Tea Gardens Retail Study

Update report – IBECON Study of 2000

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Contents

Introduction

This report provides an update to the Tea Gardens retail study of 10 August 2000 prepared by IBECON Pty Ltd. The purpose of this report is to provide updated estimates of the overall demand for retail floorspace in the Tea Gardens/Hawks Nest areas of Great Lakes Shire.

Development in the area is subject to a number of uncertainties. The coastal environment provides some constraints and restrictions on urban development and as the process of long-term strategic planning continues, efforts continue to refine population projections.

This issue was recognised in the IBECON report, which identified some of the uncertainties surrounding population growth. The IBECON report was therefore structured so that the threshold levels of retail demand could be updated as revised population figures became available. It is the purpose of this report to provide such an update.

The population projection figures for the area continue to be contested. This report examines figures provided in the update population growth projections report produced by Planning Workshop Australia in 2005 together with a review of the most recent census information, and various Council studies and reports.

Limitations

This report relies on secondary data. This includes the IBECON 2000 report, the Planning Workshop Australia 2005 report and various studies as indicated in the bibliography. Retail floorspace figures since 2000 for Tea Gardens/Hawks Nest have been provided by Crighton Properties, and are not subject to field verification. Additional information regarding retail floorspace provision within the IBECON study area has been provided by Port Stephens Council and is also available from the HillPDA Report into the Medowie area. While such information may not be comprehensive, sufficiently accurate information is available for Tea Gardens/Hawks Nest for the purpose of this report. Note that the methodologies in the IBECON and Planning Workshop Australia reports have been considered valid for the purpose of this study.

Methodology

A review was undertaken of the IBECON report, in particular to understand the specific population assumptions that underpin that study. In addition, Tea Gardens/Hawks Nest was reviewed in the context of its geographical location, and position within the overall retail hierarchy. This determined the degree to which the area can be considered on its own terms, and the degree to which it is likely to be affected by the changes within the IBECON main catchment.

Changes to retail floor space within Tea Gardens/Hawks Nest were obtained from Crighton Properties, and changes within retail provision in the main study area obtained from Great Lakes Shire. This included discussions with Councils statutory and strategic planning sections as well as a review of the HillPDA Medowie Report.

Population work undertaken by Planning Workshop Australia was also reviewed. In general, the methodology of this report is supported, however to better understand population issues in the area additional work was undertaken reviewing a range of Council-derived studies. The latest census material from the ABS was also accessed.

A spreadsheet model was then constructed based on the IBECON data, but also including population figures from the main identified sources. This model was used to generate estimates of retail floorspace demand for 2006, but also to look forward to 2011, and 2016.

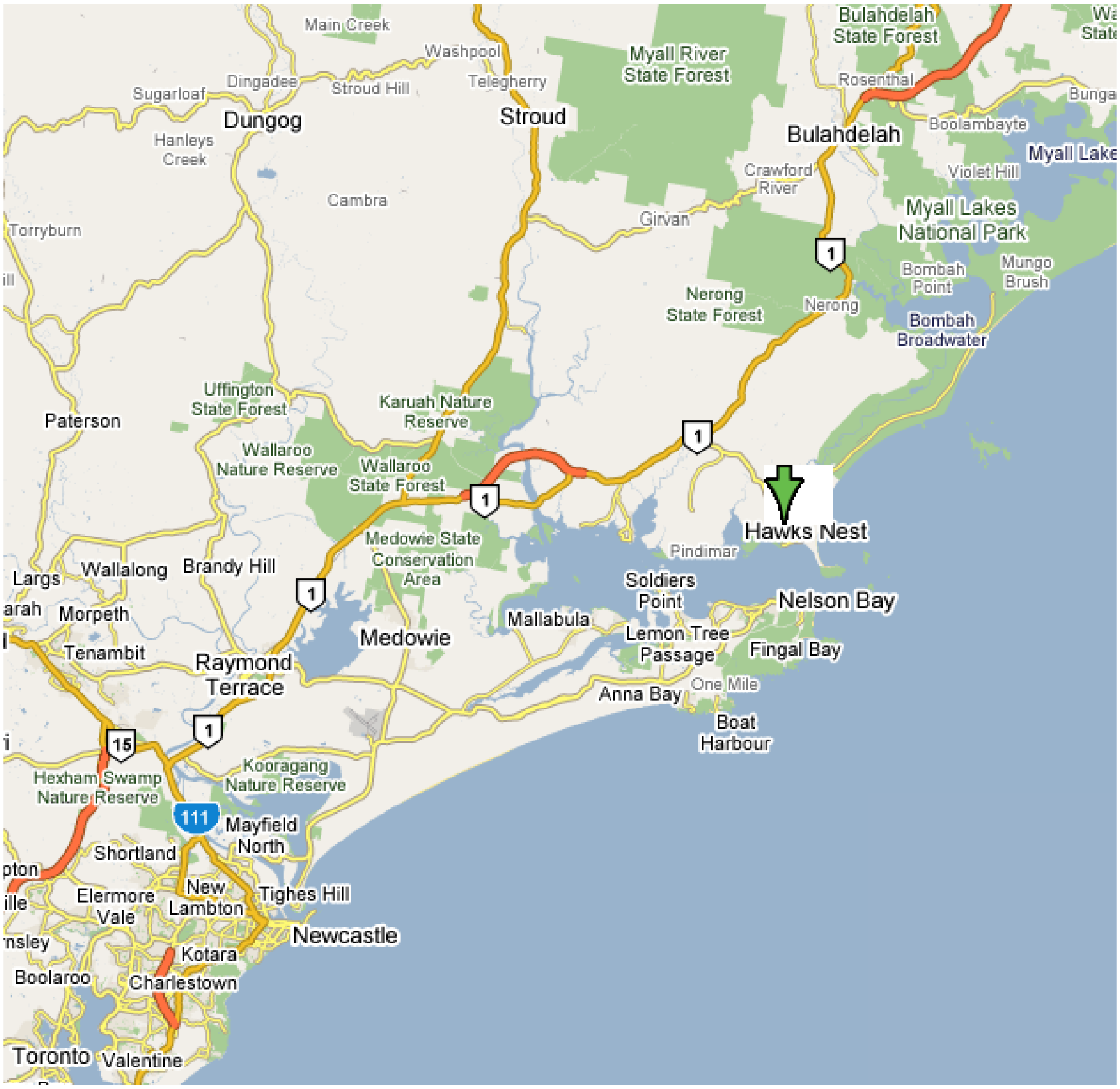
Retail Hierarchy

The retail hierarchy associated with Tea Gardens/Hawks Nest can be identified. The following table indicates the main components of the hierarchy and their level.

Locality	**Centre Type**	**Retail GFA**
Newcastle	Regional City	65,000+ (Source HVRF)
Raymond Terrace	Major Regional Centre	34,933 (Source: HillPDA)
Medowie	Local Centre	5007 (Source: HillPDA)
Tea Gardens/Hawks Nest	Local Centre	8892 (IBECON/Crighton)
Bulahdelah	Local Centre	1978 (Source: IBECON)

Table 1 – Retail Hierarchy

The hierarchy is an unusual one, in that Tea Gardens/Hawks Nest is a relatively isolated area. Raymond Terrace is the next logical level of the hierarchy in terms of shopping, with then considerable opportunities available beyond that in the Newcastle region. The Newcastle region includes major stand-alone opportunities such as Green Hills, which might be expected to attract a certain degree of regional trade from the area. Medowie is still a local centre, and even with the planned expansions over time does not really provide an alternative retailing opportunity. In terms of Tea Gardens/Hawks Nest we are therefore in the position where Raymond Terrace is the only relevant centre in terms of floorspace provision and associated changes, apart from Tea Gardens/Hawks Nest itself. This is clear from the following map:



Map of the general area indicating the relatively depauperate retail hierarchy in the area.

Tea Gardens is at a considerable distance from Raymond Terrace, being some 52 km by road. It is therefore appropriate for Tea Gardens to provide a retail capacity at a higher level than might otherwise be expected, given its population. There are no significant intervening opportunities between Tea Gardens and Raymond Terrace. This means that locally the capacity for what is known as "the weekly shop" is important, including an appropriate balance between supermarket floorspace, specialty, and other retailing. In addition, where higher order services, such as medical can be attracted, this is a significant benefit.

These factors will be considered in terms of final estimated floorspace needs.

Floorspace requirements in 2006

As outlined in the introduction there are significant issues associated with the population projections for the study area. From the point of view of the update of the IBECON study it is not necessary to fully resolve these, however one issue with respect to the figures is the difference between the 2006 census figures and the IBECON local government area projections.

There is a substantial difference in these figures, as shown in the following table:

	IBECON	ABS2006	% Variation
Port Stephens LGA	65,730	60,485	8.7
Great Lakes LGA	37,069	32,763	13.1

Table 2 – IBECON-ABS Comparisons

IBECON estimated 9551 more persons in the combined local government areas, than were measured in the 2006 Census. The impact of this is to reduce the likely take-up of retail capacity in the overall study area. In terms of Port Stephens, this is likely to mean that capacity at Raymond Terrace as predicted by IBECON may be ahead of actual demand. In the context of the distance from Tea Gardens/Hawks Nest, this should not, however, be considered as having more than a marginal impact on the level of retail offer that should be accommodated in Tea Gardens/Hawks Nest.

The next consideration is the actual population figures in Tea Gardens and Hawks Nest.

The primary trade area for Tea Gardens/Hawks Nest was reviewed in the context of available ABS data. These indicate a reasonable fit with the inclusion of the following areas:

Tea Gardens	2094
Hawks Nest	1027
Pindimar	215
North Arm Cove	701
TOTAL	4037

Table 3 – Small Area Population Figures, 2006 Census

This equates to the IBECON estimate of 4282 for the Tea Gardens Sub-Region. Minor variations in boundaries need to be noted between the two estimates. The IBECON estimate for Tea Gardens could be considered to be approximately 5% high, depending upon the likely behaviour of people at the outer edges of North Arm Cove (more likely to go to Medowie) and the south end of Bulahdelah (not included). On balance, however, the IBECON estimate is considered reasonable to adopt for 2006.

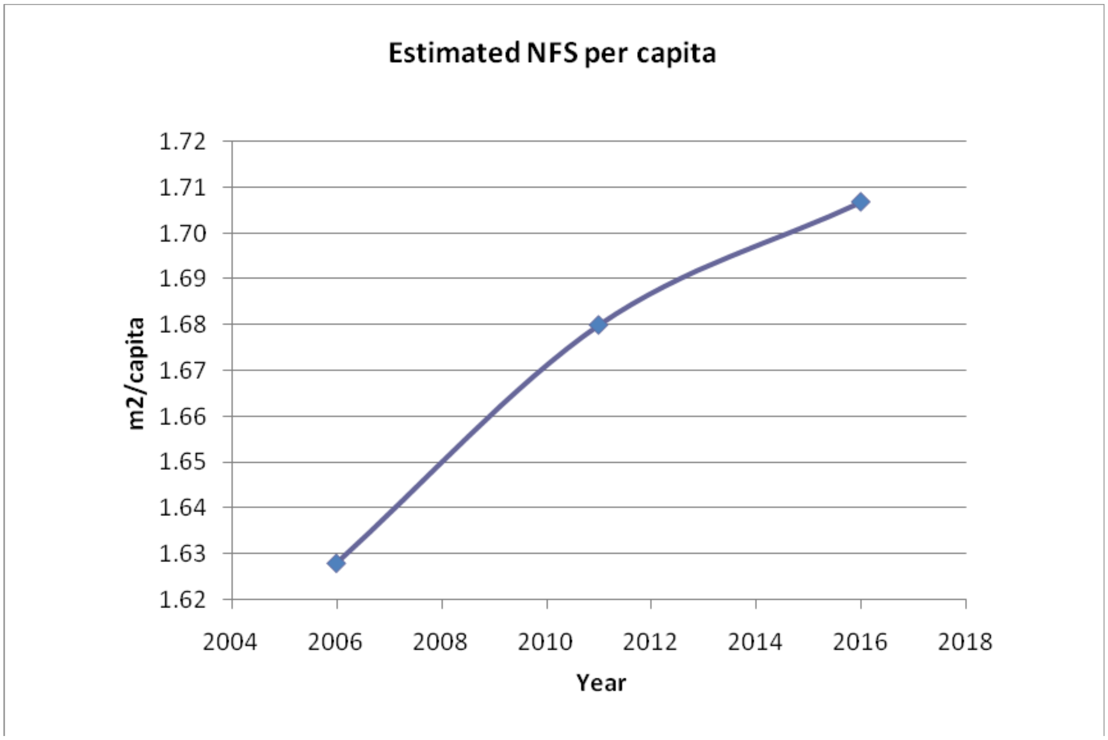
Also to be taken into consideration is the provision of new retail floorspace since the IBECON study for Tea Gardens/Hawks Nest. This is identified at 4271 m2, noting that of this 456 m2 is for a medical centre. This gives a 2006 total of 7671 m2 (existing at 2000 plus constructed). The IBECON study identified a deficit in 2006 of 3600 m2. It should be noted that IBECON uses the concept of Net Selling Area (NSA), rather than Gross Leasable Area (GLA). Factoring based on the ratios utilised for Tea Gardens/Hawks Nest requires a factor of 0.74 to be applied, giving a NSA increase of 3,161 m2.

This suggests a modest undersupply in 2006 of 439 m2. The starting point for the forward projections is therefore identified.

Forward estimates 2011 and 2016

Having established the supply and demand situation for 2006, projections can then be "rolled forward". The simplest approach to forward projections is to examine the floor space per capita and then project this forward against future population figures. This, however, does not take into account underlying trends associated with changing population structure, changing household income structure, overall expenditure on retail and the like. These factors are included in the IBECON model.

Accordingly, the approach taken is to look at the changing relationship between population and floorspace produced by the IBECON model, adjust the starting point to the current 2006 situation and then apply the Planning Workshop Australia population projections (also adjusted to the current 2006 situation) to produce the forward estimates. The changing relationship between population and floorspace is shown in the following graph derived from the existing IBECON projections.



Graph 1 – Floorspace vs Population Ratio

This approach preserves the underlying integrity of both of these bodies of work whilst accounting for the mismatches between their original forward projections and the actual 2006 situation. Due to the fact this is an update report, it is inappropriate to extend projections to the end of the population projection period of 2031, as IBECON calculations for the floorspace/population ratio figures are only available until 2016. For the purposes of investment decisions over the 2007/8 year a projection period of 10 years, to 2016, has therefore been adopted.

The following table reviews all population projections available from the Planning Workshop report, and then on the basis of the indentified 2006 situation projects net selling space deficits and gross leasable floor area deficits for 2011 and 2016.

RETAIL DEVELOPMENT FLOORSPACE FOR TEA GARDENS/HAWKS NEST SUBREGION							
	Year						Net Floorspace
							per capita (m2)
PWA Population estimate	2006	3136	3548	3747	4089	5371	1.63
	2011	3726	4551	4949	5633	8197	1.68
	2016	4317	5555	6151	7177	11023	1.71
Estimated Growth Rate p.a.		3.25%	4.59%	5.08%	5.79%	7.45%	
Population 2006 (actual)		4037	4037	4037	4037	4037	
Population 2011 (estimated)		4737	5051	5172	5348	5783	
Population 2016 (estimated)		5557	6321	6627	7086	8285	
Net Floor Space 2011 (m2)		7957	8486	8690	8985	9716	
Net Floor Space 2016 (m2)		9503	10808	11332	12117	14168	
NFS 2011 Deficit (m2)		725	1254	1458	1753	2484	
NFS 2016 Deficit (m2)		2271	3576	4100	4885	6936	
GLA 2011 Deficit (m2)		1016	1756	2041	2455	3478	
GLA 2016 Deficit (m2)		3179	5007	5740	6838	9710	

Table 4 – Floorspace Requirements

The range of figures is substantial, representing the widely differing estimates of future population, noting these have been normalised to work on the 2006 actual census figures. If the Planning Workshop preferred population figures are accepted, being the highest growth rate at 7.45%, the deficits in floorspace will achieve 3478 m2 in 2011 and 9710 m2 in 2016.

Caution should, however, be exercised when applying compound growth rates on small population bases. The general tendency with population growth is for the rate of growth to moderate as the population grows. In many respects growth is likely to be a function of the land production rate rather than intrinsic underlying demand for land. Nevertheless it is clear even utilising midrange projections that deficits in the order of 2050 m2 in 2011 and 5750 m2 in 2016 are likely to be apparent.

The following table presents a comparison of the key IBECON estimates as compared to the Planning Workshop growth scenarios.

	IBECON 2011	IBECON 2016	PWA 2011	PWA 2016
NSA	5000	6500	2484	6936
GLA	7000	9100	3478	9710

Table 5 – IBECON figures compared to updated figures

Summary and Conclusions

By 2016 there should be a reasonably close correlation between the IBECON floorspace estimates and those based on the Planning Workshop Australia population projections as applied to updated census and floorspace figures.

