Warriewood Valley Retail Demand Assessment

PREPARED FOR

Warriewood Properties

March 2009

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1. EXECUTIVE SUMMARY

1.1 Study Brief

Hill PDA Land Economists were commissioned by Warriewood Properties to undertake a demand assessment for retail space within Warriewood Valley, Pittwater. The demand assessment will inform the preparation of an appropriate development application for a retail centre located in the vicinity of the Macpherson and Garden Streets intersection (the Subject Site). For the purposes of assessment, demand for a centre in the order of 3,950sqm (comprising of a 3,200sqm supermarket and 750sqm of specialty retail) has been tested.

Pittwater Council (Council) advocates the development of a retail centre on the Subject Site to meet the retail needs and services of the existing and future Warriewood community. At present there is no retail centre located within Warriewood Valley. This fact is particularly pertinent in light of the significant increase in residential development forecast within Warriewood Valley by 2012.

Council's Section 94 Contributions Plan and the Warriewood Valley DCP estimate that an additional 1,886 residential dwellings will be developed in Warriewood Valley by 2012. The additional dwellings could increase the number of residents within Warriewood Valley by 5,300.

To quantify the amount of retail floorspace demand generated as a result of this growth, Hill PDA has:

1. Defined Primary (PTA) and Secondary (STA) Trade Areas for the Subject Site;
2. Assessed the existing (and likely future) socio-demographic characteristics of the PTA and STA's population;
3. Applied the findings of points 1 and 2 above into detailed household expenditure modelling;
4. Refined the household expenditure results into retail floorspace demand; and
5. Applied capture rates to find the net demand for retail floorspace in Warriewood Valley taking into account escape expenditure as a result of various factors.

1.2 Key Study Findings

Based on the study methodology described above, it was found that between 2007 and 2020 (subject to the realisation of forecast development within Warriewood Valley) there would be an additional $87.4m (a 111% increase) of expenditure generated by households located within the combined PTA and STA. By 2012 alone we estimate an increase of $66.3m (84%) in household expenditure generated. The results of our expenditure modelling are tabled below in greater detail.

Table 1 - Household Expenditure by Retail Store Type in PTA and STA 2007 - 2020 (2007$m)

YEAR	2007	2012	2016	2020
Supermarkets & Grocery Stores	21.5	39.1	41.8	44.7
Specialty Food Stores	7.3	13.3	14.2	15.2
Fast-Food Stores	6.7	12.5	13.4	14.3
Restaurants, Hotels and Clubs*	8.1	14.9	15.9	17.1
Department Stores	6.7	12.4	13.2	14.2
Clothing Stores	4.4	8.2	8.8	9.4
Bulky Goods Stores	11.0	20.7	22.2	23.7
Other Personal & Household Goods Retailing	10.8	19.8	21.2	22.7
Selected Personal Services**	2.4	4.5	4.8	5.1
Total Retailing	**79.0**	**145.3**	**155.5**	**166.4**

Source: Hill PDA estimate based on 2006 Census and ABS Household Expenditure Survey 1998-99 and Marketinfo 2007

* Turnover relating only to consumption of food and liquor (excludes all other types of revenue such as accommodation, gaming and gambling)

** Selected Personal Services includes hair and beauty, laundry, clothing hire and alterations, shoe repair, optical dispensing, photo processing and hire of videos

Taking into consideration the growth in retail expenditure (owing to household growth and the growing affluence of the population) households within the combined PTA and STA would generate sufficient demand for 28,751sqm of retail floorspace by 2012. This would translate into demand for an additional 13,185sqm (from a base year of 2007) of retail floorspace including an additional 1,951sqm of supermarket floorspace. It is noteworthy that the vast majority of the growth in demand will stem from the PTA as this will accommodate the majority of residential development over the period.

Table 2 - Gross Demand for Retail Floorspace Generated by the PTA and STA (sqm)

YEAR	Target Rate* ($ / sqm)	2007	2012	2016	2020
Supermarkets & Grocery Stores	9,000	2,391	4,342	4,646	4,972
Specialty Food Stores	7,000	1,044	1,902	2,036	2,178
Fast-Food Stores	7,000	962	1,787	1,913	2,047
Restaurants, Hotels and Clubs	4,000	2,015	3,725	3,986	4,265
Department Stores	3,500	1,911	3,533	3,780	4,045
Clothing Stores	5,000	886	1,637	1,752	1,875
Bulky Goods Stores	3,300	3,339	6,275	6,714	7,185
Other Personal & Household Goods Retailing	5,000	2,157	3,957	4,235	4,531
Selected Personal Services	2,800	861	1,591	1,703	1,822
Total Retailing	**5,085**	**15,566**	**28,751**	**30,764**	**32,919**

Source: Hill PDA estimate based on 2006 Census and ABS Household Expenditure Survey 1998-99 and Marketinfo 2007

* Sources: ABS Retail Survey 1998-99 (escalated to 2007 dollars), JHD Retail Averages, Hill PDA and various consultancy studies

The figures above represent total retail demand generated by households. Owing to the nature of retailing, not all expenditure generated within a given area will flow to the closest retail centre. Factors such as the type of retail offered within a centre or sought by a shopper, where a shopper works, the geographic characteristics of an area and the proximity / ease of access to good quality centres (or larger centres with more extensive retail) influence how much expenditure could escape from a trade area.

Taking each of the above factors into consideration, Hill PDA has applied 'capture rates' to calculate net demand for retail floorspace. The capture rates account for the amount of expenditure that could be retained by a retail centre on the Subject Site (with the proposed mix of retail) and the corresponding level of floorspace demand. Accordingly the table below shows the estimated 'net' floorspace required within Warriewood Valley to meet demand generated by 2012 and up to 2020.

Table 3 - Net Demand for Retail Floorspace in the PTA and STA 2012 – 2020 (sqm)

YEAR	2012	2016	2020
Supermarkets & Grocery Stores	2,932	3,138	3,357
Specialty Food Stores	878	939	1,005
Fast-Food Stores	463	495	530
Restaurants, Hotels and Clubs	506	542	580
Department Stores	0	0	0
Clothing Stores	0	0	0
Bulky Goods Stores	0	0	0
Other Personal & Household Goods Retailing	537	574	614
Selected Personal Services	157	334	357
Total Retailing	**5,473**	**6,022**	**6,444**

Source: ABD Retail Survey 1998 – 99, JHD Retail Averages, Various Consultancy Studies.

By 2012 our calculations show that there will be sufficient demand generated within the Subject Site's PTA and STA for a retail centre in the order of 5,470sqm. Within this centre there will be sufficient demand generated for a 2,930sqm supermarket and 2,540sqm of specialty retail.

It is important to note however that the level of demand shown above has been based on expenditure generated by households within the Subject Site's PTA and STA only. The demand estimates discussed above do not however factor in additional demand that is likely to be generated by commuters or employees based within Warriewood Valley's non residential sectors.

Our industry experience suggests that passing trade and local employees could increase floorspace requirements by 15 - 20%. As a result of these additional sources, by 2012 sufficient demand could be generated in Warriewood Valley for a centre between 6,300sqm and 6,570sqm (including between 3,370sqm and 3,520sqm of supermarket floorspace and between 2,920sqm and 3,050sqm[1] of specialty retail).

The significant growth in demand for retail floorspace forecast by this study concurs with the findings of prior regional studies undertaken by Hill PDA within Pittwater LGA and the North East Sydney Subregion. In accordance with our prior advice, we recommend that any potential economic impact of the planned centre is assessed to ensure that it would not have any adverse impact to the viability of existing surrounding centres.

1.3 Conclusion

In conclusion our demand analysis shows that there will be sufficient demand generated by the mix of existing and proposed uses within Warriewood Valley for the planned centre on the Subject Site to accommodate 3,950sqm of retail floorspace including a 3,200sqm supermarket and 750sqm of specialty retail by 2012.

