



Port Stephens PLANNING STRATEGY 2011







PORT STEPHENS PLANNING STRATEGY 2011-2036

Executive Summary

The Port Stephens Planning Strategy (PSPS) builds on the 2007 Community Settlement and Infrastructure Strategy by providing a comprehensive planning strategy for the Local Government Area (LGA).

The PSPS is one of a suite of high level strategic documents produced by Port Stephens Council to guide the operations of the Council, and the future growth and sustainability of the LGA. The other documents include the Port Stephens Futures Strategy and the Port Stephens Integrated Strategic Plans.

The PSPS responds to the State Government's Lower Hunter Regional Strategy (LHRS) and Lower Hunter Regional Conservation Plan (LHRCP) by providing local level detail, and by incorporating the results of more recent studies, such as the Port Stephens Commercial and Industrial Land Study (CILS) and the Rural Lands Study (RLS).

The PSPS provides a rationale for the land use planning policies to be included in the Port Stephens Principal Local Environmental Plan (LEP) and a review of the Port Stephens Development Control Plan (DCP).

Port Stephens LGA faces a range of opportunities and challenges, which include:

- An ageing of the population profile
- A declining supply of land with urban potential
- A dispersed settlement pattern
- A high dependence on motor vehicles and low public transport availability and use
- Significant impacts due to climate change and sea level rise
- Significant environmental assets (eg. the coast, the waterways, landscape and natural areas) and constraints (eg. flooding, acid sulphate soils)
- The impact of military aircraft noise
- Areas of economic growth, such as Tomago and Williamtown (DAREZ Business Park)
- The regional airport with ready access to other centres

The PSPS responds to these challenges by focusing urban growth around centres and directing urban expansion to suitable areas near existing centres and services.

The Primary Growth Corridor of the LGA stretches in the north from the recently rezoned North Raymond Terrace (Kings Hill) new release area to the regional centre of Raymond Terrace, to the emerging Enterprise Corridor of Heatherbrae and then is anchored in the south by the Tomago Industrial Precinct. There is also an Eastern Growth Corridor encompassing Medowie, Williamtown, Newcastle Airport and Fullerton Cove/Fern Bay. However, the potential for additional growth in the medium to long term in the Eastern Growth Corridor area will be re-evaluated following review of the Lower Hunter Regional Strategy and completion of the Raymond

Executive Summary

Terrace/Heatherbrae Growth Strategy. The main urban release areas are at Anna Bay, North Raymond Terrace (Kings Hill), and Medowie. In addition there is considerable "infill" as a result of the development of undeveloped zoned residential land within the existing urban area. The PSPS also seeks to ensure that other land with urban potential is not lost to inappropriate development, such as rural residential development, which has occurred in the past. Refer to the **Port Stephens Planning Strategy Map**.

The LHRS and PSPS promote Raymond Terrace as a regional centre. As such it will undergo considerable change in order to deliver a broader range of business and community services to a wide catchment. Mixed use development in the regional centre, including housing, is strongly encouraged.

Selective intensification of existing urban areas is supported by the PSPS. The development of medium density housing is encouraged within and surrounding centres where services and transport are more available.

Economic development of the LGA is supported by land use policies which are based on the findings of the CILS. The CILS found that most commercial areas could meet anticipated demand up to 2031 by either intensifying existing development, utilising underused sites in the commercial area, or by minor additions to the commercially zoned land.

CILS found that there is generally an adequate supply of industrial land to cater for future local needs and for industries meeting the needs of external markets.

Newcastle Airport, RAAF Base Williamtown and the Port of Newcastle will be major economic drivers for the LGA. It is important that infrastructure, particularly transport infrastructure, is adequate to meet the needs of these areas.

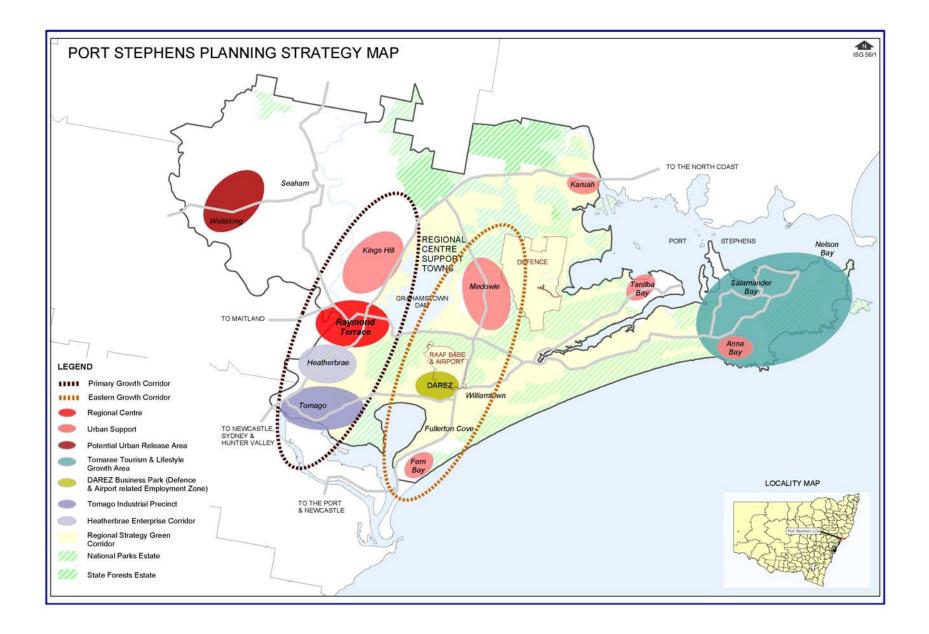
The PSPS also considers the role of tourism and local services in economic development. The appropriate development of local centres is a major factor in providing an environment to maximise the growth of these sectors.

The PSPS builds on the extensive conservation framework of the LGA, including the Green Corridor, the Port Stephens Great Lakes Marine Park, and the National Park Estate. It seeks to establish conservation priorities in order to reduce uncertainty and to provide an optimal balance between development and biodiversity.

Transport remains a big challenge for the LGA. Public transport availability is limited and its usage is very low and there is a high dependence on motor vehicles. As the population grows, and centres intensify, the viability of public transport should increase, but it will require additional measures to be able to reach sufficient high service levels to make it an attractive alternative to the car. The development of pedestrian and cycle paths is also very important because these travel modes have the potential to replace the very short trips that constitute the majority of motor vehicle movements.

Executive Summary

Finally, climate change and accompanying sea level rise presents a range of challenges to the LGA. Council has undertaken analysis to determine the likely highest risks from climate change. The impacts of climate change will be profound. While the PSPS takes climate change into account, more research will be required to determine its impacts and the measures needed to address them.



Contents

Exec	utive	Summary	. 1			
1.	Purpose					
2.	Background9					
	2.1	Location and Description	10			
	2.2 History					
3.	3. National, State and Regional Policy Context					
	3.1	Trends	16			
	3.2	National Urban Policy and Council of Australian Governments (COAG)	16			
	3.3	State Plan	18			
	3.4	Coastal Policy	20			
		3.4.1Coastal Design Guidelines	21			
	3.5	Lower Hunter Regional Strategy	21			
	3.6	Lower Hunter Regional Conservation Plan	26			
	3.7	Port of Newcastle	30			
	3.8	Newcastle Airport	30			
4.	Loca	al Policy Context	31			
	4.1	Futures Strategy	31			
	4.2	Integrated Strategic Plans	33			
	4.3	Economic Development Strategy				
	4.4	Rural Lands Strategy				
	4.5	Local Environmental Plan and Development Control Plan	35			
		4.5.1Port Stephens Local Environmental Plan 2000	35			
		4.5.2Standard Template Local Environmental Plan	36			
		4.5.3Port Stephens Development Control Plan 2007	36			
		4.5.4Port Stephens Section 94 and 94A Developer Contributions Plans				
	4.6	Environmental Policy and Strategy				
		4.6.1Comprehensive Koala Plan of Management				
		4.6.2Port Stephens and Myall Lakes Estuary Management Plan				
		4.6.3Foreshore Management Plan for Port Stephens	37			
		4.6.4Port Stephens Climate Change Policy				
5.	Strat	egic Information and Key Issues	40			
	5.1	Social (demographic)	40			
	5.2	Housing				
	5.3	Housing Approvals	46			
	5.4	Economic				
		5.4.1Centres	50			
		5.4.2Industrial Employment Lands	51			
		5.4.3Rural Industry				
	5.5	Environmental				
		5.5.1Terrestrial Ecosystems				
		5.5.2Freshwater Ecosystems				
		5.5.3Coast and Estuary				
	5.6	Aircraft Noise				
	5.7	Flood Prone Land				
	5.8	Climate Change				
	5.9	Heritage				
		Transport				
6.		egic Direction				

Contents

7.