The IBECON approach appears to somewhat overestimate floorspace in 2011 as compared to projections using the Planning Workshop Australia population figures, when applied using the methodology in this report. Nevertheless, in the context of the remoteness of Tea Gardens/Hawks Nest from the nearest significant retail offer, increased retail provision in the interim period may be justified.

Further, we note that the Riverside proposal provides for approximately 40,000 sqm of Commercial / Retail site area for development. At an FSR (floor to site ratio) of 0.25:1 (typical single storey commercial / retail development) this site area would likely yield in the order of 10,000 sqm of Gross Leasable Area, depending on the mix of uses proposed.

If the same area were allowed to be developed at a higher FSR of say 0.4:1 (typical of a 2-3 storey mix) the Gross Leasable Area would increase to around 16,000 sqm.

Based on the site area proposed for Commercial / Retail development, the Riverside site would be able to provide for, not only the foreseeable Retail / Commercial expansion of the Tea Gardens / Hawks Nest area up to 2016, but well beyond it.

APPENDIX 1 - Data Presentation

Changes in retail floorspace provision

The following changes in retail floorspace provision were identified for this update report. These figures are understood to represent GLFA.

Tea Gardens/Hawks Nest

Myall Quays Shopping Village = 3505.9 m2

BiLo	2,000
Shop 1 / Shop 2 / Shop 3	269
Shop 4	94
Shop 5	89.7
Shop 6	100.9
Shop 7	84
Shop 8	82
Shop 9	70.9
Shop 10a	30.5
Shop 10b / Shop 11 / shop 12	193.7
Shop 13	201
Shop 14a	72.2
shop 14b	98
Shop 15	120

Medical Centre Building = 764.5 m2

Medical Centre	455.5
Cafe	167
Chemist	142

Raymond Terrace

Advice from Council is that considerable capacity exists for additional retail floorspace, and this is being encouraged. Precise figures were not available, however it appears that there has been some change since the IBECON report. Based on the HillPDA Study and interpretation of the IBECON report, it appears that there has been a growth in floorspace of approximately 11,000 m2.

Population

The following information in terms of population has been summarised from various sources. Interpolation and extrapolation have been used to derive completed data sets from a five-year period from base data.

Planning Workshop Study

			Disaggregated PWA Pop projections					
		2031	2006	2011	2016	2021	2026	2031
Method	Population		5	10	15	20	25	30
ABS 2.95%		6088	3136	3726	4317	4907	5498	6088
S94		8564	3548	4551	5555	6558	7561	8564
Cons D Str		9756	3747	4949	6151	7352	8554	9756
CDS (Adj)		11809	4089	5633	7177	8721	10265	11809
PWA Report		19500	5371	8197	11023	13848	16674	19500

IBECON Study

	2001	2006	2011	2016	2021
		5	10	15	20
Council Population	2545	2943	3404	3834	4263
IBECON Great Lakes	35400	40267	45133	50000	54867
ABS projections	31384	35068	38752	42436	46120
IBECON Trade area	3515	4282	5042	5784	6496
IBECON TG/HN	2879	3691	4373	5099	5759

ABS 2006

Place of usual residence: Great Lakes LGA: 32,763
Place of usual residence: Port Stephens LGA: 60,485

Tea Gardens	2094
Hawks Nest	1027
Pindimar	215
North Arm Cove	701
TOTAL	**4037**

TOTAL: 3121

Growth Rates:
Tea Gardens: 1996-2001 38%

Spending data and floorspace needs

This information is sourced from the IBECON report.

Tea Gardens Subregion

Total Spending

	2001	2006	2011	
	73	85	97	
	73	91	108	
Shop Demand	2000	2006	2011	2016
Population	3400	4300	5000	5800
NSA Required	5600	7000	8400	9900
NSA Existing	3400	3400	3400	3400
NSA Surplus/Deficit	-2200	-3600	-5000	-6500

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HillPDA (2006) *Retail and Commercial Development Strategy for Medowie Structure Plan* (August 2006)

NSW Department of Planning (2006) *Draft Lower Hunter Regional Strategy*

NSW Department of Planning (2006) *Draft Lower North Coast Regional Strategy*

HVRF (2006) *Newcastle and the Hunter Region 2005-2006*

Booth, Ian (2000) *Tea Gardens Retail Study* IBECON Pty Ltd, 10 August 2000.

Planning Workshop Australia (2005) *population growth projections: Tea Gardens/Hawks Nest 2005*

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TEA GARDENS

RETAIL STUDY

10 AUGUST 2000

Prepared by Ian Booth

Managing Director, IBECON Pty Limited

CONTENTS

APPENDICES In Part B

GLOSSARY

NSA	=	Net Selling Area including display cabinets, checkout areas etc. Defined as any area where shoppers are permitted to go + display space.
GLA	=	Gross Leasable Area = Net Selling Area + storage space & other areas on which rent is usually paid.
REGION	=	Study Region, comprising all areas shown in map 1.
MAIN CATCHMENT	=	"Inner" study region shown in map 1. This is NOT the same as traditional "Primary" catchment. See Chapter 1 for concept definition & explanation, = Great Lakes and Gosford Shire.
FRINGE	=	Outer areas of the Region not in the Main Catchment..(Coloured Yellow in Map 1a) = adjoining LGAs
SITE + CIRCA	=	Refers to persons shopping in the site under consideration, including all shops within walking distance (i.e. usually about 0.3 Kms)
AREA	=	Local Govt Area, Postcode or part Postcode, suburb or SLA
LGA	=	Local Government Area
SLA	=	Statistical Local Area (ABS concept)
ABS	=	Australian Bureau of Statistics
CLIENT/ Majors	=	Selected shops in Town Centre and all major traders plus all traders operating out of major shopping centres. (Labelled **TGD** + Mjrs in Tables)
COMPTRS	=	All other retailing in the defined categories within the study Region
SYNERGY	=	The generation effect of complementary retailing, whereby increasing supply and/or improving the range and level of services has the effect of itself increasing the level of demand. Similarly the coincidence of other factors such as transport etc. have a cumulative non linear impact on demand.
RxYx	=	Is a shorthand notation for modelling Run"x", Result year "1" or "2"
aaa^{p123}	=	Superscript refers to greater details on Page 123 about "aaa"
bbb^{A123}	=	Superscript refers reader to greater details in Appendix A123 about "bbb"

All $ values in this report for 2000 and after are in fiscal 2000$ unless otherwise specified. Data for all years up to 1999 are expressed in current year's dollars unless otherwise stated. eg. 1999 $ values are expressed in 1999$.

LIST OF COLOUR MAPS

Colour maps graphically illustrate some of the significant results of this study. Detailed data documenting these maps are provided in Appendix A of this report.

Region Definition, Population Growth and Retail Hierarchy

Over and Under Supply of Shops "The Mismatch"

Map 6 shows over and under-supply of shop floorspace at 2000 It shows the relationship between where spending is sourced from residents, workforce and tourists and how many shops these dollars can support, and the existing provision of shops in each geographic area. Thus an apparent over-supply in a regional centre must be assessed in conjunction with the apparent under-supply in adjoining areas.

Estimated Source of Trade

EXECUTIVE SUMMARY

A. Introduction

In July 2000, IBECON was commissioned to assess the market potential for retail facilities in the Tea Gardens Region of NSW to enable, inter alia, feasibility, impact and other assessments of the proposed new supermarket based Centre in Tea Gardens. The proposed Centre is planned to be located in the Myall Quays Estate just off Myall Road alongside existing residential developments, on the northern edge of the town. Approval exists for a 3,000M^2 Centre on this site. This proposal is firstly evaluated and consideration is also given to a larger initial centre and the possibility, in the longer term future, of the addition of a DDS or mini majors and additional specialty shops.

Specific proposals evaluated in this assessment are as shown in the following Table 1.

Table A1 Development Options Assessed

OPTION	TOTAL M^2 GLA	COMPONENTS
A	3,000	2,000M^2 SPM/1,000M^2 Specs
B	4,500	3,500M^2 SPM/1,000M^2 Specs
C	11,000	3,500M^2 SPM/5,000 M^2 DDS/2,500M^2 Specs
D	14,000	4,000M^2 SPM/6,000 M^2 DDS/4,000M^2 Specs

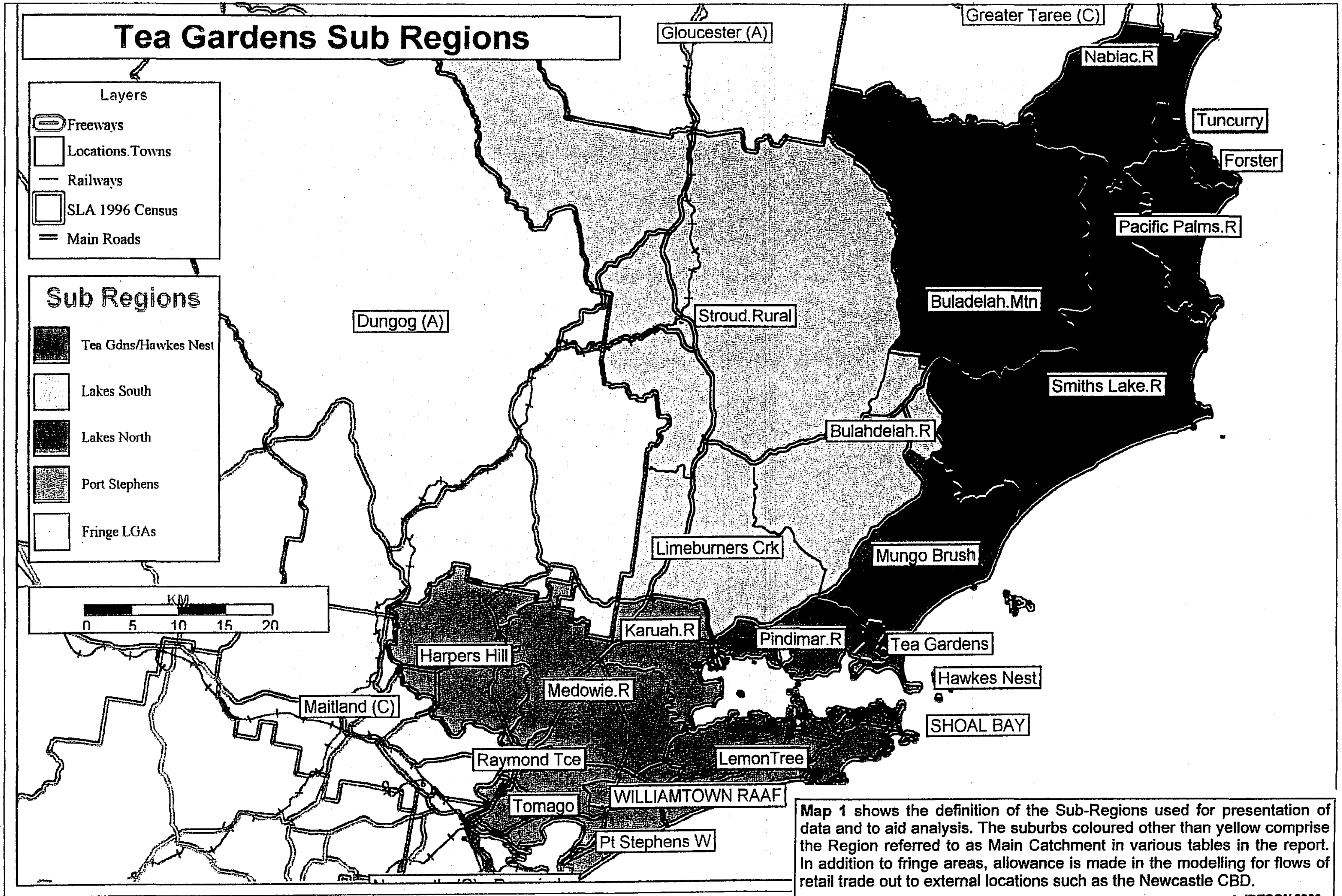
The larger Options C & D were assessed for medium to longer term possible development and have not been considered in the initial Phase 1 of the development.

A detailed study has been undertaken providing a comprehensive analysis and forecasts of the Region's demography, major industries, retail needs, plus sales forecasts and impact assessments for all shops in the Region.

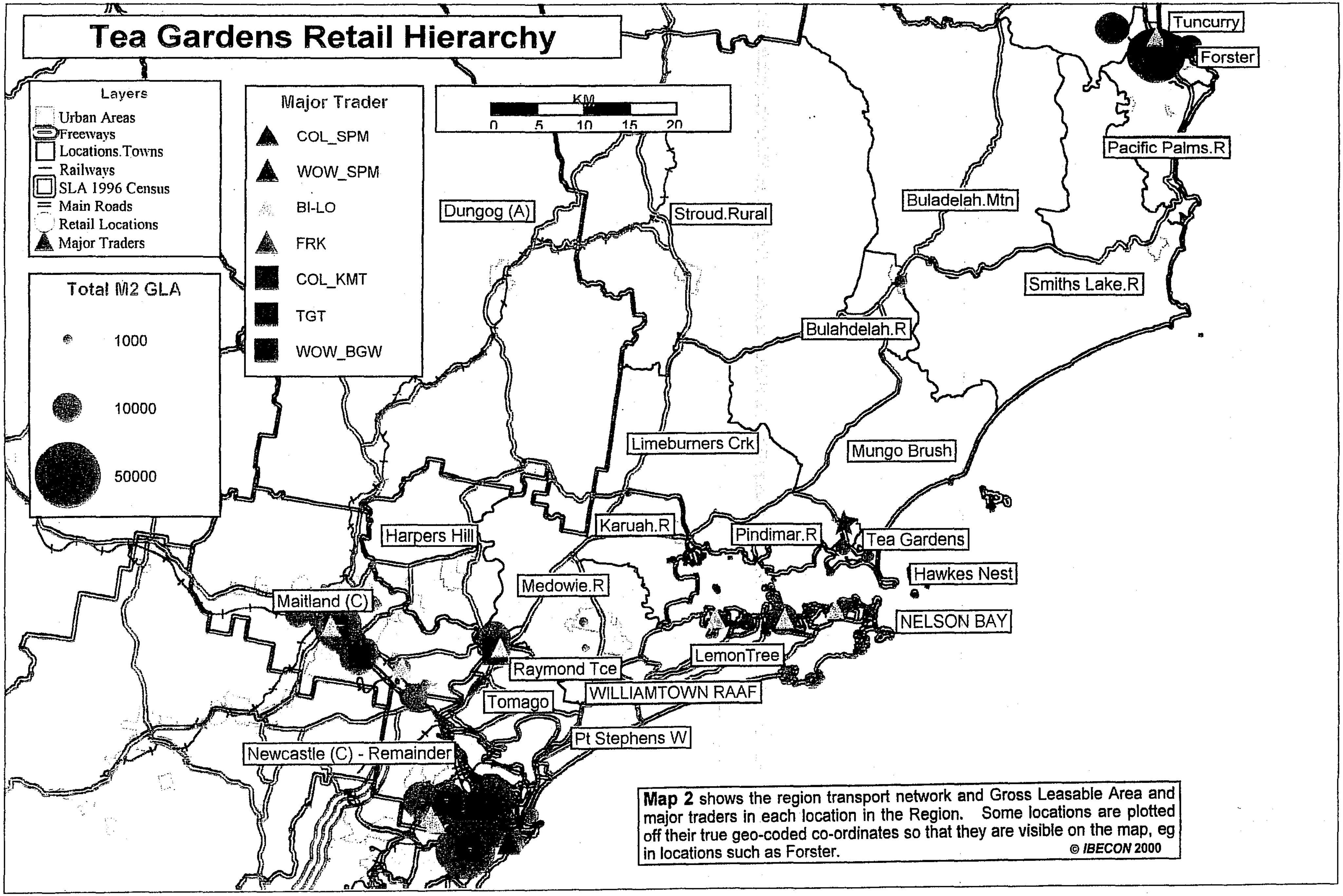
B. The Region

Definitions of the Study Region, Main Catchment and Sub-regions or Districts within this Main Catchment, for presentation of summary data are illustrated in Map 1. The Study Region has been defined to include all suburbs, towns and locations in the Local Government Areas of Great Lakes and Port Stephens plus several adjoining Local Government Areas including Taree and Newcastle. Locations in an Inner Region, referred to as the **Main Catchment**, comprise various urban and rural location/suburbs in Great Lakes and Port Stephens Shires.

The existing retail hierarchy and major trade locations in the region including major trader locations is illustrated in Map 2. This map shows the size and location of all shopping centres and locations in the Region. Detailed data showing size and composition of each of these retail locations is provided in the body of this report, in Appendix A.



