	0	0	0	0	0	0	0	263	0	0	263	
Dangar Is	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
David Rdr-Castle Hill	0	0	0	0	0	0	0	0	0	0	0	0	3013	0	0	3013	
Edgeworth David Ave-Waitara	0	0	0	0	0	0	0	0	0	0	0	0	2489	0	0	2489	
Epping	0	0	0	6699	16227	324	0	0	32272	0	0	0	6818	172	38	62550	
Galston	0	0	0	0	0	0	0	0	0	0	0	0	4189	0	0	4189	
Galston Rd-Hornsby Hts	0	0	0	0	0	179	0	0	0	0	0	0	982	0	0	1161	
Hornsby	0	631	0	6406	4025	39851	0	929	27490	239852	13518	8950	60017	12789	5239	419696	
Hospital Precinct	0	0	0	1099	0	0	0	0	0	0	0	219	0	58469	0	59788	
Kookaburra Road	0	0	0	0	3089	1932	0	1315	0	0	0	0	0	0	0	6336	
Kuringai	0	0	0	0	0	0	0	0	0	0	0	0	1114	0	0	1114	
Malton Rd-North Epping	0	0	0	0	0	270	0	0	0	0	0	0	1538	0	0	1808	
Mt Colah Shops	0	0	0	0	0	418	0	0	0	0	0	94	2466	0	0	2978	1703
Mt Colah Stn	0	0	0	0	0	0	0	0	0	0	0	201	929	0	372	1502	
Myrtle St-Normanhurst	0	0	0	0	0	0	0	0	0	0	0	0	660	0	0	660	
Normanhurst	0	0	0	84	0	0	0	0	169	0	0	0	1517	0	0	1770	
Pennant Hills	8918	30664	0	152	0	2310	0	122	1994	0	12914	0	25568	0	1707	84349	12195
Pennant Hills Rd-Thornleigh	3972	0	0	0	7227	1502	0	0	0	0	0	0	240	0	0	12941	
Plymton Rd Shops-Epping	0	0	0	0	0	335	0	0	0	0	0	0	1187	0	0	1522	
Sefton Rd-Thornleigh	0	0	0	208	0	0	0	0	276	0	0	0	809	0	0	1292	
Somerville Rd-Hornsby Hts	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Thornleigh	0	4637	0	0	396	4785	0	791	17283	11254	7269	0	16312	0	478	63204	15972
Waitara	0	0	0	0	0	3338	0	0	0	0	17180	0	11374	2037	0	33929	
West Pennant Hills	0	0	0	0	0	657	0	0	0	0	0	0	6729	0	0	7385	3908
Westleigh	0	0	0	476	0	374	0	0	0	0	0	0	7549	0	0	8399	3529
Wiseman's Ferry	293	0	0	0	0	0	0	0	0	0	0	0	2758	0	0	3051	
Yallambee Road	0	0	0	0	0	418	0	0	0	0	0	0	141	0	0	559	
TOTAL	13183	90801	0	18224	215933	138041	65910	77767	84638	304558	80364	9463	212413	80667	30014	1421977	