6.1	A Framework for Growth and Conservation	64
6.2	Analysis of Commercial and Industrial Land	
6.3	Centres and Hierarchy	
0.0	6.3.1Regional Centre - Raymond Terrace	
	6.3.2Town Centres	
	6.3.3Villages	
	6.3.4Special centres (Defence and Airport Related Employment Zone	
	(DAREZ) Business Park)	.77
6.4	Accommodating more housing	
	6.4.1Infill	
	6.4.2New Release	
	6.4.3Densities	83
	6.4.4Rural Residential	.84
6.5	Employment/Industrial	.85
	6.5.1General Industrial (including Port)	.86
6.6	Rural	.88
	6.6.1Rural Production	88
	6.6.2Landscape	.89
6.7	Conservation Areas	.89
	6.7.1Green Corridor	
	6.7.2National Park Estate	
	6.7.3Port Stephens Great Lakes Marine Park	
	6.7.4Port Stephens Comprehensive Koala Plan Of Management	
6.8	Transport	
	6.8.1Roads	
	6.8.2Freight	
	6.8.3Public Transport	
	6.8.4Pedestrian and Cyclist	
	6.8.5Airport	
	6.8.6Rail	
	lementation	
7.1	Additional Sub-strategies	
7.2	A New Principal Local Environmental Plan	
7.3	A New Development Control Plan (DCP)	
7.4	New Developer Contributions Plans	
7.5	Land Identified For Development	
7.6	Land Not Identified For Development	
7.7	Council Delivery Program	
7.8	Economic Development Strategy	
7.9	Conservation Priorities	
7.10	Review and Monitoring	. 95

Table of Figures

Figure 1: Strategic and Statutory Planning Framework	.10
Figure 2: Location of Port Stephens LGA	
Figure 3: A large ocean-going sailing ship loading timber at Clarence Town in the	
late 1800's (Hunter et al, 2002)	. 12
Figure 4: Tourist coaches which ran between Stockton and Salt Ash (circa 1908)	
(Armstrong, 1996)	. 12
Figure 5: A trader at Nelson Bay Wharf in 1908 (Armstrong 1996).	13
Figure 6: Hexham Bridge (circa 1957) (courtesy of State Library of NSW)	
Figure 7: Karuah Bridge (Community Settlement and Infrastructure Strategy 2007)	14
Figure 8: COAG Criteria for Strategic Plans (COAG, December 2009)	.17
Figure 9: State Plan Priorities (NSW State Plan 2010)	. 19
Figure 10: Lower Hunter Regional Strategy Map	
Figure 11: Additional Centre Based Employment and Dwelling Projections to 2031	24
Figure 12: High Priority Regional Conservation Areas	
Figure 13: Other Regional Conservation Priorities	
Figure 14: Overarching Strategic Directions from Port Stephens Futures 2009	32
Figure 15: Prime Agricultural Land	35
Figure 16: Dwelling Price Trends Source: NSW Department of Housing Rent and Sale	€S
Reports	
Figure 17: Dwelling Rental Trends	
Figure 18: Dwelling Approvals in Port Stephens LGA	
Figure 19: Port Stephens Share of Lower Hunter Approvals	47
Figure 20: Dwelling Approval Types Since 2000	
Figure 21: Main Components of the Port Stephens LGA Economy	
Figure 22: Commuter Flows and Employment	
Figure 23: Industrial Areas in the LGA	
Figure 24: Flood Prone Land	
Figure 25: High Risks of Climate Change to Council responsibilities	
Figure 26: 2005 Traffic Volumes (RTA)	62
Figure 27: 2031 Traffic Volumes (RTA and PSC)	
Figure 28: Centres Hierarchy	
Figure 29: Map of the Hierarchy of Centres	69
Figure 30: Estimated Residential Zoned Potential Dwelling Yields 2011-2036 (sites	
awaiting subdivision)	
Figure 31: Estimated Potential Infill Dwelling Yields	
Figure 32: Summary of Potential Dwelling Yields	
Figure 33: Existing Rural Residential Lots	
Figure 34: Possible New Rail Routes	93

Appendices

Appendix 1: Centres Hierarchy	97
Appendix 2: Port Stephens Planning Strategy – Sub- strategies	
Appendix 3: Future Growth Areas	107

1. Purpose

The Port Stephens Planning Strategy (PSPS) aims to provide high level strategic direction for spatial planning in the Port Stephens Local Government Area (LGA). It aims to guide land use allocation and other provisions of Port Stephens Principal Local Environmental Plan (LEP) and a range of other planning documents used to regulate development and ensure conservation in the LGA. In summary, the PSPS:

- Provides the context and directions for land use across the LGA;
- Guides the preparation of the Port Stephens Local Environmental Plan ;
- Guides the preparation of development control plans;
- Establishes a direction for the provision of infrastructure, including transport.

The Port *Stephens Community Settlement and Infrastructure Strategy* (CSIS) was adopted by Council in 2007. The CSIS was reviewed in 2010 and the resultant document titled the draft *Community Settlement Strategy* was publically exhibited for comment. As a result of comments received during the exhibition period, the draft Strategy was extensively revised and this more comprehensive document, the PSPS was produced. The development of the PSPS considered such matters as:

- The Port Stephens Futures Strategy
- Council's Integrated Strategic Plans, such as Port Stephens Community Strategic Plan
- Current and projected supply and demand for housing and residential land
- Current and projected supply and demand for commercial and industrial floorspace and land
- Current and projected demands on the rural lands of the LGA
- Demographic change
- Social and economic trends
- Environmental issues, including the implications of climate change
- A range of important State and Commonwealth Government documents, policies and initiatives, such as the State Plan, and Australia to 2050: Future Challenges the 2010 Intergenerational Report
- Comments received during the exhibition of the draft Community Settlement Strategy.

An important role of the PSPS is to inform a number of statutory planning documents. How the PSPS fits within the strategic and statutory planning framework is illustrated in Figure 1.

level	Key Documents
Regional Vision and Plan	Lower Hunter Regional Strategy
Community Vision	Port Stephens Futures Strategy
	Community Strategic Plan
Council Plans	Operational Plan / Delivery Program
Strategic Planning Framework	Port Stephens Planning Strategy (PSPS)
	Local Area Strategies (eg. Anna Bay, Karuah, Kings Hill, Medowie, Nelson Bay, Raymond Terrace and Heatherbrae)
Implementation Plans, Development Planning	Principal Local Environmental Plan (LEP)
	Development Control Plan (DCP), and locality and generic provisions within the DCP

Figure 1: Strategic and Statutory Planning Framework

2.1 Location and Description

The Port Stephens Local Government Area (LGA) is located in the Hunter Region of New South Wales, about 200 kilometres north of Sydney.

The LGA is approximately 55 kilometres from east to west and 30 kilometres from north to south. It extends north to Karuah, west to Duns Creek, east to Shoal Bay and south to Hexham and southeast to Fern Bay. The land area of the LGA is 850 square kilometres.

The Port Stephens LGA is bounded by Dungog Shire and the Great Lakes Council areas in the north, the Tasman Sea in the east, the City of Newcastle across the Hunter River in the south and Maitland City in the west.

The LGA contains major service centres at Raymond Terrace (regional centre), and Nelson Bay/Salamander. A major industrial area is located at Tomago which is adjacent to the Port of Newcastle, and the regional civilian airport is located at Williamtown. A large defence facility, RAAF Base Williamtown, is located adjacent to the airport.



Figure 2: Location of Port Stephens LGA

Major physical characteristics of the area are the Hunter estuary and wetlands to the south, the Stockton sand dunes and beaches to the east, the major waterway of Port Stephens in the northeast, and the rural hinterland and Williams River to the west. The LGA has a substantial estuary system including deep water with a surface area of over 100 sq. kilometres, making it approximately three times the size of Sydney Harbour.

Large areas of the LGA are of environmental significance, with several National Parks and a marine park within the LGA, as well as the Watagan to Stockton Green Corridor traversing the area.

The Pacific Highway passes north south through the LGA, with the northern end of the Sydney Newcastle Freeway just to the south of the LGA.

Port Stephens LGA has become a major recreational, tourist and retirement area, as well as a place in which people choose to live and work. The estimated residential population (ABS) has grown from 58,965 in 2001 to 63,272 in 2006 and 66,754 in 2009. It has a diverse range of economic activities comprising tourism, agriculture, manufacturing, defence, building industry and a mix of retail and small business. This population growth combined with increasing development and tourism continue to place pressure on the environmental integrity, character and attributes of the LGA.

2.2 History

The development of Port Stephens has been heavily influenced by five overlapping stages in the evolution of transport technology and infrastructure. Each stage has influenced the location, initiation and speed of development across the LGA.

Stage 1: 1820s to late 1800s - Shipping via the Pacific Ocean and the Hunter River allowed timber getters, fisherman and eventually farmers from Sydney and Newcastle to exploit land and create settlements at Raymond Terrace, Hinton and around the Port. Howard (1997) states that for the first 150 years after settlement, the means of travel by settlers was mainly along waterways.

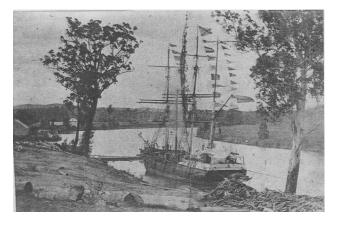


Figure 3: A large ocean-going sailing ship loading timber at Clarence Town in the late 1800's (Hunter et al, 2002)

Stage 2: 1830s to 1900 – As population growth allowed settlement to become larger and more established, the creation of roads, tracks and paths provided an alternative to shipping.

Early roads and tracks linked each of the towns and villages that supported the primary industry of Port Stephens.

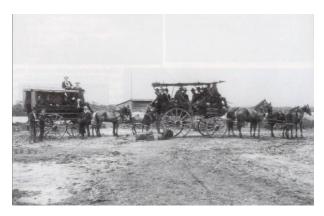


Figure 4: Tourist coaches which ran between Stockton and Salt Ash (circa 1908) (Armstrong, 1996)

Transport between these areas would have increased with the size and economic importance of these early settlements. However, the speed and

cost of such transport was restrictive. As a consequence, development was still focused around early towns and villages.



Figure 5: A trader at Nelson Bay Wharf in 1908 (Armstrong 1996).

In the east of the LGA sea transport was the mode of transport from external destinations to the Port until good roads were constructed during and after WWII (Armstrong 1996).