Map 1 shows the definition of the Sub-Regions used for presentation of data and to aid analysis. The suburbs coloured other than yellow comprise the Region referred to as Main Catchment in various tables in the report. In addition to fringe areas, allowance is made in the modelling for flows of retail trade out to external locations such as the Newcastle CBD.



Map 2 shows the region transport network and Gross Leasable Area and major traders in each location in the Region. Some locations are plotted off their true geo-coded co-ordinates so that they are visible on the map, eg in locations such as Forster.

C. Population Growth, Income Levels and Spending Power

Great Lakes Shire which comprises the Main Catchment for the proposed Tea Gardens Centre, has shown moderate to strong rates of growth over the past 20 years. In total, population has risen from 17,100 in total in 1981 to 28,700 in 1996, subsequently to 30,600 in 1999. IBECON has assumed that there will be a continuation of moderate to strong growth in population over the period to 2001 to a total of 35,400, with continued strong growth thereafter, reaching 50,000 by 2016. These projections are similar to the DUAP medium population projections and slightly higher than the population projections provided by Great Lakes Shire Council in the draft Tea Gardens/Hawks Nest S94 Contributions Plan. A more detailed discussion of population growth and its potential is provided in the body of the report. The current estimates produced by Great Lakes Council for the Hawkes Nest/Tea Gardens Conservation and Development Strategy appear to be conservative. Based on recent years Dwelling Approval rates, IBECON projects a higher growth rate for Tea Gardens than shown in these documents prepared by Council.

For the purposes of this report we have initially used Council population projections to calculate over/under supply of shops etc. In addition, some sensitivity tests are undertaken using the higher IBECON population projections for Tea Gardens. Most of the reporting in this report is based on the Council population projections except where otherwise indicated. Details for each area in the Region are provided in Table 3.1 @ page 19 & Table 3 2 @ pg 20.

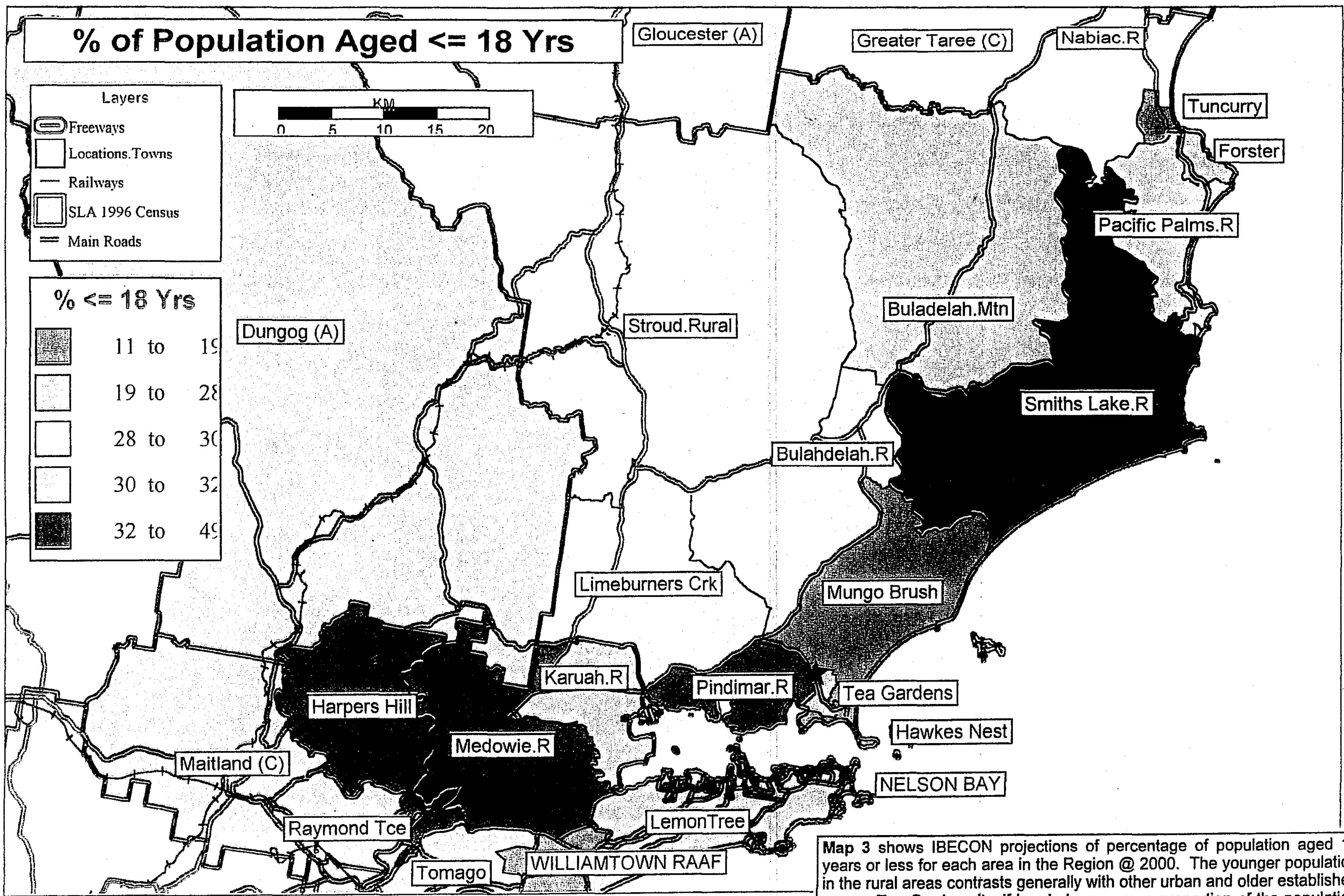
Detailed demographic characteristics are provided in Appendix A. The age structure of the population of Great Lakes is older than the National Average. (See Map 3 following). At 2000 the percentage of population aged < 18 years in Great Lakes was 23.7% compared with 26.8% for NSW in total.

In the 1996 Census median household incomes of the Great Lakes Shire, at $401/wk (in 1996$), were well below the NSW average of about $655/wk, reflecting the high retiree component in the existing population. Map 4 (page ix) shows IBECON estimates of average household incomes in the Study Region @ 2000. This shows that there are generally lower incomes in Hawkes Nest/Tea Gardens. Household Incomes in the Great Lakes Local Government Area, @ $636/wk (in 2000$), are below average for the Region. This slightly reduces spending power in the Region.

D. Population and Total Spending Capacity of the Region and Main Catchment.

In 2000 the widely defined Study Region has 339,000 people spending $2,692m (including tourists), increasing to 386,000 by 2011, spending $3,508m. (See Table 2.1 on page 5).

In 2000 Great Lakes LGA has 31,000 people spending $292m (including tourists), increasing to 42,000 by 2011 spending $412m.



Map 3 shows IBECON projections of percentage of population aged 18 years or less for each area in the Region @ 2000. The younger population in the rural areas contrasts generally with other urban and older established areas. Tea Gardens itself has below average proportion of the population aged 18 years or less.

E. Spending Trends in Region, Main Catchment, Tea Gardens Sub-Region

The following Table E.1 shows total spending dollars available and projected total percentage increases over the period from 2000 to 2011, for the Study Region, Main Catchment and Tea Gardens Sub-Region.

Table E.1 Total Spending All Retail $m (2000$)

	Total Spending All Retail $m (2000$)			% pa Increase over period	
	2000	**2006**	**2011**	**2000⇒2006**	**2006⇒2011**
Study Region	2692	3136	3508	+2.6%	+2.3%
Main Catchment [a]	702	862	1013	+3.5%	+3.3%
Great Lakes LGA	292	353	412	+3.2%	+3.1%
Tea Gardens Sub-Region [b]	73	85	97	+2.6%	+2.7%

(a) Great Lakes & Port Stephens LGAs

(b) Town/locations in Great Lakes LGA of Hawkes Nest, Tea Gardens, Pindamar Rural, Mungo Brush, Buladelah, Stroud and Limeburners Creek

Retail spending growth in the Main Catchment and Great Lakes LGA is forecast to increase in the range of 3.0-3.5% pa in real (constant dollar) terms (ie excluding inflation) over the next decade and beyond.

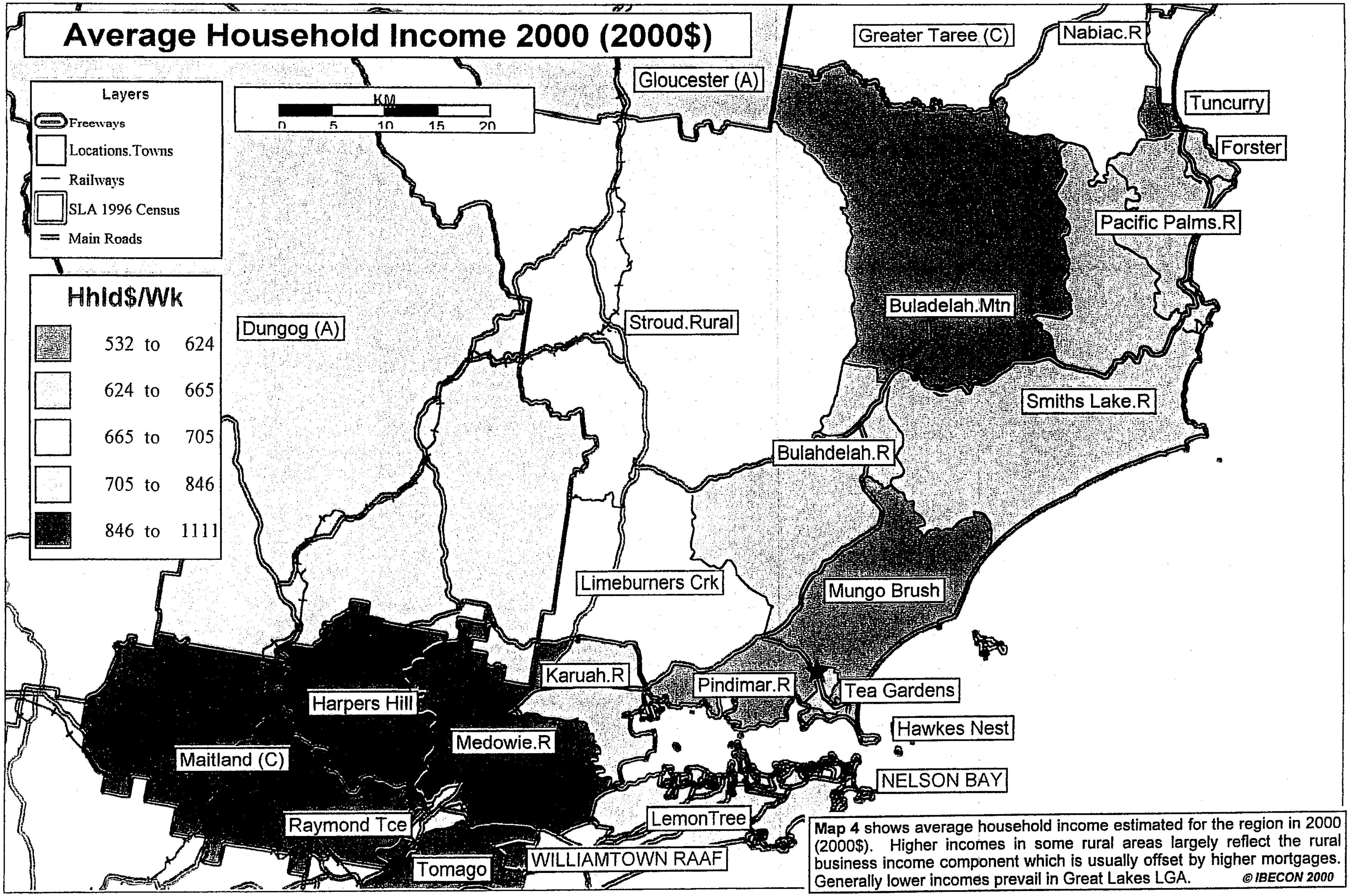
E1. Effect of Higher Population Projections

The following Table E.2 shows total spending dollars available and projected total percentage increases over the period from 2000 to 2011, for the Study Region, Main Catchment and Tea Gardens Sub-Region using the higher population projections for Tea Gardens.

Table E.2 Total Spending All Retail $m (2000$)

	Total Spending All Retail $m (2000$)			% pa Increase over period	
	2000	**2006**	**2011**	**2000⇒2006**	**2006⇒2011**
Study Region	2692	3142	3519	+2.6%	+2.3%
Main Catchment [a]	702	869	1024	+3.6%	+3.3%
Great Lakes LGA	292	359	423	+3.5%	+3.3%
Tea Gardens Sub-Region [b]	73	91	108	+3.7%	+3.5%

Retail spending increases by $6m (7%) in 2006 and by $11m (11%) by 2011 in Tea Gardens Sub-Region.



Map 4 shows average household income estimated for the region in 2000 (2000$). Higher incomes in some rural areas largely reflect the rural business income component which is usually offset by higher mortgages. Generally lower incomes prevail in Great Lakes LGA. © IBECON 2000

F. Estimated Retail Sales Levels In Tea Gardens Centre

Based on Council population projections, it is estimated that the Tea Gardens retail traders in the proposed Centre, trading from its currently proposed 3,000 M^2 Retail GLA would have a turnover of $11.8 m in 2003 (in 2000$). 98% of this trade is estimated to come from Tea Gardens Sub-Region, and 2% from the balance of Great Lakes LGA. Market penetration into Tea Garden Sub-Region totals only 28.5% of all categories of retail spending and is approximately 75% for supermarket items.

It is estimated that the Tea Gardens retail traders in the expanded Centre, trading from 4,500 M^2 GLA would have a turnover of $15.3 m in 2006 (in 2000$). 97% of this trade would come from Tea Gardens Sub-Region, and 3% from the rest of Great Lakes LGA. Market penetration into Tea Garden Sub-Region totals 33% of all retail spending. The following Table F.1 summarises IBECON estimates of sales turnover in the Centre and all other shops in Tea Gardens and Hawks Nest.

Table F.1 Estimated Sales Levels in Tea Gardens Centre + Sub-Region

Year	Size M^2 GLA				Sales $m (2000)		
	OPTION	TEA GARDENS	*OTHER	TOTAL	TEA GARDENS	*OTHER	TOTAL
2003 (a)	-	-	4,930	4,930	-	15.3	15.3
2003 (b)	A	3,000	4,930	7,930	11.8	12.9	24.7
2006	A	3,000	4,930	7,930	13.7	14.2	27.9
2006	B	4,500	4,930	9,430	15.3	13.5	28.8
2011	C	11,000	4,930	15,930	34.3	11.2	45.5
2016	D	14,000	4,930	18,930	44.2	12.0	56.2

(a) = Before proposed Centre (b) = Impact of proposed Tea Gardens Centre @ 3,000 M^2 GLA

The effect of increasing the size of Tea Gardens Centre by 50% would be an increase in its turnover of approximately $2.6m or 12%. It is estimated that the effect on all other shops in Hawkes Nest/Tea Gardens would be a decrease in turnover of about $0.7m, equivalent to 5% of their then current turnover levels.

This analysis has assumed that there are no changes either in terms of floorspace or marketing/pricing by other shops in Hawkes Nest and Tea Gardens. It is likely that some will change their marketing/merchandising to complement the range being offered in the proposed centre and that this would ameliorate, to some extent, the impact on their turnovers and, as a consequence, help reduce escape spending.

The next section assesses the effect of higher IBECON population projections.

F1. Effect of Higher Population

The following Table F.2 summarises IBECON estimates of sales turnover in the Centre and all other shops in Tea Gardens and Hawks Nest using the higher population projections.

Table F.2 Estimated Sales Levels in Tea Gardens Centre + Sub-Region

Year	Size M^2 GLA				Sales $m (2000)		
	OPTION	TEA GARDENS	*OTHER	TOTAL	TEA GARDENS	*OTHER	TOTAL
2003 (a)	-	-	4,930	4,930	-	15.3	15.3
2003 (b)	A	3,000	4,930	7,930	13.9	14.0	27.9
2006	B	4,500	4,930	9,430	18.5	14.8	33.3
2011	C	11,000	4,930	15,930	42.3	12.8	55.1
2016	D	14,000	4,930	18,930	55.6	14.3	69.9

(a) = Before proposed Centre (b) = Impact of proposed Tea Gardens Centre @ 3,000 M^2 GLA

The effect of the higher population is to significantly improve performance in the centre and to substantially reduce impacts on other shops.

G. Conclusions

Several conclusions can be drawn from the *IBECON* analysis:

1. There will be continuing moderate to strong population growth in the region and in Great Lakes LGA. The distribution of this population growth within Great Lakes LGA is shown in the following Map 5 (at page xiii).