As the centre at the junction of Macpherson and Garden Streets is an established centre in planning policy terms, we believe a supermarket should be supported in this location to not only meet the growth in demand for retail but to also support the economic viability and therefore success of the centre.

[1] Includes specialty food stores, fast food stores and restaurants, other personal and household goods retailing and selected personal services

Given the physical constraints of the Subject Site, the rapid growth in forecast demand and the economics of property development, we recommend that a centre of the proposed scale be developed in one stage prior to 2012 as opposed to incremental phases commensurate with the growth in demand. The completion of the centre in its entirety would also enhance the attraction of Warriewood Valley for further residential, commercial and industrial development by providing a sound range of local services and facilities.

We also consider that a centre on the Subject Site as planned could promote sustainable travel given its close proximity and ease of access to family households and businesses. The central location of the Subject Site within Warriewood Valley would allow for approximately 40% of dwellings within the PTA (close to 3,100[2] residents) to be within walking distance of retail and community services. This would further assist in reducing congestion and dependence on the region's road network whilst supporting the Councils vision for Warriewood Valley to become *"an eco-village – the benchmark and reference point for sustainability[3]".*

[2] Figure represents 40% of 5,300 residents estimated by Council plus 260 Self Care Dwellings

[3] Appendix 3, Pittwater DCP 21

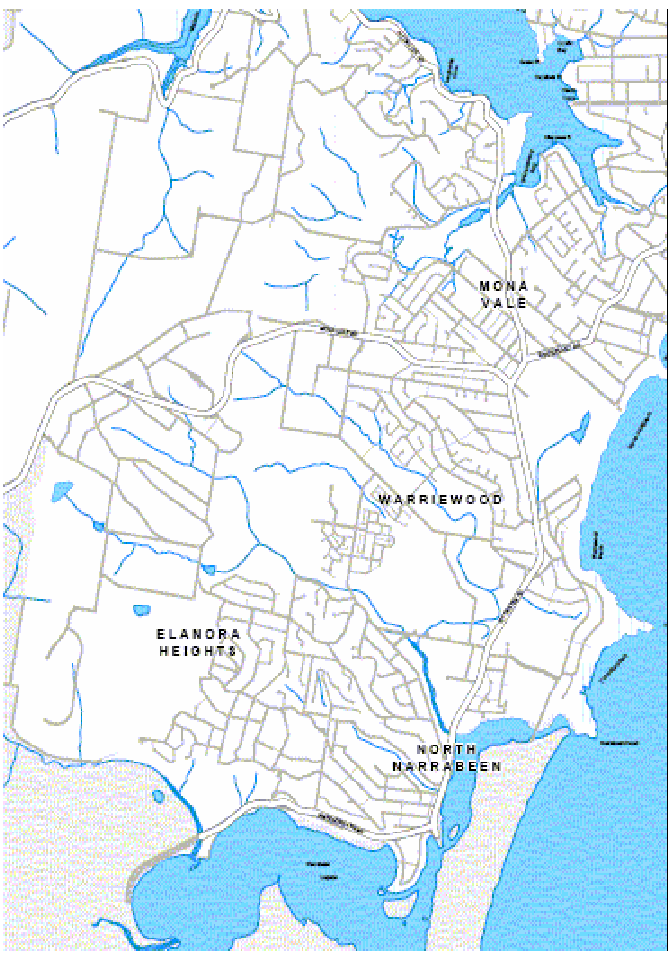
2. INTRODUCTION

Hill PDA has been commissioned by Warriewood Properties to undertake a retail demand assessment in the context of planned development within the suburb known as Warriewood Valley. Warriewood Valley is located within the Local Government Area of Pittwater and the wider Subregion known as Sydney's North East (please refer to Figure 1 below).

Since the early 1980's Pittwater Council (hereafter referred to as the Council) and the NSW State Government have advocated the development of Warriewood Valley with a mix of commercial, industrial and residential development. To support this development and to create a sustainable local community, a retail centre (referred to as the Warriewood Valley Focal Neighbourhood Centre within the Warriewood Valley Section 94 Plan and Pittwater Council DCP 21) was included as part of the Warriewood Valley Master Plan.

The following study assesses the level of demand generated for the planned retail centre within Warriewood Valley based on anticipated residential growth and the resulting level of retail expenditure generated. For the purposes of assessment we understand that Warriewood Properties seeks to develop a retail centre on the Subject Site that provides a 3,200sqm supermarket and 750sqm of specialty retail.

Figure 1 - Location Plan of Warriewood Valley



Source: Pittwater Council

2.2 Study Methodology

To meet the requirements of the Study Brief, and to assess the level of demand generated for additional retail floorspace within Warriewood Valley, Hill PDA has applied the following methodology:

- a site visit and analysis;
- a review of relevant information and planning policy;
- a demographic analysis;
- analysis of existing retail provision within Warriewood Valley and surrounding areas of influence;
- the identification of trade areas based on distances, accessibility and the location and level of the retail offer in other centres;
- the determination of potential scenarios for growth / change and in turn the

resultant demand for retail development;

- Forecasting household expenditure by trade areas and retail store type; and
- Quantifying levels of under or over supply based on national benchmark turnover levels.

2.3 Development in Warriewood Valley

Warriewood Valley is located between the Warriewood Wetlands and Mona Vale Road. Pittwater Road, a major thoroughfare for residents and businesses of the Northern Beaches passes to the immediate east of the Valley. Garden Street, Jacksons Road, Macpherson Street, Narrabeen Park Parade and Sydney Road are other major roads either passing through or around Warriewood Valley.

Figure 2 below shows the area earmarked in Warriewood Valley for mixed use development. Proposed development includes mixed low to medium density housing, industrial and commercial development as well as community facilities and retail.

Surrounding Warriewood Valley are a mix of uses including those located within Mona Vale Town Centre to the north, Warriewood Shopping Centre to the south, neighbourhood retail centres at Narrabeen Park Parade and the intersection of Garden Street and Powderworks Road, the Narrabeen Sports High School, Narrabeen North Primary School, Mater Maria Catholic School, two youth/community centres, the Coastal Environment Centre, Warriewood Sewage Treatment Plant and Pittwater RSL Club.

It is anticipated that the development of land within Warriewood Valley will facilitate approximately 1,886 private dwellings. Applying Council's average dwelling occupancy rate[4], development could realise an additional 5,281 residents by 2012. For the purposes of this assessment we have conservatively taken the population growth estimated by the ABS between 2001 and 2006 from the 5,281 figure to calculate the remaining portion of growth that could occur in Warriewood Valley.

We understand that in addition to this figure, a new Seniors Living development will be ready for occupation by mid 2009 providing an additional 260 self care dwellings (75 x 1 bed, 185 x 2 bed) and 118 beds in a health care facility. Applying a modest rate of 1 person per bedroom, the self care dwellings will generate an additional 260 permanent residents by 2012 to Council's 5,281 population growth estimate.

Sectors 6, 7 and the Southern Buffer have been released as part of Stage 1 for industrial and commercial development. A range of high quality employment generating uses have already been constructed and are occupied within these sectors.

Council policy has also identified the need for a focal neighbourhood centre within Warriewood Valley to meet the needs of existing and future residents and businesses. To date the neighbourhood centre has not been developed however master plans and DCPs for Warriewood Valley have identified the intersection of Macpherson and Garden Streets as an appropriate location.