Stage 3: late 1800s to 1950s – The development of the railway network connected the Hunter Region to Sydney and some other markets far quicker than ship or horse transport. The growth of land-based transport led to a decrease in shipping transport. In the west of the LGA, the Maitland to Dungog railway led to the eventual demise of passenger and cargo transport on the Williams River.

The growth of Newcastle and the associated road infrastructure increased the attractiveness of Port Stephens as a short stay holiday destination. The growth and spread of development was still linked to towns and villages. The upgrade of the road to Nelson Bay during World War II dramatically improved access.

Stage 4: 1940s to the present - The growing role of the car as the primary mode of transport combined with rising economic prosperity, and the associated growth in road infrastructure, fundamentally changed the accessibility into and across the area.

Construction of the Hexham Bridge in 1952 (Figure 6) and the Karuah Bridge in 1957 (Figure 7), the Kooragang Island Bridge (1971), the rerouting of the North Coast Highway (renamed Pacific Highway) from 12 Mile Creek via Karuah, Bulahdelah to Taree in 1963, the extension of the F3 from Sydney to Newcastle during the 1990s and the construction of dual carriageways to bypass Raymond Terrace and Karuah in 1998 and 2004 respectively has led to a continual improvement in access to the area.



Figure 6: Hexham Bridge (circa 1957) (courtesy of State Library of NSW)

Port Stephens is now very accessible to the rapidly growing North Coast and only two hours from Sydney. Consequently tourism has dramatically increased, including weekender residences, and the area has become even more attractive to live for people who wish to commute to elsewhere in the Lower Hunter, or move from Newcastle or Sydney but still maintain close links with their "home" city. The increasing car ownership, increasing affluence (particularly after WWII) and the creation of high-speed roads has changed development patterns. As a result low density residential development has become the predominant development pattern and some separate villages and towns have merged into continuous residential areas, such as from Soldiers Point to Salamander.



Figure 7: Karuah Bridge (Community Settlement and Infrastructure Strategy 2007)

Stage 5: 2000 onwards – Increasing investment in the Tomago industrial area and the creation of an employment node adjacent to Williamtown airport will further stimulate growth and change. Sea level rise and other impacts of climate change are likely to affect settlement patterns over the coming decades as the more low lying locations are impacted.

During the 2000's the environmental values of the LGA led to the reservation of large areas of land in the National Park Estate as well as the designation of major conservation priorities such as the Watagan to Stockton Green Corridor. These and other environmental considerations are playing a growing role in shaping growth and development in the LGA.

An increasing emphasis on urban infill and intensification of development around town centres is occurring in response to changing demographics, higher energy prices, and increasing land and infrastructure costs. Despite this, urban fringe growth can be expected to continue at North Raymond Terrace (Kings Hill), Medowie and Anna Bay.

3.1 Trends

There are a number of wider social and economic trends which affect the LGA. These trends are not exclusive to Port Stephens LGA but are experienced by much of urban Australia, and include:

- Cities and urban areas are continuing to grow
- Housing affordability has declined and housing supply is falling behind theoretical demand
- Information technology is having a major impact on how we work, play and communicate
- The population profile of the community is becoming older
- Household size has been decreasing until recently but appears to be increasing again
- Immigration is continuing at high levels and is fuelling population growth
- The economy is changing and the workforce is requiring higher skill levels
- The Hunter region economy is operating in a global marketplace where international competitiveness is essential to prosperity
- High levels of resource consumption, particularly fossil fuels, are having a negative environmental impact
- The predicted impacts of climate change are significant and will require a risk management approach.

3.2 National Urban Policy and Council of Australian Governments (COAG)

The Commonwealth urban policy framework has three main components:

- Long term strategic city plans, to coordinate planning, set shared priorities and target investment on the ground –through the Council of Australian Governments (COAG). The States have agreed to deliver these by 1 January 2012
- A national system for measuring the performance of cities the State of Australian Cities Report commences this process
- A National Urban Policy, that aims to improve coordination, planning and productivity reform. This will have broad directions that are of relevance to all 18 cities with populations over 100,000 people.

(The above points are from a speech by the Minister for Infrastructure, Transport, Regional Development and Local Government, 22 October 2010)

In December 2009 COAG agreed to national criteria for capital city strategic planning that meet the terms of the first component above. While these criteria are initially targeted at capital cities, they can be expected to

"cascade" to areas such as the Lower Hunter over time. The criteria are shown at Figure 8.

The Commonwealth has said it will link future infrastructure funding decisions to plans that meet these criteria. It is important that the PSPS meet these criteria to as high a degree as possible for these reasons.

	COAG criteria for strategic plans
1.	be integrated: -
	 across functions, including land-use and transport planning, economic and infrastructure development, environmental assessment and urban development, an across government agencies;
2.	provide for a consistent hierarchy of future oriented and publicly available plans, including:
۷.	i. long term (for example, 15-30 year) integrated strategic plans,
	ii. medium term (for example, 5-15 year) prioritised infrastructure and land-use plans,
	and
	iii. near term prioritised infrastructure project pipeline backed by appropriately detailed
	project plans;
3.	provide for nationally-significant economic infrastructure (both new and upgrade of existing
	including: -
	i. transport corridors,
	ii. international gateways,
	iii. intermodal connections,
	 iv. major communications and utilities infrastructure, and v. reservation of appropriate lands to support future expansion;
4	address nationally-significant policy issues including: -
ч.	i. population growth and demographic change,
	ii. productivity and global competitiveness,
	iii. climate change mitigation and adaptation,
	iv. efficient development and use of existing and new infrastructure and other public
	assets,
	 connectivity of people to jobs and businesses to markets,
	vi. development of major urban corridors,
	vii. social inclusion,
	viii. health, liveability, and community wellbeing,
	ix. housing affordability, and
5.	x. matters of national environmental significance;
э.	consider and strengthen the networks between capital cities and major regional centres, and other important domestic and international connections;
6.	provide for planned, sequenced and evidence-based land release and an appropriate
0.	balance of infill and greenfields development;
7.	clearly identify priorities for investment and policy effort by governments, and provide an
	effective framework for private sector investment and innovation;
8.	encourage world-class urban design and architecture; and
9.	provide effective implementation arrangements and supporting mechanisms, including: -
	i. clear accountabilities, timelines and appropriate performance measures,
	ii. coordination between all three levels of government, with opportunities for
	Commonwealth and Local Government input, and linked, streamlined and efficient
	approval processes including under the Commonwealth Environment Protection an
	Biodiversity Conservation Act 1999,
	iii. evaluation and review cycles that support the need for balance between flexibility and certainty, including trigger points that identify the need for change in policy
	settings, and
	iv. appropriate consultation and engagement with external stakeholders, experts and
	the wider community.
	· · · · · · · · · · · · · · · · · · ·

Figure 8: COAG Criteria for Strategic Plans (COAG, December 2009)

The State of Australian Cities Report (2010) produced by the Major Cities Unit provides a national comparative overview of the nature of Australia's cities with a population over 100,000. The focus of the Report is on the capital cities; however a number of issues are identified which are of particular relevance for Port Stephens LGA:

- There is a national mismatch between the production of housing and the size of households
- There is a national mismatch between housing production and the need for affordable housing
- The most carbon-efficient form of housing is townhouses and villas in inner suburban areas (i.e. near centres)
- The Newcastle urban area (which includes Port Stephens LGA) has one of the highest proportions of detached dwellings of any major city in Australia
- The Newcastle urban area (which includes Port Stephens LGA) has a very low proportion of trips by public transport
- The social and economic congestion costs of road transport are increasing
- Road freight movement within cities will increase dramatically
- The main employment growth categories are skilled and professional workers
- Urban areas are displacing land previously used for food production
- Climate change will lead to sea level rise and more frequent extreme weather.

3.3 State Plan

The State Plan aims to set clear priorities for the NSW Government for the next 10 years by defining areas and performance targets for the improvement of services and infrastructure. While the Plan is relatively comprehensive, it does not list all services, including some that may be critical to the delivery of a stated goal. Accordingly, the Plan can be viewed as indicative, rather than as an overall priority setting tool of Government.

While the State Plan does not have specific actions for Port Stephens LGA, most of the State Plan priorities are relevant to Port Stephens and are consistent with the Port Stephens Integrated Strategic Plans. It is important that planning in the LGA is consistent with State wide priorities. By co-ordinating with relevant State Plan priorities, Council is likely to increase the resources available for implementing its plans. The performance targets for each of the priorities can be found by consulting the State Plan documentation.

The 2010 State Plan priorities are shown in Figure 9.

		State Plan Priorities
1.	Better 1	Iransport and Liveable Cities
	a.	
	b.	Improve the road network
	С.	Maintain road infrastructure
		Improve road safety
		Increase use of walking and cycling
	f.	Increase the number of jobs closer to home
	g.	Grow cities and centres as functional and attractive places to live, work
	9.	and visit
	h.	Improve housing affordability
2.	Suppor	ting Business and Jobs
	a.	Maintain and invest in infrastructure
	b.	
	C.	Speed up planning decisions
		Drive innovation to grow productivity
		Cut red tape
	f.	Maintain AAA rating
	g.	Ensure a reliable electricity supply
3.	Clever	State
	а.	Make sure children have the skills for learning by school entry
	b.	
	C.	Engage students in learning for longer
	d.	
	e.	Increase access to knowledge and skills in partnership with universities
4.	Health	y Communities
	а.	
		increasing demand
	b.	Improve survival rates and quality of life for people with potentially fatal or chronic illness
	C.	Promote healthy lifestyles
		Reduce potentially preventable hospital admissions
	e.	Improve outcomes in mental health
5.	Green	State
	а.	Tackle climate change
	b.	Develop a clean energy future
	C.	Secure sustainable supplies of water and use our water more wisely
	d.	Protect our native vegetation, biodiversity, land, rivers and coastal
		waterways
	e.	Improve air quality
	f.	
6.	Stronge	er Communities
	а.	Improve child wellbeing, health and safety
	b.	Strengthen Aboriginal Communities
	C.	Increase employment and community participation for people with
		disabilities
	d.	Reduce the number of NSW people who are homeless
	e.	Increase the number of people engaged in volunteering
	f.	Increase the number of people using parks
	g.	Increase the number of people participating in sporting activity
	ĥ.	Increase the number of people participating in the arts and cultural activity
7.	Keepin	ig People Safe
	а.	
	b.	Reduce levels of antisocial behaviour
	C.	Reduce reoffending
	d.	Improve the efficiency of the court system

Figure 9: State Plan Priorities (NSW State Plan 2010)

3.4 Coastal Policy

Much of Port Stephens is located within the "coastal zone" as defined under The NSW Coastal Policy (1997). Accordingly the provisions of the Coastal Policy and its supporting documents and directions apply to the area.

