Ingleside – Employment and Retail Assessment

Draft report

Department of Planning and Environment

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SGS Economics & Planning

Independent insight.

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EXECUTIVE SUMMARY

Scope of our work

SGS has been commissioned by the Department of Planning and Environment (DP&E) to complete a retail and employment assessment for the Ingleside Release Area (Ingleside Precinct). The employment and retail assessment will identify the retail and commercial land use requirements and other supportable employment floorspace for the site.

Background and development context

The Ingleside Precinct is located in the North Subregion and is approximately 700 hectares. It adjoins the Garigal and Ku-ring-gai National Parks, the Ingleside/Warriewood Escarpment to the east and Ingleside Chase Reserve.

There are three discernable areas for planning and infrastructure provision referred to as:

- South Ingleside (south of Mona Vale Road)
- North Ingleside (north of Mona Vale Road and east of the ridgeline) and
- Wirreanda Valley (on the north side of Mona Vale Road, west of the ridgeline).

The precinct has been the subject of a number of studies at both state and local level since it was identified as the major greenfield release area for the North East subregion in the early 1990s and was confirmed as a future greenfield release precinct in 2007.

The key development issues, constraints and opportunities for the Ingleside Precinct are shown in the table overleaf.

Key Issues	Constraints	Opportunities
– Dwelling yield and economic viability – Availability of primary utilities infrastructure (particularly water, sewage and electricity) and implications for the staging and costs of development – Provision of transport infrastructure (Mona Vale Road and Powderworks Road in particular) – Impacts on existing land use and integration with current land uses – Risks to the program include engaging/facilitating timely input from state agencies and key stakeholders – Probity risks should UrbanGrowth NSW's role develop from a planning-related function to delivery – Funding over time of infrastructure	– Biodiversity – Flooding – Bush fire risk – Riparian corridors – Heritage – Urban interface e.g. with existing residential land – Existing capitalisation of some properties, particularly in North Ingleside – Capacity of Powderworks Road – Timing and upgrade of Mona Vale Road – Infrastructure servicing – Land capability and landscape – Fragmented land ownership	– Protection of natural features and environmental attributes – Public and private transport improvements including Mona Vale Road to Mona Vale – New communities – Improved access to centres – Community services – Market release, housing choice and affordability including affordable housing – Recognition of local and State heritage, and indigenous heritage – Strategic land approvals – Coherent and coordinated development outcomes – Certainty for landowners and community

Source: DP&E, Pittwater Council, UrbanGrowth NSW, Ingleside Precinct Project Plan, 2013, p.5.

A review of relevant policies, strategies and studies applying to the precinct provided guidelines for the size, location and configuration of retail and employment land in the Ingleside precinct. The key document review findings relating to retail were:

- Retail floor space provision should be located with regard to the hierarchy of centres and principles of walkability
- Conflict between different centres in the retail hierarchy should be actively managed. Established shopping centres in the Ingleside catchment area include:
  - Warringah Mall in the Brookvale – Dee Why Major Centre
  - Pittwater Place and Bungan Court in the Mona Vale Town Centre
  - Warriewood Square (Standalone Shopping Centre)
  - St Ives Shopping Centre (Village Centre)
  - Small Village Centres: Forestway Shopping Centre and Stockland Glenrose
- In the *Warriewood Valley Strategic Review Economic Feasibility Study*, Hill PDA (2011) noted that there was existing retail undersupply in the Pittwater LGA, as well as significantly growing demand for retail and commercial uses in Warriewood Valley and Pittwater LGA.

Similarly, the main findings from the document review relating to other employment development include:

– Existing employment lands in the subregion should be reserved for future employment growth and intensified to accommodate the ambitious employment targets for the area, for example, by better integrating Mona Vale Town Centre and Employment Lands, and increasing density in centres.
– Employment in the subregion is relatively self-contained, partly because the area is relatively geographically isolated and underserved by public transport. This is also reflected in the proportionally higher number of home businesses in the area. To maintain the self-containment of the subregion, employment lands should take into account the skills of the area, and the existence of medical and sports/recreation specialised precincts in the area.
– The amount of investment in industrial land is limited by the geographical isolation of the North-East subregion. Existing business parks in the area should also be built on and well-linked to future growth areas, such as Ingleside, in recognition of the growing demand for business park floor space.

Supply analysis

The analysis of surrounding centres and employment lands found that there are a variety of retail and employment centres within the Ingleside catchment. These include a number of strategic centres, such as Brookvale-Dee Why, Chatswood and Mona Vale, and population serving centres such as Terrey Hills and Elanora Heights.

Consultation with real estate agents revealed that small neighbourhood retail centres are not performing strongly with low rents and a lot of vacancies, with the exception of Elanora Heights which is performing relatively strongly. This centre is located in very close proximity to the Ingleside release area and the recent expansion (increase in size of the IGA) suggests that there is strong demand for neighbourhood retail in this area. Pittwater Council indicated the strong performance of Elanora Heights is due to its increased night-time economic activity supported by new restaurants/cafes and emerging 'Shop Local' trend by residents and visitors.

On the other hand, consultation with real estate agents indicated that larger centres, particularly those with big box format centres (e.g. Warringah Mall), are performing well.

It was suggested that Ingleside residents would generally travel to Warriewood Square (Centro Warriewood) and Mona Vale for their groceries and high-order retail needs (such as clothing). Smaller centres such as Elanora Heights attract residents from Terrey Hills, Bayview and Ingleside as the centre contains a doctor and chemist, as well as an IGA.

Based on the supply analysis, Warriewood Square (Centro Warriewood) and Mona Vale are likely to be the two major centres which cater for the retail needs of incoming residents at Ingleside. Warriewood will likely cater for local industrial needs and Belrose and Frenchs Forest will cater for local office/business park employment.

Demand forecast

Retail floorspace

The future retail land use requirements for the Ingleside precinct have been assessed by first estimating the total retail expenditure for the incoming population using the resident income profile[1], distributing the total retail expenditure to different centre types in the retail hierarchy and then converting the retail expenditure captured in this precinct to floorspace requirements. The future population at the precinct is based on the estimated dwelling yield from the draft Plan.

Based on this assessment, SGS found that there is sufficient retail demand to warrant a maximum of 2000 square metres of neighbourhood centre floorspace in the Ingleside precinct. This neighbourhood centre may include a small supermarket (e.g. IGA) and convenience-type retail stores, but should not include a full-line supermarket which would draw trade from nearby existing centres. Restricting the provision to neighbourhood retail will ensure that Ingleside does not compete and impact on the viability of existing retail floorspace within Elanora Heights, Terrey Hills and Mona Vale.

Assuming a floorspace ratio of approximately 0.75:1, around a **2,600 square metre site should be provided** to accommodate future neighbourhood retail floorspace. There is also a potential for part of this site to provide some shop-top housing, as seen in other retail centres in Pittwater LGA.

Based on the parking requirement of 1 space per 30 square metres of retail floorspace in Council's DCP, this neighbourhood centre retail floorspace will require 67 parking spaces or almost 2,000 square metres of land for parking. In total, the neighbourhood centre will require at least **a 4,600 square metre site**.

Based on the locational principles for retail development, the neighbourhood centre would best be **located around Chiltern Road, just north of Mona Vale Road**; though further refinements to this location should be made by the master planner taking into account design considerations. This location is highly accessible by car and is located near a major road for exposure. Ideally, however, to provide some amenity for this small centre, we recommend that it be on a side street and separated from the Mona Vale Road intersection.

The market forces will likely determine the timing of this neighbourhood centre development. In addition to the neighbourhood retail provision around Chiltern Road, there could be a small retail offering (e.g. cafes) co-located with community and recreational uses within the potential community node in South Ingleside.

1 As discussed in section 4, the income profile of future residents at Ingleside has been based on ABS data for SA1s within the Warriewood and Mona Vale area.

Other employment floorspace

Based on findings from consultation with real estate agents, Warriewood, Cromer, Brookvale and Manly Vale are the most favoured locations for industrial floorspace. Demand is particularly strong for small industrial sites (150 to 250 square metres) and relatively weak for large scale floorplates of greater than 2,000 square metres. While for business park floorspace, demand is strongest for Frenchs Forest and Brookvale, while Belrose is experiencing quite a few vacancies.

An analysis of demand for other employment floorspace in the Ingleside Precinct was completed. This considered the population driven employment demand generated by the future residents of the Ingleside Precinct, the role, function and capacity of surrounding centres to accommodate this demand and the suitability of Ingleside Precinct for various employment uses.

The analysis shows that there would be 690 population driven jobs (excluding retail) generated by the incoming Ingleside population. Converted to floorspace, there is projected to be around 31,000 square metres of additional floorspace required to meet demand driven by population growth in Ingleside[2].

SGS has then developed a number of principles which are used to identify the most suitable locations for these employment uses within Ingleside and the existing employment areas located in close proximity. Based on these principles and knowledge of the role, function and capacity of surrounding centres, it is found that all of the 31,000 square metres of additional employment floorspace demand should be accommodated within existing employment areas. For example, demand for business park or office floorspace can be accommodated within the existing business park developments at Frenchs Forest, Belrose and Warriewood, while industrial land uses, such as freight and logistics, can be accommodated within the existing industrial precincts where there are large number of vacant spaces.

Similarly, local service industrial (e.g. panel beaters or pool shops) could be accommodated in the nearby Warriewood centre and North Narrabeen or within the Terrey Hills industrial precinct.

Conclusion

The Ingleside precinct has a long history as an identified potential greenfield release area. Numerous studies have revealed environmental and infrastructure constraints as well as development opportunities for the site. These studies as well as state and local planning policies and strategies provided important contextual information that has informed the retail and employment location principles developed for this study.

[2] It is noted that the SHOROC Employment Lands Addendum (Nov 2014) found that the forecast growth in industrial floorspace in Pittwater LGA is in construction, wholesale trade and mining, while the growth for commercial floorspace is in the scientific/technical services sector and health care cluster.

The surrounding retail centres, industrial and business park precincts were assessed to determine their function, role within the hierarchy and capacity to absorb future development. This analysis established the most suitable locations for retail and employment floorspace generated by incoming Ingleside residents. This analysis also suggested that all of the employment floorspace demand should be accommodated within existing employment areas outside the precinct.

Future retail floorspace estimates for the incoming population were derived by adopting the dwelling yield from the draft Plan.

A series of principles, based on the policy and strategy review, provided guidance for the development of future retail floorspace within the precinct, which are summarised as follows:

- The neighbourhood centre with a maximum retail floorspace of 2,000 square metres **should be located around Chiltern Road, just north of Mona Vale Road**. Ideally, to provide some amenity for this small centre, we recommend that it be on a 'side street' and separated from the Mona Vale Road intersection.
- There is also an opportunity for this neighbourhood centre site to provide some shop top housing, as seen in other centres in Pittwater LGA.
- Based on the parking requirement of 1 space per 30 square metres of retail floorspace in Council's DCP, the neighbourhood centre will **require 67 parking spaces or almost 2,000 square metres of land for parking**.
- In total, the proposed neighbourhood centre in North Ingleside will require **at least 4,600 square metres of land.**
- There could be a small retail offering (e.g. cafes) co-located with community/recreational uses within the potential community node in South Ingleside.

Pittwater and Northern Beaches Councils

In May 2016 Pittwater Council was merged into a new body, the Northern Beaches Council. As this report was prepared prior to these changes, it makes reference to the former council. The plans and strategies of the former council continue to apply to the former local government area until the new council prepares its own plans and strategies.

1 INTRODUCTION

1.1 Project purpose

SGS Economics and Planning has been engaged by the Department of Planning and Environment (DP&E) to complete two reports – a retail and employment assessment and an economic viability assessment.

The employment and retail assessment will identify the retail and commercial land use requirements and other supportable employment floorspace for the site.

1.2 Background

The Minister for Planning and Pittwater Council have agreed to undertake a Precinct Planning Process for the Ingleside Release Area (Ingleside Precinct) to confirm development potential and to establish planning controls to enable development consistent with that potential.

The Precinct is located in the North Subregion and is approximately 700 hectares. It adjoins the Garigal and Ku-ring-gai National Parks, the Ingleside/Warriewood Escarpment to the east and Ingleside Chase Reserve.

There are three discernable areas for planning and infrastructure provision referred to as:

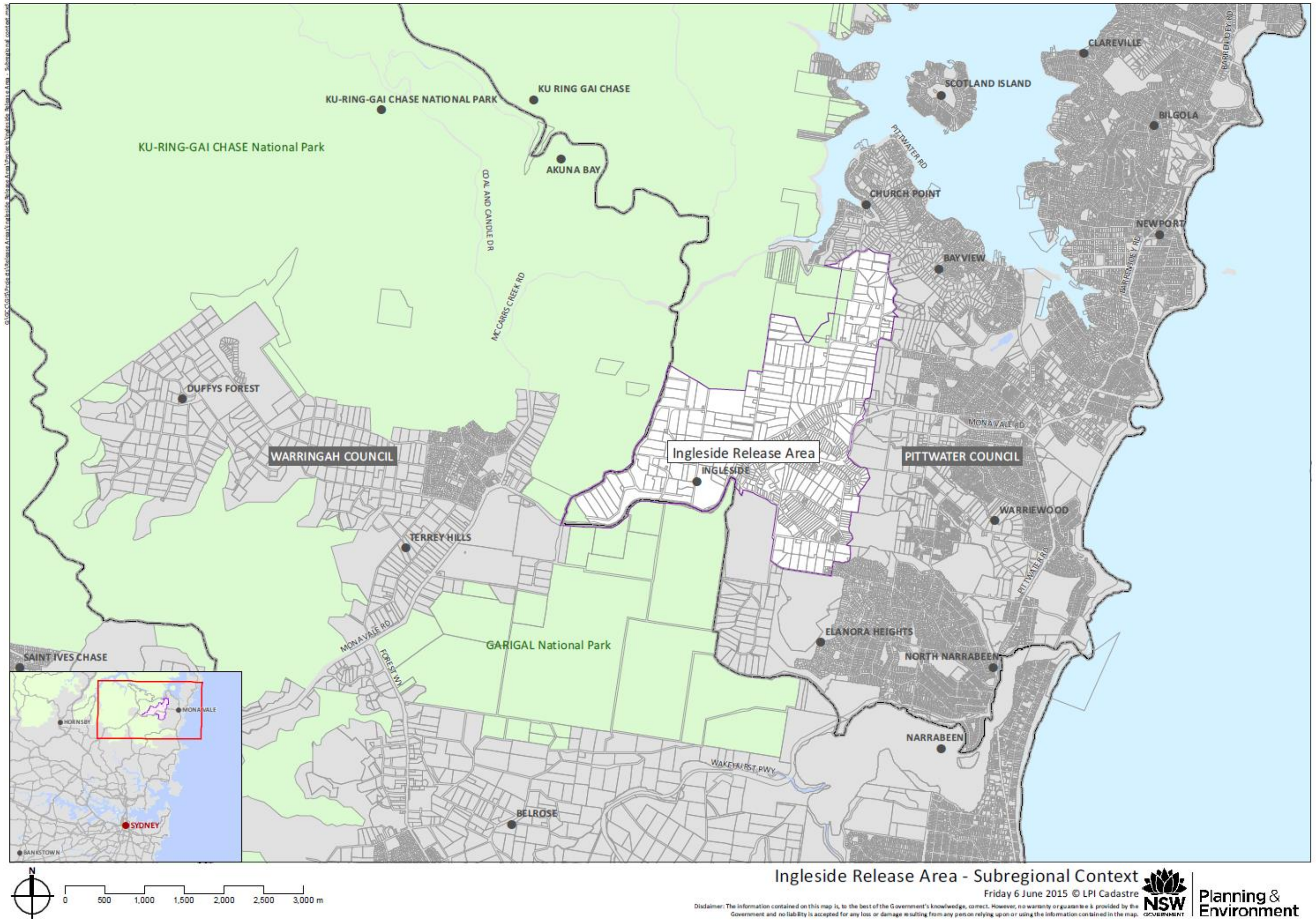
- South Ingleside (south of Mona Vale Road)
- North Ingleside (north of Mona Vale Road and east of the ridgeline) and
- Wirreanda Valley (on the north side of Mona Vale Road, west of the ridgeline).

Around two hundred hectares within the precinct is in government ownership. Land ownership is otherwise somewhat fragmented including some large lot holdings, but also some actively occupied properties with significant recent investment. Parts of the land are sloping with some areas containing high value conservation lands and habitat for threatened species, and some is bushfire prone. There are currently few utility connections to the area.

While not in the Growth Centres, the planning for Ingleside will be modelled on the Growth Centres Precinct Planning approach, led by the DP&E, in partnership with Pittwater Council and UrbanGrowth NSW.

A locality map for Ingleside is provided overleaf.

FIGURE 1. INGLESIDE PRECINCT



Source: Department of Planning & Environment, 2014.

2 DEVELOPMENT CONTEXT

2.1 Introduction and background

To establish the policy and development context for the site the following documents have been reviewed:

- Growth Centres Development Code
- *A Plan for Growing Sydney*, Sydney's latest metropolitan plan.
- draft North East Subregional Strategy
- Studies and policies undertaken by Council as appropriate, as well as proposed developments within the Precinct including the Ingleside-Warriewood Studies
- Various reports prepared by or on behalf of UrbanGrowth NSW and Council, as well as landowners for land within the Ingleside Precinct.