2. The combination of this population growth, tourism growth and increased real spending at a total of about 3.0-3.5%% per annum in real terms will result in continuing growth in retail sales dollars available from Residents, Workers and Tourists in Great Lakes and Port Stephens LGAs.

3. There is currently an approximate balance in the supply of shop floorspace, in marketplace terms, in Great Lakes LGA if the deficiency in occupied floorspace is offset by the current vacant, mostly relatively poor quality, shop floorspace.

4. There is currently a significant level of net escape spending out of Tea Gardens and Great Lakes in all Retail categories to Raymond Terrace and Newcastle and to a lesser extent other fringe areas. There are no significant offsetting flows back into Tea Gardens/Hawks Nest from fringe areas of the Region.

5. Development of Tea Gardens Centre would recapture some of this escape spending.

6. The proposed development and expansion would result overall in significant increases in total retail sales in Tea Gardens, although there would be some initial loss of trade in other shops in Tea Gardens/Hawks Nest.

7. The proposed development and expansion of Tea Gardens Centre is sustainable in economic terms and would contribute to economic growth in Tea Gardens generally.

8. The wider range of traders which would become available would increase the choices available to consumers in the Region.

9. The development of a modern supermarket based shopping centre would generally encourage other growth in Tea Gardens/Hawkes Nest, including the sale and development of permanent residential land which would result in higher population growth than used in the Council's analysis. This would result in growth of an additional 1,000 people within ten years and 2,000 in the medium to longer term. This would largely offset the impacts on other shops in Hawkes Nest and Tea Gardens.

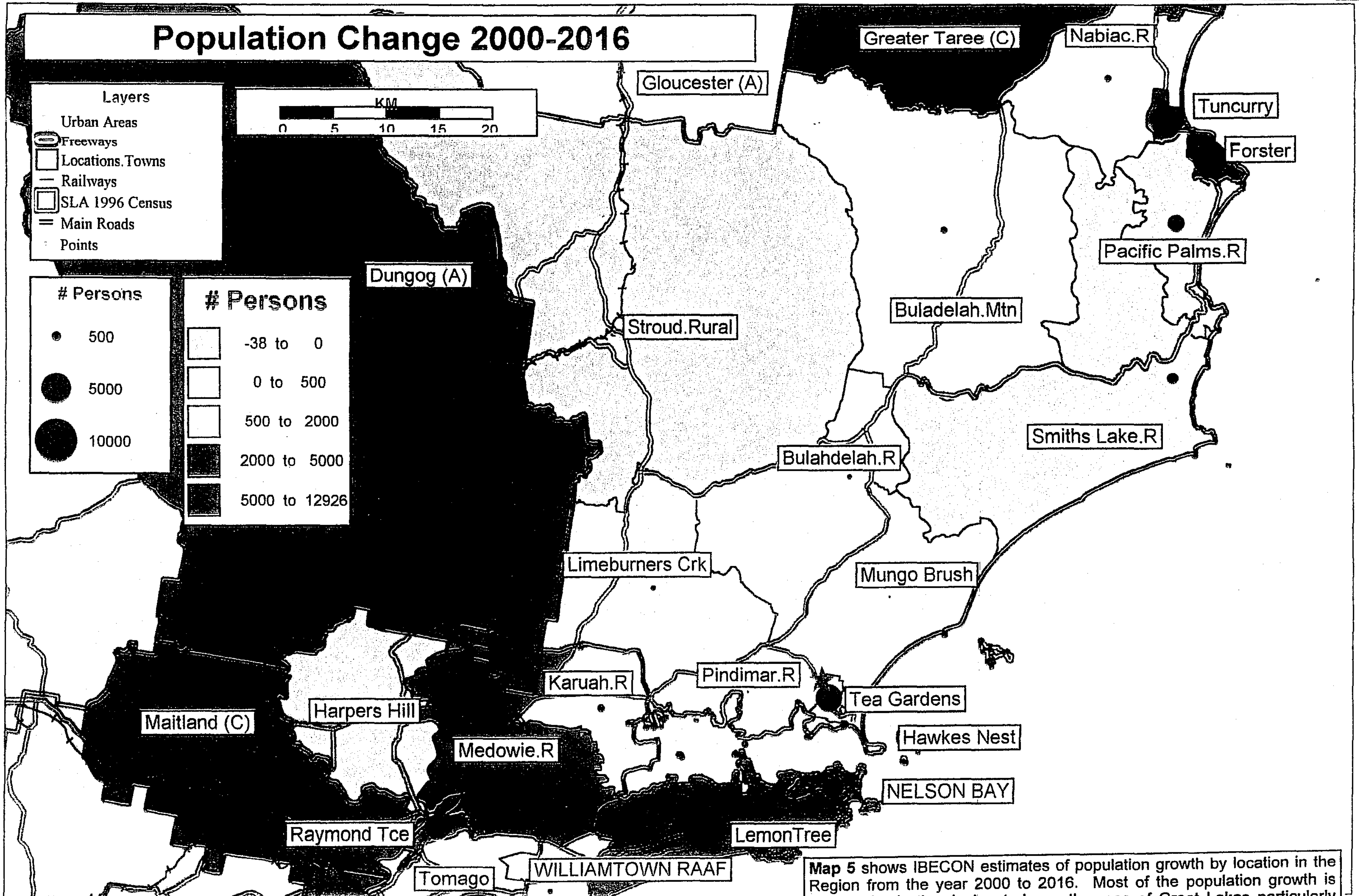
10. The conservative population projections produced by Council, if used for retail analysis, result in a substantial deficiency of shop floorspace. The higher projections used by IBECON significantly increase this deficiency. It is recommended that the higher population projections be used.

11. RECOMMENDED DEVELOPMENT PROGRAM FOR TEA GARDENS SC

APPROX YEAR	M^2 GLA		
	SPM	SPECS	TOTAL
2003	2000	1000	3000
2007-2008	3000	1500	4500
Longer Term	Add DDS and more specialty shops		

12. It is recommended that planning be modified to allow for the future longer term inclusion of a DDS and of other specialty shops with a total centre, in the range of 11-14,000 M^2, depending on the take up rate of population.

13. The issue of future population projections has raised some controversy. In this study there is no need for such debate. The analysis conducted uses certain years as benchmarks or sign posts and analyses retail requirements for projected population levels for those years. If the residential take up rate is higher or lower than either the Council or IBECON projections then, for the purposes of this exercise, there is only a need to move the opening times of the various retail proposals backwards or forwards to match that variation in population take up rate. This only applies to the longer term and can be modified as time progresses and actual residential take up rates become known.



Map 5 shows IBECON estimates of population growth by location in the Region from the year 2000 to 2016. Most of the population growth is seen to be in the designated growth areas of Great Lakes particularly Forster/Tuncurry & Hawks Nest/Tea Gardens.

1.00 STUDY BRIEF AND METHOD

.10 *Terms of Reference*

In July 2000, IBECON was commissioned to assess the market potential for retail facilities in the Tea Gardens Region of NSW to enable, inter alia, feasibility, impact and other assessments of the proposed new supermarket based Centre in Tea Gardens. The proposed Centre is planned to be located in the Myall Quays Estate just off Myall Road alongside existing residential developments, on the northern edge of the town. Approval exists for a 3,000M2 Centre on this site. This proposal is firstly evaluated and consideration is also given to a larger initial centre and the possibility, in the longer term future, of the addition of a DDS or mini majors and additional specialty shops.

Specific proposals evaluated in this assessment are as shown in the following Table

Table 1 Development Options Assessed

OPTION	TOTAL M^2 GLA	COMPONENTS
A	3,000	2,000M^2 SPM/1,000M^2 Specs
B	4,500	3,500M^2 SPM/1,000M^2 Specs
C	11,000	3,500M^2 SPM/5,000 M^2 DDS/2,500M^2 Specs
D	14,000	4,000M^2 SPM/6,000 M^2 DDS/4,000M^2 Specs

The larger Options C & D were assessed for medium to longer term possible development and have not been considered in the initial Phase 1 of the development.

A detailed study has been undertaken providing a comprehensive analysis and forecasts of the Region's demography, major industries, retail needs, plus sales forecasts and impact assessments for all shops in the Region.

.20 *Major Logical Steps in the Retail Model*

The simulation logic of the Retail Model is based on the following principles:

- Spending is sourced from three major streams of spending of Residents, Workforce, Tourists by type of person & spending.
- This $ spending potential sourced from each area is converted to Square Metres of Shop Floorspace which can be supported by the sum of this spending and compared with existing floorspace to determine over/under supply.
- This spending is then allocated to outlets based on characteristics of shops, range & level of service ratings, outlet appeal profiling and a comprehensive simulation of the transport system, effects of multiple purpose trips, the retail hierarchy, influence of major traders on patterns of trade etc.

Tables showing where the retail $ comes from and where they are spent and hence sales levels in each shop or group of shops, together with impact statements and other summary tables are then created.

A rigorous, total accounting of the sourcing and destination of every retail dollar in the Region is undertaken in the model.

A more detailed description of the model is provided in Appendix B-N.

.21 Verification Procedures

Estimates of sales in all shops in the Region are produced and checked against known actual performance to verify the calibration of the model. Where possible, trade flows identified in shopper surveys (showing selected incidences of where residents actually lived and shopped) are checked against totally comprehensive flow tables generated by the system. With the exception of some actual shop sales data (supplied to IBECON on a strictly confidential basis), Appendix A to this report and separately bound computer printouts contain detailed statistical tables which enable verification of this calibration.

.22 Some Important Concepts

Appendix B to this report and a separately bound volume, provide more detailed descriptions of the modelling systems and databases used in this study. The following three concepts used in the model vary from traditional approaches. These variations enable a very close level of simulation of the retail market and produce highly informative and, if required, detailed results.

.23 The Concept and Relevance of Over and Under Supply of Retail Floorspace

The concept of over and under supply of shop floorspace is one of a "mismatch". It measures the relationship between where spending is sourced from residents, Workforce and tourists and how much floorspace these dollars can support, and the existing provision of floorspace in each geographic area. This mismatching reflects the retail hierarchy and partly explains the flows of shoppers between localities. Many residents and workers in “deficient” suburbs/locations, of necessity travel to “surplus” suburbs/locations to shop. The mismatch concept is illustrated in the following diagram.

SUPPLY of shops	— (minus)	**DEMAND** for shops	→	**MISMATCH** over/under supply

Supply	=	Total of all shop floorspace in an area.
Demand	=	Resident Population + Workforce + Tourism Spending Translated to shop floorspace requirements.
Mismatch	=	Oversupply (+) If there are more shops than required in any area. Undersupply (-) If not enough shops in that area.

.24 *Main Catchment & "Trade Areas" Concepts*

The Main Catchment has been defined as shown in Map 1 to include all towns and locations within the Local Government Areas of Great Lakes and Port Stephens. The wider Region includes parts of Newcastle and Taree. The IBECON concept of **"Main Catchment" is not the same as the traditional "Primary" or "Secondary" trade catchment concepts** used by many consultants. It is an **inner study Region** and makes no preconceived statement about "trade areas" in the traditional sense. The analysis of market shares and source of trade is undertaken on a locality by locality basis, thus allowing subsequent aggregation to define "trade areas" for all Centres in the Main Catchment. Relevant data has been aggregated for the other Sub-Regions or Catchments as illustrated in Map 1.

.30 *Assumptions and Qualifications*

The following assumptions and qualifications are significant:-

- With the exception of assumed additions to floorspace as specified above, that there are no other additions in the Region between 2000 and 2016.
- That there are no major changes to the transport system in the Region before 2016.
- That any developments in the proposed developments and extensions to existing centres are undertaken so as to warrant the design and other ratings as assumed and listed in this report or detailed tables.
- While the population projections used in this modelling are based on the best information available, it is possible that take up rates of residential land could be faster or slower than indicated. Under such circumstances the timing and forecast level of sales would need to be adjusted accordingly.

2.00 SUMMARY OF RESULTS AND CONCLUSIONS

Selected detailed results from various modeling runs are presented in this chapter. These results, together with Chapters 3 through 6, plus Appendix A in part B, provide the documentation and background to the conclusions presented in the Executive Overview.

.10 *Study Region Definition*

For the purpose of this study the "Region" for retail analysis comprises Great Lakes and Port Stephens Shires, plus adjoining LGA's of Newcastle (Remainder - Excluding Newcastle Inner), Maitland, Gloucester, Dungog and Greater Taree. This widely drawn study Region enables a comprehensive analysis of all competing retail centres and their catchments, trade flows between suburbs/locations and LGA's and hence levels of escape and captured spending. The defined Main Catchment comprises the sum of all towns and locations within Great Lakes and Port Stephens LGAs. The locations in Newcastle, Taree and other LGAs have been included as fringe or external areas to allow for retail trade inflows and outflows. Estimates and forecasts have been prepared for 2000 through to 2016. The definition of these various Sub-Regions is shown in Map 1b and listed in various tables in Appendix A.

Some slight differences occur between the actual boundaries of Great Lakes and Port Stephens LGAs and the summation of suburbs and locations identified within those LGAs. These differences are only minor and do not affect the results or conclusions.

.20 *Summary of Results - Study Region, Main Catchment, Greater Lakes LGA, Hawkes Nest & Tea Gardens Sub-Region*

A summary of relevant results of this analysis follows. The following descriptions of the overall situation for the Study Region, the Main Catchment, Great Lakes Shire. Hawkes Nest and Tea Gardens Sub-Region, provide a general background for the analysis of the proposed retail developments.

.30 *The Region Retail Requirements in 2000 - 2016*

The following Table 2.1 shows the effects of assumed population, jobs and economic growth in the Region. It summarises, population, spending and retail floorspace data over the period 2000 to 2016 assuming no increase in competing shops. The Main Catchment essentially comprises Great Lakes and Port Stephens LGAs. Other nearby LGAs making up the study region include Newcastle and Taree. This analysis is based on Council projections for Tea Gardens. Using IBECON projections would produce greater demand for shop floorspace and hence, greater deficiencies of shop floorspace.

Table 2.1 Demand for Shops (2000$) (TOTAL RETAIL) *ABSOLUTE*

Year	2000	2006	2011	2016
Scenario	R1Y1	R2Y2	R3Y1	R3Y2
Study Region				
Population '000	339	367	386	406
$m Spending (2000$)	2692	3136	3508	919
'000 M^2 NSA Required	418	488	547	613
'000 M^2 NSA Existing	439	491	491	491
'000 M^2 NSA Surplus	+21	+3	-56	-122
Main Catchment (a)				
Population '000	89	103	114	126
$m Spending (2000$)	702	862	1013	1179
'000 M^2 NSA Required	108	133	156	182
'000 M^2 NSA Existing	108	111	111	111
'000 M^2 NSA Surplus	-	-22	-45	-72
Great Lakes LGA				
Population '000	31	37	42	47
$m Spending (2000$)	292	353	412	477
'000 M^2 NSA Required	45	55	64	74
'000 M^2 NSA Existing	46	46	46	46
'000 M^2 NSA Surplus	+1	-8	-18	-28
Tea Gardens Sub-Region (b)				
Population '000	7.0	8.0	8.9	9.7
$m Spending (1998$)	72.7	85.0	97.1	110.0
'000 M^2 NSA Required	11.2	13.1	15.0	17.1
'000 M^2 NSA Existing	5.3	5.3	5.3	5.3
'000 M^2 NSA Surplus	-5.9	-7.8	-9.7	-11.7
Hawkes Nest/Tea Gardens District (c)				
Population '000	3.4	4.3	5.0	5.8
$m Spending (1998$)	36.4	45.4	54.3	64.0
'000 M^2 NSA Required	5.6	7.0	8.4	9.9
'000 M^2 NSA Existing	3.4	3.4	3.4	3.4
'000 M^2 NSA Surplus	-2.2	-3.7	-5.0	-6.6

(a) Great Lakes and Port Stephens LGAs
(b) Hawkes Nest, Tea Gardens District, Buladelah, Stroud and Lime Burners Creek
(c) Hawkes Nest, Tea Gardens, Pindamar Rural and Mungo Brush

The most relevant areas for this analysis are Hawkes Nest/Tea Gardens District, Tea Gardens Sub-Region, Great Lakes LGA and the Main Catchment. The growth shown for the whole of the Study Region occurs throughout most parts of the Region. In absolute terms there is an approximate balance of shop floorspace in the total Great Lakes and Port Stephens LGA's. There is some vacant floorspace in Great Lakes and Port Stephens LGAs, mostly in Raymond Terrace and Forster/Tuncurry. If these vacant shops are added back into the apparent balance based on occupied shops, there would be an apparent small surplus of shops in the Main Catchment.

In the Tea Gardens Sub-Region and Great Lakes LGA there are deficiencies in floorspace in all categories except Meals Out, and to a lesser extent Furniture and miscellaneous. The Meals Out category includes restaurants, coffee shops, sandwich shops, takeaway food etc, which cater for peak loads of tourists in the tourist season.