The Coastal Policy has nine goals, including:

- Protecting, rehabilitating and improving the natural environment of the coastal zone
- Recognising and accommodating the natural processes of the coastal zone
- Protecting and enhancing the aesthetic qualities of the coastal zone
- Protecting and conserving the cultural heritage of the coastal zone
- Providing for ecologically sustainable development and use of resources
- Providing for ecologically sustainable human settlement in the coastal zone
- Providing for appropriate public access and use
- Providing information to enable effective management of the coastal zone
- Providing for integrated planning and management of the coastal zone.

An interwoven series of State Government planning instruments, directions and guidelines are directed towards implementation of the Coastal Policy.

The Coastal Policy is also supported by State Environmental Planning Policy No 71 - Coastal Protection (SEPP 71), which aims to ensure that:

- Development in the NSW coastal zone is appropriate and suitably located
- There is a consistent and strategic approach to coastal planning and management
- There is a clear development assessment framework for the Coastal Zone.

Large areas of Port Stephens are subject to the Coastal Policy, including the entire coastline, the northern shore of the Hunter River, the Williams River to just upstream of Raymond Terrace and the tidal reaches of the Karuah River. The area embraced by the Coastal Policy and SEPP 71 also extends up to several kilometres from these water bodies.

The implications of the Coastal Policy for the PSPS are that the Coastal Policy and its supporting documents require a higher standard of urban design and environmental performance from development in the coastal zone. In addition, the landscape impacts of development on their surroundings assume a greater importance within the coastal zone than most other locations. This particularly affects development strategy and practice in the more intensive urban settlements on the Tomaree and Tilligerry Peninsulas.

3.4.1 Coastal Design Guidelines

The Department of Planning and Infrastructure (DoPI) requires councils to ensure that local environmental plans for localities within the coastal zone are consistent with the Coastal Policy, the Coastal Design Guidelines (CDG) and the NSW Coastline Management Manual, unless the inconsistency can be justified to the satisfaction of the DoPI (Section 117 Direction 2.2).

The CDG embody many of the objectives of the Coastal Policy and SEPP 71.

The CDG describes a hierarchy of coastal settlements, from coastal cities to coastal towns, villages and hamlets. The CDG provide guidelines to assist the development of these settlements and their relationship to the surrounding area to be sensitive to the "unique natural and urban settings of coastal places in NSW".

The CDG provide details of issues and a generic desired future character for types of coastal settlement which have been considered in the development of the PSPS, and should be considered in the development of strategic plans, local environmental plan (LEP) and development control plan (DCP) provisions for coastal areas of Port Stephens.

The CDG have a particular impact on development in the more intensive urban areas of the Tomaree and Tilligerry Peninsulas, as well as villages such as Taylors Beach and Karuah. In these areas, the character of development and its impact on its surroundings has a greater significance than in most other areas, and needs to be considered in the expansion of urban areas as well

as in the design of individual developments. The PSPS should promote a hierarchy of settlements which responds to the policy direction of the coastal development guidelines.

3.5 Lower Hunter Regional Strategy

The Lower Hunter Regional Strategy (LHRS) aims to guide the growth of the Lower Hunter for the next 25 years by identifying future development areas, principal land use types, settlement patterns and conservation outcomes.

A key component of the LHRS is that most new development within the Region will be located in close proximity to major centres and employment lands, maximising access to services and employment opportunities.

The projected spatial nature of development of the Lower Hunter is shown on the map in Figure 10.

The LHRS also emphasises the importance of economic development, noting that the majority of new jobs have been created in the tertiary sector.

Discussion of this matter within the LHRS largely focuses on centres and employment lands.

The LHRS states that there is a clear need to coordinate the release of land in alignment with infrastructure provision and funding to achieve an orderly and efficient pattern of land release. Furthermore, new release areas should be based on "Neighbourhood Planning Principles" to ensure that new suburbs have access to jobs, centres and transport choice within their communities. The LHRS projects the following additional dwellings in Port Stephens Local Government Area by 2031:

Under "Housing" the LHRS states a range of actions for the Lower Hunter, a number of which are directly or indirectly relevant to Port Stephens LGA, as follows (selective listing):

- Sufficient land and development capacity will be identified and rezoned to provide for an additional 69 000 dwellings in new release areas and 46,000 dwellings in existing urban areas and centres to meet forecasted demands for an additional 115,000 dwellings over the next 25 years.
- Councils will revise their local environmental plans to be consistent with the identified urban footprint within the Regional Strategy (unless growth rates exceed expectations and dictate an earlier release of additional land).
- Councils will revise their local environmental plans to be consistent with the dwelling capacity projections for their local government area.
- Ensure that planning and design of new release areas is based on the Neighbourhood Planning Principles.
- Innovative land use proposals, outside of the areas identified as future urban, may be considered where it can be shown that the proposal meets the Sustainability Criteria. This consideration will not apply to proposals for development in the area identified as a green corridor on the Strategy Map.
- Where development or rezoning increases the need for State infrastructure, the Minister for Planning may require a contribution to the provision of the infrastructure having regard to the State Infrastructure Strategy and equity considerations.
- Councils will plan for a range of housing types of appropriate densities, location and suitability that are capable of adapting and responding to the ageing of the population



Figure 10: Lower Hunter Regional Strategy Map

EXISTING URBAN AREA PROPOSED URBAN AREA Boundaries to be defined	NATIONAL PARK (EXISTING AND FUTURE)	RURAL AND RESOURCE LAND Agriculture, drinking water aquifers, mineral and timber resources will be protected. Land that provides valuable economic,	EMPLOYMENT LAND Contain various employment activities such as: factories, warehouses, manufacturing, or major storage operations	PROPOSED EMPLOYMENT LAND	FUTURE FREIGHT HUB & EMPLOYMENT LANDS Identified as providing an opportunity for the storage, transfer and distribution of	WATAGAN STOCKTON & WALLARAH GREEN CORRIDORS Areas of high conservation values joining key corridors through the region. Lands within the corridor	PROPOSED CONSERVATION LANDS (DEDICATIONS) Areas of high conservation values outside green corridors that will be dedicated to the Government.
boundaries to be desired through local planning		environmental and social benefits to the region.	with some associated offices.	*	containerised freight and associated employment.	will be managed for conservation purposes.	•
RENEWAL CORRIDOR Residential and mixed use opportunities for areas around high finguancy transport nervorks and in close proximity to centres.	NEWCASTLE REGIONAL CITY Main focus for business, professional services, specialised shops and tourism. It is also a recreation and entertainment destination for the region.	MAJOR REGIONAL CENTRE Major shopping and business centre for the district, usually with council off ces and central community facilities.	EMERGING MAJOR REGIONAL CENTRE Centres that are expected to grow and take on the role of major centres in the future.	SPECIALISED CENTRE Centres including John Hunter Hospital, Nevcessite University, the Port and Nevcessite Airport that perform vital economic and employment roles within the region.	TOWN Shopping and business centre for the district including health and professional services mixed with medium and higher density residential.	NEWCASTLE AIRPORT	STAND ALONE SHOPPING CENTRE Privately owned centres located away from other commercial areas, containing many of the attributes of a town but without housing or public open space.

Under "Transport", relevant statements within the LHRS include:

"Concentrate employment and residential development in proximity to public transport to maximise transport access"

The LHRS specifies the following actions of particular relevance to Port Stephens LGA:

The LHRS identifies Raymond Terrace town centre as a "major regional centre" with a "concentration of business, higher order retailing, employment, professional services and generally including civic functions and facilities. A focal point for subregional road and transport networks and may service a number of districts".

The LHRS also identifies the Airport Precinct and Nelson Bay Tourism Precinct as "specialised centres" which are "centres and concentrations of regionally significant economic activity and employment".

Within the Port Stephens LGA, significant new tracts of employment land are proposed at Tomago and at Newcastle Airport, noting that the Port and Airport are key regional infrastructure.

The table below shows the projected additional employment and dwellings in centres within Port Stephens by 2031. This figure comprises around 10% of the proposed additional centre based employment in the Lower Hunter, around 10% of the proposed additional centre based dwellings, and around 10% of the total additional dwellings, proposed within the Lower Hunter. The LHRS does not provide projections for non centre based employment on a Local Government Area basis (eg. industrial areas).