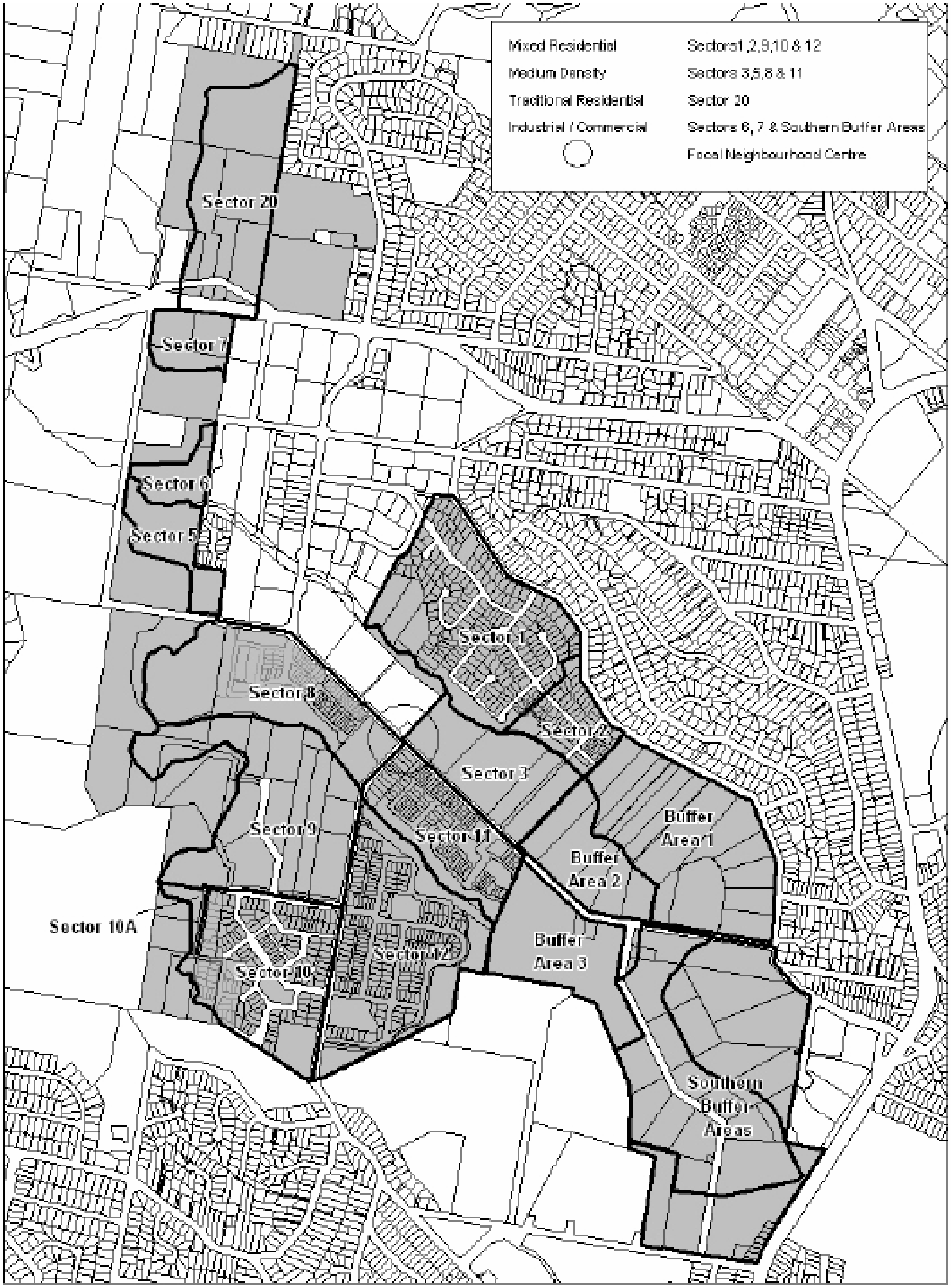
[4] 2.8 persons per household

In light of the intended mix of uses for the site, its high environmental characteristics and sound development practice, Council states that:

*"Physically, socially, environmentally and economically, in both the private and in the public domains, the Valley needs to become an "eco-village" - the benchmark and the reference point for best practice in **Sustainability**."*[5]

[5] Appendix 3, Pittwater DCP 21

Figure 2 - Plan of Development Sectors within Warriewood Valley



Source: Appendix 4, Pittwater DCP 21

2.4 Planned Retail Centre

Warriewood Properties proposes the development of a retail centre in the vicinity of the Macpherson and Garden Streets intersection. This location has been identified as appropriate by Council planning policies given its accessibility to the surrounding development in Warriewood Valley and location at the junction of two prominent roads.

In order to provide a range of quality retail in the locality and to ensure the success of the centre, Warriewood Properties proposes the provision of a 3,200sqm supermarket. This scale of supermarket represents a smaller main line supermarket. Main line supermarkets are generally operated by major retailers and provide a broad range of goods and services to meet the grocery needs of a local population. To support the viability of the supermarket and to complement the range of grocery services, 750sqm of specialty retail floorspace has also been proposed for the planned centre.

2.5 Limitations

This report is for the confidential use only of the party to whom it is addressed (the client) for the specific purposes to which it refers. We disclaim any responsibility to any third party acting upon or using the whole or part of its contents or reference thereto that may be published in any document, statement or circular or in any communication with third parties without prior written approval of the form and content in which it will appear.

This report and its attached appendices are based on estimates, assumptions and information sourced and referenced by Hill PDA. We present these estimates and assumptions as a basis for the reader's interpretation and analysis. With respect to forecasts we do not present them as results that will actually be achieved. We rely upon the interpretation of the reader to judge for themselves the likelihood of whether these projections can be achieved or not.

As is customary, in a report of this nature, while all possible care has been taken by the authors to prepare the expenditure and financial models from the best information available at the time of writing, no responsibility can be undertaken for errors or inaccuracies that may have occurred both with the programming or the financial projections and their assumptions.

3. Existing Centres and Retail Supply

Based on prior retail surveys conducted by Hill PDA[6], Pittwater LGA provides in the order of 111,000sqm of retail floorspace of which 20,000sqm relates to supermarket floorspace, 18,000sqm relates to specialty non food floorspace and 12,000sqm to restaurant, café and takeaway retail. Our analysis shows that as an LGA, Pittwater has an existing undersupply of retail floorspace including supermarket floorspace.

The following section identifies the main competitive centres directly surrounding the subject site, specifically detailing the provision of retail space within these centres.

3.1 Centro Warriewood

Centro Warriewood (Warriewood Square) is categorised as a Stand Alone Shopping Centre within the North East Subregion of Sydney's Retail Centre Hierarchy[7]. The centre is located approximately 22km north east of Sydney CBD and approximately 2km to the south east of the Subject Site.

Warriewood Shopping Centre is a single level centre with a high proportion of national retailers, including the only Kmart in the Northern Beaches. Anchor tenants include:

- Kmart 8,076sqm
- Coles Supermarket 3,760sqm
- Woolworths Supermarket 2,156sqm

Major tenants consume 13,991sqm of the centres 22,091sqm of floor area. In addition there are 86 speciality stores (8,139sqm). The total retail area of the centre is 22,130sqm situated on a site area of 6.24ha.

As of 2007 the centre's turnover was approximately $139 million. This equates to $6,234/sqm, which is above national average or industry benchmarks for similar size centres.

3.2 Mona Vale Town Centre

Mona Vale is classified as one of only two town centres within Sydney's North East Subregion[8]. The centre is located approximately 1.3km from the Subject Site. Mona Vale Town Centre provides approximately 28,700sqm of retail space. At the time of survey approximately 1,353sqm of shop front floorspace was vacant.

[6] Compiled from vvarious Hill PDA surveys between 2000 and 2008
[7] NSW Department of Planning
[8] NSW Department of Planning

Mona Vale Town Centre comprises of traditional strip shopping as well as two enclosed shopping malls and a stand alone Woolworths on the corner of Park and Keenan Streets.

A commercial area exists at the junction of Pittwater Road, Barrenjoey Road and Mona Vale Road. The total commercial space located within Mona Vale Town Centre is estimated to be 7,368sqm.

A range of other land uses surround the town centre including community (schools, churches), residential and industrial.

Pittwater Place Shopping Centre

Park Street, Mona Vale

Pittwater Place Shopping Centre is located approximately 50 metres from Barrenjoey Road between Park and Darley Streets and approximately 1.8km north east of the Subject Site. It is the newest shopping centre on Sydney’s Northern Beaches, opening in July 2004.