Table 51. Ku-ring-gai Floorspace by 1 Digit ANZSIC

	А	В	С	D	Е	F	G	Н	1	J	K	L	М	N	0	Р	Q	Total
East Killara	0	0	0	0	0	0	910	114	0	0	0	0	0	0	0	0	114	1137
East Lindfield	0	0	0	0	0	0	1113	0	0	0	0	0	0	0	196	0	0	1309
Eastern Rd-Turramurra	0	0	0	0	0	0	1157	0	0	0	0	0	0	0	0	0	133	1290
Fox Valley	0	0	0	0	0	0	725	483	0	0	0	0	0	0	1655	0	0	2863
Gordon	0	0	570	0	973	0	23314	9090	168	542	3126	41126	4986	830	6846	2777	4687	99034
Grosvenor Street	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hampden Ave Shops-Nth Wahroonga	0	0	33	0	0	0	546	70	0	0	0	44	0	0	33	0	140	868
Killara	0	0	0	0	0	0	88	101	0	101	0	88	0	0	0	0	0	378
Lindfield	0	0	99	1092	0	507	12211	1610	336	2517	1634	8216	558	220	6362	1419	849	37631
North Turramurra	0	0	0	0	0	0	1237	811	0	0	0	1268	0	0	1524	0	149	4989
Princes St-Turramurra	0	0	0	0	0	0	1097	0	0	0	0	0	0	0	232	0	0	1328
Pymble	0	0	184	0	898	377	4128	1882	226	0	1291	5790	0	569	2209	662	559	18775
Pymble Office Park	0	0	14551	1626	5108	8062	4782	0	4660	5010	1790	37285	134	1100	3506	693	691	88999
Roseville	0	0	79	0	79	0	4554	2597	401	310	0	2754	0	1054	3013	1318	1368	17528
Roseville Chase	0	0	0	0	0	0	1681	242	0	0	0	106	0	0	106	0	248	2383
South Turramurra	0	0	0	0	0	0	1210	0	0	0	0	0	0	0	0	0	0	1210
St Ives	0	0	0	0	0	0	30040	510	970	0	3253	2759	0	0	4992	1798	2800	47122
St Ives Chase	0	0	0	0	0	0	790	0	0	0	0	0	0	0	69	0	69	927
St Ives North	0	0	0	0	0	0	1181	547	0	0	0	0	0	0	182	0	182	2092
Turramurra	0	65	0	351	289	963	10555	1499	676	413	1450	3726	0	369	3418	1611	3327	28712
Wahroonga	0	0	0	0	113	0	5402	509	360	754	1034	1391	0	0	1308	0	640	11511
West Gordon	0	0	0	0	0	85	220	423	0	0	0	0	0	0	233	0	0	961
West Lindfield	0	0	0	0	0	207	1598	879	0	242	0	710	0	0	661	186	0	4485
West Pymble	0	0	0	0	0	0	2694	443	0	0	0	0	0	0	485	0	0	3622
TOTAL	0	65	15517	3069	7460	10201	111233	21810	7799	9888	13577	105263	5678	4142	37032	10465	15955	379153

Table 52. Ku-ring-gai Floorspace by 1 Digit ANZSIC

	AST	BP	CAR	D	FL	LL	MH	ML	0	RB	RBG	RES	RM	S	US	TOTAL
East Killara	0	0	0	0	0	0	0	0	0	0	0	0	1137	0	0	1137
East Lindfield	0	0	0	0	0	0	0	0	0	0	0	0	1309	0	0	1309
Eastern Rd-Turramurra	0	0	0	0	0	0	0	0	0	0	0	0	1290	0	0	1290
Fox Valley	0	0	0	1655	0	0	0	0	0	0	0	0	1208	0	0	2863
Gordon	0	0	0	3018	0	3298	0	0	52316	13391	439	0	26573	0	0	99034
Grosvenor Street	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hampden Ave Shops-Nth Wahroonga	0	0	0	0	0	111	0	0	0	0	0	0	757	0	0	868
Killara	0	0	0	0	0	0	0	0	0	0	0	0	378	0	0	378
Lindfield	0	12751	0	93	474	2682	0	0	4064	0	0	0	16415	59	1092	37631
North Turramurra	0	0	0	1122	0	0	0	0	0	0	0	0	3867	0	0	4989
Princes St-Turramurra	0	0	0	0	0	0	0	0	0	0	0	0	1328	0	0	1328
Pymble	0	0	0	0	0	184	0	0	4190	0	0	0	13971	429	0	18775
Pymble Office Park	0	3986	0	500	5488	1396	0	0	75440	0	0	0	654	0	1536	88999
Roseville	0	0	0	274	0	0	0	0	1315	310	665	0	14964	0	0	17528
Roseville Chase	0	0	0	0	0	534	0	0	0	0	0	0	1850	0	0	2383
South Turramurra	0	0	0	0	0	347	0	0	0	0	0	0	862	0	0	1210
St Ives	0	0	0	0	0	639	0	0	1481	32988	0	0	11912	101	0	47122
St Ives Chase	0	0	0	0	0	240	0	0	0	0	0	0	687	0	0	927
St Ives North	0	0	0	0	0	270	0	0	0	0	0	0	1822	0	0	2092
Turramurra	0	0	0	1570	0	628	0	0	1031	0	177	0	23199	1755	351	28712
Wahroonga	0	0	0	347	0	1362	0	0	0	0	0	142	8946	0	714	11511
West Gordon	0	0	0	0	0	0	0	0	0	0	0	0	961	0	0	961
West Lindfield	0	0	0	0	0	0	0	0	0	0	0	0	4485	0	0	4485
West Pymble	0	0	0	0	0	485	0	0	0	0	0	0	3138	0	0	3622
TOTAL	0	16736	0	8578	5962	12175	0	0	139837	46689	1282	142	141714	2344	3693	379153