This section provides a summary of the relevant findings for this study from the document review. The detailed document review is located in Appendix 1.

The Ingleside Precinct has been the subject of a number of studies at both state and local level since it was identified as the major greenfield release area for the North East subregion in the early 1990s. It was confirmed as a future greenfield release precinct in 2007. A chronology of studies for the planning of Ingleside is listed in Table 1.

TABLE 1. CHRONOLOGY OF STUDIES FOR INGLESIDE, 1991 - 2013

Year	Event
1991	Announced for urban development (listed on the Metropolitan Development Program)
1993	Pittwater Council commenced the preparation of a planning strategy for Ingleside and Warriewood.
1995	Council completed investigation and exhibited a draft planning strategy for Ingleside and Warriewood.
1998	Warriewood Valley release area commenced and Ingleside deferred by State Government.
2006	Former Minister for Planning requested Council undertake preliminary investigations into land release in Ingleside.
2007	The Department and Council commenced preparation of a scoping study for Ingleside: – Government and land owners engaged Landcom to investigate potential rezoning – Draft North East Subregional Strategy was released, confirming Ingleside as the primary source of greenfield land supply for the region.
2008	Further studies, including a biodiversity assessment, a preliminary bushfire assessment and an aboriginal heritage study were prepared: – RTA released the Mona Vale to Macquarie Park Corridor Strategy – Scoping study endorsed by Council, indicating issues to be resolved – Consultation with key agencies on the potential rezoning of Ingleside
2009	Scoping study for Ingleside completed and reported to Council, identifying a range of issues that must be considered in progressing planning investigations for Ingleside.
2013	Council resolved to be involved in a Precinct Planning Process led and funded by the NSW Government.

Source: DP&E, Pittwater Council, UrbanGrowth NSW, Ingleside Precinct Project Plan, 2013, p. 4.

The table below provides a summary of the key issues, constraints and opportunities which will have an impact on the Ingleside Precinct, as identified in the 2013 project plan.

TABLE 2. SUMMARY OF KEY ISSUES, CONSTRAINTS AND OPPORTUNITIES FOR THE INGLESIDE PRECINCT

Key Issues	Constraints	Opportunities
– Dwelling yield and economic viability – Availability of primary utilities infrastructure (particularly water, sewage and electricity) and implications for the staging and costs of development – Provision of transport infrastructure (Mona Vale Road and Powderworks Road in particular) – Impacts on existing land use and integration with current land uses – Risks to the program include engaging/facilitating timely input from state agencies and key stakeholders – Probity risks should UrbanGrowth NSW's role develop from a planning-related function to delivery – Funding over time of infrastructure	– Biodiversity – Flooding – Bush fire risk – Riparian corridors – Heritage – Urban interface e.g. with existing residential land – Existing capitalisation of some properties, particularly in North Ingleside – Capacity of Powderworks Road – Timing and upgrade of Mona Vale Road – Infrastructure servicing – Land capability and landscape – Fragmented land ownership	– Protection of natural features and environmental attributes – Public and private transport improvements including Mona Vale Road to Mona Vale – New communities – Improved access to centres – Community services – Market release, housing choice and affordability including affordable housing – Recognition of local and State heritage, and indigenous heritage – Strategic land approvals – Coherent and coordinated development outcomes – Certainty for landowners and community

Source: DP&E, Pittwater Council, UrbanGrowth NSW, Ingleside Precinct Project Plan, 2013, p.5.

2.2 Relevant findings from the document review

The document review found that the policies and strategies have implications for the size, location and configuration of retail and employment land in the Ingleside precinct as well as the viability of development. These are outlined below.

Retail

- Retail floor space provision should be located with regard to the hierarchy of centres and principles of walkability
- Conflict between different centres in the retail hierarchy should be actively managed. Established shopping centres in the Ingleside catchment area include:
  - Warringah Mall in the Brookvale – Dee Why Major Centre
  - Pittwater Place and Bungan Court in the Mona Vale Town Centre
  - Warriewood Square (Standalone Shopping Centre)
  - St Ives Shopping Centre (Village Centre)
  - Small Village Centres: Forestway Shopping Centre and Stockland Glenrose

  - Neighbourhood Centres: Elanora Heights shopping centre and Garden Street-Powderworks Road
- In the *Warriewood Valley Strategic Review Economic Feasibility Study*, Hill PDA (2011) noted that there was a retail undersupply in the Pittwater LGA, as well as significantly growing demand for retail and commercial uses in Warriewood Valley and Pittwater LGA.

Employment

- Existing employment lands in the subregion should be reserved for future employment growth and intensified to accommodate the ambitious employment targets for the area, for example, by better integrating Mona Vale Town Centre and Employment Lands, and increasing density in centres.
- Employment in the subregion is relatively self-contained, partly because the area is relatively geographically isolated and underserved by public transport. This is also reflected in the proportionally higher number of home businesses in the area. To maintain the self-containment of the subregion, employment lands should take into account the skills of the area, and the existence of medical and sports/recreation specialised precincts in the area.
- The amount of investment in industrial land is limited by the geographical isolation of the North-East subregion. Existing business parks in the area should also be built on and well-linked to future growth areas, such as Ingleside, in recognition of the growing demand for business park floor space.

3 RETAIL AND EMPLOYMENT LAND SUPPLY

3.1 Introduction

Analysis of the supply context for retail and industrial floorspace was undertaken to document the centres and employment lands within the catchment of Ingleside. The focus of this analysis was the number of jobs by industry type for all nearby centres and employment lands and details on total floorspace obtained from existing employment lands studies. Further details, particularly regarding the current retail and industrial markets in the area, were obtained from a 'drive by' audit and targeted consultation with local real estate agents. This process led to an understanding of the distribution of land and floorspace between the locations in the system.

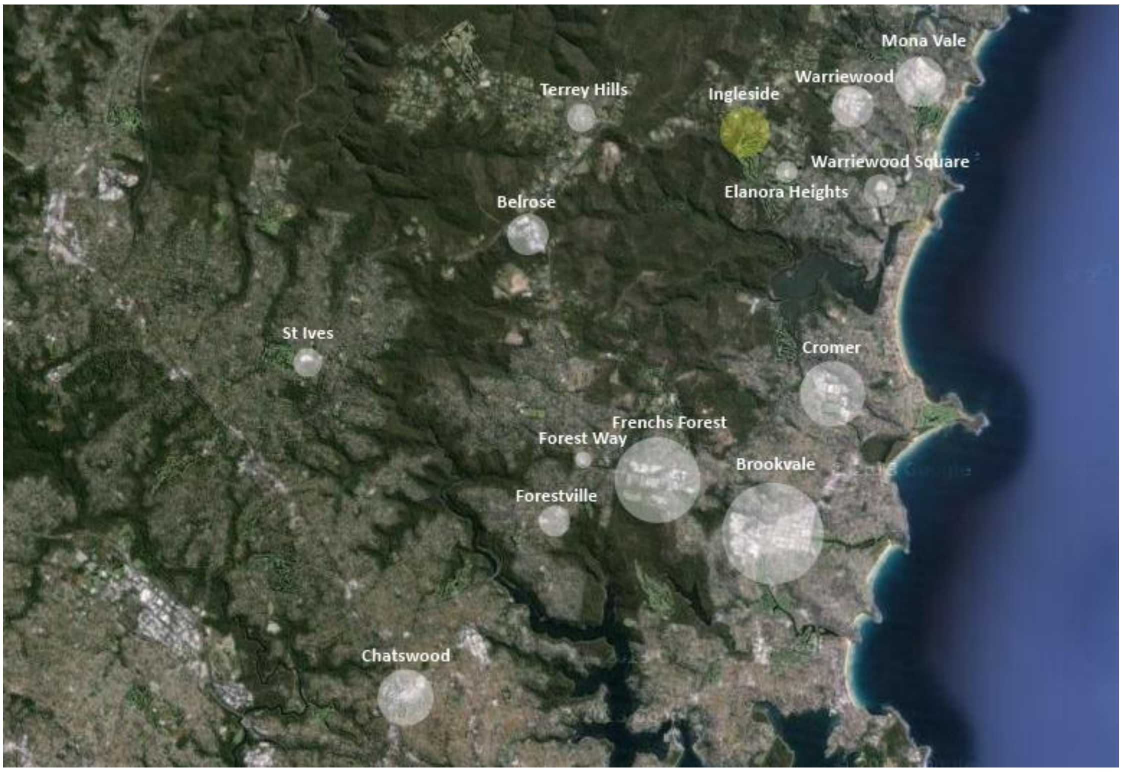
3.2 Employment and retail centres

The catchment centres and employment precincts are those which would share a sphere of influence with the Ingleside precinct and were based on both proximity to the Ingleside precinct (travel time, rather than distance) and the size of the centres and employment precincts. This evaluation was based on research and a qualitative assessment of alternative options for retail and employment.

It was also noted that whilst some centres appeared to be close to the site, other centres such as St Ives were more accessible due to the shorter travel time and direct route of travel (via car). The size of centres was also considered when determining the catchment of Ingleside. A major centre which is further from the site than a neighbourhood centre would be considered within the catchment as larger centres serve a broader catchment. For example, both Chatswood and Brookvale (i.e. Warringah Mall) were considered within the catchment as these centres are expected to capture the higher order retail spending of the incoming residents in Ingleside. The same logic applies to both office and industrial precincts as well. The centres selected are detailed in Figure 2. Figure 3 distinguishes those centres that have a significant retail component. A detailed analysis of the centres is located in Appendix 2.

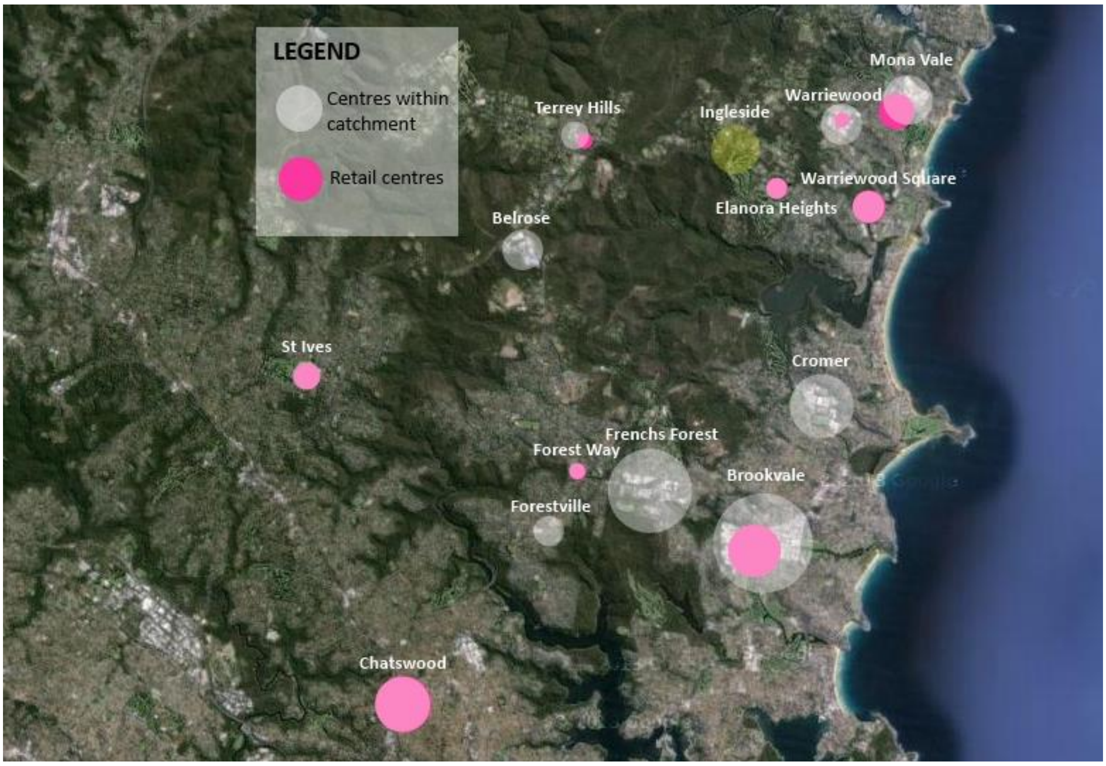
It should also be noted that Pittwater Council is developing a place plan for Mona Vale Town Centre. This plan will help Council understand the needs of residents and businesses and guide the management of the centre over time. The place planning process will shape the development of planning controls for the Mona Vale centre, with the intention to allow the Town Centre to evolve over time with a strong emphasis on creating places for people. The plan will generate strategies to improve connectivity, enhance civic space, and stimulate night time economic activity. The place planning process ought to make the Mona Vale Town Centre more attractive to cater for a significant range of retail needs from the Ingleside residents.

FIGURE 2. CENTRES CONSIDERED WITHIN THE CATCHMENT



Source: SGS Economics and Planning, 2013 (base from Google Maps, 2013)

FIGURE 3. HIERARCHY OF SURROUNDING RETAIL CENTRES



Source: SGS Economics and Planning, 2013 (base from Google Maps, 2013)

Retail centres

Figure 3 on the previous page shows a retail hierarchy of surrounding retail centres to the Ingleside precinct.

Table 3 provides an overview of the retail centres identified within the catchment for Ingleside.

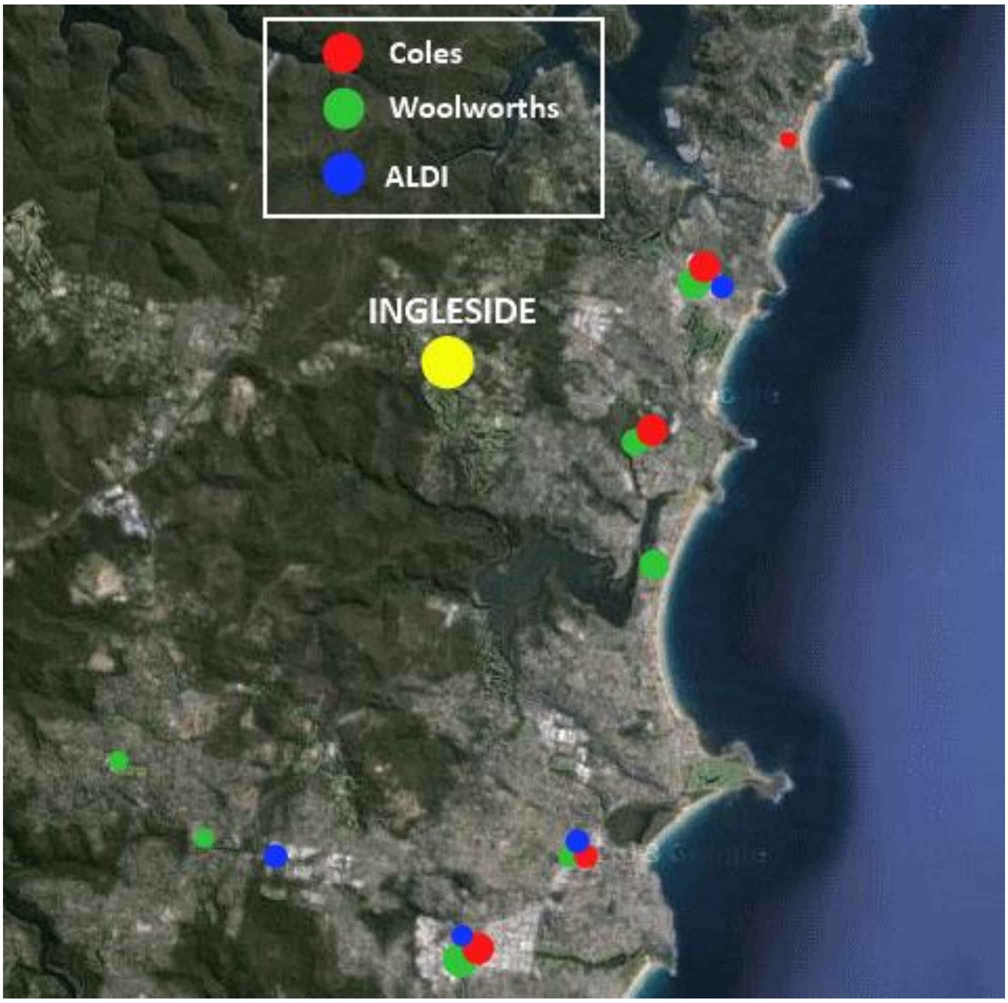
TABLE 3. OVERVIEW OF RETAIL CENTRES

Centre	Role/function	Floorspace (sqm)	Total employment (2011)	Comments	Distance from Ingleside
Brookvale – Dee Why (Warringah Mall and Pittwater Road Corridor)	• Major centre • High end retail and entertainment	324,119	14,457 (includes industrial)	Some vacant floorspace and minimal capacity for expansion.	18 minute drive
Chatswood	• Major centre • High end retail and entertainment	300,000	21,499	-	22 minute drive
Elanora Heights	• Small village • Local retail	5,700	622	Performing strongly and recently expanded - indicates strong demand in area.	4 minute drive
Forestway	• Within Frenchs Forest (village) • Local retail	9,600	723	-	13 minute drive
Mona Vale	• Town centre • Retail	12,910	4,198 (includes industrial)	Performing ok. Current Mona Vale place planning by Council will shape the planning, design and vision for Mona Vale.	7 minute drive
St Ives	• Village centre • Enclosed retail mall	12,152	1,722	-	12 minute drive
Terrey Hills	• Local retail	1,163	1,737 (includes retail)	-	5 minute drive
Warriewood	• Population serving retail	9,130	2,822 (includes industrial and commercial)	Provides for majority of retail needs of residents. Limited vacant retail floorspace in this centre. Capacity for expansion.	3 minute drive
Warriewood Square	• Stand-alone centre • Enclosed retail mall	22,265	2,054	-	8 minute drive

Source: SGS Economics and Planning, 2013

The ability of the site to accommodate a full-line supermarket will be a major consideration within this study. As a result, a desktop review of major full-line supermarkets within close proximity to the site was undertaken (refer to Figure 4). The closest full-line supermarkets to the site are located in Warriewood Square and Mona Vale; which are an eight and seven minute drive, respectively, from the main Ingleside intersection of Chiltern Road and Mona Vale Road.