Centre	Jobs	Dwellings
Raymond Terrace (regional centre)	1600	300
Airport Precinct	3000	0
Nelson Bay (specialised centre)	1500	1200
Other centre based		1800
Centred based total	6100	3300

Figure 11: Additional Centre Based Employment and Dwelling Projections to 2031 Source: Department of Planning

An action identified in the LHRS proposed to:

"Ensure that local planning provisions reflect and promote the role of the Port of Newcastle as identified in the NSW Port Growth Strategy, as the site for a second container port facility for NSW. This will include ensuring that local planning provisions maintain 'port-related' employment land around the Port of Newcastle for industries that specifically require port access".

Land at Tomago could be considered as "port related" for the purposes of this Action.

Another proposed Action is:

"The Department of Planning, in partnership with key stakeholders, will coordinate the preparation of a land use development strategy for the RAAF Base Williamtown-Newcastle Airport Employment Zone. Once completed, local environmental plans will be amended, where necessary, to reflect and promote the role of the RAAF Base Williamtown- Newcastle Airport Employment Zone as identified in the land use development strategy." The study for the land has been undertaken, and rezoning has occurred.

The LHRS also contains an Action to:

"Ensure a mix of housing types in proximity to employment to provide the necessary supply of labour locally. This includes housing for lower as well as higher income groups to fill the diversity of employment opportunities provided".

Seeking to improve the balance between greenfield land release and urban infill, the Strategy clearly promotes greater urban consolidation. In doing so, it seeks to increase the use of public transport and achieve efficiencies in the use of existing and future infrastructure. The LHRS projects 3,300 additional centre based dwellings and 2,000 additional infill dwellings in the LGA by 2031. Notwithstanding the emphasis on "more compact development", substantial provision is made in the LHRS for the release of greenfield land in the LGA for housing for 7,200 dwellings by 2031, including a major expansion of Medowie, with smaller urban extensions of Anna Bay and Tanilba Bay, and a major new release area at Kings Hill (up to 5,000 dwellings), north of Raymond Terrace. A total of 12,500 additional dwellings are projected for the LGA from 2006 to 2031.

"Investigate the need for improved transport links connecting the Port of Newcastle and the RAAF Base Williamtown–Newcastle Airport to the national highway network and identify the preferred linkages".

"Continue improvements to the north-south access through the Region, including planning the linkage of the F3 to the Pacific Highway at Raymond Terrace and planning and construction of upgrades to the Pacific Highway".

The environmental qualities of Port Stephens are strongly acknowledged in the LHRS, in relation to the LGA's role within a subregional green corridor, aquifer protection, Port Stephens itself and coastal management. The LHRS contains a number of measures aimed at ensuring the Watagan to Stockton Corridor (including the foreshores of Port Stephens) is protected and enhanced, including the finalisation of the Lower Hunter Regional Conservation Plan by the (then) Department of Environment and Conservation.

"Local environmental plans in the Watagan to Stockton Corridor (including the foreshores of Port Stephens) and the Wallarah Peninsula (Lake Macquarie) are to provide for the ongoing role of biodiversity corridor and inter-urban break.

The Sustainability Criteria will not apply in the Watagan to Stockton and Wallarah Peninsula green corridors to protect the significant biodiversity and natural resource values of these areas."

The Green Corridor affects a significant area of land in the eastern portion of Port Stephens, providing a significant constraint to the expansion of urban settlements east of the Pacific Highway.

Port Stephens plays an important role in the potable water supply for the Lower Hunter. Accordingly, the LHRS contains a range of provisions directed towards protecting water catchments, including the aquifers of Tomago, Tomaree and Stockton.

In the past, Port Stephens has provided considerable areas of rural residential land, and the LHRS contains provisions to limit the further growth of such development, namely:

"Local Environmental Plans and other relevant planning provisions will be required to align with the strategic intentions contained in the Regional Strategy by:

- limiting further dwelling entitlements in rural areas
- maintaining or increasing minimum lot sizes for rural subdivisions that confer a new dwelling entitlement (where established by an appropriate methodology as agreed by the Department of Primary Industries)".

The LHRS also makes provision for consideration of the release of land for urban development, not currently identified in the LHRS if the proposal satisfies certain specified Sustainability Criteria (Appendix 1 of the LHRS). It should be noted that the Sustainability Criteria do not apply to lands within the Watagan to Stockton Green Corridor.

In summary, the LHRS clearly seeks to contain residential development either within or adjacent to existing urban development, unless a range of rigorous criteria is met. Public transport accessibility as well as access to jobs and services features highly in the desirable attributes of new urban areas espoused in the LHRS. In view of the significant subregional role of Port Stephens in a number of areas outlined above, the LHRS has a significant influence on the PSPS within the LGA.

The PSPS should seek to meet the dwelling capacity projections of the LHRS, as well as provide a hierarchy of centres and urban settlements which responds to the policy directions of the LHRS and the local constraints and opportunities of the LGA.

The LHRS will be reviewed by the Department of Planning and Infrastructure (DoPl) in 2011/2012. An initial discussion paper is expected to be released in late 2011, followed by a draft Strategy going on public exhibition.

3.6 Lower Hunter Regional Conservation Plan

The Lower Hunter Regional Conservation Plan (LHRCP) is a partner document to the Regional Strategy and sets out a 25 year program to direct and drive regional high conservation efforts. The Plan identifies the following regional conservation priorities for the Port Stephens LGA, as shown in Figure 12:

• A new 'Green Corridor' stretching from the Watagan Ranges through Hexham Swamp to Port Stephens (approximately 14,600 hectares)

providing a highly significant link between southern sandstone ranges and the coastal heaths and wetlands of Port Stephens.

 Conservation of important areas around Port Stephens in the Karuah area (3,000 hectares). Additions to Karuah Nature Reserve and Worimi Nature Reserve will protect important Paperbark Swamp forests, SEPP 14 wetlands, the foreshores of Port Stephens and habitat for threatened species, including migratory species.

Other conservation priorities identified in the LHRCP of relevance to Port Stephens as shown in Figure 13 are:

- The Squirrel Glider population is of state significance
- The area supports extensive, high quality coastal habitat
- The woodlands of the Tomago/Port Stephens area support an iconic population of koalas
- The extensive heathlands on the Tomago Sandbeds and around Port Stephens are among the most significant heath habitats in NSW
- The protection of large areas of important estuarine wetlands around Port Stephens.

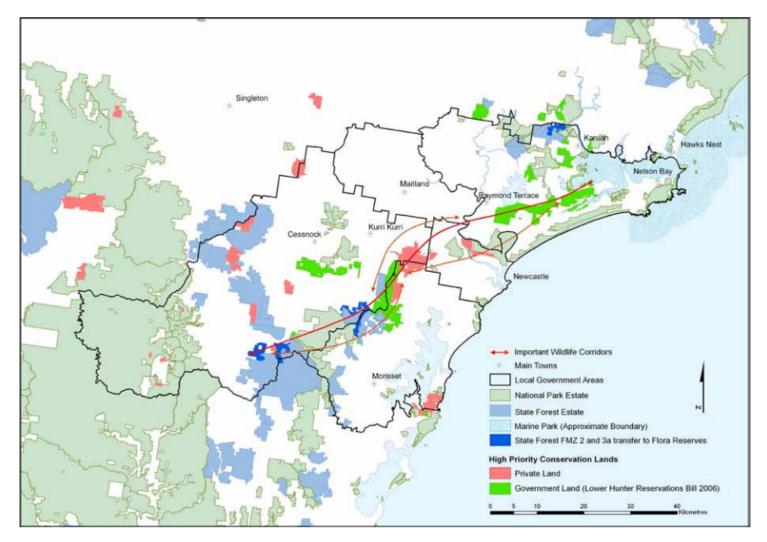


Figure 12: High Priority Regional Conservation Areas

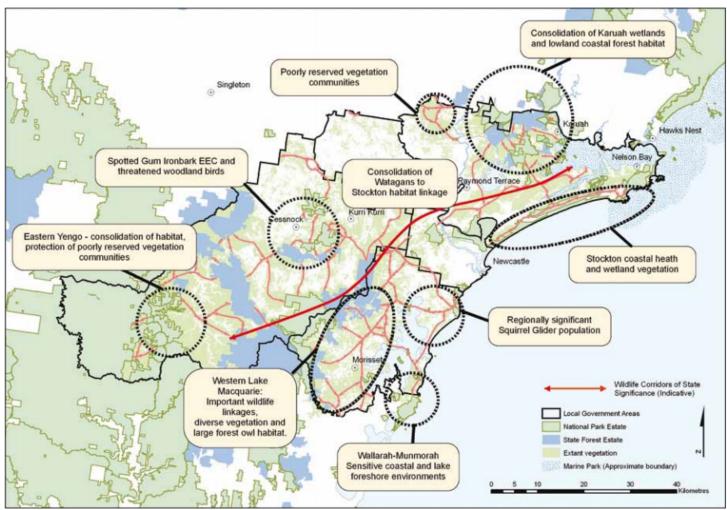


Figure 13: Other Regional Conservation Priorities

The LHRCP:

- Canvasses tools and mechanisms that could be used in the medium to long term to secure additional lands needed to complete the corridors for optimal land management boundaries
- Explains how development will be guided away from high conservation areas through the identification of a desired development footprint and the definition of other areas where the Government's Sustainability Criteria will or will not operate (if met, these criteria allow development to proceed outside the planned footprint)
- Identifies a further 65,000 ha as 'other regional conservation priorities' that should be the focus for voluntary conservation initiatives, areas for future offsetting of development impacts and for government biodiversity investments (such as through the Catchment Management Authority (CMA))
- Provides direction for local councils when preparing new Local Environmental Plans, to enable biodiversity certification (certification by the Minister for the Environment streamlines development assessment and approvals where Plans will ensure overall maintenance or improvement of biodiversity values).