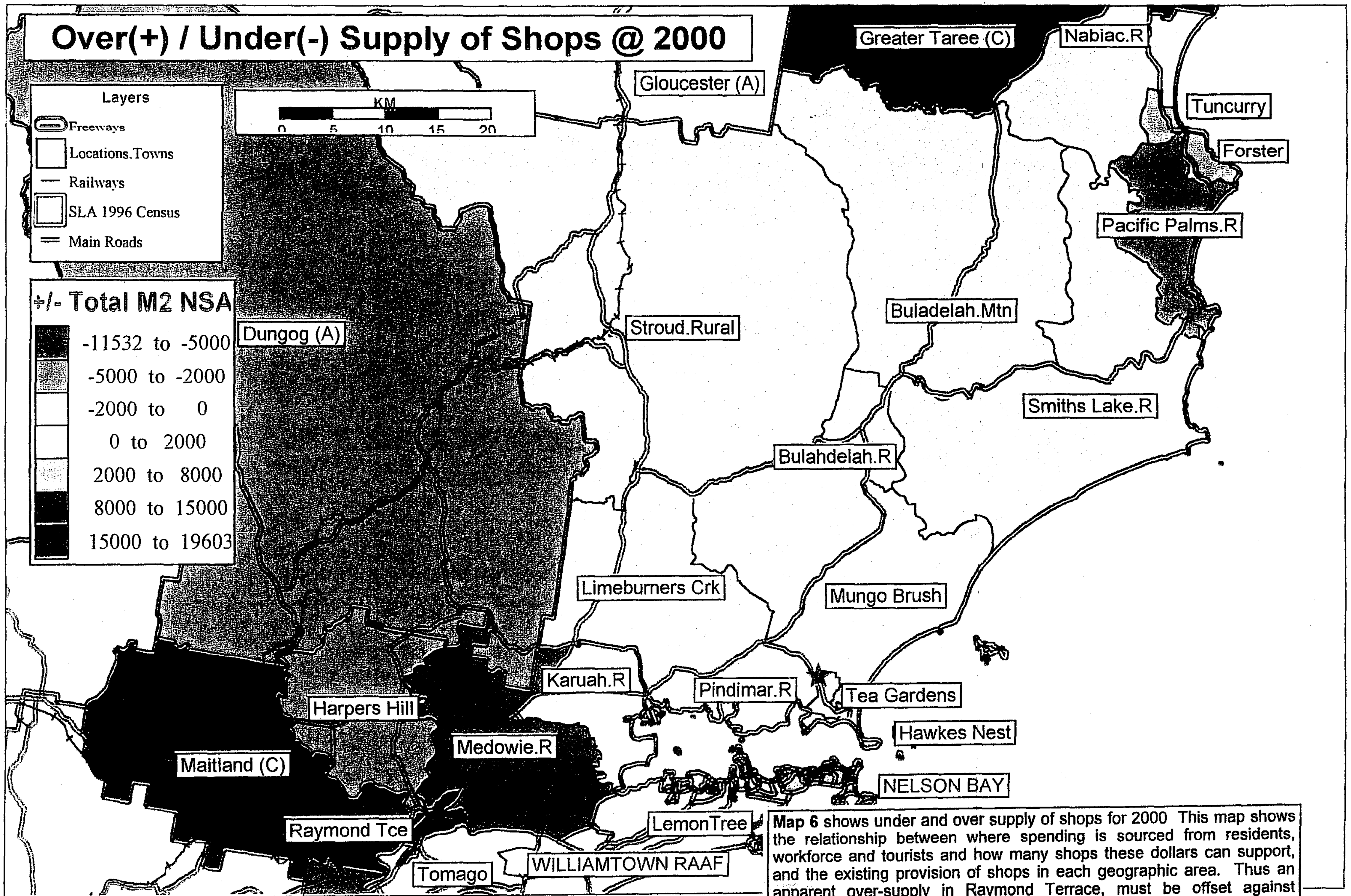
This analysis is based on floorspace as measured (ie in absolute terms). If the existing floorspace is weighted by quality ratings reflecting their turnover rates the effective existing floorspace in Great Lakes LGA reduces significantly. Detailed tables showing the results of this analysis are provided in Appendix A. Under the weighted analysis the apparent surplus in the LGA reduces to a noticeable deficiency which partly offsets the vacant floorspace in Tuncurry/Forster. For the Tea Gardens Sub-Region and Hawkes Nest/Tea Gardens District there is a substantial deficiency which grows strongly over the next decade and beyond if it is assumed that no further floorspace is added to the existing shops.

On the assumption that there are only additions to Retail floorspace as listed in this report, the Region over the coming decade would move into substantial deficiency. It is therefore likely that there will be proposals for additional shop floorspace which have not yet been submitted for approval.

A second factor which needs to be taken into account is that the floorspace and productivity rates used in this analysis to determine floorspace requirements are based upon fringe metropolitan/non-urban typical rates for New South Wales. It could possibly be argued that with the development of new shopping centres in locations such as Tea Gardens and Raymond Terrace, that higher productivity rates would be more appropriate. Even if productivity rates were increased by 10%, making them approach typical Sydney rates for all types of shops, the Main Catchment would still be approximately in balance by the Year 2002/3.

In total for the Tea Gardens Sub-Region there is currently a deficiency of almost 6,000 M^2 net selling area which equates to approximately 8,000 M^2 GLA. If there were no further additions to shop floorspace in this Sub-Region, this deficiency would grow to almost 12,000 M^2 by 2016, equivalent to 15,000 M^2 GLA. This is sufficient floorspace requirement to warrant a centre which comprised at least one major supermarket, one DDS and specialty shops. There could conceivably be scope based on this analysis alone for a second small supermarket to be included by then. If the higher population growth scenario, assumed as a possibility for Tea Gardens/Hawkes Nest and described elsewhere in this report, were to eventuate there would definitely be scope for a second supermarket. The composition and timing of deficiencies by type of shop is discussed in more detail elsewhere in this report.

Map 6 on the following page illustrates the over and undersupply of floorspace in suburb/location in the Region in 2000.



Map 6 shows under and over supply of shops for 2000 This map shows the relationship between where spending is sourced from residents, workforce and tourists and how many shops these dollars can support, and the existing provision of shops in each geographic area. Thus an apparent over-supply in Raymond Terrace, must be offset against undersupplies in adjoining areas.

.40 *Estimated Sales in Tea Gardens Centre*

The following table shows a range of likely estimates for sales in Tea Gardens Centre in 2003 to 2016 for each of the Options considered. The supermarket options (A & B) trade viably. Generally the turnover rates, assuming development in the years nominated for the larger options (C & D), barely achieve levels which are acceptable to major retailers. This indicates that the developments would be premature and hence would probably need to be deferred for a few years. To some extent this depends on who the traders are and their willingness to invest in this location for the longer term. For example, Option A considered for 2003 and 2006 produces a turnover level which is acceptable. If Option C were deferred to approximately 2016 it would achieve more acceptable, but not spectacular, turnover levels.

Table 2.2a Estimated Sales in Tea Gardens Centre in 2002 (2000$)

			LOW POPULATION		"MOST LIKELY" POPULATION	
YEAR	OPTION	M^2 GLA	\$m SALES	\$/M^2 GLA	\$m SALES	\$/M^2 GLA
2003	A	3000	11.8	3933	13.9	4633
2006	A	3000	13.7	4567	16.1	5367
2006	B	4500	15.3	3400	18.5	4111
2011	C	11000	34.3	3118	42.3	3845
2016	D	14000	44.2	3157	55.6	3871

At this stage it is difficult to be precise about likely take up rates of new residential blocks. This analysis, nevertheless, shows that there is scope ultimately for a larger supermarket and DDS based centre, though it may not be for quite some time. For planning purposes, allowance should be made for the possible future expansion of this centre to include a DDS and to achieve an overall size in the range of 11-14,000M^2 GLA.

.41 *Estimated Source of Patronage for Tea Gardens Centre in 2006*

Table 2.2b shows estimates of source of sales in Tea Gardens Centre for Option A (3,000M^2). The data has been aggregated to Sub-Regions as shown in Map 1 (at page xiii) to aid interpretation. Detailed data by suburb/location is provided in Appendix A.

Table 2.2b Source data for Tea Gardens Centre in 2006 (2000$) As Is

AREA	#Pop	$000	%Share	$000	%Source
	Total	(a) Total	(b) Site	(c) Site	(d) Site
HAWKES.TEAGDNS					
Hawkes Nest	1420	19444	26.0	5064	33.0
Tea Gardens	2198	22897	42.5	9726	63.3
Pindamar.Rrl	521	2433	6.0	144	0.9
Mungo Brush	118	705	5.7	40	0.3
HAWKES.TEAGDNS	**4257**	**45479**	**32.9**	**14974**	**97.5**
LAKES STH	3782	39618	0.7	275	1.8
TG.HN+NEARBY	**8039**	**85097**	**17.9**	**15249**	**99.3**
LAKES NORTH	28954	267630	0.0	39	0.2
GREAT LAKES LGA	**36993**	**352727**	**4.3**	**15288**	**99.5**
PORT STEPHENS L	65680	509283	0.0	63	0.4
MAIN CATCHMNT	**102673**	**862010**	**1.8**	**15351**	**99.9**
Region Total	**366844**	**3135202**	**0.5**	**15361**	**100.0**

(a) Total Retail $ available from this area.
(b) % of (a) estimated to be spent in Site = Tea Gardens Centre
(c) (a) x (b)
(d) = $ in (c) expressed as % of Total Sales in Tea Gardens Centre

Total sales level in Tea Gardens Centre in 2006 is estimated @ $15.4m (in 2000$). 97.5% of the trade is estimated to come from Tea Gardens Sub-Region and 2.5% from Great Lakes LGA. No significant trade comes from fringe areas in the Region.

.42 *Source of Trade as Proposed in 2016*

Table 2.2c shows estimate source of trade in 2016 of the proposed expanded Tea Gardens Centre. (Option D - 14,000M^2)

Table 2.2c Source Data for Tea Gardens Centre $000 - 2016 (Expanded)

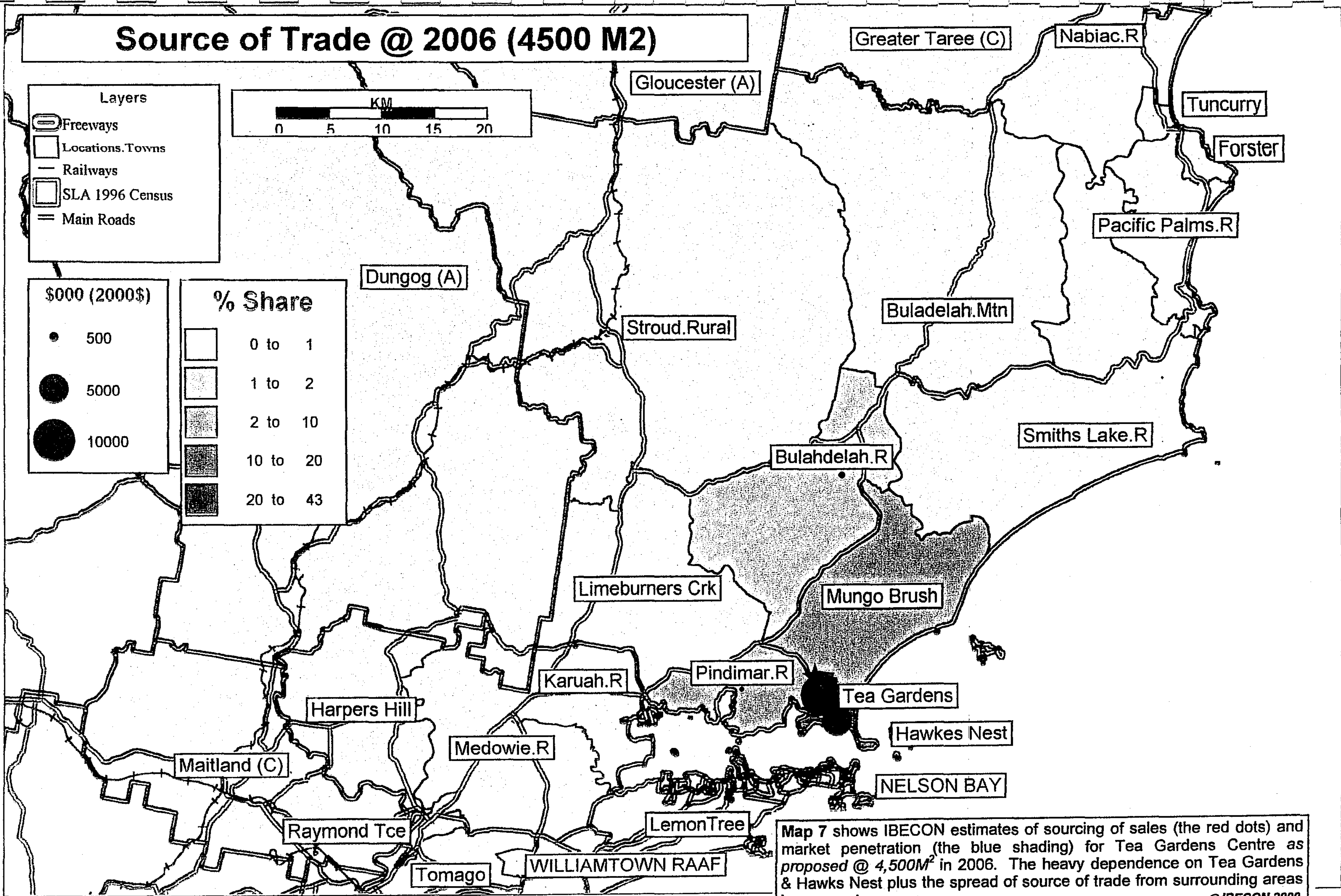
AREA	#Pop	$000	%Share	$000	%Source
	Total	(a) Total	(b) Site	(c) Site	(d) Site
HAWKES.TEAGDNS					
Hawkes Nest	1737	24586	56.9	13988	31.7
Tea Gardens	3351	36056	73.4	26481	60.0
Pindamar.Rrl	539	3032	18.5	559	1.3
Mungo Brush	136	913	17.8	162	0.4
HAWKES.TEAGDNS	**5763**	**64587**	**63.8**	**41190**	**93.4**
LAKES STH	3942	45955	3.1	1444	3.2
TG.HN+NEARBY	9705	110542	38.6	42634	96.6
LAKES NORTH	37289	366740	0.1	310	0.6
GREAT LAKES LGA	**46994**	**477282**	**9**	**42944**	**97.2**
PORT STEPHENS L	78879	702270	0.2	1155	2.6
MAIN CATCHMNT	**125873**	**1179552**	**3.7**	**44099**	**99.8**
REGION TOTAL	**406102**	**3919664**	**1.1**	**44159**	**100.0**

(a) Total Retail $ available from this area.
(b) % of (a) estimated to be spent in Site = Tea Gardens Centre
(c) (a) x (b)
(d) = $ in (c) expressed as % of Total Sales in Tea Gardens Centre

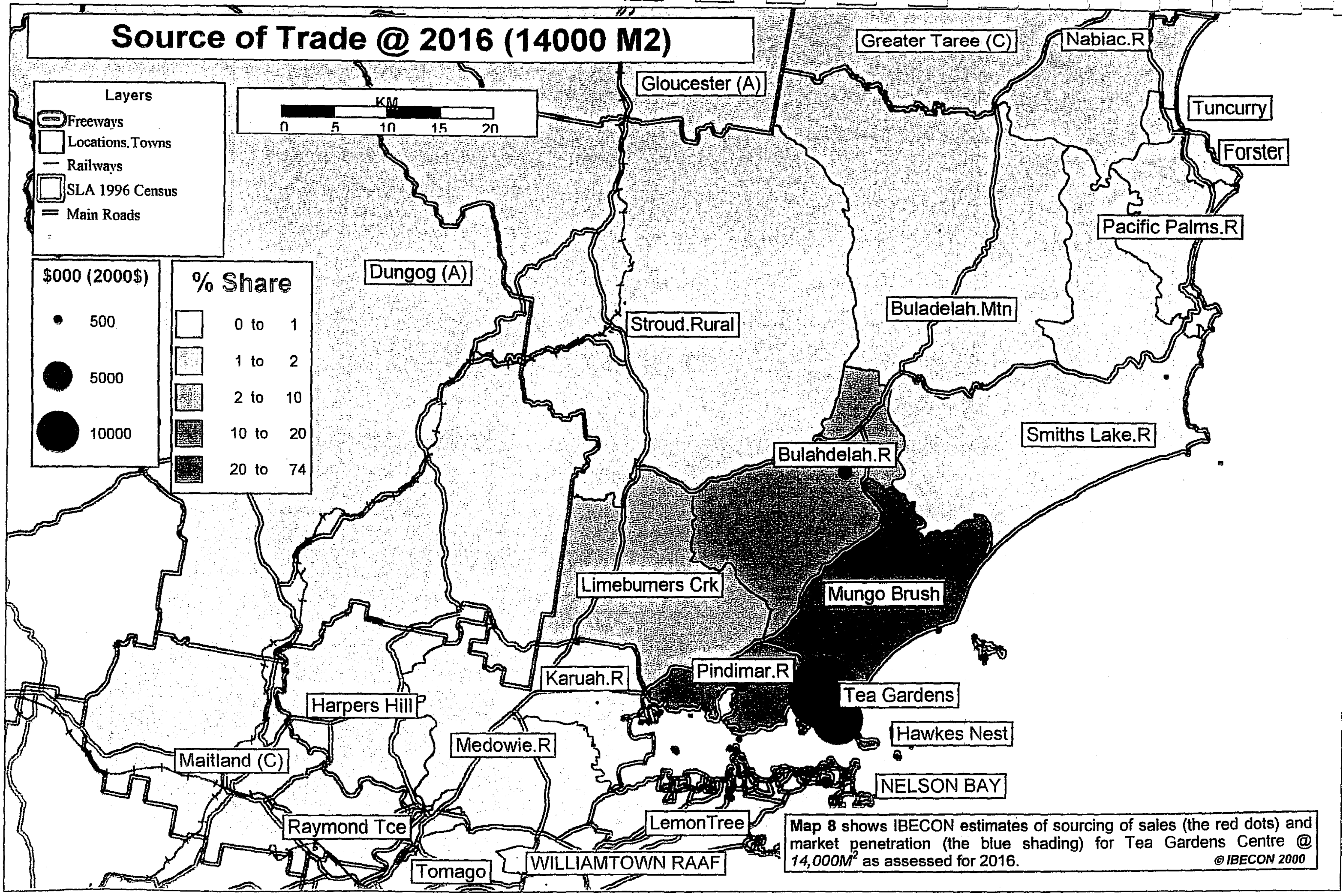
This shows that overall market penetration increases in all parts of the Region except in Hawkes Nest/Tea Gardens.