FIGURE 4. FULL-LINE SUPERMARKETS IN CLOSE PROXIMITY TO INGLESIDE

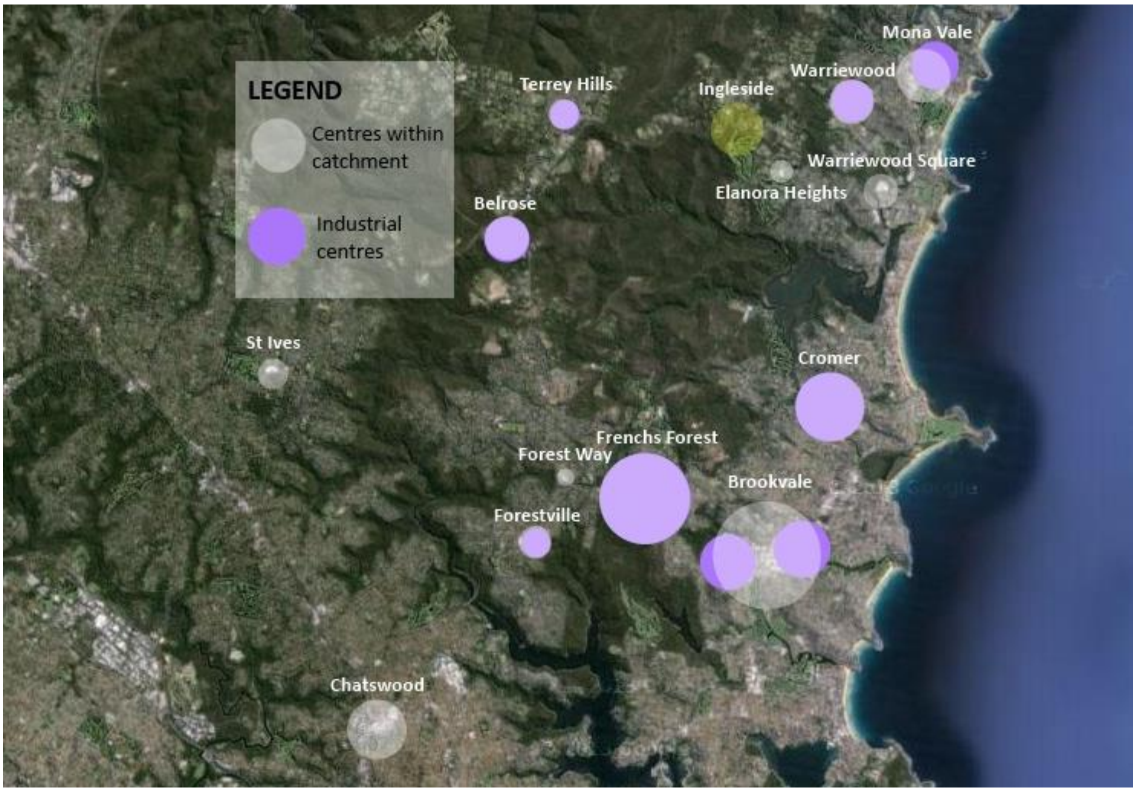


Source: SGS Economics and Planning, 2013 (base from Google Maps, 2013)

Employment precincts

The other employment precincts within the catchment of Ingleside precinct are highlighted in Figure 5.

FIGURE 5. INDUSTRIAL CENTRES



Source: SGS Economics and Planning, 2013 (base from Google Maps, 2013)

Table 4 provides an overview of the industrial centres identified within the catchment for Ingleside.

TABLE 4. OVERVIEW OF INDUSTRIAL CENTRES

Centre	Role/function	Floorspace (sqm)	Total employment (2011)	Comments	Distance from Ingleside
Belrose	• Business industrial (business park)	310,057	2,798	Vacant sites: 4.8 hectares Vacant floorspace: 26,163 sqm (8.4%)	6 minute drive
Brookvale	• Manufacturing and light/local industry	810,671	14,457 (includes retail)	Performing strongly. Some vacant floorspace and sites.	18 minute drive
Cromer	• Manufacturing and light/local industry • Population servicing industrial	250,645	3,034	Performing strongly. Vacant sites: 0.2 hectares Vacant floorspace: 14,355 sqm (5.7%)	17 minute drive
Frenchs Forest	• Business industrial (business park)	414,786	7,196	Some vacant office space. Generally performing strongly. Strong demand due to central location.	15 minute drive
Forestville	• local light industrial • urban services	10,778	1,287	-	15 minute drive
Mona Vale	• Major centre • Manufacturing and light/local industry	12,910	4,198 (includes industrial)	-	7 minute drive
Terrey Hills	• Business industrial	23,983	1,737 (includes retail)	Vacant floorspace: 2,865 sqm (11.4%)	5 minute drive
Warriewood	• Population serving industrial and commercial	40,376	2,822 (includes industrial and commercial)	Performing strongly with high demand and room for expansion. Some evidence of halted development and quite a few vacancies.	3 minute drive

Source: SGS Economics and Planning, 2013.

3.3 Summary

There are a variety of retail and employment centres within the Ingleside catchment including a number of strategic centres, such as Brookvale-Dee Why, Chatswood and Mona Vale, and population serving centres such as Terrey Hills and Elanora Heights.

Consultation with real estate agents revealed that small neighbourhood retail centres are not performing strongly with low rents and a lot of vacancies. One exception is Elanora Heights which is performing relatively strongly compared to other neighbourhood centres. This centre is located in very close proximity to the Ingleside release area and the recent expansion (increase in size of the IGA) suggests that there is strong demand for neighbourhood retail in this area. Consultation with real estate agents indicated larger centres are performing well, particularly those with large shopping centres.

It was suggested that residents would generally travel to Warriewood Square (Centro Warriewood) and Mona Vale for their groceries. Major centres within proximity to Ingleside, including Chatswood and Brookvale (i.e. Warringah Mall) are also expected to capture the high-order retail needs (such as fashion) of the future residents. Smaller centres such as Elanora Heights attract residents from Terrey Hills, Bayview and Ingleside as the centre contains a doctor and chemist, as well as an IGA.

The industrial market is booming with demand strong in Warriewood, Cromer, Brookvale and Mona Vale. Demand is particularly strong for small industrial sites (150 to 250 square metres) and relatively weak for large scale floorplates of greater than 2,000 square metres. Demand is strong for warehousing and storage used by the construction industry.

Demand for floorspace within business parks is not as strong as demand for industrial floorspace and there is a high proportion of floorspace available with owners struggling to find tenants, particularly at Belrose (Austlink Business Park). Demand is stronger for office space within business parks in Frenchs Forest and Brookvale. Frenchs Forest is seen as a hub for agglomeration economies, attracting international headquarters, particularly due to its central location.

Based on the supply analysis, Warriewood Square (Centro Warriewood) and Mona Vale are likely to be the two major centres which cater for the retail needs of incoming residents at Ingleside. Warriewood will likely cater for local industrial needs, and Belrose and Frenchs Forest will cater for local office/business park employment.

4 RETAIL & EMPLOYMENT REQUIREMENTS

4.1 Introduction

This section outlines the demand for employment and retail floorspace associated with the future residents of the Ingleside precinct. Employment floorspace has been forecast by applying population-driven employment ratios to the estimated incoming population. Retail floorspace has been forecast by assessing the retail needs of the incoming population.

The amount of on-site retail and employment floorspace that is required for the Ingleside precinct (and the amount that should be provided elsewhere) has been derived by applying a series of locational criteria to the future floorspace.

4.2 Employment land demand

Dwelling yield and population forecast

According to the draft Plan, it is estimated that the precinct can accommodate around 3400 dwellings and 9050 residents[3] when it is fully built out.

Population-driven employment forecast

To determine the number of population-driven jobs that are created by the incoming population, a cross-sectional regression analysis has been performed to establish the relationship between employment and population size at a 1-digit ANZSIC level[4]. The analysis utilised the following simple linear model:

$$Jobs\ in\ industry_i = \beta_{0i} + \beta_{1i} population + \varepsilon_i$$

The sample of observations used in this regression comprises all the Statistical Local Areas within the Sydney SD, rather than the Northern Beaches subregion. This is because the Northern Beaches subregion has a high self-containment rate, which would be unrealistic to apply to Ingleside. Furthermore, the Northern Beaches subregion yields only a small sample size making the regression analysis overly

[3] Since the yield analysis for the draft Plan was not finalised when the demand assessment was completed, the modelling for estimating the retail and employment requirements was based on the assumption that the precinct will reach approximately 9,500 residents when fully developed. Given the margin of error allowed for this modelling, it is unlikely that the minor difference in assumed population would change the study recommendations.

[4] Australian and New Zealand Standard Industrial Classification (ANZSIC) codes are provided at 4 different levels. 1-digit codes are the broadest level and there are 17 different 1-digit industry classifications. 3500

sensitive to outliers. Exceptions were made where a particular industry in Ingleside would be more similar to the Northern Beaches than the broader Sydney region.

Table 5 presents the results from the regression analysis. Our estimate of the ratio of population-driven jobs per person for each 1-digit ANZSIC industry is presented in the final column. Estimates for Sydney SD and the Northern Beaches are included for comparison, although the Sydney SD figure is used unless otherwise stated. A standard 95 percent significance level cut-off has been used to determine the industries for inclusion. In other words, jobs in a particular industry are only listed as population driven if there is less than a 5 percent probability that jobs in that industry is not driven by the local population.

TABLE 5. RATIO OF JOBS PER PERSON AT 1-DIGIT INDUSTRY LEVEL

1-digit	Description	Sydney SD jobs per person	Northern Beaches jobs per person	Comment	Population-driven jobs per person
A	Agriculture, Forestry and Fishing	0.00003	0.00000	Set to zero because n.a. in the Ingleside area	0.00000
B	Mining	0.00000	0.00000	Set to zero because n.a. in the Ingleside area	0.00000
C	Manufacturing	0.02014	0.02790	Set to zero because n.a. in the Ingleside area	0.00000
D	Electricity, Gas, Water and Waste Services	0.00049	0.00044		0.00049
E	Construction	0.01128	0.00193		0.01128
F	Wholesale Trade	0.00451	0.03604		0.00451
G	Retail Trade	n.a.	n.a.	Excluded from the analysis because retail industry requirements have been examined using a different method	n.a.
H	Accommodation and Food Services	n.a.	n.a.	Excluded from the analysis because these industry requirements have been examined using a different method	n.a.
I	Transport, Postal and Warehousing	0.00123	0.00469	An aerial view of the region shows some concentration of these industries in Pittwater, which is more similar to Ingleside than the broader Sydney SD area.	0.00469
J	Information Media and Telecommunications	0.00000	0.00186		0.00000
K	Financial and Insurance Services	0.00000	0.00000		0.00000
L	Rental, Hiring and Real Estate Services	0.00077	0.00065		0.00077

1-digit	Description	Sydney SD jobs per person	Northern Beaches jobs per person	Comment	Population-driven jobs per person
M	Professional, Scientific and Technical Services	0.00037	0.00057		0.00037
N	Administrative and Support Services	0.00256	0.00508		0.00256
O	Public Administration and Safety	0.00368	0.00024		0.00368
P	Education and Training	0.01886	0.01911		0.01886
Q	Health Care and Social Assistance	0.01572	0.01138		0.01572
R	Arts and Recreation Services	0.00175	0.00020		0.00175
S	Other Services	0.00770	0.00989		0.00770
TOTAL		**0.08908**	**0.11997**		**0.07238**

Source: SGS, 2013

These ratios were applied to the population forecasts above to generate forecasts for the number of additional population-driven jobs in the Ingleside precinct. Results are presented in Table 6.

TABLE 6. INGLESIDE PRECINCT POPULATION-DRIVEN JOB FORECASTS BY ANZSIC INDUSTRY

1-digit	Description	Population driven jobs
A	Agriculture, Forestry and Fishing	0
B	Mining	0
C	Manufacturing	0
D	Electricity, Gas, Water and Waste Services	5
E	Construction	107
F	Wholesale Trade	43
G	Retail Trade	n.a.
H	Accommodation and Food Services	n.a.
I	Transport, Postal and Warehousing	45
J	Information Media and Telecommunications	0
K	Financial and Insurance Services	0
L	Rental, Hiring and Real Estate Services	7
M	Professional, Scientific and Technical Services	4
N	Administrative and Support Services	24
O	Public Administration and Safety	35
P	Education and Training	180
Q	Health Care and Social Assistance	150
R	Arts and Recreation Services	17
S	Other Services	73
TOTAL		**690**

Source: SGS, 2013.

Jobs per ANZSIC category were converted to floorspace using standard employment density ratios. These are presented in Table 7 below.

TABLE 7. INGLESIDE PRECINCT ADDITIONAL FLOORSPACE BY ANZSIC INDUSTRY (SQUARE METRES)

1-digit	Description	2031
A	Agriculture, Forestry and Fishing	0
B	Mining	0
C	Manufacturing	0
D	Electricity, Gas, Water and Waste Services	556
E	Construction	8,058
F	Wholesale Trade	9,449
G	Retail Trade	n.a.
H	Accommodation and Food Services	n.a.
I	Transport, Postal and Warehousing	9,836
J	Information Media and Telecommunications	0
K	Financial and Insurance Services	0
L	Rental, Hiring and Real Estate Services	184
M	Professional, Scientific and Technical Services	102
N	Administrative and Support Services	854
O	Public Administration and Safety	1,228
P	Education and Training*	
Q	Health Care and Social Assistance	4,823
R	Arts and Recreation Services	582
S	Other Services	2,127
TOTAL		**37,798**

Source: SGS, 2013

*Note the floorspace for education and training has not been calculated, as the requirements for schools will be informed by a separate social infrastructure study.

Floorspace reported by ANZSIC industry categories say little about operational impacts or characteristics that planning is concerned with. For this reason it is necessary to convert floorspace by ANZSIC categories into the SGS Broad Land use Categories (BLCs), which were developed in previous employment land planning investigations with the NSW Department of Planning and Environment. Results are presented in Table 8.

Forecasts are for after the total dwelling yield at the Ingleside precinct has been completed. These forecasts are slightly lower than the above total floorspace, as some additional retail (bulky goods, main street retail and big box retail) and dispersed floorspace has been removed from the forecast. Retail floorspace has been removed as this is being accounted for in a separate retail assessment, while dispersed floorspace would be distributed throughout the community and not necessarily tied to particular commercial areas (e.g. a local physiotherapist).

TABLE 8. INGLESIDE PRECINCT ADDITIONAL FLOORSPACE FORECASTS BY BLC CATEGORY (SQUARE METRES)

1-digit	Description	BP	FL	LL	ML	O	S	US	TOTAL
A	Agriculture, Forestry and Fishing	0	0	0	0	0	0	0	0
B	Mining	0	0	0	0	0	0	0	0
C	Manufacturing	0	0	0	0	0	0	0	0
D	Electricity, Gas, Water and Waste Services	71	0	179	0	227	0	32	510
E	Construction	1,550	0	5,337	0	458	68	25	7,438
F	Wholesale Trade	833	510	5,425	450	480	0	0	8,693
G	Retail Trade	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
H	Accommodation and Food Services	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
I	Transport, Postal and Warehousing	1,411	3,348	3,232	426	144	0	476	9,037
J	Information Media and Telecommunications	0	0	0	0	0	0	0	0
K	Financial and Insurance Services	0	0	0	0	0	0	0	0
L	Rental, Hiring and Real Estate Services	6	0	37	0	30	1	0	169
M	Professional, Scientific and Technical Services	18	0	13	15	41	2	0	94
N	Administrative and Support Services	118	7	112	17	518	0	0	788
O	Public Administration and Safety	8	0	166	0	499	0	339	1,130
P	Education and Training	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Q	Health Care and Social Assistance	591	0	563	0	642	630	0	4,455
R	Arts and Recreation Services	26	0	122	0	69	88	0	535
S	Other Services	38	0	1,229	81	115	77	6	1,957
TOTAL		4,670	3,865	16,416	989	3,224	865	878	30,908

Source: SGS, 2013.

4.3 Retail demand

The future retail/commercial land use requirements for the Ingleside precinct have been assessed.