The LHRCP has provided a conservation framework within which the settlement hierarchy of the PSPS should be developed. This would permit the PSPS to develop a settlement pattern of discrete settlements which maintains their local identity and character as well as their close connection to the natural environment. It also provides greater certainty as the priority conservation areas which the PSPS should protect, and those areas which are available for development.

It is important that the PSPS leads to further development of this model, with defined biodiversity corridors and priorities being agreed in more detail for the LGA in order to better define the "green corridor" of the LHRS and to allow local level decisions to be made which deliver optimum development and environmental outcomes.

3.7 Port of Newcastle

The Port of Newcastle is of National and State significance. Port Stephens contains land adjacent to the Port at Tomago. Land at Tomago within Port Stephens LGA is included in special provisions of the Major Development State Environmental Planning Policy, and accordingly it is very important that the significance of this land be recognised and that adequate infrastructure is provided to enable it to achieve its potential as an economic and employment development area. The importance of Tomago will be discussed in Section 6.5 of this Strategy.

The Port of Newcastle provides a major economic driver for a number of industries within Port Stephens LGA, particularly in the Tomago area. The PSPS should aim to ensure a sufficient supply of employment land with excellent access to the Port. Accordingly, the adequacy of infrastructure, including transport, is critical to the economic performance of the LGA.

3.8 Newcastle Airport

The airport serving the Hunter Region is located at Williamtown. It provides direct services to Brisbane, Sydney, Canberra and Melbourne as well as to a number of regional centres, including the Gold Coast. The airport is very important to the Region in providing access for tourist and business travellers.

Increasingly, the land around the airport is being developed as a specialist industrial/business park area which capitalises on the closeness of the airport for freight and the need to provide aircraft maintenance and other services to civilian and military aircraft.

Following a planning study, the Defence and Airport Related Employment Zone (DAREZ Business Park) has been identified, and rezoned (90 ha), with a potential 150 ha of specialist employment land.

The development of the DAREZ Business Park land will be a significant contributor to broadening the employment base of Port Stephens, as well as increasing total employment and is an important element of the PSPS as a result.

4. Local Policy Context

4.1 Futures Strategy

In 2009 Council adopted Port Stephens Futures Strategy. This was developed after a review of the major issues facing Port Stephens, and comprehensive consultation with the community and agencies, to set overall directions for sustainable future growth in Port Stephens.

It aimed to provide a foundation upon which the Integrated Strategic Plan (see Section 4.2 below) could be developed. It also provides an additional foundation for the Principal LEP that is targeted to be in draft in 2012.

The Strategy sets a number of Strategic Directions for the LGA which are shown in Figure 14. The PSPS must be consistent with these Strategic Directions and provide a spatial framework to support their implementation.

4. Local policy context

Sustainability will be:

- Increasingly the foundation for Council policies and operations;
- Increasingly the basis for Council promotion and advocacy of energy and water conservation and carbon neutral operations of public and private sector agencies operating in the Shire;
- The basis for planning the overall design of the new urban release areas;
- The basis for planning a balance between development and environment in the LGA;
- Achieving inter-generational equity in terms of environmental conservation and service provision and the basis of financial management of Council; and
- Council exercising responsibility to "think globally and act locally" to a reasonable extent.

Governance Framework

A framework is established to coordinate the policies, budgets and work programs of agencies to deliver this Strategy and in particular a framework to improve the cohesive approach of State agencies to implement this Strategy, the Lower Hunter Regional Strategy and the State Plan in Port Stephens.

Good Development

Port Stephens Council stands for "good development", i.e. supporting development that:

- Fulfils the Lower Hunter Regional Strategy directions;
- Respects the coastal and environmental attributes and heritage of the LGA;
- Establishes reasonable clarity about the long term development pattern and capacity of the Shire for the development industry, investors and the community;
- Is consistent with the State and local legal and policy framework; and
- Is based upon policies providing increased certainty to the development industry, investors and the
- community and supporting increasingly efficient development assessment

Social Futures

Strategic Directions to achieve continuous improvements in:

- Community safety;
- Community capacity;
- Housing opportunities tailored to demographic structure and community needs; and
- Quality of facilities tailored to demographic structure and community needs.

Cultural

To enhance collaboration between cultural groups to progressively enhance cultural opportunities, cultural events and related employment opportunities.

Port Stephens Economy

Economic Development is planned and managed to:

- Build upon existing strengths (aviation, defence industry, tourism, aluminium production, bus manufacturing etc.)
- To increase the provision of locally based jobs and increase the proximity of employment opportunities to existing and future development areas.

Environment

- The unique coastal and natural environmental attributes of Port Stephens are protected and enhanced.
- Opportunities are taken directly by negotiations with developers, or through voluntary planning agreements to conserve and enhance environmental lands and corridors.

Infrastructure

- Planning and delivery of infrastructure (social and physical infrastructure for public services and facilities) is improved in terms of integration with development pattern and timing and are based upon a clear framework of public sector and private sector funding commitments.
- Opportunities are taken directly by negotiations with developers, or through voluntary planning agreements to conserve and enhance environmental lands and corridors.

Urban Design

- The quality of the built environment is continuously improved by:
- Rolling out a program of locality planning which reflects distinctive characteristics of towns and villages in the Shire; and
- Placing more emphasis on policy making and development assessment on urban design and architectural design particularly in Nelson Bay and Raymond Terrace

Accountability of Government

Council will follow processes and policies that support openness, transparency and accountability of assessment and decision making, particularly in planning and environmental management.

Figure 14: Overarching Strategic Directions from Port Stephens Futures 2009

4.2 Integrated Strategic Plans

The Integrated Planning Framework and its companion documents are produced in response to the NSW Government's requirement for each council to produce an integrated strategic plan. It builds on the Futures Strategy by describing more detailed actions that are specific to Council's responsibilities. The Integrated Planning Framework package comprises:

- Port Stephens Community Strategic Plan
- Delivery Program (4 years)
- Operational Plan (annual)
- 10 year Council Resource Strategies
- Long Term Financial Plan
- Asset Management Plan
- Workforce Strategy

It is through the Integrated Planning Framework that priorities are set and resources are allocated for Council to implement the PSPS. Actions arising from the PSPS need to be incorporated into the ISP if they are to be implemented.

4.3 Economic Development Strategy

The Port Stephens Economic Development Strategy (2007) guides Council actions directed towards shaping the economic activity in the LGA. This Strategy focuses on practical ways of shaping the future of Port Stephens and ensuring that it achieves its full potential as a place to live, to work, to operate a business, and to visit.

The projects that were identified in the Economic Development Strategy as having the greatest potential impact on economic growth and jobs are:

- Development of Raymond Terrace as the LGA's primary services centre, with improvements in retail and higher level services, and reshaping the town's structure
- Development of new towns and town centres at Medowie and North Raymond Terrace/Kings Hill (residential and local services), and the planning of the town centres in the tourist areas, especially Nelson Bay
- Development of the airport (passenger and freight) and development of associated lands into the Defence/Aviation Zone (DAREZ Business Park)
- Role of RAAF Base Williamtown
- Continuing to develop high value manufacturing in the Tomago area and in Heatherbrae
- Development of Tomago as the major industrial area by providing additional industrial zoned land
- Development of the industrial land, including reducing constraints such as road networks, services (water, sewer, power) and the securing of funding for these requirements

4. Local policy context

• Boosting Port Stephens tourism industries, through broadening markets (including events), and improving tourism areas.

The Economic Development Strategy sets a number of major policy directions for implementation by the PSPS. The roles of the PSPS are to provide a land use framework to support the priorities of the Economic Development Strategy and to develop a balanced economy for the LGA which is able to take advantage of opportunities which arise and withstand market fluctuations. At the same time, it is important that the PSPS achieve a balance between the economic objectives of the community relative to social and environmental matters. A number of key issues must be addressed by the PSPS, including:

- Nurturing the development of Tomago, DAREZ Business Park and Heatherbrae employment areas
- Promoting the development of centres, including the evolution of the regional centre at Raymond Terrace with a wide range of urban services
- Accommodating the development of the tourism industry, and its coexistence with the local residential population and environmental areas
- Advocating the provision of essential infrastructure including adequate roads, public transport and broadband.

4.4 Rural Lands Strategy

The LGA has a considerable area of rural land. The prime agricultural land in the LGA is shown in Figure 15. A rural land study was undertaken by Council in 2010 in order to understand the planning issues facing rural land. The resultant Rural Lands Strategy for the LGA is based on a growth management philosophy, which is underpinned by a series of conservation and development principles. Some important aspects of this approach are to:

- Recognise the impact of climate change on future settlement patterns and the rural lands of the LGA, including impacts on natural hazards
- Limit expansion to those settlements that have the infrastructure capacity and land capability to support growth
- Avoid development in areas of conservation significance
- Ensure that current and future agriculture is not compromised by the fragmentation of rural land
- Ensure that rural residential development does not hinder the proper and orderly development of urban settlements in the future
- Encourage sustainable agricultural production by maintaining and enhancing the natural resource base
- Ensure the people in rural areas and settlements have access to an appropriate level of community services and facilities
- Encourage a wide range of agricultural and other complementary rural uses such as tourism having regard to environmental impacts
- Ensure that there is adequate transport infrastructure to transport the commodities produced in the LGA to markets

4. Local policy context

- Protect the water quality of the Hunter and Williams Rivers and their tributaries
- Protect the integrity of both working and natural landscapes.