.43 *Market Penetration Maps*

The following two maps show IBECON estimates of source of trade and market penetration for the proposed 4,500M^2 Centre in the year 2006 (Map 7) and estimates of source of trade and market share if the centre were expanded to 14,000M^2 in the year 2016 (Map 8).



Map 7 shows IBECON estimates of sourcing of sales (the red dots) and market penetration (the blue shading) for Tea Gardens Centre *as proposed @ 4,500M²* in 2006. The heavy dependence on Tea Gardens & Hawks Nest plus the spread of source of trade from surrounding areas is apparent. *© IBECON 2000*



Map 8 shows IBECON estimates of sourcing of sales (the red dots) and market penetration (the blue shading) for Tea Gardens Centre @ *14,000M²* as assessed for 2016.

.50 *Calculation of Escape/Captured Spending for Tea Gardens District*

The modeling calculates flows of retail trade sourced from every area in the region to all possible destinations, i.e. shops in areas in the various catchments, fringe areas and to external locations. Tables for the Hawkes Nest/Tea Gardens District show a summation of these flows comprising 4 major components of "RETAINED", "ESCAPE", "CAPTURED" and "OUTSIDE" as follows.

Sales $ Sourced	Source of sales $ — ◆◆◆◆ →→→→ Total Spending		Allocated to ↘ — ↘↘↘↘ District		↘↘↘↘ Other Area
From District + ↓	"TOTAL FROM DISTRICT" Total of all retail $ available from all Residents, Workers and Tourists in District.	=	"RETAINED" Sourced from District and spent in District	+	"ESCAPE" Sourced from Shire but spent outside District.
From Other Areas = ↓	"TOTAL FROM OUTSIDE" All retail $ available all residents, workers etc, from Fringe Areas of Region	=	"CAPTURED" Sourced from other areas but spent in District.	+	"OUTSIDE" Sourced and Spent outside District.
Region Total $	Region Total = Σ SOURCED FROM DISTRICT + FRINGE	=	Total Sales in All shops in District.	+	Total $ Not Spent in Shops in the District.

This information is presented in tables in this report as follows:-

Source	**Total Spending**	*Allocated to (+% of Total)* District(a)	*Other Area(b)*
District	"TOTAL FROM DISTRICT"	"RETAINED"	"ESCAPE"
Other Areas	"TOTAL FROM OUTSIDE"	"CAPTURED"	"OUTSIDE"
Region Total	Σ of above	Σ of above	Σ of above

Tables summarising these net flows for each of the four scenarios for the defined Hawkes Nest/Tea Gardens District, for total retail sales, are provided in the following tables. The detailed data from which these tables are derived are provided as part of the bound volume of computer printouts. More detailed tables showing full origin/destination tables are available.

.51 *Escape/Captured Spending from Hawkes Nest/Tea Gardens District*

Table 2.3 following shows estimated **escape/captured spending** from the Hawkes Nest/Tea Gardens District, in 2002 assuming the proposed Tea Gardens Centre is not developed. (For origin/destination tables for all retail sales see Appendix A013)

Table 2.3 Escape & Captured Homewares Spending 2002 Tea Garden District ($m)
"AS IS"

	Total	*Allocated to (% of Total)*	
Source	Spending	*District*	*Other Area*
District	39.1	12.5 (32%)	26.6 (68%)
Other Areas	2804.2	2.2 (-)	2802.0 (100%)
Region Total	2843.4	14.7 (0.5%)	2828.7 (99.5%)

In 2002, it is estimated that without the proposed Tea Gardens Centre, $12.5m (or only 32%) of the total of $39.1m retail spending available from the Tea Garden Sub-Region would be retained within the Sub-Region. The balance of $2.2m captured from outside this Shire is vastly less than the $26.6m currently escaping from the District to locations such as Raymond Terrace and Newcastle. Net escape spending is $24.4m (=39.1-14.7), equivalent to 62% of total spending generated from within the District.

.52 *Effect of Tea Gardens Proposed Centre in 2003*

Table 2.4 following shows estimated **escape/captured spending** from the Hawkes Nest/Tea Garden District in 2003 after the proposed Tea Gardens Centre (R2Y1 assumptions) commenced trading from 3,000 M^2.

Table 2.4 Escape & Captured Spending 2003 (2000$)

	Total	*Allocated to (% of Total)*	
Source	Spending	*District*	*Other Area*
District	40.7	22.2 (55%)	18.5 (45.0%)
Other Areas	2871.9	2.5 (-)	2369.4 (100.0%)
Region Total	2912.6	24.7 (0.8%)	2887.9 (99.2%)

With the Tea Gardens Centre in 2003, local retention would increase to $22.2m, 55% of locally generated spending. Captured trade would increase marginally so that net escape spending is estimated to decline to $16.0m (= 40.7-24.7) equivalent to 39% of locally generated spending.

.53 *Escape/Captured Spending from the Great Lakes Shire*

Table 2.5 following shows estimated **escape/captured spending** from the defined Great Lakes Shire, in 2002 assuming Tea Gardens Centre is not trading.

Table 2.5 Escape & Captured Spending 2002 ($m)
"AS IS"

Source	Total Spending	*Allocated to (% of Total)* *Shire*	*Other Area*
Shire	310	210 (67.7%)	100 (32.0%)
Other Areas	2533	11 (0.5%)	2522 (99.5%)
Region Total	2843	221 (6.7%)	2622 (92.3%)

In 2002, it is estimated that without the proposed Tea Gardens Centre, $210m (or 68%) of the total of $310m retail spending available from the Shire is retained within the Shire. The balance of $11m captured from outside the Shire is less than the $100m currently escaping. Net escape spending is thus $89m, equivalent to 29% of total spending generated from within the Shire.

.54 *Effect of Tea Gardens Centre in 2003*

Table 2.6 following shows estimated **escape/captured spending** from the Great Lakes LGA in 2003 after the proposed expansion of Tea Gardens Centre (R2Y2 assumptions). (Option A = 3,000M^2).

Table 2.6 Escape & Captured Spending 2003 (2000$)

Source	Total Spending	*Allocated to (% of Total)* *Shire*	*Other Area*
Shire	320	226 (70.6%)	94 (29.4%)
Other Areas	2592	11 (0.5%)	2581 (99.5%)
Region Total	2913	237 (8.1%)	2676 (91.9%)

With the expanded Tea Gardens Centre in 2003, local retention would increase to $226m, 71% of locally generated spending. Captured trade would increase marginally so that net escape spending is estimated to increase to $83m (26% of locally generated spending).

.60 *Sales Levels in All Shops*

The following Table 2.7, IBECON estimates of sales in 2000 and 2002, for all suburbs/locations in Great Lakes and Port Stephens. In these tables columns headed $/M^2 NSA are $ Sales per M^2 Net Selling Area, +/-% columns are % change before and after proposed expansion in 2002 and $000 +/- are differences between $000 total sales levels before and after additions elsewhere begin by 2002.

Table 2.7 Estimates of Sales in Outlets in Great Lakes Shire in 2000 -2002

LOCATION	$000	$000	%	$/M²NSA	$/M²NSA	%	$000
	(a) 2000	(b) 2002	CHANGE	(a) 2000	(b) 2002	CHANGE	CHANGE
HAWKES.TEAGDNS							
Hawkes Nest	5754	5895	2.5	3951	4048	2.5	141
Tea Gardens	8201	8781	7.1	4309	4614	7.1	580
Pindamar.Rrl	0	0	0.0	0	0	0.0	0
Mungo Brush	0	0	0.0	0	0	0.0	0
HAWKES.TEAGDNS	13955	14676	5.2	4154	4369	5.2	721
LAKES STH							
Bulahdelah.Rrl	5097	5034	-1.2	3982	3932	-1.3	-63
Stroud.Rrl	2108	2074	-1.6	3896	3833	-1.6	-34
Limeburners Ck	417	445	6.7	2780	2966	6.7	28
LAKES STH	7622	7553	-0.9	3867	3832	-0.9	-69
G.HN+NEARBY	21577	22229	3.0	4048	4170	3.0	652
LAKES NORTH	187367	198517	6.0	4573	4845	6.0	11150
GREAT LAKES LGA	208944	220746	5.6	4512	4767	5.6	11802
PORT STEPHENS LGA	326000	338864	3.9	5286	5258	-0.5	12864
Total Main Catchment	534944	559610	4.6	4954	5053	2.0	24666

(a) Before Additions (b) After Region Additions

Some retail trade would be redistributed reflecting the assumed additions. Overall trading rates ($/M^2 NSA) would increase slightly within the Main Catchment, reflecting the population and real spending growth and additional competition in fringe areas.

.61 *Medium Term Trading Levels in all Shops*

The following Table 2.8 shows trading levels in all shops trading in 2003 & 2006. It shows estimated sales of all shops in each suburb location which would prevail firstly in 2003 and then in 2006 with no other changes to retail floorspace or transport systems, other than as listed in this report.

Table 2.8 Estimates of Sales in all Shops in 2003 & 2006

LOCATION	$000	$000	%	$/M²NSA	$/M²NSA	%	$000
	2003	2006	CHANGE	2003	2006	CHANGE	CHANGE
HAWKES.TEAGDNS							
Hawkes Nest	6081	6646	9.3	4176	4564	9.3	565
Tea Gardens	9191	10502	14.3	4829	5518	14.3	1311
Pindamar.Rrl	0	0	0.0	0	0	0	0
Mungo Brush	0	0	0.0	0	0	0	0
HAWKES.TEAGDNS	15272	17148	12.3	4546	5105	12.3	1876
LAKES STH							
Bulahdelah.Rrl	5092	5248	3.1	3978	4100	3.1	156
Stroud.Rrl	2097	2156	2.8	3876	3985	2.8	59
Limeburners Ck	456	490	7.5	3040	3266	7.4	34
LAKES STH	7645	7894	3.3	3878	4005	3.3	249
TG.HN+NEARBY	22917	25042	9.3	4299	4698	9.3	2125
LAKES NORTH	204920	225899	10.2	5001	5513	10.2	20979
GREAT LAKES LGA	227837	250941	10.1	4920	5420	10.1	23104
PORT STEPHENS L	349844	373905	6.9	5429	5802	6.9	24061
Total Main Catchment	577681	624846	8.2	5216	5642	8.2	47165

If there were no further additions to shop floorspace, trading levels would increase from the 2000 \$4,954/M^2 NSA to \$5,216/M^2 NSA in 2003 and then to \$5,642/M^2 NSA by 2006. This shows that even with the assumed additions of retail floorspace, there is still scope for significant expansions to other shopping centres throughout the Region.

3.00 BACKGROUND DATA & TRENDS

This chapter provides detailed data and information about the major factors influencing the availability of retail dollars and the types of retail demands made by residents, workers and tourists. A number of transport issues plus other issues are also addressed.

.10 *Population & Characteristics*

Several sets of population forecasts are available for Tea Gardens and Great Lake Shire. These include:

- The DUAP forecasts last updated in 1994 but now subject to review as a result of the 1996 Census and more recently published ABS data.
- The population projections included in the draft *"Tea Gardens/Hawkes Nest S94 Contributions Plan"*, prepared by Great Lakes Council in February 1998.
- Forecasts for global NSW, Metropolitan & Non-Metropolitan areas by the Australian Bureau of Statistics in catalogue # 3222.0 entitled *"Population Projections 1997-2051"*.
- Population projections included in the *"Tea Gardens/Hawkes Nest Conservation and Development Strategy"*, prepared by Great Lakes Council (not yet published but being submitted to July Council Meeting).
- Annual Buildings approvals data supplied by Great Lakes Council for years 1992/3 through 1999/2000 for various Regions throughout Great Lakes.

Each of these sources provides a range of possible future demographic projections. As part of this study IBECON reviewed all of these projections both for Great Lakes and adjoining LGA's and for specific towns and locations within Great Lakes. The resulting projections for towns and locations within Great Lakes have been used in this study.

The following projections present a summary of the results of this analysis and forecasts. Data is presented first for the total of Great Lakes LGA, DUAP projections and share of total state for Sydney and Great Lakes total population are also shown in this table.

Table 3.1 Population Data & Projections for the Region

LGA/SSD	1976	1981	1986	1991	1996	1999	2001	2006	2011	2016
SOURCE	CENSUS	CENSUS	CENSUS	CENSUS	CENSUS	ABS	IBECON	IBECON	IBECON	IBECON
IBECON PROJECTIONS										
NSW (000)	4836	5211	5539	5899	6204	6412	6540	6858	7147	7475
SYDNEY (000)	3020	3256	3473	3673	3879	4041	4086	4262	4420	4570
BAL NSW (000)	1816	1955	2066	2226	2325	2371	2454	2596	2727	2905
DUAP PROJECTIONS - GREAT LAKES LGA										
Low				25.5	30.1	(32.8) (a)	34.6	38.9	42.9	46.7
Med							35.0	39.7	44.4	49.2
High							35.4	40.6	45.9	51.4
ABS	12.8	17.1	20.2	25.5	28.7	30.6				
Inc Average Annual		340	620	1010	640	630				
As % of NSW										
SYD TOTAL	62.4	62.5	62.7	62.3	62.5	63.0	62.5	62.1	61.8	61.1
BAL OF NSW	37.6	37.5	37.3	37.7	37.5	37.0	37.5	37.9	38.2	38.9
Great Lakes (med) (b)	0.26	0.33	0.36	0.43	0.46	0.48	0.54	0.58	0.62	0.66
Great Lakes as % of Non-Syd	0.70	0.87	0.98	1.14	1.23	1.29	1.43	1.53	1.63	1.69

This table shows that the population of Great Lakes Shire has increased from 12,800 in 1976 to 30,600 by 1999. Over this period Great Lakes Shire as a proportion of the total NSW has increased from 0.26% to 0.48%. Over the period between the 1976 and 1996 Censes, Great Lake's total population increased by an average of 800 persons per annum. In 1996-1999 this decreased to 635 persons per annum. To some extent this apparent slowing in areas outside Sydney reflects the abnormal growth which has occurred recently in Sydney's population. It is anticipated that after the Olympics, growth rates will revert to a more normal pattern and the historical trends of strong growth in coastal NSW will resume.

The following Table 3.2 shows updated Council Population Projections based on their Linear Dwelling Approvals method for Tuncurry, Forster, Tea Gardens and Hawkes Nest. Also shown on this table is the IBECON projection of Total Population based on the DUAP projection, corrected for 1996 Census Data and the aberrations caused by the Sydney Olympics. The balance of the Shire comprises areas such as Buladelah, Stroud and other coastal regions such as Seal Rocks, Smith Lake, Pacific Palms etc.