This village shopping centre incorporates a Coles supermarket, 40 speciality shops, a Fitness First gymnasium, first floor commercial accommodation and one level of under-cover car parking. The total shopping centre retail floorspace is 6,044sqm, and consists of another 2,800sqm of office space with 9 commercial tenants being located on the first floor above the shopping centre.

Neighbourhood Centre - Intersection of Garden Street and Powder Works Road

A small neighbourhood centre is located to the south of the Subject Sites Primary Trade Area. The neighbourhood centre provides a small number of specialty stores including a café. It does not however provide a supermarket or grocery store. Trade for the centre is likely to be associated with surrounding households, passing traffic and the adjacent light industrial area.

A highway convenience (Service Station) is located further south of the neighbourhood centre on Garden Street at the junction with Pittwater Road.

4. TRADE AREA DEFINITION

In order to inform the EIA we have defined a trade area for the proposed centre. In brief the Primary Trade Area (PTA) may be defined as the main geographic region from which shoppers can be expected to travel from to utilise the services offered. A Secondary Trade Area (STA) may be defined as a geographic region where a portion, yet not the majority of shoppers will originate from to use the services and facilities on offer.

The trade area served by any retail centre is determined by a number of factors including:

- the strength and attraction of the centre in question, determined by factors such as the composition, layout, quantum of floorspace, ambience/atmosphere and car parking in the centre;
- competitive retail centres, particularly their proximity to the subject centre and respective sizes, retail offer and attraction;
- the location and accessibility of the centre, including the available road and public transport network and travel times; and
- the presence or absence of physical barriers, such as rivers, railways, national parks and freeways.

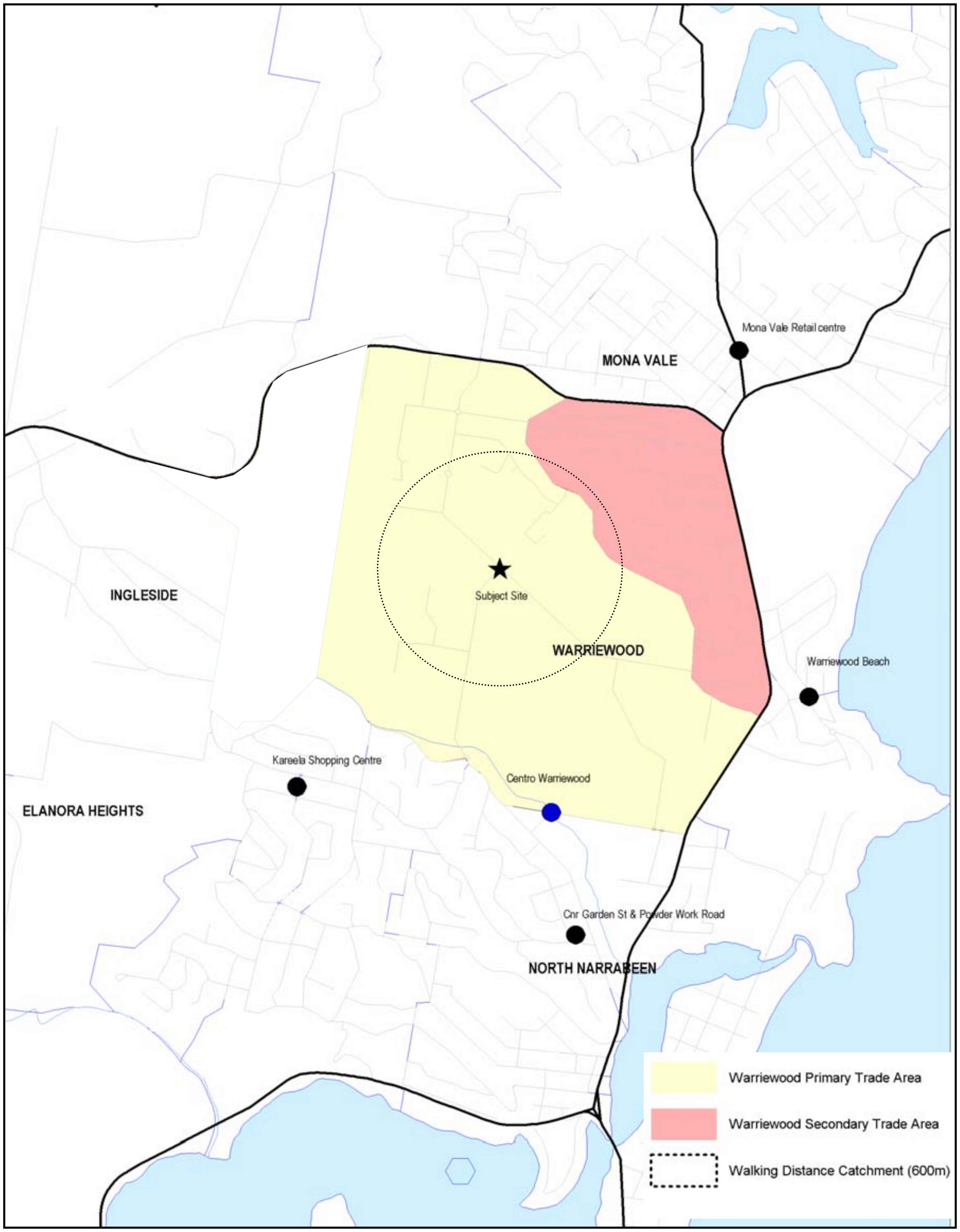
Having regard to each of the factors detailed above and our experience with a number of studies in similar sized centres and the Pittwater LGA, we have defined a PTA for the Subject Site as the geographic region that is bound by Warriewood and Mona Vale Road to the north / north east and to the south by Jacksons Road. The escarpment has been used to define the western boundary.

In addition to a PTA we have defined a STA which includes a triangular shaped area bordered by Pittwater Road to the east, Mona Vale Road to the north and Warriewood Road to the south west.

A plan presenting both the primary (light yellow) and secondary (light red) trade areas is presented on the following page. The plan also shows the portion of the primary trade area that would fall within a 600m walking radius of the Subject Site. We estimate that approximately 40% of the PTA falls within the circumference of this walkable area. We therefore conservatively estimate that by 2012, should full development be achieved in Warriewood Valley, close to 3,100[9] residents will be able to walk to the local centre for supermarket shopping, local services and community interaction.

[9] Figure represents 40% of 5,300 residents estimated by Council plus 260 Self Care Dwellings

Figure 3 - Primary and Secondary Trade Areas of the Subject Site



Based on 2006 Census Collection District Boundaries

5. Demographic Characteristics of the Trade Area

The level of household expenditure generated within a trade area is one of the main determinants of demand for retail in that area. Household expenditure generated by a trade area is dependent not only on the number of households, but also by the demographic and socio-economic characteristics of the area's population.

In particular, household income is a strong determining variable as higher income earners spend more on goods and services. The composition of a household (i.e. family compared to single occupant) is another important factor whereby larger households (i.e. families) demand more retail services.

In light of the above considerations, the following section reviews the existing and forecast demographic characteristics of Warriewood Valley in order to inform Hill PDA's retail demand modelling.

5.1 Existing Demographic Characteristics

The tables below show the general characteristics of the Primary and Secondary Trade Areas (the Study Area) defined by this study using ABS 2006 Census Data. For comparative purposes we have provided the general population characteristics of the Sydney Statistical Division (SD) and NSW. Where appropriate we have also compared the ABS 2006 Census Data shown in the tables below with 2001 Census Data (provided in full in Appendix 1) to indicate how the study area has changed over the five year period.

Dwellings

As of the 2006 Census, the PTA and STA provided 2,166 households combined. This represents a noticeable net increase from 2001 of 489 dwellings. The most significant increase (442 households) occurred in the PTA. It followed that the growth in the number of households resulted in the growth of the population by 1,289 persons in the PTA and STA combined and 1,268 persons in the PTA alone.