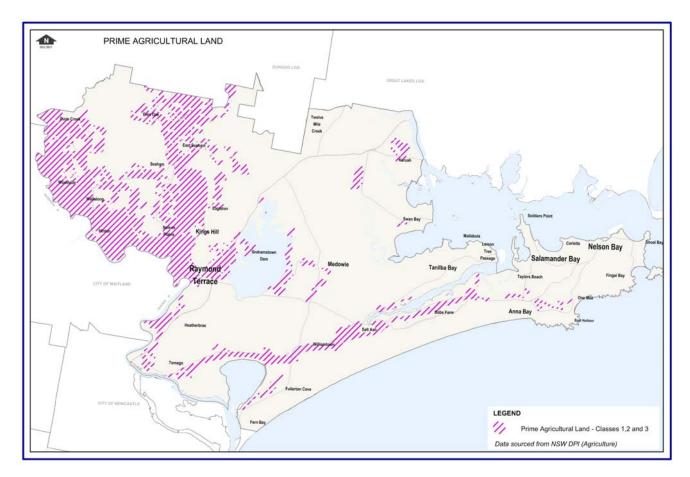


Figure 15: Prime Agricultural Land

The PSPS needs to ensure that prime agricultural land and important rural landscapes are protected from undesirable development. The containment of urban settlements within a defined settlement hierarchy is an important component of protecting rural land. In addition, rural land with urban potential should be protected from premature or inappropriate development such as rural residential development or smaller lot subdivision. Port Stephens LGA has limited land which is suitable for future urban development and this resource needs to be protected. The PSPS has an important role to play in providing a framework for protecting these valuable resources.

4.5 Local Environmental Plan and Development Control Plan

4.5.1 Port Stephens Local Environmental Plan 2000

The Port Stephens Local Environmental Plan (LEP) 2000 provides the primary statutory land use planning tool for the LGA. It describes a number of land use zones and the land uses permissible within each of

these zones. It also describes a number of development standards and other controls on development, including building heights and minimum lot sizes.

4.5.2 Standard Template Local Environmental Plan

As part of the NSW Planning Reform Agenda, all council's are required to prepare a new LEP to comply with the Standard Instrument (Local Environmental Plan) Order, 2006. The PSPS will provide direction to Council in developing a new Principal LEP. Further details are provided in Section 7 Implementation.

4.5.3 Port Stephens Development Control Plan 2007

The Development Control Plan (DCP) contains principles and controls for development at a more detailed level than the LEP 2000. The DCP is comprehensive, and applies to all development applications. The LEP prevails over the DCP.

In addition to controls applying to development in general, the DCP has controls for specific development types (such as medium density housing), and controls applying to a number of specific localities, such as Raymond Terrace town centre or Nelson Bay West.

The DCP needs to be consistent with the directions adopted by the PSPS.

4.5.4 Port Stephens Section 94 and 94A Developer Contributions Plans

Section 94 and 94A Developer Contributions Plans provide for the levying of contributions, as a condition of development consent, towards the public capital costs for facilities required as a result of new development. These Plans also detail Council's policy for the assessment, collection, spending and administration of contributions.

The yearly allocation of funds to specific projects takes place during the budget process which is undertaken as part of the finalisation of the Operational Plan, although the overall allocation of funds to projects is shown in the Section 94 Contributions Plan.

The PSPS contains infrastructure priorities which may be appropriate for Section 94 contributions, however it does not provide specific recommendations.

4.6 Environmental Policy and Strategy

4.6.1 Comprehensive Koala Plan of Management

Port Stephens contains important areas of koala habitat, and these have a significant impact on planning policy in the LGA. The Port

Stephens Comprehensive Koala Plan of Management (CKPoM) was produced to meet the requirements of State Environmental Planning Policy No 44 – Koala Habitat Protection (SEPP 44). The Plan:

- Evaluates and ranks koala habitat throughout the Port Stephens LGA
- Identifies priority conservation areas and strategies to protect significant koala habitat and populations
- Identifies threats that impact on koalas and koala habitat
- Provides for the long-term survival of koala populations by devising conservation strategies to effectively address each of the threats impacting on koalas and koala habitat.

The CKPoM describes one of the most important environmental assets of the LGA, and one to which the PSPS should protect by directing development to those areas least likely to impact on the koala population, either directly by reducing habitat, or indirectly by removing important movement corridors.

4.6.2 Port Stephens and Myall Lakes Estuary Management Plan

The Estuary Management Plan covers the following areas:

- the waterways of Port Stephens and Myall Lakes
- the Myall River, Karuah River and their tributaries, up to the limit of tidal influence
- the foreshore and other lands adjacent to the estuary, including all wetlands that are functionally related to the estuary
- the catchment area of these water bodies, in relation to the impacts of catchment processes on the estuarine environment.

The Estuary Management Plan provides a range of co-ordinated actions to deal with catchment related drivers of estuary health, rather than only addressing the resulting issues in the estuary.

It is important that the PSPS is consistent with the directions and actions of the Estuary Management Strategy by protecting the integrity of the Port Stephens waterways and the adjacent lands. The PSPS can achieve this objective by focussing urban development in defined settlements in locations where environmental impacts can be best managed.

4.6.3 Foreshore Management Plan for Port Stephens

The Estuary Management Plan identified the 'naturalness' of the foreshore of the estuary as one of its greatest assets. The Foreshore Management Plan provides a guide for the long term management of the Port Stephens Estuary Foreshore in order to protect its environmental, recreational, economic and cultural values.

The Plan provides a comprehensive review of the assets, conditions and values of the Port Stephens Foreshore. It provides a detailed series of recommendations presented as management actions for the entire Foreshore as well as for specific localities.

Major points made by the Plan are:

- The outer Port (east of Soldiers Point) is dominated by tidal and wave processes; the inner Port is dominated by fluvial processes
- The Foreshore is very diverse, and the Plan has divided it into 14 management zones
- Population growth will increase pressure on the built and natural assets of the Foreshore
- The character of the Foreshore is one of the most significant residential and tourist attractors to the area
- The range of existing land use zonings applying to different locations within the Foreshore do not provide sufficient recognition of its values and should be replaced by a "Foreshore Zone" and/or DCP
- The Foreshore supports areas of ecological significance
- Visual amenity is best protected through concentrating urban development within existing areas and minimising development on ridgelines and the immediate foreshore
- Sea level rise and climate change is likely to increase foreshore inundation and reduce shoreline stability
- The main water quality risks are from urban runoff, rural runoff, on-site wastewater treatment systems, oxidised acid sulphate soils, point source discharges from marinas (and slipways) and wastewater treatment plants
- There are many places (including the entire Foreshore) which are of significance to the Aboriginal community, but which do not have evidence of physical occupation.

The policy framework of the PSPS should be consistent with the Foreshore Management Plan, notwithstanding that much of the Plan is at a greater level of detail than that of the PSPS. Specifically, the PSPS should address the above points.

4.6.4 Port Stephens Climate Change Policy

The response of governments to climate change is evolving as more information becomes available about its likely extent and its potential impacts.

The full extent of the physical implications of climate change for Port Stephens LGA is not known, however Council is assessing the risks of climate change and developing clear policies and an asset management response. On 19 March 2009 Council adopted a planning benchmark for sea level rise of 0.91m for the year 2100 with an assumed linear increase from present day levels as the basis for Council staff to proceed with risk assessment, policy development, and

planning and development decisions. Council also resolved to review these figures when new information becomes available, such as the release of future Intergovernmental Panel on Climate Change assessment reports and guidelines being drafted by the NSW Department of Planning and Infrastructure and Office of Environment and Heritage.

In 2010 NSW Government has set sea level rise planning benchmarks of an increase above 1990 mean sea levels of 40cm by 2050 and 90cm by 2100.

The Department of Climate Change and Energy Efficiency (Federal) have now released Climate Change Risks to Coastal Buildings and Infrastructure – A Supplement to the First Pass National Assessment in June 2011. The Report predicts significant adverse implications for the LGA by concluding sea levels could rise by 1.1m by 2100. This is higher than the .9m adopted by Council. Further, the Report goes on to highlight the extent of projected impact on the infrastructure of the LGA such as indicating that up to 345 km of road network is potentially affected. This information will also be utilised as Council continues to develop a comprehensive response to managing the implications of climate change.

The spatial pattern of development promoted by the PSPS needs to respond to the challenge of climate change by:

- Promoting development which will not contribute to climate change (more sustainable development)
- Avoiding development of those areas which are likely to be negatively affected by the impacts of climate change.

5.1 Social (demographic)

Port Stephens has experienced continuing high population growth (annual growth rate 1.41%, from 2001-2006). The population is 67,825 at June 2010. This is a 1.71% increase from the previous year.

In 2006 Port Stephens had a resident population of 63,273 and accounted for 9.5% of the regional population. The highest population growth (25.6%) occurred in the period 1991-2006.

Analysis of the age structure of the LGA in 2006 compared to the Hunter Statistical Division shows a larger proportion of people in the younger age groups (0 to 17) and a larger proportion of people in the older age groups (60+).

The major differences between the age structure of Port Stephens LGA and the Hunter Statistical Division (SD) were:

- A larger percentage of 0-17 year olds (25.4% compared with 24.1%)
- A larger percentage of 60 to 69 year olds (11.3% compared to 9.7%)
- A larger percentage of people aged over 60 years and over (22.9% compared to 21.2%)
- A smaller percentage of 18 to 24 year olds (7.4% compared to 8.9%)
- A smaller percentage of 25 to 34 year olds (10.2% compared to 11.8%).

Other characteristics of note include:

- 17.5% of the population had some form of mobility impairment, including 23% in Nelson Bay
- 19,267 households occupied a separate house (66.7%), while 2,927 occupied a medium density dwelling (10.1%), and 294 occupied high density flats and apartments (1.0%) (Note: ABS definitions).