Recent Dwelling Approvals data for Hawkes Nest + Tea Gardens has been running at a rate between 120 and 134 dwellings per annum, compared with a rate of 60-77 dwellings per annum in the previous seven or eight years. While not all dwelling approvals result in an increase in the housing stock, as some replace existing dwellings and some do not proceed to completion, this nevertheless would suggest that the projections prepared by Council on their Linear Method are conservative. Current construction rates in existing development areas also support the view that these projections are conservative. Council's projections indicate that there is scope for dwellings to house approximately 140-150 persons per annum over future years. It is our view that this rate could be substantially higher at about 250 persons per annum. This additional growth is shown at the bottom of the table as additional Tea Gardens population. While to remain ultra conservative most of the IBECON retail requirements modelling has been based on Council's conservative projections we have also conducted sensitivity tests using these higher, more likely, population growth rates to assess their likely effect.

Table 3.2 Population Projections for Great Lakes LGA

Table 3.2.1 Council Projections for Tea Gardens/Hawks Nest based on Compound Growth Rates

	1996	1999	2001	2006	2011	2016
Tea Gardens (%)	996	na	1365	1869	2561	3509
Hawkes Nest (%)	1065		1278	1534	1840	2208
S/T TG/HN	2061		2643	3403	4401	5717

Table 3.2.2 Council Projections for Tea Gardens/Hawks Nest based on Linear DAs

Tea Gardens (D)	996	na	1579	2163	2746	3329
Hawks Nest (D)	1065		1232	1398	1565	1732
S/T TG/HN	2061		2811	3561	4311	5061

Table 3.2.3 Total Population Projections for Great Lakes LGA

Tuncurry (%)	5500	na	6325	7274	8365	9620
Forster (%)	10906		12542	14423	16586	19074
Tea Gardens (D)	996	na	1579	2163	2746	3328
Hawks Nest (D)	1065	na	1232	1398	1566	1732
Balance of Shire	10233		10322	11742	12738	13245
Great Lakes (a)	28700	30600	32000	37000	42000	47000
Average # pa	+640	+630	+700	+1000	+1000	+1000

(%) Council Projections based on Compound Growth Rates.
(D) Council Projections based on Linear DAs

Table 3.2.4 DUAP Medium Growth Projections (adjusted for 1996 Census & Olympics by IBECON)

Great Lakes	28700	30600	32000	37000	42000	47000
Average # pa	640	630	700	1000	1000	1000

Table 3.2.5 IBECON (most likely) projections for Tea Gardens/Hawks Nest)

Tea Gardens	996	na	2078	3163	4246	5328
Hawkes Nest	1065	na	1232	1398	1566	1732
S/T TG/HN	2061	na	3310	4561	5812	7060
Average # pa			+250	+250	+250	+250

The IBECON base projections (= DUAP medium) assume a rate averaging 1,000 persons per annum total increase over the period to 2016. On this basis Great Lakes as a percentage of New South Wales would increase to 0.59% of the NSW total by 2011. These projections are broadly consistent with DUAP and council projections but have been modified to reflect the 1996 Census and more recent population data. The line showing "Additional Tea Gardens Population" represent additional residents based on a higher take up rate of residential development within Tea Gardens. These projections represent IBECON's "most likely" population projections. A number of factors have contributed to the relatively slow development of residential land in the Tea Garden/Hawkes Nest area over the past 5-10 years. The major factor has been the absence of available zoned land in this area compared with alternatives available elsewhere. Recent changes to zoning has substantially increased available land and the development of the Expressway North of Hexham have increased demand by potential new residents. The addition of a new supermarket will enhance the appeal of the Tea Gardens location as will development of the new Health and Medical Centre soon to be established, and hence will contribute to this higher population growth rate.

.11 *Detailed Population Projections For Tea Gardens Region*

The following Table 3.3 shows detailed population projections for each of the locations identified in Great Lakes sub-totalled to urban and rural components together with totals for nearby local government areas and fringe local government areas. These projections do not include the "Additional Tea Gardens Population" shown in Table 3 above. The column headed "Relative Birth" (in Appendix A002) is a relative birth rate calculated by the IBECON population model. This relative birth rate is calculated by comparing the actual number of births in each area in 1996 with the expected number of births derived by applying Australian age/specific birth rates to the populations living in those areas in 1996.

Table 3.3 Conservative Population Totals for Region of Tea Gardens Retail Study

	CENSUS	CENSUS	POPULATION PROJECTIONS						
LGA/POSTCODE	1991	1996	1999	2000	2001	2006	2011	2016	2021
HAWKES.TEAGDNS									
Hawkes Nest (a)	1282	1203	1235	1247	1260	1426	1588	1743	1874
Tea Gardens (a)	**701**	**1020**	**1378**	**1498**	**1619**	**2205**	**2785**	**3356**	**3885**
Pindamar.Rrl	499	510	514	518	522	529	537	544	574
Mungo Brush	36	112	112	115	114	122	132	141	163
HAWKES.TEAGDNS	**2518**	**2845**	**3239**	**3378**	**3515**	**4282**	**5042**	**5784**	**6496**
LAKES STH									
Bulahdelah.Rrl	1351	1380	1398	1406	1414	1456	1501	1542	1597
Stroud.Rrl	1697	1571	1563	1550	1537	1527	1522	1512	1511
Limeburners Ck	562	686	720	744	768	815	862	907	951
LAKES STH	**3610**	**3637**	**3681**	**3700**	**3719**	**3798**	**3885**	**3961**	**4059**
TG.HN+NEARBY	**6128**	**6482**	**6920**	**7078**	**7234**	**8080**	**8927**	**9745**	**10555**
LAKES NORTH									
Nabiac.R	1301	1383	1450	1467	1485	1578	1674	1764	1836
Bulahdelah.Mtn	919	1002	1029	1036	1045	1140	1238	1330	1431
Smiths Lake.R	1446	1815	1955	2003	2050	2291	2536	2771	2991
Tuncurry	5177	5637	6127	6303	6479	7408	8486	9695	10656
Forster	10311	11178	11822	12108	12395	14688	16825	18891	20648
Pacific Palms	1075	1287	1338	1359	1383	1884	2384	2872	3318
LAKES NORTH	**20229**	**22302**	**23721**	**24276**	**24837**	**28989**	**33143**	**37323**	**40880**
GREAT LAKES LGA	**26357**	**28784**	**30641**	**31354**	**32071**	**37069**	**42070**	**47068**	**51435**
PORT STEPHENS LGA									
Pt Stephens W	2022	1797	1859	1892	1926	1967	1998	2052	2109
Lemon Tree Psg	12298	16364	18386	19180	19974	23502	27170	30530	33699
Williamstown	693	546	553	555	558	554	549	552	559
Nelson Bay	7914	8602	9058	9239	9421	10067	10658	11369	11952
Harpers Hill	2630	3283	3516	3633	3751	4236	4695	5205	5692
Raymond Trce	11429	12640	12961	13223	13485	14424	15283	16316	17295
Tomago	964	839	829	835	842	842	839	846	865
Medowie.R	5111	6671	7234	7470	7706	8675	9590	10410	11217
Karuah	1139	1265	1306	1337	1369	1463	1548	1652	1745
PORT STEPHENS LGA	**44200**	**52007**	**55702**	**57364**	**59032**	**65730**	**72330**	**78932**	**85133**
MAIN Catchment (b)	**70557**	**80791**	**86343**	**88718**	**91103**	**102799**	**114400**	**126000**	**136568**
REGION TOTAL	**302996**	**321014**	**332546**	**338759**	**344985**	**366999**	**386297**	**406259**	**424846**

(continued next page)

IBECON (more likely) projections including an additional 100 persons per annum for Tea Gardens, assuming land is available.

	1991	1996	1999	2000	2001	2006	2011	2016	2021
Hawkes Nest (a)	1282	1203	1235	1247	1260	1426	1588	1743	1874
Tea Gardens (a)	**701**	**1020**	**1378**	**1500**	**2100**	**3200**	**4300**	**5350**	**6400**
Pindamar.Rrl	499	510	514	518	522	529	537	544	574
Mungo Brush	36	112	112	115	114	122	132	141	163
TOTAL	**2518**	**2845**	**3239**	**3371**	**3996**	**5277**	**6557**	**7778**	**9011**

(a) Council Projections (b) Great Lakes + Port Stephens LGAs

The next Table 3.4 shows the average population growth per annum for each of these locations and LGA's.

Table 3.4 Population Growth Rates For Region of Tea Gardens Retail Study

LGA/POSTCODE	1991-1996	1996-1998	1998-1999	1999-2000	2000-2001	2001-2006	2006-2011	2011-2016	2016-2021
HAWKES.TEAGDNS									
Hawkes Nest	-15	10	11	12	13	33	32	31	26
Tea Gardens (a)	63	119	120	120	121	117	116	114	105
Pindamar.Rrl	2	0	3	4	4	1	1	1	6
Mungo Brush	15	0	1	3	-1	1	2	1	4
HAWKES.TEAGDNS	**65**	**129**	**135**	**139**	**137**	**152**	**151**	**147**	**141**
LAKES STH									
Bulahdelah.Rrl	5	6	5	8	8	8	9	8	11
Stroud.Rrl	-25	-2	-4	-13	-13	-2	-1	-2	0
Limeburners Ck	24	11	11	24	24	9	9	9	8
LAKES STH	**4**	**15**	**12**	**19**	**19**	**15**	**17**	**15**	**19**
TG.HN+NEARBY	**69**	**144**	**147**	**158**	**156**	**167**	**168**	**162**	**160**
LAKES NORTH									
Nabiac.R	16	22	23	17	18	18	19	18	14
Bulahdelah.Mtn	16	9	9	7	9	19	19	18	20
Smiths Lake.R	73	47	46	48	47	48	49	47	44
Tuncurry	92	163	164	176	176	185	215	241	192
Forster	173	214	216	286	287	458	427	413	351
Pacific Palms	42	16	18	21	24	100	100	97	89
LAKES NORTH	**412**	**471**	**476**	**555**	**561**	**828**	**829**	**834**	**710**
GREAT LAKES LGA	**481**	**615**	**623**	**713**	**717**	**995**	**997**	**996**	**870**
PORT STEPHENS LGA									
Pt Stephens W	-45	20	22	33	34	8	6	10	11
Lemon Tree Psg	813	674	674	794	794	705	733	672	633
Williamstown	-29	1	4	2	3	0	-1	0	1
Nelson Bay	137	152	152	181	182	129	118	142	116
Harpers Hill	130	77	79	117	118	97	91	102	97
Raymond Trce	242	107	107	262	262	187	171	206	195
Tomago	-25	-3	-4	6	7	0	0	1	3
Medowie.R	312	187	189	236	236	193	183	164	161
Karuah	25	13	15	31	32	18	17	20	18
PORT STEPHENS L	**1560**	**1228**	**1238**	**1662**	**1668**	**1337**	**1318**	**1317**	**1235**
MAIN Catchment	**2041**	**1843**	**1861**	**2375**	**2385**	**2332**	**2315**	**2313**	**2105**
REGION TOTAL	**3603**	**3702**	**4128**	**6213**	**6226**	**4402**	**3859**	**3992**	**3717**

(a) Council Projections

These projections show that the bulk of the growth in Great Lakes LGA is forecast to be in the growth areas and that the majority of the growth will be concentrated in Tuncurry/Forster and Hawkes Nest/Tea Gardens. Some growth will also occur in the Pacific Palms and Smiths Lake Districts.

.20 *Jobs/workforce*

Separate estimates are prepared in the modelling for workers spending at or near their workplace. Estimates of numbers of jobs by location within Great Lakes have been prepared based on the 1991 and 1996 Census occupation by industry data together with IBECON observations of locations of employment activities and utilises data that is available from the ABS Integrated Register. The distribution of jobs by location by industry type is provided as part of Appendix A (A014). Table "AVSP.1" @ Appendix A038 which summarises total spending by residents, workers and tourists shows the IBECON estimate that in 2000 of the $291.7m in total retail spending generated from within Great Lakes Shire, a relatively low $19.1m or just over 6.5% is generated from people shopping at or near their workplace.

.30 *Tourism*

Another important component of general retail spending in the region is tourism spending. Several estimates of tourism spending are produced by ABS and the Department of Tourism. The ABS data in *"Regional Statistics"* and *"Tourism Data"* understates retail spending as it only deals with accommodation takings. The Department of Tourism estimates cover all spending not just retail components and also include a visiting friends and relative component, which in my view is generally overstated.

Appendix A014 provides a listing of the IBECON estimates of numbers of tourists bed-nights of stay by type of accommodation for each area in the region. As with jobs, Appendix A038 shows total retail spending by overnight tourists to be estimated at $103.3m for Great Lakes LGA in 2000 equivalent to 35% of all retail spending generated from the LGA. This is somewhat less than the estimate by Department of Tourism. The main reason for the difference is that the IBECON estimate includes only items which are strictly defined as retail and excludes items such as accommodation, car hire, entertainment, drinking in bars & clubs etc.

Table 3.5 shows estimates of total number of bed nights of stay in tourist accommodation in Great Lakes LGA from 1994/95 to 1999/2000.

Table 3.5 Estimate of Number of Bed Nights of Stay in Great Lakes LGA

YEAR	#000	% Increase
94/95 (a)	1782	
95/96 (a)	1873	+5.1%
96/97 (a)	1956	+4.4%
1999/2000 (b)	2200	+12.5%

Source: (a) Tourism NSW - Great Lakes Community Profile (b) IBECON estimates

This aggregate has been distributed to each location in the Region using the IBECON database of accommodation/motels, hotels etc.

.40 *Transport & Other Issues*

Several major factors influence the retail industry. In many coastal locations these factors can include the through traffic on the highway and in the coastal areas the influence of tourism. Through traffic from the highway is unlikely to be a significant factor as likely diversions off the highway for a visit would be expected to be minimal. The influence of overnight stayers in the Shire is, however, significant. Estimates have been produced for total bed nights of stay and dollars of spending as indicated above. Day tripper tourism by contrast is likely to be negligible.

While it is difficult to precisely quantify the effects of individual components when several factors influence outcomes, the following comments represent my considered view of the relative significance of each factor and the likely translation of those factors to the situation in Tea Gardens.

.41 *Some General Factors*

Most shops in the older existing Retail Locations suffer from a number of serious design deficiencies. These include the spread out nature of strip shop locations generally. When compared with an enclosed or structured mall where the shoppers are "on the inside looking out" in strip shop locations the shoppers are forced to be "on the outside looking in".

Many of the shops are also very narrow fronted and very deep which is the opposite of the shallow wide fronted shops in structured shopping centres, which are far better from a merchandising point of view for the retailer. Access and circulation is also much better in enclosed malls.

To illustrate this latter point, IBECON has a simple test of functional design, as one of the criteria by which we rate retail centres and locations. This measure comprises firstly conducting an audit of all shops in the locations to measure how many M^2 of floor space there are. The second part of the assessment is to conduct a time trial to measure how long it takes to drive from the local road network, find a car park, park your car then walk past every single shop front in that location, including up and down arcades, aisles, malls etc and then return to your car. We then calculate the ratio of floor space to the time taken for this measure. The higher the ratio the more functional the location. Using this measure, centres such as the proposed centre score relatively highly. By contrast all shops in Hawkes Nest, and to a lesser extent Tea Gardens, score relatively lowly. While not the only factor influencing people's choice of where they shop this accessibility design issue is an important part of the choice. In conjunction with the mix and selection of retailers, this largely explains the popularity of enclosed malls when compared to old strip shop locations. Air conditioning and protection from other extreme climatic conditions also favors enclosed malls. An offsetting factor which must be allowed for in a coastal resort location is the ambiance and sometimes outside undercover eating facilities available in locations such as those restaurants along Marine Drive in Tea Gardens, which also have an outlook over the water.

All these issues have a bearing on the future of retailing in Tea Gardens/Hawkes Nest.

4.00 RETAIL SECTOR

.10 Structure & Hierarchy

As a substantial part of the data gathering for this study IBECON conducted an updating audit of most shops in Great Lakes and Port Stephens. IBECON had already conducted audits in parts of the Region in earlier retail studies. Table 4.1 shows major retail locations in the Region. This listing of retail locations is mostly from the IBECON Retail Database but includes some data as published in the ABS retail census for the fringe Local Government Areas of Dungog, Gloucestor and Greater Taree. In addition, IBECON has included the new Woolworths Marketplace in Taree in the fringe competition.