The study area is characterised by high levels of home ownership (74 - 80% in the STA and PTA respectively) compared to the Sydney SD and NSW (65 – 67% respectively). Reflecting on 2001 Census Data, home ownership levels have increased significantly in the PTA over the census period by 15%.

Accordingly the proportion of dwellings that were rented were considerably lower in both the PTA (19%) and STA (21%) compared to the Sydney SD (31%) and NSW (30%). Increasing rates of home ownership and low levels of dwelling rentals are reflective of both an urban release area (the PTA) and the more established community of the STA.

With respect to dwelling type, the PTA showed a considerably greater proportion of Townhouses (38%) and a correspondingly lower proportion of detached dwellings (53%) than the STA, Sydney SD and NSW. This characteristic reflects the dominant development pattern of the Warriewood Urban Release Area compared to the more established traditional development type of the STA.

Age of the Population and Household Structure

As of the 2006 Census, the PTA and STA were characterised by an older demographic than the Sydney SD, with particular respect to the STA that had a median age of 40 years and 22% of its resident population over the age of 60 years. An older demographic is also characteristic of Pittwater LGA.

The PTA however showed a greater proportion of the population in the 30 – 44 year age bracket and the 0 -14 year age bracket indicating the increasing number of families with children. This trend is also evident in comparison to the 2001 ABS Census Data whereby there has been a significant (5.2%) increase in the proportion of the PTA's population with children under the age of 14 years.

The family characteristic of the PTA is also reflected in its predominant household structure being 80% family households. The number of family households increased significantly (over 10 percentage points) in the PTA since the 2001 Census.

The STA had a lower proportion (75%) of family households however this was still significantly greater that the Sydney SD of 73% of all households. Between 51% and 53% of households in the PTA and STA respectively were couples with children again representing a greater proportion than the Sydney SD (49%) and NSW (46%).

Labour and Income

In keeping with the characteristics of Pittwater LGA, the PTA and STA had a high proportion of their population employed as Managers. Interestingly however, and at odds with the LGA as a whole, lower proportions (19%) were employed in the 'professional' category compared to both the Sydney SD and NSW. Rather the PTA and STA reflected higher levels of 'Community and Personal Workers', 'Clerical and Administration', 'Sales Workers', 'Technician and Trade Workers'.

The study area also showed comparatively low rates of unemployment (2-3%) to the Sydney SD and NSW.

The median weekly incomes for dwellings in the Study Area were characteristically higher than the Sydney and NSW median. This is also characteristic of Pittwater LGA and the Northern Beaches Peninsula. Of particular note was the higher proportion of households with a weekly median income over $1,400 in the PTA (49%) compared to the Sydney SD (37%) and NSW (31%). Whilst the STA also has a high proportion of households with a weekly income over this level, the proportion was lower than the PTA at 39%. This figure may reflect the relative affluence of the STA to wider Sydney yet also it's comparatively older age cohort compared to the middle aged workforce within the PTA and therefore the comparatively greater proportion of persons in the STA earning within the lower weekly income brackets.

Summary of Existing Population

Based on the analysis provided above, and the figures shown in the tables below, the Subject Site's trade areas (the study area) have changed significantly since the 2001 census representing a higher rate of home ownership and a younger population, with a greater proportion of families and children under the age of 14 years. This is particularly the case for the PTA.

In comparison to the PTA however, the STA represents a more established community with a greater proportion of detached dwellings and an older age profile. Despite this however the STA retains a reasonably significant proportion of families and a sound household income comparative to other regions of Sydney and NSW wide.

Combined the trade areas represent a relatively affluent and growing, family focused community.

Table 4 - PTA & STA Population Characteristics

	PTA	STA	Sydney SD	NSW
Population and Dwellings				
Total Population	2,801	2,844	4,119,190	6,549,177
Total Dwellings	1,082	1,084	1,643,675	2,728,719
Occupied Private Dwellings	997	992	1,521,465	2,470,451
Occupied Private Dwellings (%)	92.1%	92%	92.6%	90.5%
Average Household Size	*2.7*	*2.8*	*2.7*	*2.6*
Age Distribution				
0-14	*23%*	*20%*	20%	20%
15-29	*16%*	*17%*	21%	20%
30-44	*28%*	*21%*	23%	22%
45-59	*18%*	*20%*	19%	20%
60-74	*9%*	*11%*	11%	12%
75+	*6%*	*11%*	6%	7%
Total	*100%*	*100%*	100%	100%
Median Age	*36.0*	*40.0*	*35*	*37*
Place of Birth				
Australia & Oceania	*74%*	*73%*	63.1%	71.2%
Europe	*13%*	*15%*	8.9%	7.8%
North Africa and Middle East	*0%*	*0%*	2.5%	1.6%
Asia	*3%*	*2%*	10.6%	7.1%
Americas	*1%*	*1%*	0.6%	0.5%
Sub-Saharan Africa	*2%*	*1%*	0.7%	0.5%
Other	*8%*	*8%*	13.7%	11.4%
Total	***100%***	***100%***	**100.0%**	**100.0%**

Source: ABS Census 2006

Table 5 - PTA & STA Household Characteristics

	PTA	STA	Sydney SD	NSW
Home Ownership				
Owned or Being Purchased	80%	74%	65.0%	66.7%
Rented	19%	21%	31.3%	29.5%
Other/Not Stated	1%	5%	3.7%	3.8%
Total	100%	100%	100.0%	100.0%
Household Structure				
Family Households	80%	75%	72.7%	72.1%
Lone Person Households	18%	22%	23.1%	24.2%
Group Households	2%	3%	4.2%	3.7%
Total	100%	100%	100.0%	100.0%
Family Type				
Couple family w. children	51%	53%	49.3%	46.2%
Couple family w/o children	29%	30%	33.2%	36.0%
One parent family	17%	16%	15.6%	16.1%
Other family	3%	1%	1.9%	1.7%
Total	100%	100%	100.0%	100.0%
Dwelling Type				
Separate house	53%	77%	63.6%	71.4%
Townhouse	38%	15%	11.8%	9.7%
Flat-Unit-Apartment	8%	8%	23.9%	17.7%
Other dwelling	1%	0%	0.6%	1.1%
Not stated	0%	0%	0.1%	0.1%
Total	**100%**	**100%**	**100.0%**	**100.0%**

Source: ABS Census 2006

Table 6 - PTA & STA Labour and Income Characteristics

	PTA	STA	Sydney SD	NSW
Labour Force				
Managers	17%	14%	13%	13%
Professionals	19%	19%	23%	20%
Community & Personal Services Workers	10%	8%	8%	8%
Clerical and Administrative Workers	18%	14%	16%	15%
Sales Workers	10%	11%	9%	9%
Technicians & Trade Workers	14%	16%	12%	13%
Machinery Operators & Drivers	4%	4%	6%	6%
Labourers & Related Workers	5%	8%	8%	9%
Inadequately described or N.S.	2%	2%	2%	2%
Unemployed	2%	3%	5%	6%
Total	100%	100%	100.0%	100.0%
Weekly Household Income				
$0-$349	7%	12%	13%	15%
$400-$799	12%	16%	18%	21%
$800-$1,399	19%	19%	21%	22%
$1,400-$2,499	27%	22%	21%	19%
$2,500+	22%	17%	16%	12%
Partial income stated	10%	10%	9%	8%
All incomes not stated	3%	3%	3%	3%
Total	100%	100%	100.0%	100.0%
Median Weekly Household Income	***$ 1,671***	**$ 1,262**	***$1,154***	***$1,036***

Source: ABS Census 2006

5.2 Forecast Trade Area Household & Population Growth

As shown in the 'Population Characteristics' table above, between the 2001 and 2006 Census years, the Subject Site's trade areas grew by a significant number of households. The demographic characteristics of the trade areas also grew to represent a greater proportion of families and thereby a younger age profile. Based on analysis conducted by Pittwater Council, over the next Census period, the number of households and thereby the population of the trade area will continue to grow significantly.