In this sub-section, a retail demand analysis is completed in following steps:

1. Estimate the total retail expenditure for the incoming population using the resident income profile
2. Distribute the total retail expenditure to different centre types in the system
3. Convert the retail expenditure captured in the precinct to floorspace requirements

Unless stated otherwise, all values in this section are in 2013 dollars.

Step 1: Estimate total retail expenditure

The retail expenditure of the incoming resident population has been based on a per-capita figure derived from the national average and adjusted for the income profile of households likely to occupy the dwellings at Ingleside. For the purpose of this assessment, the income profile of future residents has been based on ABS data for SA1s within the Warriewood and Mona Vale area. This proxy was chosen for its similarity to the Ingleside precinct since it has an affluent population, a semi-rural setting and several new housing developments.

The assumed income profile of future households at Ingleside is provided in the following table alongside the NSW average. On average, residents of Ingleside are projected to have higher incomes than the state as a whole, implying a higher than average per capita expenditure on retail goods and services.

TABLE 7. PROPORTION OF HOUSEHOLDS IN EACH WEEKLY INCOME BRACKET

	Low Income Range	Second Income Range	Third Income Range	Fourth Income Range	Upper Income Range
New South Wales	24.2%	17.8%	16.1%	20.8%	21.1%
Ingleside (assumed)	14.1%	14.0%	15.0%	23.4%	33.5%

Source: SGS, 2013.

Next, the assumed income distribution has been applied to the ABS National Household Expenditure Survey data (by income bracket and retail type) to derive expenditure at the local level. The average expenditure at the national level is then compared to the average of the derived expenditure at a state and local level. This forms the basis for the variation in expenditure (by retail type) between NSW and the Ingleside precinct.

Using time series data in the ABS Retail Turnover quarterly release, per-capita state retail expenditure by retail type has been extrapolated to derive projected five-yearly state forecasts from 2016 to 2031. The average variation in expenditure (by retail type) between NSW and the study area is then applied to the state retail forecast to derive study area-level projections. As an example of the outcome of this process, the table below shows the yearly per-capita expenditure comparison for 2021. The 'Total' column in Table 9 shows that each future resident at Ingleside is estimated to spend $13,086 on retail goods and services in 2021, about $1,800 more than the NSW average.

TABLE 9. PER CAPITA RETAIL EXPENDITURE 2021

	Supermarkets	Other Food	Dept. Stores	Clothing	Household Goods	Other Retail	Hospitality and Services	Total
NSW	$ 3,842	$ 802	$ 852	$ 1,932	$ 1,493	$ 1,561	$ 767	$ 11,249
Ingleside (assumed)	$ 4,469	$ 933	$ 991	$ 2,247	$ 1,737	$ 1,816	$ 892	$ 13,086

Source: SGS Economics and Planning, 2013 based on ABS Retail Trade time series

These figures are then multiplied by the projected additional population in the Ingleside land release area to derive total expenditure forecasts at five yearly intervals from 2016 to 2031. If the precinct is to be fully developed to its maximum capacity of around 9,500 residents by 2031, the total retail expenditure generated by residents is projected to reach $134 million.

TABLE 10. PROJECTED TOTAL RETAIL EXPENDITURE

	Supermarket & Grocery Stores	Other Food	Clothing	Household	Other Retail	Hospitality & Services	Department stores	Total
Total resident retail spend	$47,432,920	$8,954,271	$9,706,612	$24,364,774	$16,656,016	$18,841,227	$8,205,857	$134,161,677

Source: SGS Economics and Planning, 2013.

Step 2: Distribute the retail expenditure to different centre types in the system

Based on previous research and results from previous expenditure surveys, it has been found that in general the resident retail expenditure within a relatively enclosed system (i.e. no expenditure leakage or injections) is distributed across different centre types in the following apportionment:

- Regional City: 16%
- Major Centre: 22%
- Town: 23%
- Village: 9%
- Small village: 7%
- Neighbourhood: 7%

The following table shows the retail expenditure associated with the incoming residents and how that expenditure is likely to be allocated to each centre type within a retail hierarchy. Note that the total is less than 100 percent of residents' retail expenditure. This is because a portion of expenditure 'escapes' to bulky goods or large format retail centres and centres outside the defined system (i.e. a CBD centre).

TABLE 11. DISTRIBUTION OF RETAIL EXPENDITURES BY CENTRE TYPE

	Regional City	Major Centre	Town	Village	Small Village	Neighbourhood	Total
Spending by centre	$20,746,037	$19,905,052	$30,838,982	$12,788,883	$9,593,587	$9,488,896	$103,361,437

Source: SGS Economics and Planning, 2013.

Step 3: Determine the suitable centre typology

Additional centres can only be supported in the Ingleside area if projected floorspace demand by residents for such centres exceeds the 'typical' centre sizes.

To estimate the retail floorspace demand generated by incoming residents at Ingleside a set of benchmark Retail Turnover Densities (RTD) have been applied to the retail expenditure allocated to each centre type. Those RTDs represent the average trading performance of each centre type, as reported in the *Urbis Retail Averages,* and are measured in turnover per sqm Gross Leasable Area (GLA).

The projected total expenditure by Ingleside precinct residents at each centre type has been assessed in step 2. Comparing the projected floorspace demand to the average centre sizes suggests that there is sufficient demand to support a neighbourhood centre as part of the development, with annual turnover of over $8.8 million and floorspace of approximately 2,000 square metres. Other centres will be positively impacted, with projected expenditure of $93.9 million elsewhere in the system.

TABLE 12. ADDITIONAL FLOORSPACE REQUIREMENT AND TURNOVER THRESHOLDS (2011 DOLLARS)

	Formulas	Regional City	Major Centre	Town	Village	Small Village	Neighbourhood
Allocated retail expenditure by Ingleside precinct residents (from step 2)	A	$20,746,037	$19,905,052	$30,838,982	$12,788,883	$9,593,587	$9,488,896
Typical RTDs	B	$6,489	$5,149	$6,363	$7,139	$6,361	$5,382
Floorspace demand	C=A/B	3,197	3,866	4,847	1,791	1,508	1,763
Typical centre size	D	200,582	128,279	32,983	8,520	4,260	1,495
Enough demand to support a centre locally?	C>D?	No	No	No	No	No	Yes
Floorspace requirement		n.a.	n.a.	n.a.	n.a.	n.a.	~2,000

Source: SGS estimates based on RTDs from *Urbis Retail Averages*, 2013.

4.4 On-site requirements

Retail

On-site provision of retail floorspace should be restricted to neighbourhood retail (maximum floorspace of around 2,000 square metres). This neighbourhood centre may include a small grocery store and convenience-type retail stores, but should not include a full-line supermarket which would draw trade from nearby existing centres. Restricting the provision to neighbourhood retail will ensure that Ingleside does not compete and impact on the viability of existing retail floorspace within Elanora Heights, Terrey Hills and Mona Vale.

Any additional demand for retail generated by on-site residents, beyond what is provided at a neighbourhood level, would be distributed to the nearest centres of the appropriate centre typology.

SGS has developed a number of principles which are used to identify the most suitable locations for neighbourhood retail within the Ingleside release area:

- Central location which is accessible for a wide number of residents.
- Proximity to a major intersection for exposure, though to maintain amenity it should not straddle an intersection.
- Proximity to existing public transport routes.
- Accessibility to existing commercial uses including industrial areas to support multi-purpose trip generation and provide services to existing employment in the area.
- Proximity to social and community infrastructure to support multi-purpose trip generation and reinforce the viability of both uses.

Based on these principles, the neighbourhood centre would best be **located around Chiltern Road, just north of Mona Vale Road (see map below)**; though further refinements to this location should be made by the master planner taking into account design considerations. This location is highly accessible by car and is located near a major road for exposure. Ideally, however, to provide some amenity for this small centre, we recommend that it be on a side street and separated from the Mona Vale Road intersection.

FIGURE 6. POTENTIAL LOCATION NEIGHBOURHOOD RETAIL CENTRE IN INGLESIDE

Source: SGS Economics and Planning, 2014 (base layer Google Maps, 2014).

A floorspace ratio of 0.75:1 is considered appropriate for a neighbourhood centre of this size with at grade parking. Hence around a 2,600 square metre site should be provided to accommodate future retail floorspace. Elanora Heights is a good example of the neighbourhood centre envisaged for Ingleside (refer to Figure 7).

Based on the parking requirement of 1 space per 30 square metres of retail floorspace in Council's DCP, the neighbourhood centre will require 67 parking spaces or almost 2,000 square metres of land for parking. In total, the retail centre will require at least 4,600 square metres of land.

Market forces will likely determine the timing of this neighbourhood centre development. In addition to the neighbourhood centre, there could be a small retail offering (e.g. cafes) co-located with community/recreational uses within the potential community node in South Ingleside.

FIGURE 7. ELANORA HEIGHTS LOCAL RETAIL CENTRE

Source: SGS Economics and Planning, 2014.

Other employment

The analysis above highlighted that there is projected to be around 31,000 square metres of additional floorspace required to meet demand driven by population growth in Ingleside. This includes business park uses, office, light service industrial, freight and logistics and manufacturing uses.

SGS has also developed a number of principles which are used to identify the most suitable locations for these employment uses within the Ingleside release area and the existing employment areas located in close proximity:

- Access to large sites, particularly for industrial uses requiring large floorplates such as warehousing and business parks.
- Proximity to other employment lands to support supply linkages and agglomeration economies. This is particularly important for manufacturing and construction uses.
- Proximity to major intersections to increase exposure and access. This is particularly important for freight and logistics.
- Proximity to a skilled labour force. This is particularly important for high skilled employment within business parks and hi-tech manufacturing.

Based on these principles and knowledge of the role, function and capacity of surrounding centres, it is suggested that all of the 31,000 square metres of additional employment floorspace demand should be accommodated within existing employment areas.

For example, demand for business park or office floorspace can be accommodated within the existing business park developments at Frenchs Forest, Belrose and Warriewood. These employment areas currently contain vacant floorspace and have capacity for expansion which will be able to accommodate the demand generated by the Ingleside release area. Alongside this, the business parks satisfy the characteristics described above, particularly in terms of exposure and access and potential to encourage agglomeration economies.

Industrial land uses requiring large floorplates (2,000 square metres), which include freight and logistics, can be accommodated within the existing industrial precincts where there are large number of vacant spaces. In terms of industrial uses requiring smaller floorplates (150 to 250 square metres) there is relatively strong demand and low supply. Existing centres such as Warriewood, Belrose, Cromer and Brookvale could accommodate this demand through higher utilisation of existing businesses, filling of vacant buildings and some expansion.

Similarly, local service industrial (e.g. panel beaters and pool shops) could be accommodated in the nearby Warriewood centre and North Narrabeen or within the Terrey Hills industrial precinct.

5 SUMMARY AND CONCLUSIONS

5.1 Summary

Background and development context

The Ingleside Precinct is located in the North East Subregion and is approximately 700 hectares. It adjoins the Garigal and Ku-ring-gai National Parks, the Ingleside/Warriewood Escarpment to the east and Ingleside Chase Reserve.

There are three discernable areas for planning and infrastructure provision referred to as:

– South Ingleside (south of Mona Vale Road)
– North Ingleside (north of Mona Vale Road and east of the ridgeline) and
– Wirreanda Valley (on the north side of Mona Vale Road, west of the ridgeline).

The precinct has been the subject of a number of studies at both state and local level since it was identified as the major greenfield release area for the North East subregion in the early 1990s and was confirmed as a future greenfield release precinct in 2007.

The key development issues, constraints and opportunities for the Ingleside Precinct are as follows:

Key Issues	Constraints	Opportunities
– Dwelling yield and economic viability – Availability of primary utilities infrastructure (particularly water, sewage and electricity) and implications for the staging and costs of development – Provision of transport infrastructure (Mona Vale Road and Powderworks Road in particular) – Impacts on existing land use and integration with current land uses	– Biodiversity – Flooding – Bush fire risk – Riparian Corridors – Heritage – Urban interface e.g. with existing residential land – Existing capitalisation of some properties, particularly in North Ingleside – Capacity of Powderworks Road – Timing and upgrade of Mona Vale Road – Infrastructure servicing – Land capability and landscape	– Protection of natural features and environmental attributes – Public and private transport improvements including Mona Vale Road to Mona Vale – New communities – Improved access to centres – Community services – Market release, housing choice and affordability including affordable housing – Recognition of local and State heritage, and indigenous heritage – Strategic land approvals

Key Issues	Constraints	Opportunities
– Risks to the program include engaging/facilitating timely input from state agencies and key stakeholders – Probity risks should UrbanGrowth NSW's role develop from a planning-related function to delivery – Funding over time of infrastructure	– Fragmented land ownership	– Coherent and coordinated development outcomes – Certainty for landowners and community

Source: DP&E, Pittwater Council, UrbanGrowth NSW, Ingleside Precinct Project Plan, 2013, p.5.

A review of relevant policies, strategies and studies applying to the precinct provided guidelines for the size, location and configuration of retail and employment land in the Ingleside precinct. The key document review findings relating to retail were:

- Retail floor space provision should be located with regard to the hierarchy of centres and principles of walkability
- Conflict between different centres in the retail hierarchy should be actively managed. Established shopping centres in the Ingleside catchment area include:
  - Warringah Mall in the Brookvale – Dee Why Major Centre
  - Pittwater Place and Bungan Court in the Mona Vale Town Centre
  - Warriewood Square (Standalone Shopping Centre)
  - St Ives Shopping Centre (Village Centre)
  - Small Village Centres: Forestway Shopping Centre and Stockland Glenrose
- In the *Warriewood Valley Strategic Review Economic Feasibility Study*, Hill PDA (2011) noted that there was existing retail undersupply in the Pittwater LGA, as well as significantly growing demand for retail and commercial uses in Warriewood Valley and Pittwater LGA.

Similarly, the main findings relating to other employment development include:

- Existing employment lands in the subregion should be reserved for future employment growth and intensified to accommodate the ambitious employment targets for the area, for example, by better integrating Mona Vale Town Centre and Employment Lands, and increasing densities in centres.
- Employment in the subregion is relatively self-contained, partly as the area is relatively geographically isolated and underserved by public transport. This is also reflected in the proportionally higher number of home businesses in the area. To maintain the self-containment of the subregion, employment lands should take into account the skills of the area, and the existence of medical and sports/recreation specialised precincts in the area.
- The amount of investment in industrial land is limited by the geographical isolation of the North-East subregion. Existing business parks in the area should also be built

on and well-linked to future growth areas, such as Ingleside, in recognition of the growing demand for business park floor space.

Supply analysis

The analysis of surrounding centres and employment lands found that there are a variety of retail and employment centres within the Ingleside catchment. These include a number of strategic centres, such as Brookvale-Dee Why, Chatswood and Mona Vale, and population serving centres such as Terrey Hills and Elanora Heights.

Consultation with real estate agents revealed that small neighbourhood retail centres are not performing strongly with low rents and a lot of vacancies, with the exception of Elanora Heights which is performing relatively strongly. This centre is located in very close proximity to the Ingleside release area and the recent expansion (increase in size of the IGA) suggests that there is strong demand for neighbourhood retail in this area. Pittwater Council indicated the strong performance of Elanora Heights is due to its increased night-time economic activity supported by new restaurants/cafes and emerging 'Shop Local' trend by residents and visitors.

Consultation with real estate agents indicated that larger centres, particularly those with big box format centres (e.g. Warringah Mall), are performing well. It was suggested that Ingleside residents would generally travel to Warriewood Square (Centro Warriewood) and Mona Vale for their groceries and high-order retail needs (such as clothing). Smaller centres such as Elanora Heights attract residents from Terrey Hills, Bayview and Ingleside as the centre contains a doctor and chemist, as well as an IGA.

Based on the supply analysis, Warriewood Square (Centro Warriewood) and Mona Vale are likely to be the two major centres which cater for the retail needs of incoming residents at Ingleside. Warriewood will likely cater for local industrial needs and Belrose and Frenchs Forest will cater for local office/business park employment.

Demand forecast

Retail floorspace

SGS found that there is sufficient retail demand to warrant around 2,000 square metres of neighbourhood retail floorspace. Assuming a floorspace ratio of approximately 0.75:1, then around a **2,600 square metre site should be provided** to accommodate future neighbourhood retail floorspace.

Based on the locational principles for retail development, the neighbourhood retail site would best be **located around Chiltern Road, just off Mona Vale Road**; though further refinements to this location should be made by the master planner taking into account design considerations. This location is highly accessible by car and is located near a major road for exposure. Ideally, however, to provide some amenity for this small centre, we recommend that it be on a side street and separated from the Mona Vale Road intersection.

Other employment floorspace

According to real estate agents, Warriewood, Cromer, Brookvale and Manly Vale are the most favoured locations for industrial floorspace. Demand is particularly strong for small industrial sites (150 to 250 square metres) and relatively weak for large scale floorplates of greater than 2,000 square metres. While for business park floorspace, demand is strongest for Frenchs Forest and Brookvale, while Belrose is experiencing quite a few vacancies.

Based on the locational principles for non-retail employment development, combined with the knowledge of the role, function and capacity of surrounding centres, it is suggested that all of the 31,000 square metres of employment floorspace demand from Ingleside residents should be accommodated within existing employment areas.

5.2 Conclusion

The Ingleside precinct has a long history as an identified potential greenfield release area. Numerous studies have revealed environmental and infrastructure constraints and development opportunities for the site. These studies as well as state and local planning policies and strategies provided important contextual information that has informed the retail and employment location principles developed for this study.