Table 4.1 Total Retail Floorspace M2 (Incl vacant)

PCD	SLA	LOCID#	LOCATION NAME	NSA	GLA	
2324	3400	32450	HAWKES NEST	1556	2044	
2324	3400	32451	TEA GARDENS	1980	2887	
2324	3400	32452	THE BIG ROCK	150	200	
2423	3400	42300	BULAHDELAH	1433	1978	
2425	3400	42501	STROUD	624	783	
2428	3400	42800	FORSTER SHOPPING VLG	10621	13974	
2428	3400	42802	TUNCURRY SC	2289	3200	
2428	3400	42803	PACIFIC PALMS	362	450	(e)
2428	3400	42804	SEAL ROCKS	88	100	(e)
2428	3400	42810	TUNCURRY/FORSTER BAL	29052	39433	(e)
	3400		**Great Lakes LGA**	**48155**	**65049**	
2301	6400	30100	SALAMANDER SC	8545	11264	
2301	6400	30101	MEDOWIE 1	434	538	
2301	6400	30102	MEDOWIE VILLAGE	708	993	
2301	6400	30103	SOLDIERS POINT 1	166	200	
2301	6400	30104	CORLETTE 1	166	200	
2301	6400	30105	SALAMANDER BAY 1	608	850	
2301	6400	30106	ANNA BAY VILLAGE	339	466	
2301	6400	30107	ANNA BAY 1	467	594	
2301	6400	30108	ANNA BAY 2	771	1153	
2301	6400	30109	SALAMANDER BAY 2	962	1204	
2301	6400	30110	KOOINDAH CENTRE	1392	1698	
2301	6400	30111	LEMON TREE PASSAGE 1	916	1198	
2301	6400	30112	TANILBA BAY 1	410	750	
2301	6400	30113	BOBS FARM 1	495	600	
2301	6400	30114	TILLEGERY PLAZA	2315	2937	
2301	6400	30116	MEDOWIE 2	150	200	
2301	6400	30117	TANILBA BAY 2	252	504	
2315	6400	31500	CINEMA MALL	947	1333	
2315	6400	31501	CASCADE WALK	757	869	
2315	6400	31502	NELSON BAY MARINA	1056	1319	
2315	6400	31503	SHOAL BAY 1	113	150	
2315	6400	31504	SHOAL BAY ARCADE	352	419	

PCD	SLA	LOCID#	LOCATION NAME	NSA	GLA	
2315	6400	31505	BAY VILLAGE	712	986	
2315	6400	31506	SHOAL BAY 2	590	707	
2315	6400	31507	FINGAL BAY 1	293	424	
2315	6400	31508	NELSON BAY 1	1011	1537	
2315	6400	31509	NELSON BAY 2	2758	3878	
2315	6400	31510	NELSON BAY 3	1686	2258	
2315	6400	31511	NELSON TOWERS	729	968	
2315	6400	31512	GARDEN COURT	298	409	
2315	6400	31513	NELSON BAY 4	1004	1254	
2315	6400	31514	NELSON PLAZA	274	314	
2315	6400	31515	NELSON BAY 5	1832	2239	
2315	6400	31516	NELSON BAY 6	931	1350	
2324	6400	32400	RAYMOND TERRACE 1	426	768	
2324	6400	32401	GAZEBO SC	492	595	
2324	6400	32402	TERRACE PLAZA	4856	6419	
2324	6400	32403	TERRACE VILLAGE	2071	2686	
2324	6400	32404	RAYMOND TERRACE 2	1509	1923	
2324	6400	32405	THE HUB	481	830	
2324	6400	32406	TERRACE CENTRE	343	410	
2324	6400	32407	BOBS PLAZA	314	385	
2324	6400	32408	RAYMOND TERRACE 3	611	889	
2324	6400	32409	RAYMOND TERRACE 4	4097	5782	
2324	6400	32410	HOME IMPROVEMENT CTR	689	1119	
2324	6400	32411	RAYMOND TERRACE STH	179	291	
2324	6400	32412	LAKESIDE SC	1034	1475	
2324	6400	32413	RAYMOND TERRACE 6	183	366	
2324	6400	32414	HEATHERBRAE 1	1379	2391	
2324	6400	32417	KARUAH 1	2240	3063	
2324	6400	32418	RT Marketplace	10565	13744	
	6400		**Port Stephens LGA**	**65908**	**88899**	
			Main Catchment	**114063**	**153948**	
	2700		Dungog	5019	6900	(a)
	3050		Gloucester	6257	8500	(a)
	3350		Greater Taree	61708	83668	(c) (a)
	5050		Maitland LGA	94994	135775	
	5902		Newcastle Rmndr	169583	8500	
			Region Total	**451624**	**619738**	

(a) = ABS Retail 1992 Census (e) = Partly Estimated (c) Excludes Woolworths Marketplace

Map 2, following page v (in Executive Summary) shows the locations and size of the retail industry measured by M^2 GLA at 2000, compared with existing urban areas and growth areas.

.20 *Historical Sales Data*

The following Table 4.2 compares data for 1992 derived from ABS with an estimate of likely total sales in 2000 prepared by IBECON. For 1992 the table shows total population, total M^2 retail & total $m sales. For 2000 IBECON has updated the population total based on estimated resident population published by ABS to 1999. In addition to this population % growth a total retail spend per capita increase of 30% over the period from 1992 to 2000 is then added based on the monthly retail sales data published by ABS (see Appendix N). This produces an indicative estimate for 2000 of total retail sales. These total retail sales have been used as a broad target for the calibration of the retail model. In addition IBECON has other sales data supplied on a confidential basis for some specific traders and shopping centres within the region to aid in this calibration.

Table 4.2 Actual Retail Sales Target, Great Lakes & Port Stephens LGA's

	1992 (c)		2000 (b)		
	Pop	$m	Pop	$m (% Incr)	(c) +30%
GREAT LAKES	26100	137.4	31300		
'000M^2 GLA	*58*			(+19.9)	
PORT STEPHENS	46500	198.3	57700		
'000M^2 GLA	*68*			(+24.1)	
TOTAL	**72600**	**335.7**	**89000**	**411**	**535**
'000M^2 GLA	*128*			(+22.5)	

Source c = ABS Retail Census

(a) Growth in Spending pc (b) IBECON (c) 1992-2000 (ABS, IBECON)

Thus from 1992 to 2000 the apparent increase in floorspace is 20% with retail sales rising by 59% (in current $ terms) to $535m.

.30 *Assumed Proposed Developments*

A number of proposed developments have been assessed as part of this study. While the status and/or timing of some of these projects is unclear, allowance has been made for them in the modelling in the years shown in the following table. Table 4.3 following lists some assumed retail developments by location. Developments proposed for Tea Gardens Centre are the reason for this study and are not included in this list.

Table 4.3 Assumed Retail Developments in the Region

PCD	SLA	LOCID	YEAR	LOCATION NAME	NSA	GLA
2289	5902	28910	2000	KOTARA HOMEMAKER	17250	23000
2289	5902	28911	2000	KOTARA	7500	10000
2324	6400	32402	2001	TERRACE PLAZA	564	720
2292	5902	29202	2001	BROADMEADOW	2625	3500
2301	6400	30119	2001	SALAMANDER BAY	2208	3001
2304	5902	30402	2001	WARABROOK	2138	3000
2323	5050	32301	2002	GREENHILLS SC PHASE1	10958	15041
2323	5050	32305	2006	GREENHILLS SC PHASE2	16030	21373
				Region Totals	**59272**	**79635**

The years of opening shown in this table are preliminary only and subject to review. Most of the proposed developments are in fringe areas and will slightly increase escape spending from Great Lakes LGA.

5.00 RETAIL SPENDING & REQUIREMENTS

In the following tables, abbreviated columns & row headings have the following meaning. A detailed description of the contents of each category is provided in Appendix J.

Heading	=	Brief Description
Super Dry	=	Super Market Dry Goods
Meat+Fish	=	Fresh Meat + Fish
Fruit+Veg	=	Fresh Fruit + Veg
Meals Out	=	Restaurants, Takeaway, Sandwiches, Coffee shops etc
Alcohol+T	=	Bottled Alcohol + Tobacco
Cloth+Sho	=	Clothing + Shoes
Furniture	=	Furniture + Floor Coverings, Whitegoods, Blinds etc
Hardware	=	Hardware + Kitchenware, Computers, Small Electrical
Miscellaneous	=	Chemists + Newsagents, Hairdressers etc, all other nei

.10 Definition of Broad Commodity Groups

In some of the tables that follow showing a summary of data in some summary commodity groups the items in the table have been defined as shown in the following table:

Table 5.1 Composition of Commodity Groups

Group	Comprises	%
Supermarket	Super Dry	100
	Meat and Fish	100
	Fruit and Veg	100
Meals and Alcohol	Meals Out	100
	Alcohol and Tobacco	100
Bulk Retail	Furniture	100
	Hardware & Kitchenware	100
	Miscellaneous	15
All Other	Clothes and Shoes	100
	Miscellaneous	85

.20 Composition of Retail Spending

Detailed data from the 1992 Retail Census shows data for number of shops by type, their total sales and employment. Unfortunately ABS confidentiality requirements restricts the publication of quite a number of the types of shops data. For modelling purposes IBECON uses commodity categories rather than shop type categories. Thus, for example, supermarket sales are separated into dry goods, fresh fruit & vegetables, meat & fish etc.

Similarly floorspace requirements and existing floorspace as part of the field audit are also disaggregated into commodity components rather than aggregates for shop types. This is done to enable a valid and proper comparison between shop types, as the throughput rate in fresh fruit & veg and meat & fish, measured on a dollars per M^2 basis, can be very much greater than dry goods supermarket floorspace, for example.

Detailed tables showing the composition of retail sales sourced from each location from within the region and total spending levels after allocation to shops by commodity type, by area, is provided in Appendix A. The following table 5.1 provides a summary breakup of total retail spending sourced from Hawkes Nest/Tea Gardens, Great Lakes and Port Stephens LGAs and all other areas for 2000.

In the tables which follow the Sub-Region of Hawkes Nest/Tea Gardens and nearby comprises the Hawkes Nest/Tea Garden District plus the Lakes South District. The addition of Lakes North District makes up Great Lakes LGA.

Table 5.2 Components of Retail $ Available 2000 ($m)

	HAWKES. TEAGDNS	LAKES STH	LAKES NORTH	GREAT LAKES	PORT STEPHENS	Main Catchment	TOTAL
Super Dry	36353	36307	219024	291684	410607	702291	2692384
Meat+Fish	8405	8720	52399	69524	109152	178676	686014
Fruit+Veg	1620	1825	10934	14379	29415	43794	181279
Meals Out	1821	1578	10845	14244	20844	35088	134972
Alcohol+T	4410	4320	23461	32191	37266	69457	256853
SubTotal Food	2764	2721	15317	20802	16233	37035	114420
Cloth+Sho	4535	3967	26067	34569	54450	89019	355492
Furniture	1670	1882	11941	15493	27519	43012	190462
Hardware	4066	4410	23937	32413	39483	71896	270225
Miscellan	7062	6884	44123	58069	76245	134314	502667

Appendix A provides greater detail for individual areas and LGA's and for future years.

.21 *Spending by Residents, Workers & Tourists*

The following Table 5.3 shows a summary of average per capita spending by residents, workers and tourists in Tea Gardens. In this table:

$/Rsdnt	= $ Spending per annum per resident
$/Wrkfc	= Average $ spending per annum per worker
$/Onite	= Average $ spending per night per tourist
#.Rsdnt	= number of residents in population
#.Wrkfc	= number of persons working in this area
#.Onite	= number of bed nights of stay in the area
$.Rsdnt	= Total $'000 spent by residents
$.Wrkfc	= Total $'000 spent by workforce
$.Onite	= Total $'000 spent by tourists
$.TOTAL	= The sum of resident, workers and tourist total spending for the year

Table 5.3 Summary of Average Per Capita Spending by Residents, Workforce & Tourists in Tea Gardens $000 2000

	HN.TG	LAKES SOUTH	LAKES NORTH	GREAT LAKES	PORT STEPHENS	REGION TOTAL
Average Spending by:						
$/Rsdnt	5275	5486	5420	5413	6574	6694
$/Wrkfc	2100	2047	2222	2170	1614	2077
$/Onite	44	44	46	46	46	44
X Number of*:						
#.Rsdnt	3356	3681	24242	31279	57311	338602
#.Wrkfc	1446	1615	5728	8789	12369	123746
#.Onite	351250	288750	1627563	2267563	298397	3769549
=Total Spending by:						
$.Rsdnt	17706	20197	131405	169308	376803	2266724
$.Wrkfc	3037	3307	12728	19072	19975	257090
$.Onite	15610	12803	74891	103304	13829	168570
$.TOTAL	36353	36307	219024	291684	410607	2692384

The following Table 5.3a shows percent of type of spending by type of person for Urban Tea Gardens and the region total. It shows that shops in Great Lakes currently have vastly greater dependance upon tourists than residents when compared with the rest of the Region.

Table 5.3a % of Total $ Spending

	GREAT LAKES LGA	REGION TOTAL
Residents	58	84
Workers	7	10
Tourists	35	6
TOTAL	100%	100%

.30 *Calculation of Over/Under supply of shops*

Detailed tables in Appendix A show how the over and under supply of shops by area and type of shop has been calculated. These tables show total dollars spending sourced from each location/suburb (A007), how much floorspace this can support (A008) and what the resulting over and under supply is (A010). Similar data for subsequent years and different scenarios is also provided in Appendix A and separately bound volumes of computer printout. The following tables provide a summary of this data for areas aggregated to sub-regions of Hawkes Nest/Tea Gardens, Great Lakes and Port Stephens etc.

.31 *Supportable and Existing M2 NSA*

The following Table 5.4 shows the optimum number of M^2 of floorspace which is supportable by spending generated from various Sub-Regions.

Table 5.4 Optimum # of Shops (M^2 NSA) in Region in 2000

	SUPERMRKT	MEALS&ALC	BULK RETL	ALL OTHER	TOTAL
HAWKES.TEAGDNS	1360	840	1406	1982	5588
LAKES STH	1383	826	1521	1853	5583
LAKES NORTH	8494	4515	8827	11995	33831
GREAT LAKES LGA	11237	6181	11754	15830	45002
PORT STEPHENS LGA	17810	6667	16134	22150	62761
Main Catchment	29071	12868	27916	37998	107853
REGION TOTAL	**113302**	**46599**	**111540**	**146879**	**418320**

Of total retail requirements generated from Great Lakes of 45,000 M^2 NSA, 11,200 M^2 NSA is for shops in the supermarket categories.

Table 5.5 shows the existing amount of M^2 NSA in shops by type of floorspace for various sub-regions within the Study Region.

Table 5.5 Existing # of Shops M^2 NSA in Tea Gardens Region 2000

	SUPERMRKT	MEALS&ALC	BULK RETL	ALL OTHER	TOTAL
HAWKES.TEAGDNS	649	836	460	1413	3358
LAKES STH	162	934	473	400	1969
LAKES NORTH	7697	4215	11930	17124	40966
GREAT LAKES	8508	5985	12863	18937	46293
PORT STEPHENS	18449	9403	10478	23329	61659
Main Catchment	26957	15388	23346	42271	107962
REGION TOTAL	**105760**	**49907**	**123830**	**159800**	**439297**

Table 5.6 following compares the difference between the optimum number M^2 of shops floorspace required and that which is existing, by category of retail and summed by major sub-region.

Table 5.6 Over(+) and Under(-) Supply of Shops (M^2 NSA) in Tea Gardens Region 2000

	SUPERMRKT	MEALS&AL	BULK RETL	ALL OTHER	TOTAL
HAWKES.TEAGDNS	-711	-7	-946	-568	-2232
LAKES STH	-1221	105	-1046	-1451	-3613
LAKES NORTH	-799	-303	3096	5127	7121
GREAT LAKES	-2731	-205	1104	3108	1276
PORT STEPHENS	619	2722	-5653	1174	-1138
Main Catchment	-2114	2518	-4569	4272	107
REGION TOTAL	**-7542**	**3306**	**12287**	**12919**	**20970**

In Great Lakes LGA in 2000 there were 8,500 M^2 NSA of shops in the Supermarket Catgory, out of a total of 46,300 M^2 NSA.

The total provision of shops in the supermarket category in Great Lakes LGA in 2000 is less than the requirements by 2,700 M^2 NSA, but Great Lakes was over supplied in non-food categories.

.40 *Sales Levels*

The next stage of the analysis is to allocate the trade or spending sourced from residents, workers and tourists in each of these areas to the shops in which they are spent. Tables @ Appendix A 012 show estimate sales levels by suburbs and commodity type. Tables A024, A025 and A026 provide summary information about the sales levels in shops as estimated by IBECON.

.50 *Escape/Captured Spending*

As part of the process of estimating trade flows the retail model estimates the source and destination of all retail dollar flows (See Appendix A013). This enables the preparation of a summary table which shows how much of the trade originating from each of the areas or locations within Hawkes Nest.Tea Gardens is retained within Hawkes Nest/Tea Gardens and how much escapes to shops outside the Sub-Region. Similarly $ flow data for the adjoining LGA's is calculated.

Detailed tables showing flows are available if required.