Council's s94 Contributions Plan (adopted September 2008), in fact forecasts net growth of 5,281 residents and 1,886 homes in Warriewood Valley by 2012[10]. The socio-demographic characteristics of the future population have been forecast by Travers Morgan on behalf of Council. Of relevance to this study, Travers Morgan predicts that the Warriewood Valley community will have:

- a significant representation of young families;
- children and youth being heavily represented, with persons aged under 24 comprising approximately 42% of the population;
- adults aged primarily 30 to 45 years comprising approximately 30% of the population;
- up to 30% of households will be high income earners (that is, over $60,000 per annum);
- there will be a high resident workforce with a high female work participation rate;
- a significant number of households will have two working parents with dependent children;
- up to 15% of dwellings will be rented, with the remainder being purchased or owned outright; and
- most households will comprise second and third homebuyers with young families.

Many of the forecast characteristics listed above are consistent with the demographic trends that have emerged since the 2001 Census. Of particular importance to this study (and the assessment of retail demand for the study area in the future) is Council's appreciation that the demographic profile of Warriewood Valley will continue to differ from that of the broader LGA. Of particular relevance to this study is the expectation that Warriewood Valley will have a much younger age profile and a greater share of family households than other localities within Pittwater LGA.

Each of the above factors and characteristics have been applied to underpin Hill PDA's detailed demand modeling discussed in the following sections of this report.

[10] Applying Council's occupancy rate of 2.8 persons per dwelling

6. DEMAND FOR RETAIL FLOORSPACE IN WARRIEWOOD VALLEY

6.1 Household Expenditure Generated in Trade Areas

In order to quantify existing and future demand for retail services within Warriewood Valley, Hill PDA has utilised its bespoke Retail Expenditure Model (hereafter referred to as the Model). The Model translates the number of households within the defined trade areas, together with their characteristics, into demand for retail floorspace over time. The Model forecasts household expenditure using:

- The ABS Household Expenditure Survey 2003-04 which provides household expenditure by broad commodity type by household income quintile; and
- The Marketinfo 2007 database which is generated by combining and updating data from the Population Census and the ABS Household Expenditure Survey (HES) using "microsimulation modelling techniques".

Marketinfo combines the data from the Census, HES and other sources to derive total HES by commodity type. This data, which was validated using taxation and national accounts figures, quantifies around 14% more expenditure than the ABS HES Survey.

Based on the above inputs, the table below shows the estimated household expenditure generated by the Subject Site's PTA in 2007 and forecast for 2012, 2016 and 2020.

Table 7 - Household Expenditure by Commodity Type in the PTA 2007 – 2020 (2007 $m)

YEAR	2007	2012	2016	2020
Food, Groceries & Liquor take-away	12.2	31.0	33.2	35.5
Food Catered	6.7	16.9	18.1	19.4
Apparel	3.4	8.5	9.1	9.8
Bulky Goods	6.2	15.7	16.8	18.0
Other Personal & Household Goods	8.5	21.6	23.1	24.8
Personal Services	1.3	3.2	3.4	3.7
TOTAL	**38.2**	**97.0**	**103.7**	**111.0**

* Excludes Liquor on Premises and Cinema Expenditure

Source: Hill PDA based on 2006 Census and ABS Household Expenditure Survey 2003-04 and Marketinfo 2007

The ABS Retail Survey 1998-99 Cat No. 8624.0 provides a cross tabulation of store type (defined by ANZIC), by commodity type. Multiplying the percentages of dollars spent on each commodity in the cross tabulation by total dollars spent generates household expenditure by retail store type. This is provided in the following table.

Table 8 - Household Expenditure by Retail Store Type in the PTA 2007 – 2020 (2007$m)

YEAR	2007	2012	2016	2020
Supermarkets & Grocery Stores	10.8	27.4	29.3	31.4
Specialty Food Stores	3.7	9.4	10.0	10.7
Fast-Food Stores	3.6	9.1	9.7	10.4
Restaurants, Hotels and Clubs*	4.2	10.7	11.5	12.3
Department Stores	3.5	8.9	9.5	10.2
Clothing Stores	2.3	5.9	6.3	6.7
Bulky Goods Stores	6.0	15.2	16.3	17.5
Other Personal & Household Goods Retailing	5.5	14.1	15.1	16.1
Selected Personal Services**	1.3	3.2	3.4	3.7
Total Retailing	**40.9**	**103.9**	**111.2**	**119.0**

Source: Hill PDA estimate based on 2006 Census and ABS Household Expenditure Survey 1998-99 and Marketinfo 2007

* Turnover relating only to consumption of food and liquor (excludes all other types of revenue such as accommodation, gaming and gambling)

** Selected Personal Services includes hair and beauty, laundry, clothing hire and alterations, shoe repair, optical dispensing, photo processing and hire of videos

Note that the total expenditure amount in the two tables above do not equate. This is because some expenditure is captured by non-retailers (such as internet shopping) and some turnover captured by retailers is not household expenditure related (such as wholesaling and hiring of equipment).

A similar calculation has been undertaken to estimate the level of existing and forecast household expenditure generated within the STA by Commodity Type and Retail Store Type between 2007 and 2020. The results are provided in the tables below.

Table 9 - Household Expenditure by Commodity Type in the STA 2007 – 2020 (2007 $m)

YEAR	2007	2012	2016	2020
Food, Groceries & Liquor take-away	12.2	13.3	14.2	15.2
Food Catered	5.9	6.4	6.8	7.3
Apparel	3.0	3.3	3.6	3.8
Bulky Goods	5.1	5.6	5.9	6.4
Other Personal & Household Goods	8.1	8.8	9.5	10.1
Personal Services	1.1	1.2	1.3	1.4
TOTAL	**35.5**	**38.6**	**41.3**	**44.2**

* Excludes Liquor on Premises and Cinema Expenditure

Source: Hill PDA based on 2006 Census and ABS Household Expenditure Survey 2003-04 and Marketinfo 2007

Table 10 - Household Expenditure by Retail Store Type in the STA 2007 - 2020 (2007$m)

YEAR	2007	2012	2016	2020
Supermarkets & Grocery Stores	10.7	11.7	12.5	13.4
Specialty Food Stores	3.6	3.9	4.2	4.5
Fast-Food Stores	3.2	3.4	3.7	3.9
Cafes and Restaurants	3.8	4.2	4.5	4.8
Department Stores	3.2	3.5	3.7	4.0
Clothing Stores	2.1	2.3	2.5	2.6
Bulky Goods Stores	5.0	5.5	5.8	6.3
Other Personal & Household Goods Retailing	5.2	5.7	6.1	6.5
Selected Personal Services	1.1	1.2	1.3	1.4
Total Retailing	**38.0**	**41.4**	**44.3**	**47.4**

Source: Hill PDA estimate based on 2006 Census and ABS Household Expenditure Survey 1998-99 and Marketinfo 2007

* Turnover relating only to consumption of food and liquor (excludes all other types of revenue such as accommodation, gaming and gambling)

** Selected Personal Services includes hair and beauty, laundry, clothing hire and alterations, shoe repair, optical dispensing, photo processing and hire of videos

Combining the results for the PTA and STA, the table below shows that household expenditure by retail store type is expected to increase between 2007 and 2012 by $66m owing to the forecast household and expenditure growth.