The surrounding retail centres, industrial and business park precincts were assessed to determine their function, role within the hierarchy and capacity to absorb future development. This analysis established the most suitable locations for retail and employment floorspace generated by incoming Ingleside residents. This analysis also suggested that all of the employment floorspace demand should be accommodated within existing employment areas outside the precinct.

Future retail floorspace estimates for the incoming population were derived by adopting a previously identified dwelling yield for the precinct.

A series of principles, based on the policy and strategy review, provided guidance for the development of future retail floorspace within the precinct, which are summarised as follows:

– The neighbourhood centre with a retail floorspace of around 2,000 square metres **should be located around Chiltern Road, just north of Mona Vale Road**. Ideally, to provide some amenity for this small centre, we recommend that it be on a 'side street' and separated from the Mona Vale Road intersection.
– There is also an opportunity for this neighbourhood centre site to provide some shop top housing, as seen in other centres in Pittwater LGA.

- Based on the parking requirement of 1 space per 30 square metres of retail floorspace in Council's DCP, the neighbourhood centre will **require 67 parking spaces or almost 2,000 square metres of land for parking**.
- In total, the proposed neighbourhood centre in North Ingleside will require **at least 4,600 square metre land.**
- There could be a small retail offering (e.g. cafes) co-located with community/recreational uses within the potential community node in South Ingleside.

6 APPENDIX 1 – DOCUMENT REVIEW

Planning Context

A Plan for Growing Sydney

A Plan for Growing Sydney was released in December 2014 and provides a vision for the growth of Sydney over the next 30 years. The four main goals within the strategy are:

- a competitive economy with world-class services and transport;
- a city of housing choice with homes that meet our needs and lifestyles;
- a great place to live with communities that are strong, healthy and well-connected; and
- a sustainable and resilient city that protects the natural environment and has a balanced approach to the use of land and resources.

Ingleside falls within the North Subregion defined by the Plan. The priorities identified for the North Subregion include:

- A competitive economy;
- Accelerate housing supply, choice and affordability and build great places to live; and
- Protect the natural environment and promote its sustainability and resilience.

Ingleside/ Warriewood Urban Land Release Draft Planning Strategy (Pittwater Council, 1995)

Ingleside has been designated by the NSW Government for future land release since 1991. In the early 1990s, Council undertook a comprehensive suite of environmental and demographic studies for Ingleside-Warriewood, including an urban land capability study, water cycle management study and demographic analysis and modelling. These studies were used to prepare the draft Planning Strategy for the Ingleside-Warriewood Release Area, which was reviewed by the NSW Government in 1995 and suspended by the then Planning Minister. In 1997, a limited land release was announced for the Warriewood Valley, while Ingleside remained listed in the Metropolitan Development Program.

Three projections were provided in the document, based on the preliminary results of the environmental studies.

TABLE 13. POPULATION PROJECTIONS FOR INGLESIDE-WARRIEWOOD

Level of development	Number of dwellings	Population
High	9,100	25,500
Medium	6,000	17,600
Low	3,500	9,000

Source: Pittwater council, Ingleside-Warriewood Urban Land Release Draft Planning Strategy, 1995.

TABLE 14. DWELLING PROJECTIONS FOR INGLESIDE

Development area	Area	Estimated number of dwellings
South Ingleside	232 Ha	1,890
North Ingleside	98 Ha	847
Chiltern Road	155 Ha	989
Wirreanda	172 Ha	1,143

Source: Pittwater Council, Update on Ingleside Investigation Area, 2009.

The draft Strategy forecast a total of 4,869 dwellings for Ingleside, based on a range of development scenarios for various areas of Ingleside as a result of the land use development capacity. Whilst this study was based on sound planning practices carried out on the back of detailed study information available at the time, it is no longer endorsed by Council. In 2006, Pittwater Council and the State Government started a re-investigation into the current extent and nature of development capability, due to changes in community views and standards, economic viability in the area and legislative requirements regarding conservation and bushfire protection.

Growth Centres Development Code (Growth Centres Commission, 2006)

The Growth Centres Development Code sets out the broad protocols and processes for precinct planning and new communities in Growth Centres. The Code comprises three elements:

a) Site analysis and identification of the physical and environmental constraints of the land
b) Statutory component which includes provision for land use zoning, density, height controls and any other planning controls and provisions that could form the basis of a future environmental planning instrument. During this period local councils should be preparing a development contributions plan as part of the precinct planning process.
c) Detailed development controls for the precinct, such as desired character, building controls and processes notifying other interested parties about development, which could form the basis of a future development control plan.

The Code aims to achieve the following objectives for new greenfield development precincts:

- A range of uses in precincts, including commercial, retail and residential
- An emphasis on “jobs available locally and within the region,” to reduce travel time and demand for transport into CBD

The Code also aims to establish a hierarchy of centres for the growth areas. Based on the precincts proposed population and function, each type of centre (major centre, town and village centre, walkable community) has a target range of estimated retail. The provision and location of retail floor space in Ingleside will be based on the following principles:

- Communities should have easy access to a full range of shops, recreational facilities and services
- Retail provision can be used to establish community focal points and organise smaller village centres to maximise pedestrian access
- For regional and mixed use town centres – retail should be provided at sufficient levels, and be located to act as a catalyst to generate other, non-retail employments

The Code also identified strategies that will influence the provision of floor space for employment lands within the Ingleside precinct:

- Employment strategies for growth centres to promote “jobs available locally and within the region,” to create self-contained communities
- On edges of Growth Centres, the Code promotes employment for light industry with a limited number of heavy industrial areas – structured to be jobs-dominant, primarily non-retail employment areas with connection to public transport
- Establishment of mixed use employment corridors for commercial and industrial uses that take advantage of site exposure/passing trade
- Small-scale home businesses should be factored into floor space provision

Draft Strategy for North East Subregion (Department of Planning, 2007)

The Draft Strategy for the North East Subregion aimed to translate the objectives of the City of Cities Metropolitan Strategy and NSW State Plan to the subregional level. Local councils were consulted during the preparation of the draft Strategy, and the plan was exhibited in 2007. The draft Strategy aimed to drive land use planning in Manly, Pittwater and Warringah LGAs until 2031, but will be reviewed and updated by the subregional delivery plans prepared under the new Metropolitan Strategy for Sydney to 2031 (2013).

The draft Strategy aimed to achieve the following relevant objectives:

- To ensure than an adequate supply of employment land is identified within centres and other specialised/industrial lands to maintain the subregion’s high level of employment self-containment
- To accommodate 19,500 new jobs in the subregion by 2031, to bring the subregion’s total jobs to 102,000

The draft Strategy also highlighted a number of issues and opportunities that may have an impact on retail and employment lands floor space provision in the Ingleside precinct:

- The local economy depends largely on the consumption of the subregional population

- Net community benefit criteria should be applied to out-of-centre retail proposals
- The historical development pattern and physical isolation of the subregion means there are relatively small areas of employment lands. Therefore, the draft Strategy highlights the importance of protecting and enhancing strategic employment lands
- In the past, larger industrial employers were not attracted to the area as a result of transport constraints in and out of the subregion and there is a higher proportion of very small businesses operated from home. The draft Strategy indicates that the DP&E and local councils should review planning controls for the industrial areas
- Investigation and creation of a commercial core in the Brookvale Centre
- Councils to implement employment capacity target of 4,000 additional jobs for the Brookvale-Dee Why major centre by planning for sufficient commercial, retail and industrial zoned land and floor space with their Principal LEP
- Industrial lands are minimal (have only increased by half a hectare 1987 – 2006), but of strategic value to subregion, and should be protected. For example, Austlink/Terrey Hills, Cromer, Mona Vale.

A summary of the draft Strategy's approach to the provision of retail and employment lands floor space can be found below:

- Subregion is not expected to have significant new zoning of employment lands, instead, existing areas should be maintained and intensified
- Councils to implement employment capacity target of 40,00 additional jobs for the Brookvale-Dee Why major centre by planning for sufficient commercial, retail and industrial zoned land and floor space with their Principal LEP
- DP&E to investigate role of Pittwater Road as an enterprise corridor between Brookvale and Dee Why – provide low cost accommodation for a range of local and regional services, e.g. start-up offices, light industrial, showrooms and building supplies.
- Existing employment lands at Frenchs Forest and Allambie Heights could provide potential for medical services-related growth in tandem with the development of a new hospital at Frenchs Forest
- Align future growth in Frenchs Forest with the transport network for the area, integrating activities with nearby Austlink business park and light industrial along Warringah Road
- Establishment/enhancement of business parks is important as they are a key driver of employment growth outside the CBD
- Intensified use of industrial areas near public transport connections may require reviewing planning controls

Local Planning Directions (Section 117.2)

Local planning directions are issued by the Minister for Planning and must be followed by relevant planning authorities, such as local councils, when preparing planning proposals for LEPs. Direction 1.1 relates to business and industrial zones and will need to be taken into consideration when Pittwater Council prepares an LEP incorporating the Ingleside urban release area.

Under this planning direction, planning proposals must retain the areas and locations of existing business and industrial zones. They should not reduce the total potential floor space area for industrial uses in industrial zones and employment uses and related public services in business zones. As well, planning proposals should ensure that proposed new employment areas are in accordance with a strategy that is approved by the Director-General of the DP&E.

The objectives of Direction 1.1 are:
– To encourage employment growth in suitable locations
– Protect employment land in business and industrial zones
– Support the viability of identified strategic centres

Draft State Environmental Planning Policy (Competition) 2010

The SEPP (Competition) 2010 is still a draft, but if passed it aims to:
– Promote economic growth and competition
– Remove anti-competitive barriers to commercial development (retail, business, office premises) in environmental planning and assessment

The draft Competition SEPP aims to promote competition between retail. A central policy move of the SEPP stipulates that environmental planning instruments cannot restrict:
– the number of particular types of retail premises
– loss of trade for other commercial developments, unless this a new development is likely to have an overall adverse impact on the extent and adequacy of facilities and services available to the local community
– the proximity of particular types of retail premises

SHOROC Employment Study (Hill PDA, 2008)

The SHOROC Region includes the Local Government Areas of Mosman, Manly, Warringah and Pittwater, and covers an area of 264 square kilometres, with a population of 264,413 in 2006 (ABS, Hill PDA). The region's population has a higher median age, lower unemployment rates and a significantly greater proportion of its population is in the medium to high income bands than the rest of the Sydney metropolitan area. In 2006, there was over 5.3 million square metres of employment lands (relating to industrial, commercial and retail site area) and 920,000 square metres of floor space relating to Special Uses (Health, Community and Education). Combined, these uses generated approximately 100,140 jobs in the Region in 2006 (Hill PDA 2008).

The aims of the SHOROC Employment Study were to:
– Research and document existing employment in the SHOROC region
– Identify economic, social and environmental trends that may influence employment in the region to 2031

– Identify key strategies and principles that will enable sustainable employment and business growth across the region to 2031

In 2006, retail trade generated 19% of jobs in the region, followed by property and business services (16%), which is 4.8% and 1.5% higher than the Sydney SD, respectively. The study suggests there will be demand for an additional 240,000 square metres of retail floor space between 2006 and 2031 across SHOROC. Growing affluence is likely to lead to growing demand for retail floor space and residents working longer hours/higher workforce participation rates leading to growing demand for convenient, comprehensive and out of hours retail and service provision. This demand will need to be met by town and village centres that create a network of larger supermarkets and provide greater convenience through car parking and public transport provision. The study also identified:

– growing demand for bulky goods retailing,
– a current undersupply of supermarket floor space in region,
– greater local demand for bulky goods than currently being met by the SupaCentre Belrose, the main bulky goods retailer in the area.

The study projected the number of commercial jobs would increase by 8145 to 2031, requiring an additional 185,000 square metres of floor space. The majority of job growth is expected to be in the property and business sectors, requiring around 170,000 square metres of floor space. The SHOROC study indicates that a very high density of development will be needed to meet floorspace growth forecasts. If this is not met, businesses will need to relocate to alternative LGAs, which will harm the local economy, services and employment self-containment. In 2006, the Region contained over 5.3 million square metres of employment lands (relating to industrial, commercial and retail site area). It had 920,000 square metres of floor spaces related to Special Uses, including health, community and education and there were approximately 100,140 jobs in the subregion.

Average intensity of use of business lands in 2006 was low across the region, with an average FSR of 0.6:1, which indicates opportunities for more efficient use of land through higher density development. As outlined in the SHOROC Employment Study, trends likely to influence the type of employment provided in the SHOROC region in the future include a declining household size and ageing population and growing affluence leading to growing demand for retail floor space. A strong commercial office market in Global Sydney, coupled with significant forecast regional growth of property and business services, is likely to have a positive impact on demand for higher specification, flexible commercial units within a range of town centres, villages and business park locations within the SHOROC region. There is growing demand for business parks across the Sydney region, which the SHOROC region could capitalise on. However, demand for industrial floor space was projected to peak in 2016 at an additional 48,000 square metres, with demand decline subsequently as a result of job decline. The study also flagged growing potential for conflict between business uses and residential, particularly in town centres where there is an active night time economy and growing proportion of residential dwellings.

It important to point out that the SHOROC study was completed pre-GFC and, as such, the forecasts in the study potentially overstate the future requirement for employment generating uses for the subregion.

Pittwater Economic Development Plan 2012 – 2016 (Pittwater Council, 2012)

The Pittwater Economic Development Plan (EDP) 2012 – 2016 was Pittwater Council's first EDP, and seeks to create an environment that promotes business growth, investment and employment generation by identifying opportunities for economic growth in the LGA.

The EDP aims to:
- Ensure that local land resources and planning instruments can accommodate demand for commercial, retail and industrial activities in ways that contribute to Pittwater as a sustainable economy
- Maintain a regional retail hierarchy in collaboration with Warringah Council
- Manage the potential conflict between residential and commercial/retail uses within hierarchy of centres

The EDP identifies a number of challenges for economic development in the region. It suggests that Pittwater LGA has a shortage of employment land, and more land is required to be zoned for employment lands to accommodate growth, for example, by better integrating Mona Vale town centre and employment lands. The EDP reveals that the area has an ageing population, and Council needs to create opportunities for older people to continue participating in the workforce, and create better work and learning pathways for younger residents. The area is experiencing employment growth at a rate higher than forecast and the EDP provides direction to ensure there is sufficient commercial, retail and employment land to accommodate growth.

Around 25% of all jobs in Pittwater LGA are in the employment lands of Mona Vale, Warriewood and North Warriewood. Employment is growing strongly in these areas, particularly in the advanced industrial and warehouse areas. This highlights the potential to grow new employment opportunities through well designed and planned employment lands. The EDP reveals that infrastructure constraints and poor integration of Pittwater LGA into metropolitan Sydney's major transport infrastructure and labour markets limits business investment in the area.

The EDP also identifies a number of opportunities for economic development in the region. The proportion of people working from home in Pittwater is around double the Sydney average and this is likely to increase with investment in ICT infrastructure. There is also a need to improve mass transit connections south to Global Sydney and west to Chatswood, Macquarie Park and St Leonards. If the Frenchs Forest site develops as a specialised centre, this will have implications for Pittwater, opening significant opportunities for the workforce. The strategy aims to further strengthen the current and future role of Mona Vale Town Centre as the major commercial office centre for Pittwater LGA.

Draft Metropolitan Strategy for Sydney to 2031 (Department of Planning and Environment, 2013)

The draft Metropolitan Strategy identifies a number of relevant priorities for the North subregion, including:

– To promote the North subregion as an accessible and liveable area with a growing network of employment areas
– Promote increased housing choice
– Improve transport connections
– Provide protection of environmental assets including the Harbour and beaches

Strategies to achieve these priorities that may influence the Ingleside precinct include:

– Strengthen Brookvale-Dee Why Major Centre as a location for integrated retail, employment and service centre for the Northern Beaches and wider subregion
– Improve connections to the Global Economic Corridor via North Sydney & cross-regional links with Chatswood via Brookvale-Dee Why
– Continue to support mixed-use renewal of Dee Why
– Provide capacity for at least 3000 additional jobs to 2031 at Brookvale-Dee Why major centre

Economic viability

Ingleside Investigation Area: Preliminary Scoping Report (Pittwater Council, 2009)

The Ingleside Investigation Area: Preliminary Scoping Report (Scoping Report) was commissioned to update the draft Strategy (1995) and mapped existing environmental constraints to development, based on aerial photography and studies to define the approximate area capable of development, for urban or large lot residential. This resulted in an estimated dwelling yield between 4177 and 4635; based on the benchmark of 15 dwellings per hectare.

The Scoping Report also contained economic analysis for Ingleside. This considered the likely economic viability of developing Ingleside as a release area, given constraints such as the fragmented ownership, infrastructure requirements and capitalisation of private lands in the Ingleside Investigation Area.

The Scoping Report found that private investment in 'bricks and mortar' including any existing commercial enterprises may deter redevelopment of the property regardless of it being 'upzoned' from non-urban to residential. As many properties identified with development capability are also highly capitalised, there is a firm possibility that the high acquisition costs would result in very little or no return for developers. The Scoping Report also flags introducing employment containment initiatives and attracting employment generators into the area, to increase the area's economic sustainability.

Development constraints identified in Scoping Report which may affect the ability to achieve projected dwelling yields include:

- Protection of environmentally sensitive land
- Threat from bushfire
- The extent of capitalisation evident in private landholdings in Ingleside
- The capacity of Mona Vale Road to accommodate future development
- The future use of Powderworks Road as a direct north-south route
- The delivery of infrastructure in a timely way
- Financial risk to Council and NSW government if development potential is not achieved, resulting from uncertainty with infrastructure charges.

Ingleside Land Release Area Report (MacroPlan, 2008)

MacroPlan was commissioned by Landcom to undertake a demand and supply analysis for housing, employment and retail land uses in the Ingleside Land Release Area (Ingleside precinct) in 2008. The study aimed to identify the target number of dwellings, which are detailed in Table 15 below.

Based on surveys of existing and potential residents, MacroPlan found strong demand for eco housing in the Ingleside precinct. Environmental features such as sustainable housing, recycling and solar energy were important considerations for existing and potential residents of the area.

TABLE 15.INGLESIDE ESTIMATED DWELLING YIELDS

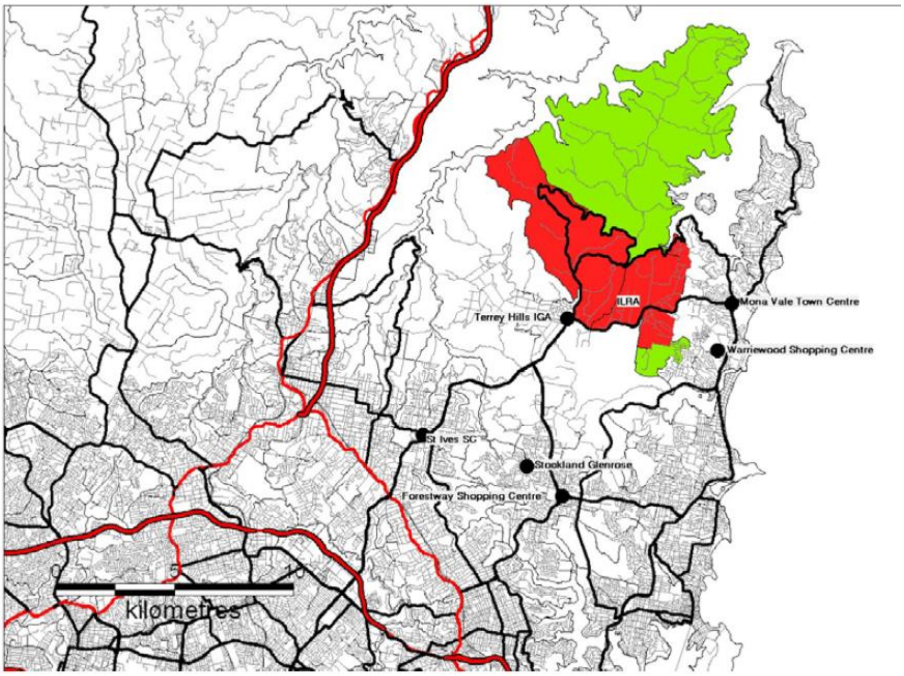
Building types	Built form	Average Lot Size	Total Area/Ha	Total dwelling yield
Detached eco housing	Detached, 1-2 storeys in height	Torrens title housing with lot size ranging from 2.5Ha to 5Ha	240.7	72
Eco housing	Detached, 1-2 storeys in height	Torrens title housing with lot size ranging from 0.83Ha to 1.25Ha	135	135
Detached housing	Detached, 1-2 storeys in height	Torrens title housing with lot size ranging from 660 to 1200 square metres	12.1	139
Detached or paired housing	Detached and semi-detached 1-2 storey in height	Torrens title housing with lot size ranging from 500 to 660 square metres	26.67	466.7
Paired or attached housing	Detached, semi-attached and attached 2-3 storey s in height	Torrens title housing with lot size ranging from 330 to 500 square metres	59.8	1495
Apartments or shop top housing	Detached apartment buildings, attached shop top housing, 2-4 storeys in height	Strata title housing, ground floor retail uses with possible lot size range from 50 to 3000 square metres	17.5	1617.8
Total			**491.77**	**3925.5**

Source: Hill Thalis Architecture, 2008; MacroPlan, 2008.

Projected Retail Floor Space

MacroPlan also conducted a retail analysis of the area, and defined a main trade area (MTA) around the Ingleside area, including a primary trade area (PTA) and secondary trade area (STA) (Figure 8). It suggested that residents of the PTA are likely to use retail offerings in the Ingleside area for a significant proportion of convenience shopping, based on proximity to other centres and geographic barriers, such as main roads. Residents of the STA will still have access to the proposed retail in Ingleside, but their expenditure in the area is likely to be lower, due to competition from surrounding centres and distance from the site.

FIGURE 8. PRIMARY AND SECONDARY CATCHMENT OF INGLESIDE PRECINCT



Source: MacroPlan, 2008.

Based on the size and location of competing centres, the hierarchy of centres and forecast residential development in the Ingleside Precinct, MacroPlan (2008) devised the estimates of sustainable retail floorspace, assuming some leakage to surrounding centre.

The MacroPlan report estimates that the sustainable convenience retail floorspace in the Ingleside precinct is 3,892 square metres by 2016 and 9,237 square metres by 2031, of which 23% would be supermarket space (MacroPlan 2008).

MacroPlan suggests that the northern end of the Ingleside development would support a larger scale retail development, such as a supermarket, as it would have a higher volume of passing trade due to greater access from Mona Vale Road, while the southern end of the Ingleside precinct would have a more localised role, perhaps including a deli or local supermarket.

Projected Employment Floor Space

MacroPlan also identified a significant demand for office floor space and industrial land in the Pittwater LGA, but argued that this was likely to be absorbed by established employment nodes with good accessibility and servicing as well as capacity for future development, including the existing office and industrial areas within the Pittwater and Warringah LGAs. The study found that the Ingleside precinct could potentially deliver a small parcel of employment land along Mona Vale Road, which could feature local service industries such as automotive or medical services, which would complement the role of the Austlink Business Park (MacroPlan 2008).

Warriewood Valley Strategic Review Report (DP&E and Pittwater Council, 2012)

This review report was jointly prepared by the Department of Planning and Environment and Pittwater Council, in response to a recommendation by the Planning Assessment Commission. The review covered Council's dwelling density and height controls, the current transport network and infrastructure demands for Warriewood Valley, as well as a review of the development opportunities of the Southern Buffer, including the possibility of a mixed use centre. It also aimed to clarify the subregional role of Warriewood Square, how it relates to Warriewod Valley, the potential for higher density residential development and the opportunity for employment-generating development adjacent to Warriewood Square. The review process included a preliminary review of undeveloped land parcels to determine their development potential, a land capability assessment to identify land with potential for intensification, and then a detailed review (including a review of economic feasibility, traffic impacts and urban design outcomes) of the land identified as appropriate for development was conducted.

In general, the review recommended increased dwelling yields for the area, recommending increased dwelling densities of up to 32 dwellings per developable hectare, depending on appropriate design criteria and infrastructure provision strategies and underpinned by infrastructure funded through a section 94 contributions plan.

Warriewood Valley Strategic Review Economic Feasibility Study (Hill PDA, 2012)

To test the feasibility of several residential development scenarios in the Warriewood Valley area, Hill PDA conducted the Economic Feasibility Study for the Warriewood Valley Strategic Review. The objectives of the economic feasibility study were to provide an economic assessment of:

– The feasibility of several residential density scenarios
– Development scenarios for a mixed use centre in the Southern Buffer.

FIGURE 9. SOUTHERN BUFFER

Source: DP&E and Pittwater Council, 2012.

When assessing the development scenarios for a mixed use centre, Hill PDA considered the existing centres hierarchy within the Pittwater LGA, demographics, population and household growth forecasts and the role of Warriewood Square. Within the North East subregion, the retail market is dominated by the Brookvale-Dee Why major centre, but population and rising household incomes has driven demand for additional retail floor space within the subregion. The Economic Feasibility Study generally supported the principle of expansion of the Warriewood Valley retail area to address Pittwater Road, to create a focus for the Warriewood Valley community, and prevent retail expenditure leakage from the Pittwater LGA.

While assessing the feasibility of a mixed use centre in the Southern Buffer, Hill PDA found that there was an existing retail undersupply in the Pittwater LGA, as well as significantly growing demand for retail and commercial uses in Warriewood Valley and Pittwater LGA. However, expansion of many of the existing centres in Pittwater LGA is constrained by surrounding land uses.

The study found that:

– Small-lot housing and townhouses can be viable when the minimum density is 30 – 35 dwellings per hectare
– Apartment buildings are only economically viable at minimum densities of 60 dwellings per hectare, although this density is much greater than the level recommended in the Warriewood Valley Urban Design Study

- A single level subregional shopping centre would be the most economically viable option for a mixed-use centre in the Southern Buffer of the development.
- A subregional shopping centre in Warriewood Valley would not disrupt the existing retail hierarchy, would be commercially attractive and create a village/town centre opportunity for the local community. Based on an assessment of socio-demographics in the area, Hill PDA concluded that there was sufficient demand for a subregional centre in the area.

However, during public exhibition of a draft Concept Plan for a mixed use centre in the Southern Buffer, it became clear that the community was generally opposed to the proposal, and the existing Concept Plan will not be progressed.

Update on the Ingleside Investigation Area (Pittwater Council, 2009)

A number of the reports and strategies summarised above address concerns related to the economic viability of the development of the Ingleside precinct. The risks and constraints to development are identified in Pittwater Council's Update on the Ingleside Investigation Area (2009), and include:

- The future protection and management of the environmentally sensitive land, including environmental and biodiversity corridors and creek line corridors
- Concerns raised by the NSW Department of Environment and Climate Change requiring further resolution
- The threat from bushfire
- The extent of capitalisation evident in private landholdings in Ingleside
- The capacity of Mona Vale Road to accommodate for future development in Ingleside and provide emergency access/egress e.g. bushfire
- The future use of Powderworks Road as a direct north-south route
- Delivery of infrastructure in a timely manner over the life of the development process
- Financial risk to Council and the State Government if the development potential is not achieved or is delayed
- Uncertainty with the Section 94 funding mechanisms.

The table below summarises the preliminary risk for those involved in the provision of various infrastructure within a land release development, based on a hypothetical shortfall in the development yield.

TABLE 16. SUMMARY OF PRELIMINARY RISK IN INGLESIDE DEVELOPMENT

Issue	**Infrastructure**	**Risk Exposure (for)**		
Incomplete Development	**Element**	**Council / Community**	**Government / Service Agency**	**Developer**
Shortfall in development (e.g. 25% shortfall in 10 years or equivalent shortfall of 1,159 dwellings, based on estimated optimum yield of 4,365 dwellings)	Section 94 requirements (roads, open space, water management, etc.)	Exposure to significant shortfall in s94 contributions – financial deficit to any forward-funded infrastructure, bushfire safety concerns		Incomplete development resulting in safety concerns, poor amenity. Shortfall in profit margin.
	Services (sewer and water, electricity, telecommunications, gas)		Significant exposure to financial deficit to any forward-funded infrastructure.	Significant exposure to financial deficit to any forward-funded infrastructure. Poor residential amenity and shortfall in profit margin.
	Mona Vale upgrade		Significant exposure to financial deficit to any forward-funded infrastructure.	Poor residential amenity, safety concerns.
	Public transport provision	Poor residential amenity, unsustainable community contrary to aims for release area development.	Significant exposure to financial deficit to any forward-funded infrastructure. Removal of infrastructure.	Poor residential amenity and unsustainable development / community.

Source: Pittwater Council, Update on Ingleside Investigation Area, 2009, p.7.

7 APPENDIX 2 – DETAILED SUPPLY ANALYSIS

Belrose: Austlink Business Park

Austlink Business Park is located on the south-western corner of Forest Way and Mona Vale Road in Belrose and surrounded by the Australian National Park Bushland (refer to Figure 10). The Austlink Business Park is currently zoned B7 Business Park.

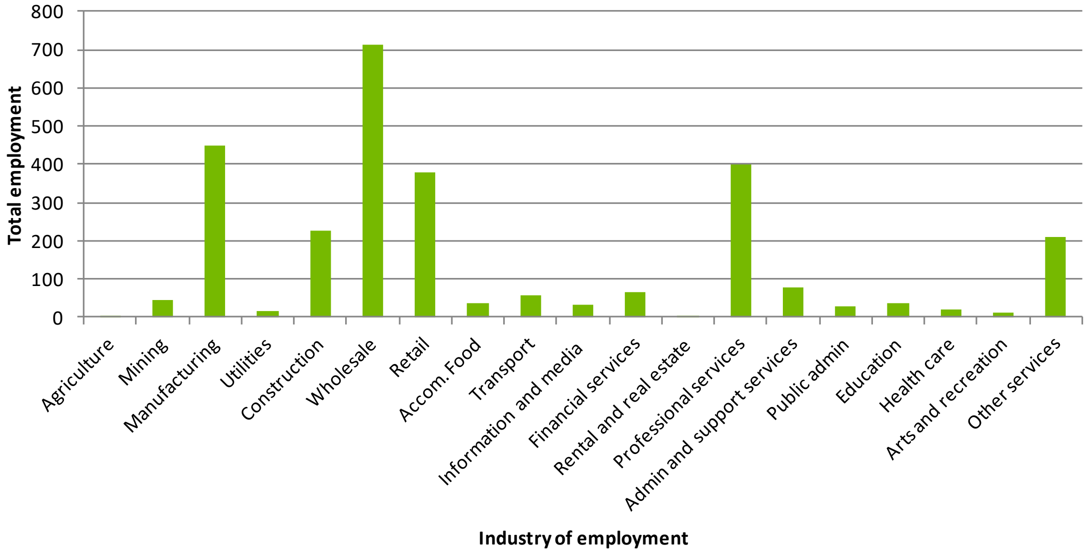
FIGURE 10. AERIAL OF BELROSE (AUSTLINK BUSINESS PARK)

Source: Google Maps, 2013

The predominant land uses of the Business Park include office, business park and bulky goods retail. In 2011, there were a total of 2,798 jobs in this employment centre with a high proportion of jobs within wholesale trade, manufacturing, professional services and retail (refer to Figure 11).

Austlink Business Park is accessible from both Mona Vale Road and Forest Way, which are major arterial roads across the LGA. Austlink is a strategic employment destination for office and business park uses, with an existing clustering of 'green' sector business.

FIGURE 11. INDUSTRIES OF EMPLOYMENT, BELROSE (2011)



Source: Bureau of Transport Statistics, 2012

Summary of floorspace:
- Gross area of audited floorspace: 310,057 sqm
- Vacant sites: 4.8 hectares
- Vacant floorspace: 26,163 sqm (8.4%)

Brookvale

Brookvale centre includes an industrial area to the east, and industrial area to the west, strip retail along Pittwater Road and Warringah Mall (refer to Figure 12).

FIGURE 12. AERIAL OF BROOKVALE

Source: Google Maps, 2013

Brookvale Industrial Area (east) is located on the eastern part of Brookvale Major Centre and is an old industrial area. Most of the sites in this industrial area have a relatively small size. The area functions as a population servicing hub by providing a range of local light and urban support services (including car repairers and timbers and building supplies) to Warringah and Northern Beaches. Other land uses include office, light manufacturing and urban service.

Summary of floorspace:
– Gross area of audited floorspace: 489,601 sqm
– Vacant sites: 0.35 hectares
– Vacant floorspace: 38,198 sqm (7.8%)

Brookvale Industrial Area (west) is a newer industrial and commercial employment area, located along Old Pittwater Road to the west of Warringah Mall. The area is currently zoned IN1 General Industrial and functions as one of the strategic industrial precincts within Warringah, servicing light manufacturing, local lights and freight and logistics businesses. The availability of large lots and proximity to the Pittwater Road make this industrial area attractive for freight, logistics and warehousing users. The western border of the area is also surrounded by Allenby Park, which acts as a natural barrier to the residential areas.

Summary of floorspace:
– Gross area of audited floorspace: 321,070 sqm
– Vacant sites: 0.9 hectares
– Vacant floorspace: 31,651 sqm (9.85%)

The Pittwater Road Corridor straddles Pittwater Road, between the north of William Street and south of Warringah Road. The area largely consists of street front retailers, motor vehicle showrooms, offices, bulky good retails and some urban services (such as bus depot). The corridor also contains a strip commercial area that is traditionally defined as the Brookvale Town Centre (just south of Brookvale Oval), which provides supporting services to businesses and industries in the surrounding area.