Table 11 - Household Expenditure by Retail Store Type in the PTA and STA 2007 - 2020 (2007$m)

YEAR	2007	2012	2016	2020
Supermarkets & Grocery Stores	21.5	39.1	41.8	44.7
Specialty Food Stores	7.3	13.3	14.2	15.2
Fast-Food Stores	6.7	12.5	13.4	14.3
Restaurants, Hotels and Clubs*	8.1	14.9	15.9	17.1
Department Stores	6.7	12.4	13.2	14.2
Clothing Stores	4.4	8.2	8.8	9.4
Bulky Goods Stores	11.0	20.7	22.2	23.7
Other Personal & Household Goods Retailing	10.8	19.8	21.2	22.7
Selected Personal Services**	2.4	4.5	4.8	5.1
Total Retailing	**79.0**	**145.3**	**155.5**	**166.4**

Source: Hill PDA estimate based on 2006 Census and ABS Household Expenditure Survey 1998-99 and Marketinfo 2007

* Turnover relating only to consumption of food and liquor (excludes all other types of revenue such as accommodation, gaming and gambling)

** Selected Personal Services includes hair and beauty, laundry, clothing hire and alterations, shoe repair, optical dispensing, photo processing and hire of videos

6.2 Demand for Retail Floorspace

By dividing the household expenditure figures (provided in the tables above) by target turnover figures, we can quantify the estimated demand for retail floor space generated by households in Warriewood Valley as of 2007 and up to 2020. The table below shows the total retail floorspace demand for the PTA and STA combined.

Table 12 - Gross Demand for Retail Floorspace Generated by the PTA and STA (sqm)

YEAR	Target Rate* ($ / sqm)	2007	2012	2016	2020
Supermarkets & Grocery Stores	9,000	2,391	4,342	4,646	4,972
Specialty Food Stores	7,000	1,044	1,902	2,036	2,178
Fast-Food Stores	7,000	962	1,787	1,913	2,047
Restaurants, Hotels and Clubs	4,000	2,015	3,725	3,986	4,265
Department Stores	3,500	1,911	3,533	3,780	4,045
Clothing Stores	5,000	886	1,637	1,752	1,875
Bulky Goods Stores	3,300	3,339	6,275	6,714	7,185
Other Personal & Household Goods Retailing	5,000	2,157	3,957	4,235	4,531
Selected Personal Services	2,800	861	1,591	1,703	1,822
Total Retailing	**5,085**	**15,566**	**28,751**	**30,764**	**32,919**

Source: Hill PDA estimate based on 2006 Census and ABS Household Expenditure Survey 1998-99 and Marketinfo 2007

* Sources: ABS Retail Survey 1998-99 (escalated to 2007 dollars), JHD Retail Averages, Hill PDA and various consultancy studies

The table above shows that within the Subject Site's Trade Areas as of 2007, there was sufficient demand generated to support over 15,500sqm of retail floorspace. By 2020 this demand is anticipated to more than double to 32,919sqm.

It must be noted that the table above shows the total amount of retail floorspace demand generated by households within the PTA and STA. Owing to the nature of retailing however, not all of this retail floorspace will be catered for by centres within the Subject Site's Trade Areas. Rather a portion will 'escape' to larger centres and other forms of retailing in a wider geographic region. Expenditure commonly 'escapes' in categories such as

Department Stores, Clothing and Bulky Goods as these forms of retailing are predominantly located in larger centres that draw trade from a far broader trade area.

Expenditure may also escape to other forms of retailing outside of the PTA and STA including highway convenience stores and retail located in close proximity to resident's workplaces.

Whilst retail categories such as Department Stores, Clothing and Bulky Goods will experience a high rate of escape expenditure from smaller centres, a greater portion of supermarket, grocery and specialty foods retail will be retained owing to the localised nature and frequency of this type of shopping. A higher rate of retention is likely to occur in the latter noted retail categories if the centre located on the Subject Site provides a supermarket (particularly a supermarket of a reasonable scale such as a main line supermarket) and a mix of supporting specialty stores including specialty foods, cafes and restaurants.

Taking the above factors into consideration as well as:

1. the proposed type of retail on the subject site (3,200sqm supermarket and 750sqm of specialty retail including a café / restaurant);
2. the geographic relationship of the PTA and STA to the Subject Site; and
3. the scale and quality of existing centres surrounding Warriewood Valley;

we have conservatively applied 'capture rates' to each retail category. The capture rates take into account the retail expenditure that will continue be retained in the PTA and STA rather than escape to higher order centres such as Mona Vale Town Centre and Warriewood Square Stand Alone Centre.

The capture rates by retail category used for both the STA and PTA are shown in the tables below. The corresponding columns show the net demand for retail floorspace by category in each trade area after the capture rates have been applied.

Table 13 - Net Demand for Retail Floorspace in the PTA 2012 – 2020 (sqm)

YEAR	Capture Rate	2012	2016	2020
Supermarkets & Grocery Stores	75%	2,283	2,443	2,614
Specialty Food Stores	55%	737	789	844
Fast-Food Stores	30%	389	416	445
Restaurants, Hotels and Clubs	15%	402	430	460
Department Stores	0%	0	0	0
Clothing Stores	0%	0	0	0
Bulky Goods Stores	0%	0	0	0
Other Personal & Household Goods Retailing	15%	423	452	484
Selected Personal Services	25%	113	286	306
Total Retailing	**30%**	**4,346**	**4,817**	**5,154**

Source: Hill PDA estimate based on 2006 Census and ABS Household Expenditure Survey 1998-99 and Marketinfo 2007

Table 14 - Net Demand for Retail Floorspace in the STA 2012 – 2020 (sqm)

YEAR	Capture Rate	2012	2016	2020
Supermarkets & Grocery Stores	50%	649	694	743
Specialty Food Stores	25%	141	150	161
Fast-Food Stores	15%	74	79	84
Restaurants, Hotels and Clubs	10%	104	112	120
Department Stores	0%	0	0	0
Clothing Stores	0%	0	0	0
Bulky Goods Stores	0%	0	0	0
Other Personal & Household Goods Retailing	10%	114	122	131
Selected Personal Services	10%	45	48	51
Total Retailing	**17%**	**1,126**	**1,205**	**1,290**

Source: Hill PDA estimate based on 2006 Census and ABS Household Expenditure Survey 1998-99 and Marketinfo 2006

The table below combines demand for retail floorspace generated in the PTA and STA following the application of capture rates. The table shows that as of 2012, there will be demand generated across the PTA and STA for close to 5,500sqm of retail floorspace. Of this demand, we estimate that 2,930sqm will relate to supermarket floorspace. By 2020, demand will have increased to close to 6,500sqm of retail floorspace including 3,350qm of supermarket floorspace.

Table 15 - Net Demand for Retail Floorspace in the PTA and STA 2012 – 2020 (sqm)

YEAR	2012	2016	2020
Supermarkets & Grocery Stores	2,932	3,138	3,357
Specialty Food Stores	878	939	1,005
Fast-Food Stores	463	495	530
Restaurants, Hotels and Clubs	506	542	580
Department Stores	0	0	0
Clothing Stores	0	0	0
Bulky Goods Stores	0	0	0
Other Personal & Household Goods Retailing	537	574	614
Selected Personal Services	157	334	357
Total Retailing	**5,473**	**6,022**	**6,444**

Source: Hill PDA estimate based on 2006 Census and ABS Household Expenditure Survey 1998-99 and Marketinfo 2006Additional Expenditure Generation

The calculations for retail demand above have specifically related to demand generated by existing and future households in Warriewood Valley only. There are a number of other factors however that should be highlighted as contributing to demand for retail floorspace and services in Warriewood Valley and therefore the Subject Site.

One such factor is the level of retail demand generated in Warriewood Valley as a result of non residential uses such as commercial and industrial. Section 2 of this report outlined that development within Warriewood Valley has included employment generating uses in two sectors (covering approximately 27ha of land area).The significant number of resulting employees associated with the construction and operation of these non residential uses also generates demand for supermarket and food related floorspace. Demand stems from employee needs to purchase lunch, snacks, office related supplies or picking up goods on the way home / to work.

We estimate that trade generated by employees of businesses within Warriewood Valley, in addition to passing trade generated by residents of surrounding areas (i.e. Ingleside) travelling through Warriewood Valley, could increase demand for retail floorspace by 15 - 20%. **As a result by 2012, sufficient demand could be generated**

in Warriewood Valley for a centre between 6,300sqm and 6,570sqm (including between 3,370sqm and 3,520sqm of supermarket floorspace and between 2,920sqm and 3,050sqm[11] of specialty retail).

Another important factor is the potential for the release of land in Ingleside over the next 20 years. It is understood that the potential release of land in Ingleside (the suburb adjacent to Warriewood Valley) for urban development is currently being considered by Local and State Government. Early assessments estimate however that the release of land in this location could accommodate over 4,300 additional residential dwellings. Should this development occur, we anticipate that there will be a substantial increase in demand for retail in surrounding centres, including the Subject Site.

[11] Includes specialty food stores, fast food stores and restaurants, other personal and household goods retailing and selected personal services

7. WIDER DEMAND FOR RETAIL FLOOR SPACE

As detailed in Section 6, considerable growth in demand has been forecast for retail floorspace within Warriewood Valley as a result of the areas urban development and the resulting increase in households (particularly family households) and employees. Growth in demand for retail floorspace is not however limited to Warriewood Valley, but rather is occurring across Pittwater LGA and the North East Subregion. In fact detailed analysis undertaken by Hill PDA, on behalf of various government authorities has found that there will be a significant increase in demand for retail floorspace within the North East Subregion over the next 25 years.

The growth in demand is a result of two factors:

1. population growth (particularly as a result of the forecast development in the Warriewood Valley and Ingleside release areas); and
2. the continuation of trends relating to the growing affluence and expenditure of households.

It was found however that even without significant population growth, the growing affluence of the North East Subregion's community and increasing household expenditure will result in substantial growth in demand for retail floorspace by 2031. Based on trend analysis, on a per capita basis, we estimate that demand for retail will increase from 2.6sqm per person to 3.17sqm per person in the North East Subregion by 2031. The growth in retail demand will extend across all retail categories.

For Pittwater LGA alone, Hill PDA's analysis has identified the need for in the order of 4 large (4,500sqm) or 17 small (1,200sqm) additional supermarkets by 2031 to meet forecast demand.

The growth in demand for supermarket floorspace is a particular planning issue however owing to the number of additional stores required yet development difficulties associated with securing suitable sites for supermarkets that have good access, parking and are of a sufficient size within established centres. Furthermore owing to site constraints and the economics of development, it is often not possible to expand existing supermarkets. It is therefore often necessary in property feasibility terms to develop a larger supermarket in one phase ahead of the estimated growth in demand.

Consistent with NSW Government Planning advice, we believe that all new retail floorspace (including supermarket floorspace) should be prioritised within existing or planned retail centres. Supermarkets should not however only be located within large centres but rather included within smaller centres to increase their accessibility to shoppers and reduce the need to travel by car in the interest of environmental sustainability and reduced traffic congestion. By focusing additional retail within existing and planned centres, greater support will also be given to their success and economic viability. A range of uses, particularly cafes and restaurants, are also recommended within centres of all scales to support their economic viability and the creation of a lively local atmosphere.

As the centre at the junction of Macpherson and Garden Streets is an established centre in planning policy terms, we believe a supermarket should be supported in this location to not only meet the growth in demand for retail but to also support the economic viability and therefore success of the centre.

Notwithstanding this however Hill PDA maintains that a full assessment of the economic impact of the planned retail centre (and its mix of retail uses) should be undertaken to ensure that there will be no adverse impact to existing centres. Whilst this study establishes demand for significant retail in Warriewood Valley, it does not go so far as to assess impact.

8. CONCLUSION

Pittwater Council estimates that by 2012, there will be an additional 1,881 houses (approximately 5,300 residents) located within Warriewood Valley. In order to assess how this household growth and the characteristics of the area's population will translate into demand for retail services, in addition to the range of non residential uses developed / being developed in Warriewood Valley, Hill PDA has:

1. defined Primary (PTA) and Secondary (STA) Trade Areas for the Subject Site;
2. assessed the existing (and likely future) socio-demographic characteristics of the PTA and STA's population;
3. applied the findings of points 1 and 2 above using detailed household expenditure modelling;
4. refined the gross household expenditure results into retail floorspace demand; and
5. applied capture rates to find the net demand for retail floorspace in Warriewood Valley taking into account escape expenditure owing to a range of factors.

Our calculations have found that there will be sufficient demand generated for a centre on the Subject Site of between between 6,300sqm and 6,570sqm (including between 3,370sqm and 3,520sqm of supermarket floorspace and between 2,920sqm and 3,050sqm[12] of specialty retail).

As the centre at the junction of Macpherson and Garden Streets is an established centre in planning policy terms, we believe a supermarket should be supported in this location to not only meet the growth in demand for retail but to also support the economic viability and therefore success of the centre.

Given the physical constraints of the Subject Site, the rapid growth in forecast demand and the economics of property development, we recommend that a centre of the proposed scale be developed in one stage prior to 2012 as opposed to incremental phases commensurate with the growth in demand. The completion of the centre in its entirety would also enhance the attraction of Warriewood Valley for further residential, commercial and industrial development by providing a sound range of local services and facilities.

We also consider that a centre on the Subject Site as planned could promote sustainable travel given its close proximity and ease of access to family households and businesses. The central location of the Subject Site within Warriewood Valley would allow for approximately 40% of dwellings within the PTA (close to 3,100 residents) to be within walking distance of retail and community services. This would further assist in reducing congestion and dependence on the region's road network whilst supporting the Councils vision for Warriewood Valley to become *"an eco-village – the benchmark and reference point for sustainability[13]".*

[12] Includes specialty food stores, fast food stores and restaurants, other personal and household goods retailing and selected personal services

[13] Appendix 3, Pittwater DCP 21

APPENDIX 1 - ABS 2001 CENSUS DATA

SUMMARY FOR PTA AND STA

Table 16 - – PTA & STA Household Characteristics

Characteristics	Warriewood PTA	Warriewood STA	Sydney SD
Population and Dwellings			
Total Population	*1,533*	*2,823*	*3,948,015*
Total Dwellings	*640*	*1,037*	*1,546,691*
Occupied Private Dwellings	612	994	1,438,394
Occupied Private Dwellings (%)	95.6%	95.9%	93.0%
Average Household Size	*2.5*	*2.8*	*2.7*
	28	43	
Age Distribution			
0-14	17.8%	18.1%	20.2%
15-29	18.2%	19.6%	21.9%
30-44	26.2%	20.4%	23.8%
45-59	18.6%	20.3%	18.4%
60-74	9.7%	10.9%	10.1%
75+	9.5%	10.7%	5.6%
Total	100.0%	100.0%	100.0%
Median Age	*37.6*	*39.2*	*34.9*
Home Ownership			
Owned or Being Purchased	65.0%	75.4%	62.7%
Rented	26.3%	16.5%	29.0%
Other/Not Stated	8.7%	8.1%	8.4%
Total	100.0%	100.0%	100.0%
Household Structure			
Family Households	69.8%	76.0%	73.3%
Lone Person Households	25.3%	19.9%	22.4%
Group Households	4.9%	4.2%	4.3%
Total	100.0%	100.0%	100.0%
Dwelling Type			
Separate house	31.9%	77.6%	63.1%
Townhouse	57.3%	6.5%	11.3%
Flat-Unit-Apartment	8.7%	12.7%	23.9%
Other dwelling	1.6%	0.0%	0.8%
Not stated	0.5%	3.2%	0.9%
Total	100.0%	100.0%	100.0%
Labour Force			
Managers and Administrators	13.0%	10.3%	8.4%
Professionals	18.6%	17.2%	19.9%
Associate Professionals	12.1%	11.7%	11.1%
Tradespersons & Related Wrkrs	12.0%	13.8%	10.4%
Clerical, Sales and Service Wrkrs	32.6%	30.7%	29.0%
Intermediate Production & Transport Wrkrs	5.0%	6.1%	6.9%
Labourers & Related Wrkrs	3.8%	7.1%	6.2%
Inadequately described or N.S.	0.0%	0.0%	1.9%
Unemployed	3.1%	0.0%	6.1%
Total	**100.0%**	**97.0%**	**100.0%**