Summary of floorspace:
– Gross area of audited floorspace: 188,463 sqm
– Vacant sites: 0.14 hectares
– Vacant floorspace: 15,457 sqm (8.2%)

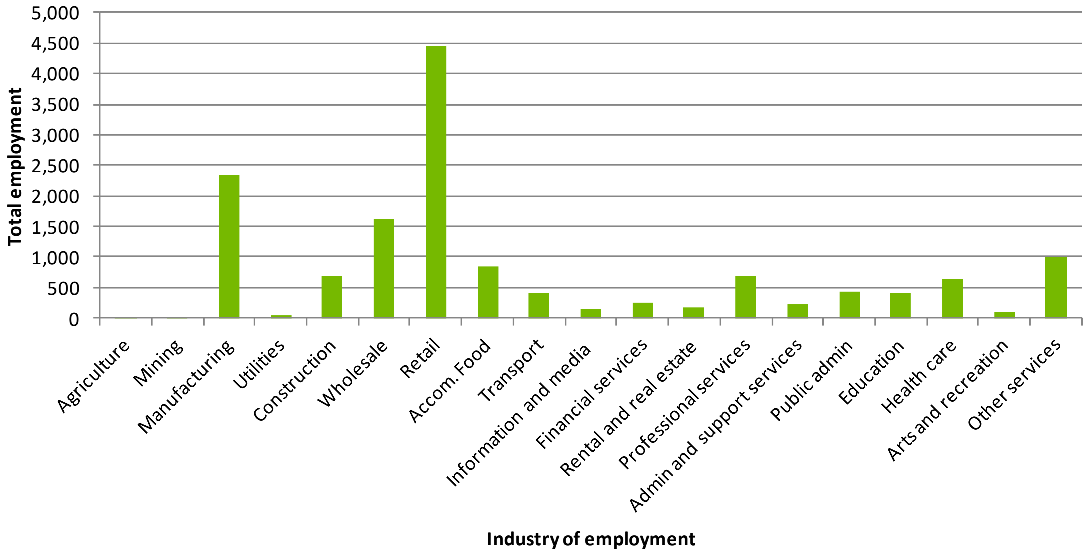
Warringah Mall is an important local and regional retail destination. It attracts customers from across the Northern Beachesand beyond, because of its size, diversity and relative accessibility. The enclosed shopping centre encompasses a wide range of speciality shops, discounted department stores, department stores, together with a cinema complex, fitness club and community facilities. The owners have obtained development consent for the potential increase in floorspace by a further 35,000 sqm by 2021.

Summary of floorspace:
– Gross area of audited floorspace: 135,656 sqm

– Vacant sites: -
– Vacant floorspace: 344 sqm (0.25%)

In 2011, there were 14,457 people employed within the entire Brookvale centre (refer to Figure 13). The majority of these workers are employed within retail, followed by manufacturing.

FIGURE 13. INDUSTRIES OF EMPLOYMENT, BROOKVALE (2011)



Source: Bureau of Transport Statistics, 2012

Summary of total floorspace for Brookvale centre:
– Gross area of audited floorspace: 1,134,790 sqm
– Vacant sites: 1.39 hectares
– Vacant floorspace: 85,650 sqm (7.5%)

Chatswood

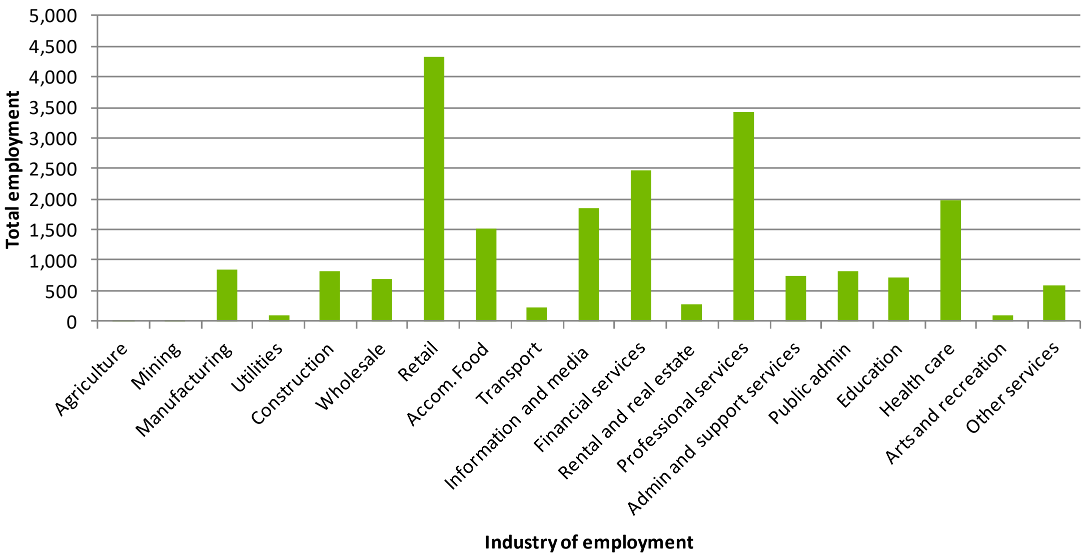
Chatswood is identified as a major centre under the *draft Metropolitan Strategy for Sydney to 2031*. The centre contains a mix of retail and commercial employment land uses and is one of the largest centres in Sydney. The commercial and retail floorspace is concentrated around the railway station (refer to Figure 14).

FIGURE 14. AERIAL OF CHATSWOOD

Source: Google Maps, 2013

Chatswood contained 21,499 jobs in 2011. The majority of these jobs were in retail and professional services (refer to Figure 15).

FIGURE 15. INDUSTRIES OF EMPLOYMENT, CHATSWOOD (2011)



Source: Bureau of Transport Statistics, 2012

There is around 300,000 square metres of office floorspace in Chatswood and around 190,000 square metres of retail floorspace which includes Westfield Chatswood (83,257 sqm) and Chatswood Chase (51,490 sqm).

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Cromer

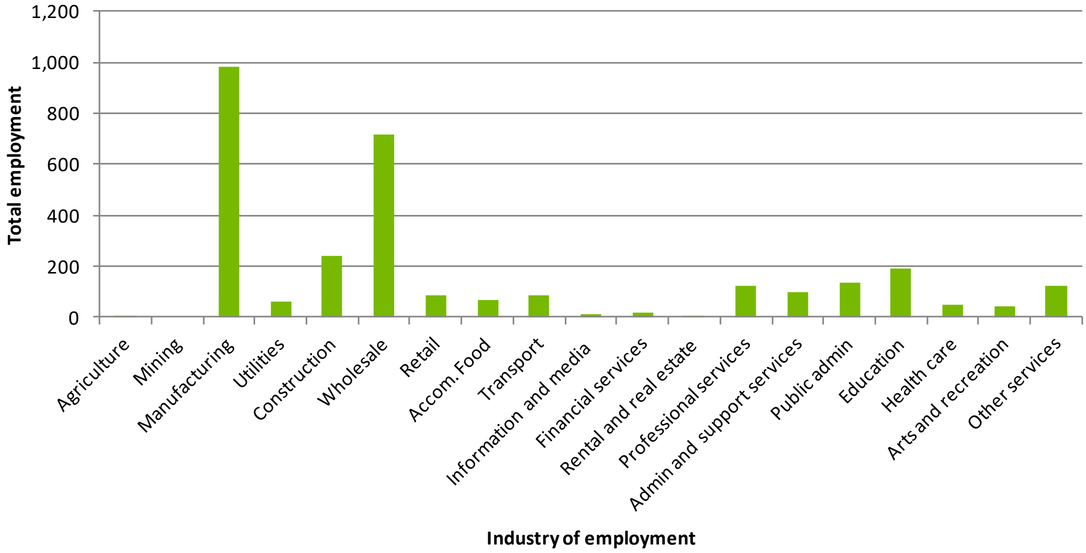
Cromer Industrial area is located to the northeast of the Cromer suburb and less than five minute drive from the Dee Why Major Centre via Fisher Road (refer to Figure 16). The industrial area largely consists of manufacturing businesses, building suppliers, vehicular servicing and repairers, council depots and wholesalers. Large organisations/institutions operating in this area include Energy Australia, Roche Pharmaceuticals Warringah Council Depot and Northern Beaches Secondary Colleges.

FIGURE 16. AERIAL OF CROMER

Source: Google Maps, 2013

In 2011, there were 3,034 people employed in Cromer, with around a third of these workers employed in manufacturing, followed by wholesale trade (refer to Figure 17).

FIGURE 17. INDUSTRIES OF EMPLOYMENT, CROMER (2011)



Source: Bureau of Transport Statistics, 2012

Summary of floorspace:

– Gross area of audited floorspace: 250,645 sqm
– Vacant sites: 0.2 hectares
– Vacant floorspace: 14,355 sqm (5.7%)

Elanora Heights

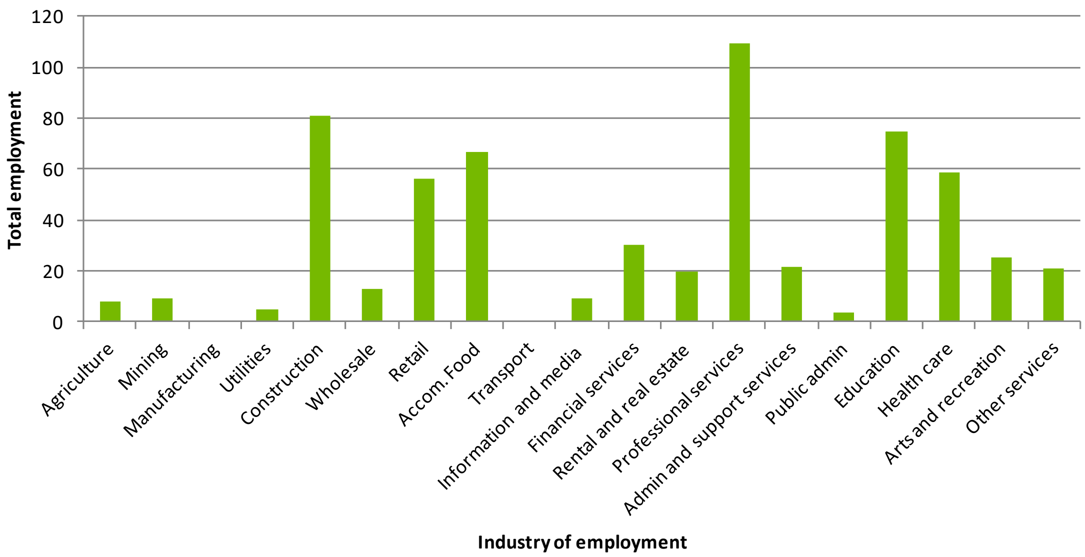
Elanora Heights identified as a small village under the North East Subregion draft Subregional Strategy with retail and commercial activity focussed on Kalang Road near the intersection of Powder Works Road. Around 38 percent of the floorspace is retail and around 21 percent is commercial (with around 17 percent vacant) (Hill PDA 2011).

FIGURE 18. AERIAL OF ELANORA HEIGHTS

Source: Google Maps, 2013

In 2011, there were 622 people employed in Elanora Heights. The majority of these workers were employed in professional services, construction and education (refer to Figure 19).

FIGURE 19. INDUSTRIES OF EMPLOYMENT, ELANORA HEIGHTS (2011)



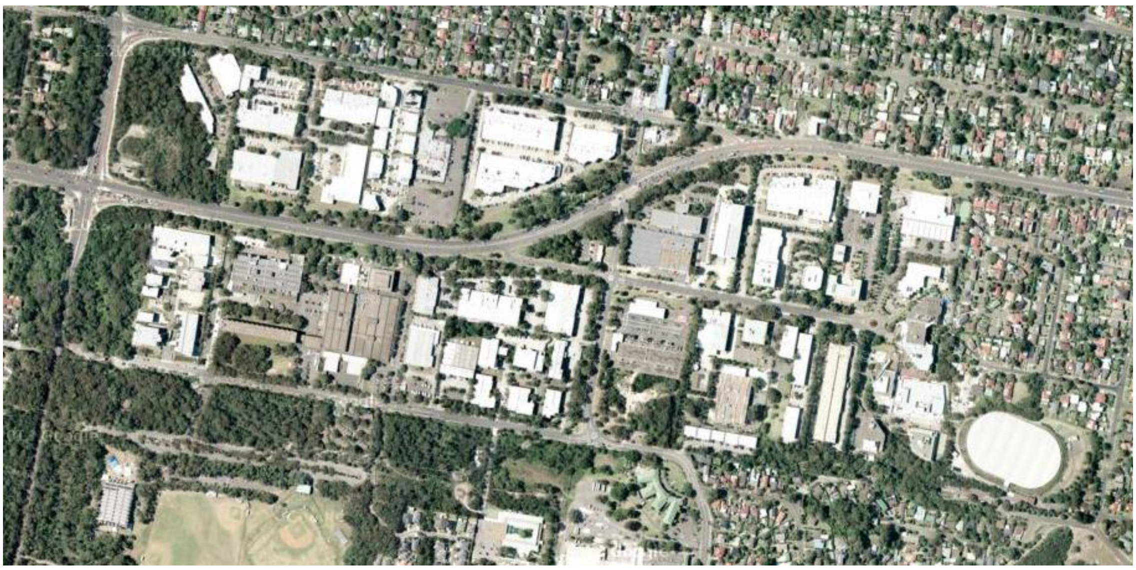
Source: Bureau of Transport Statistics, 2012

Summary of floorspace:
– Gross area of floorspace: 5700 sqm
– Vacant floorspace: 975 sqm (17%)

Frenchs Forest

Frenchs Forest Business Park is bounded by Warringah Road to the north, Wakehurst Parkway to the west and Aquatic Drive to the south (refer to Figure 20). French Forest Business Park is currently zoned B7 Business Park and largely contains high tech industries and commercial offices. The main land uses include office, business park, local light and light manufacturing.

FIGURE 20. AERIAL OF FRENCHS FOREST

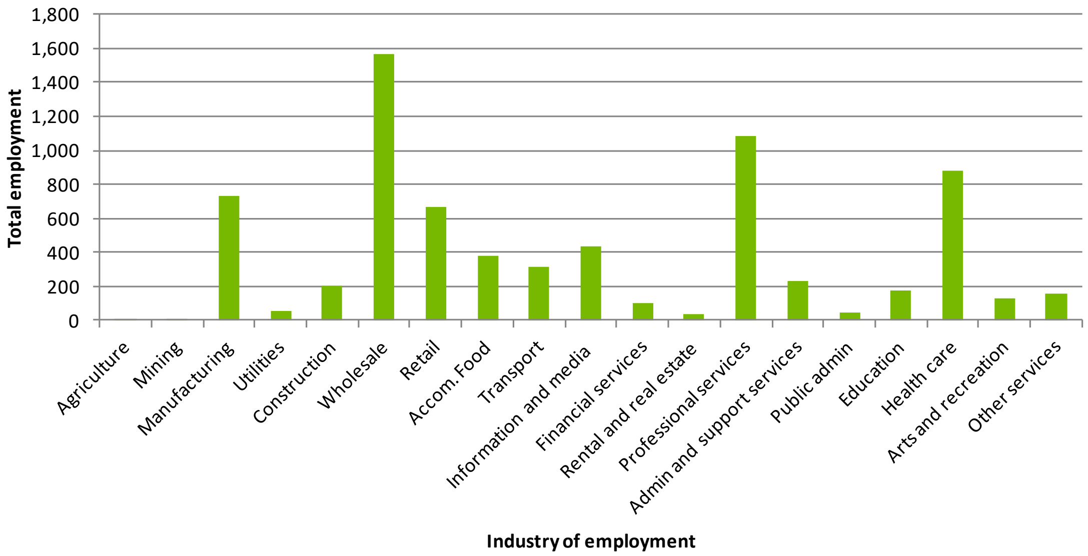


Source: Google Maps, 2013

The availability of large lot size and central location in the subregion make Frenchs Forest Business Park attractive to those businesses that need large floor plates, good access to population and would like to consolidate their offices with showrooms or warehouses.

In 2011, there were a total of 7,196 people employed in Frenchs Forest with the majority of these workers employed in wholesale trade and professional services, as well as health care and manufacturing (refer to Figure 21).

FIGURE 21. INDUSTRIES OF EMPLOYMENT, FRENCHS FOREST (2011)



Source: Bureau of Transport Statistics, 2012

Summary of floorspace:

- Gross area of audited floorspace: 414,786 sqm
- Vacant sites: -
- Vacant floorspace: 22,218 sqm (5.35%)

Forestville

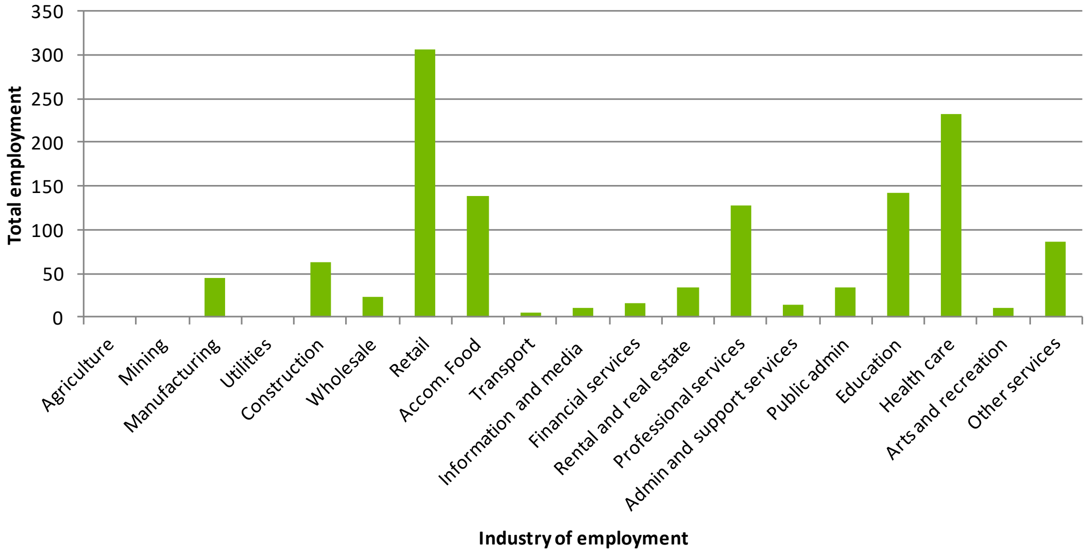
Forestville Industrial is located on the south-eastern corner of Warringah Road and Currie Road in Forestville. Predominant land uses include local light industries, urban services, special uses and bulky goods retail. Forestville also contains a neighbourhood retail centre to the south west of this industrial precinct (refer to Figure 22).

FIGURE 22. AERIAL OF FORESTVILLE

Source: Google Maps, 2013

In 2011, there were 1,287 people employed in Forestville with the majority employed within retail and health care industries (refer to Figure 23).

FIGURE 23. INDUSTRIES OF EMPLOYMENT, FORESTVILLE (2011)



Source: Bureau of Transport Statistics, 2012

The industrial precinct has a gross floorspace of 10,778 square metres.

Forestway

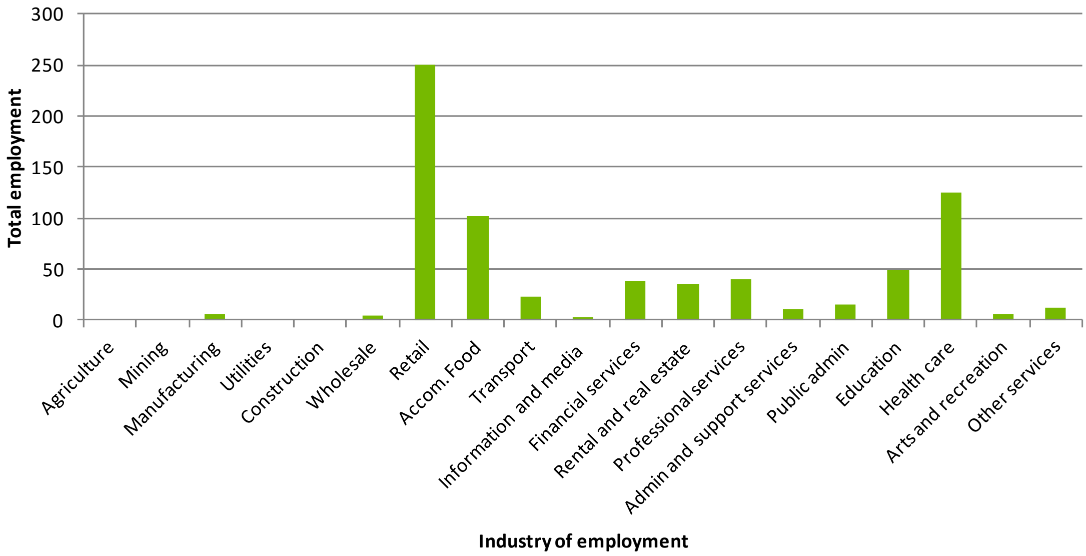
Forestway Shopping Centre is a small shopping centre located in the small village of Frenchs Forest. The centre includes a full line Woolworths and a number of specialty stores and service retail uses.

FIGURE 24. AERIAL OF FOREST WAY

Source: Google Maps, 2013

Forest Way only employs a small number of workers (723 people in 2011) who are mostly employed in retail, food and health care (refer to Figure 25).

FIGURE 25. INDUSTRIES OF EMPLOYMENT, FOREST WAY (2011)



Source: Bureau of Transport Statistics, 2012

The gross floor area of Forestway is 9,600 square metres. The centre is likely to have limited capacity for expansion.

Mona Vale

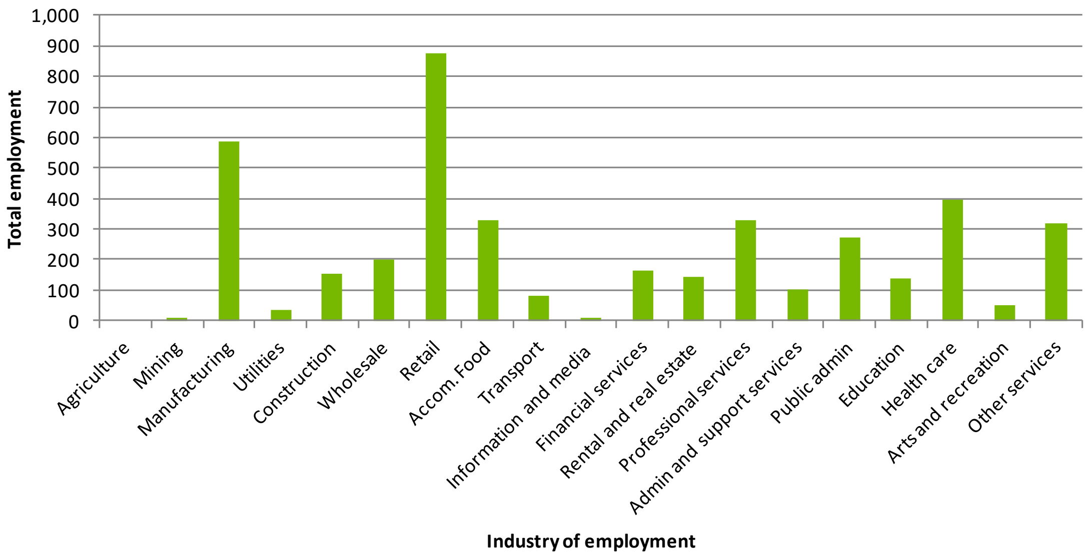
Mona Vale is identified as a major centre within the *North East Subregion draft Subregional Strategy*. The town centre contains a concentration of retail land uses including Pittwater Place Shopping centre with a major industrial precinct in the northern section of the centre (refer to Figure 26).

FIGURE 26. AERIAL OF MONA VALE

Source: Google Maps, 2013

In 2011, there were 4,198 people employed in Mona Vale with majority of workers employed in retail or manufacturing (refer to Figure 27), reflecting the two major focuses of the centre discussed above.

FIGURE 27. INDUSTRIES OF EMPLOYMENT, MONA VALE (2011)



Source: Bureau of Transport Statistics, 2012

Pittwater Place, which is located within Mona Vale, has a gross floor area of 12,910 square metres, which includes a full-line supermarket. There are a number of retail shops, including another full-line supermarket, outside of this centre and there is limited information available on total floorspace of Mona Vale (include industrial).

St Ives

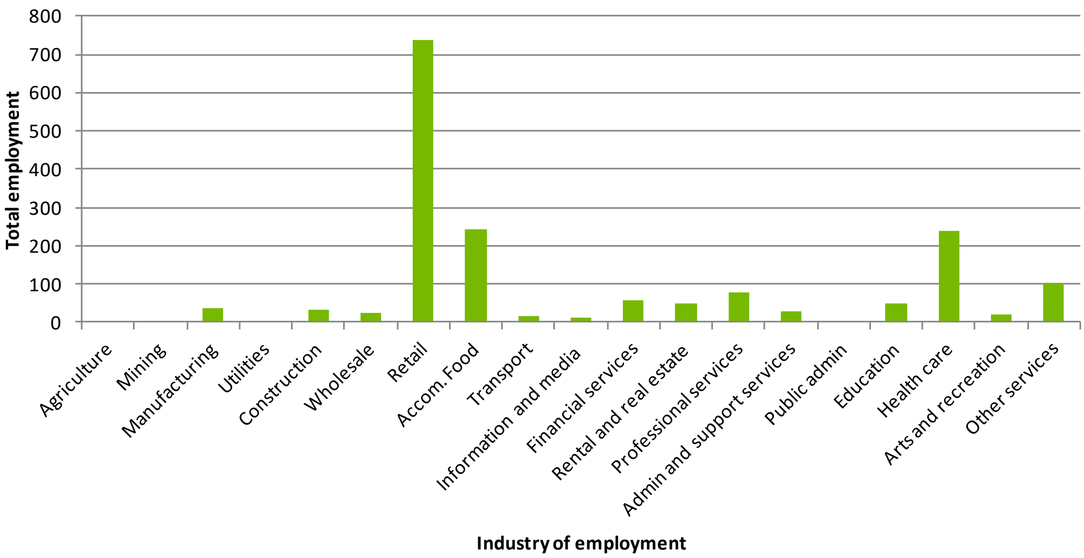
St Ives is identified as a village within the *North Subregion draft Subregional Strategy* and contains a small enclosed shopping mall (St Ives Shopping Village) as well as strip retail along Mona Vale Road.

FIGURE 28. AERIAL OF ST IVES

Source: Google Maps, 2013

There were 1,722 people employed in St Ives in 2011. The majority of these workers are employed in retail (refer to Figure 29), reflecting the concentration of retail in St Ives Shopping Village.

FIGURE 29. INDUSTRIES OF EMPLOYMENT, ST IVES (2011)



Source: Bureau of Transport Statistics, 2012

St Ives Shopping Village has a gross floor area of 12,152 square metres and includes a full-line Woolworths supermarket.

Terrey Hills

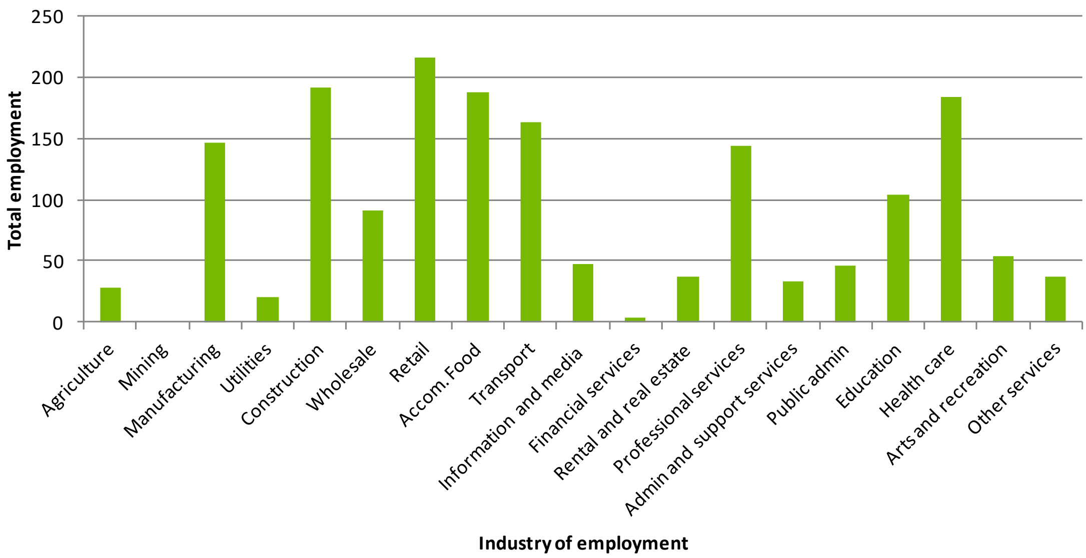
Terrey Hills includes an industrial precinct and neighbourhood retail located in the northern part of Terrey Hills and surrounded by residential areas (refer to Figure 30). The area is within good proximity to the Mona Vale Road. Predominant land uses in this area include local light and urban support services and office, as well as mainstreet retail.

FIGURE 30. AERIAL OF TERREY HILLS

Source: Google Maps, 2013

In 2011, there were 1,737 people employed in the Terrey Hills industrial and retail precinct. These workers are employed in a variety of industries (refer to Figure 31)

FIGURE 31. INDUSTRIES OF EMPLOYMENT, TERREY HILLS (2011)



Source: Bureau of Transport Statistics, 2012

Summary of industrial and retail floorspace:

– Gross area of audited floorspace: 25,146 sqm
– Vacant sites: -
– Vacant floorspace: 2,865 sqm (11.4%)

Warriewood

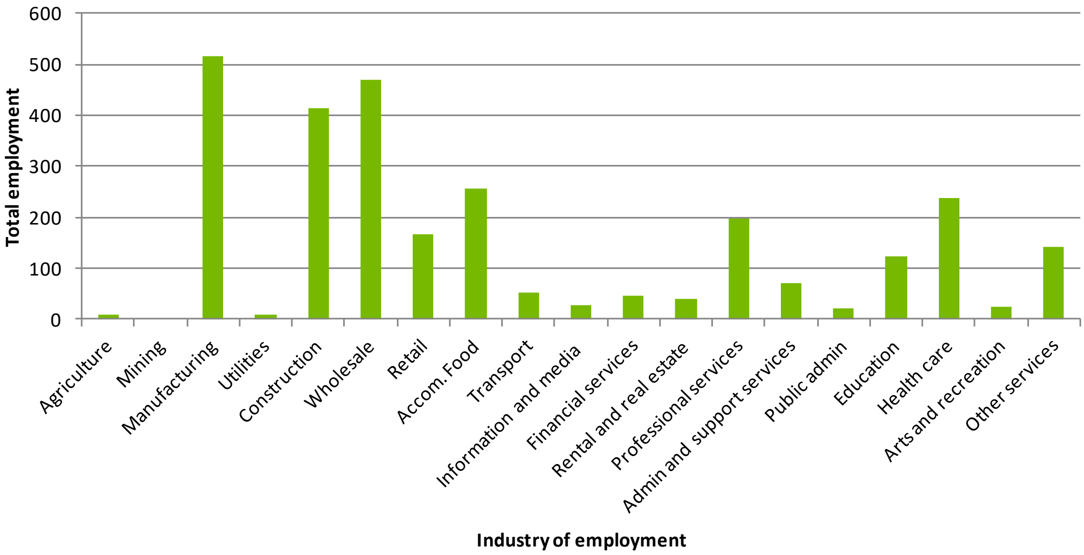
Warriewood contains both commercial and industrial land uses with small strip retail. The majority of these land uses are urban service industrial uses.

FIGURE 32. AERIAL OF WARRIEWOOD

Source: Google Maps, 2013

In 2011, there were 2,822 people employed in Warriewood. These workers were employed in a variety of industries (refer to Figure 33) including manufacturing, construction and wholesale trade.

FIGURE 33. INDUSTRIES OF EMPLOYMENT, WARRIEWOOD (2011)



Source: Bureau of Transport Statistics, 2012

Warriewood Square

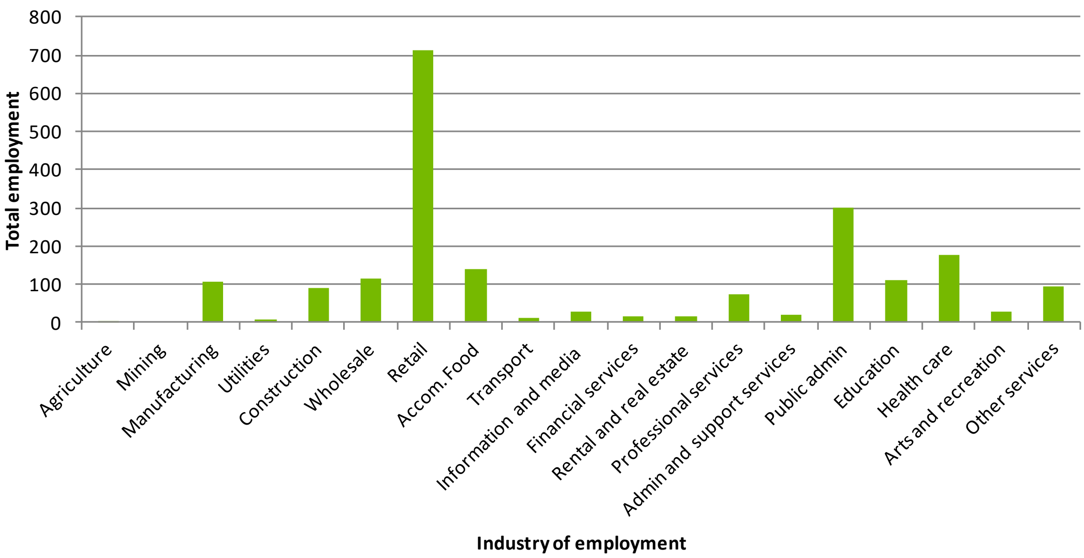
Warriewood Square is a standalone shopping centre located south of Mona Vale town centre (refer to Figure 34). Under the North East Subregion draft Subregional Strategy, a standalone centre is an internalised, privately owned centres located away from other commercial areas, containing many of the attributes of a Town Centre but without housing or public open space—may have potential to become a traditional town centre in the long–term.

FIGURE 34. AERIAL OF WARRIEWOOD SQUARE

Source: Google Maps, 2013

Total employment within the centre in 2011 was around 2,054 people (refer to Figure 35) with the majority of workers employed within the retail industry, reflecting the role and function of the standalone centre.

FIGURE 35. INDUSTRIES OF EMPLOYMENT, WARRIEWOOD SQUARE (2011)



Source: Bureau of Transport Statistics, 2012

The centre contains approximately 22,265 square metres of retail floorspace (Property Council of Australia Shopping Centre Database, 2010). The shopping centre is anchored by Kmart, Coles and Woolworths and supported by 86 specialty stores.

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