The changes in the type of occupied dwellings between 2001 and 2006 were:

- Separate house (+2,125 dwellings)
- Medium density dwelling (+201 dwellings)
- Caravans, cabin, houseboat (-333 dwellings)
- High density dwelling (-50 dwellings).(Note: ABS definition)

15.2% of the households earned a high income, and 24.1% were low income households, compared with 18.4% and 23.7% respectively for the Hunter SD.

59% of the population had no trade qualification or tertiary education and 62% left school by Year 10. This is a relatively low level of educational attainment with two implications. Firstly, people with low skill levels are more likely to be unemployed and for longer periods, and to receive a lower income throughout life. Secondly, low skilled jobs generally pay less and

transport costs and employment location are very important in allowing people to access these jobs.

The size of Port Stephens LGA labour force was 25,713 persons, of which 8,117 were employed part-time and 14,139 were full time workers (plus a portion of unemployed).

The employment status of the population in the LGA in 2006 is similar to the Hunter SD.

Overall, 92.8% of the labour force was employed (50.2% of the population aged 15+), and 7.2% unemployed (3.9% of the population aged 15+), compared with 93.0% and 7.0% respectively for the Hunter SD.

Port Stephens has a high level of casual employment, which is partially caused by, and compounded by, the seasonal nature of the tourism industry. This is a major challenge for the LGA.

1.3% used public transport, while 72.8% used a private vehicle, to get to work compared with 2.3% and 73.6% respectively in the Hunter SD.

38.2% of the households owned one car; 34.3% owned two cars; and 14.0% owned three cars or more, which is similar to the Hunter SD.

Below is an outline of forecast population trends within local areas.

Raymond Terrace – the proposed North Raymond Terrace/Kings Hill development will contribute to a near doubling the size of the existing population. Infill development in the current town is likely to be in the form of dual occupancy, low-rise multi unit development, with mixed-use development in the town centre.

Medowie – the fastest growing Planning District (48% between 1996 and 2006). High growth is projected to continue as the Medowie Strategy is implemented. Limited infill will occur through the further subdivision and additional dwellings on rural residential lots.

Karuah/Swan Bay - growth to occur in greenfield areas adjacent to the Karuah town boundaries. Infill development is likely to be minor given the area's relative remoteness from employment and higher order services. Physical constraints such as flooding limits potential growth of Swan Bay.

Tilligerry Peninsula – slightly higher growth levels than Karuah, supported by a larger existing population and a potentially larger greenfield development area at Tanilba Bay.

Tomaree Peninsula – the second fastest growing Planning District (40% between 1996 and 2006). Greenfield land opportunities are rapidly decreasing and land prices are increasing. Anna Bay is to be the only major area of urban expansion and is likely to attract local first homebuyers. Under

current planning controls, infill development is still likely to increase, particularly dual occupancies and multi storey dwellings.

Rural East – minimal population growth due to flooding, aircraft noise issues and a lack of infrastructure.

Fern Bay – population growth to be accommodated by the "Seaside" development and incremental development permitted with consent under relevant State Environmental Planning Policies which has allowed urban development in the rural zone.

Rural West - Future population growth is currently limited as rural residential areas are developed. Potential urban development at Wallalong could occur on relatively unconstrained land, however, infrastructure provision is a matter of key importance to be addressed.

Rural Residential

In Port Stephens LGA, rural residential development is found as urban fringe development or scattered throughout the LGA. Almost 50% of the rural land of the LGA is occupied by rural residential development. Over 95% of all rural holdings are less than 42 ha, leading to a highly fragmented land ownership pattern. In 2010 the Rural Lands Strategy found there were approximately 1684 dwellings on rural residential lots in the LGA. A further 407 dwellings could be accommodated as a result of further subdivision or the development of vacant rural residential lots.

Rural residential development provides housing for those seeking certain lifestyle values; however it also has a number of disadvantages including the costs of providing services to dispersed populations, effluent and waste disposal, weed control and rural land management.

The LHRS states that any future rezoning proposal for rural-residential development, beyond areas already available or identified, should be consistent with the Sustainability Criteria of Appendix 1 of the LHRS, consistent with an endorsed local strategy and maintain the character and role of the existing village centre.

5.2 Housing

Detached housing is the predominant form of privately occupied housing in the Port Stephens LGA. In 2006, 83.1 % of dwellings were detached houses, which was a 2.4% increase from 1996. In Australia 74.8% of dwellings are detached houses. A much smaller proportion of Port Stephens LGA's occupied dwellings are units or apartments than Australia overall, only 4.7% compared with 14.2% for Australia.

Because of Port Stephens' role as a holiday destination, it has a high proportion of unoccupied dwellings with 19.7% being unoccupied in 2006, similar to that of 1996. The Census is undertaken in August which is not a high tourist season time of year. Many of the unoccupied dwellings identified in the Census are located in the Tomaree Peninsula.

Of the unoccupied dwellings in the LGA, 33.9% of duplexes, villas and townhouses, and 60.7% of flats and apartments were unoccupied at the 2006 Census, an increase on the 1996 figures. Accordingly, it is important to understand the implications of these high vacancy rates for urban infrastructure and in contributing to a low level of activity and vitality of town centres out of the tourist season. Particularly in the Tomaree Peninsula, high numbers of dwellings do not equate to proportionally high permanent residential populations. In Nelson Bay, for example, 28% of detached houses, 50% of villas and townhouses, and 75% of apartments and units were vacant at the time of the 2006 Census.

During the 10 years from 1996-2006 there has been an increase in the proportion of households who have a mortgage and a decrease in those renting privately or from Government authorities. Outright ownership has the largest proportion, albeit declining, form of housing tenure. However, the decline in the proportion of households owning their dwelling outright has been almost entirely offset by the increased proportion of those paying off a mortgage.

Housing affordability in Port Stephens LGA has declined dramatically, in common with Australia generally. According to the NSW Department of Housing, at December 2010, the proportion of dwellings affordable for purchase to households at 80% of median incomeⁱ in Port Stephens was 10.0% (compared to 23.6% in non-metropolitan NSW at December 2009 and 3.8% in the Greater Metropolitan Region). This is up from 7.7% in December 2008 and compares with 9.3% in neighbouring Great Lakes at December 2009. Although purchase affordability has improved in Port Stephens LGA over the past two years, statistics show that it is still exceedingly difficult for lower income households to purchase housing in Port Stephens.

Since 2000, the most rapid increase in the median dwelling price in Port Stephens LGA occurred between 2000 and 2003, with the rate of increase in median prices being much flatter from 2003, until a slight increase in 2009 (see Figure 16). There is little difference in the trend for strata and non strata dwellings. Care should be taken in interpreting the 2009 figures because of the impact of the global financial crisis, first home owners' scheme (which increased prices and sales volume at the lower end of the housing market), and changing sales volumes on the median price (particularly reduced sales volumes at the upper end of the market).

The change in the median dwelling price in Port Stephens LGA has generally paralleled those of the Sydney Statistical District, as shown in Figure 16; however the last year or so has shown a more rapid increase in Sydney prices. Surprisingly, this trend is evident in both strata and non strata properties, despite the apparent oversupply of recently constructed units in the Tomaree Peninsula.

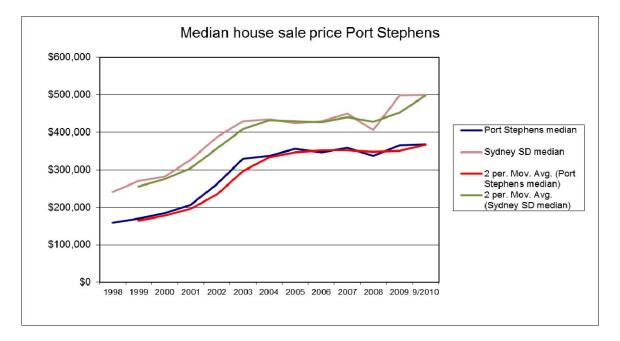


Figure 16: Dwelling Price Trends Source: NSW Department of Housing Rent and Sales Reports

According to the NSW Department of Housing, from the 2006 Census, the proportion of low and moderate income households in Port Stephens who are purchasing and are in housing stress is 47%. This is an increase of 15.7% from the 2001 Census. Port Stephens has a lower proportion of low and moderate income households purchasing and in housing stress than the average for the Greater Metropolitan Region (61%) and a higher proportion than the average for non-metropolitan NSW (43%). Port Stephens has a lower proportion than Great Lakes (51%) and is comparable to Lake Macquarie (46%) and Newcastle (45%).

Rental prices in Port Stephens LGA have shown a steady increase since 1999, with three bedroom dwelling rents increasing at a faster rate than one bedroom and two bedroom dwellings. Since 2006 the rate of increase of rents has accelerated. Since 2007 Port Stephens LGA rents have increased at a slower rate than Sydney metropolitan area overall (see to Figure 17).

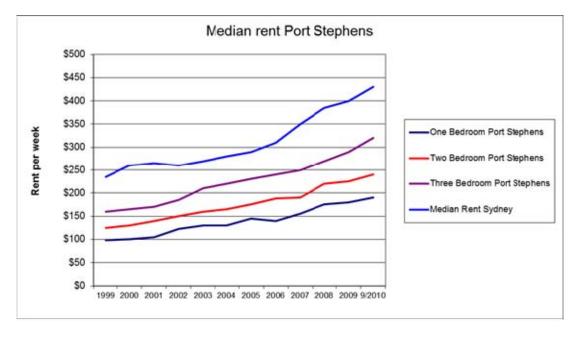


Figure 17: Dwelling Rental Trends Source: NSW Department of Housing Rent and Sales Reports

According to the NSW Department of Housing, the private rental market represents 17.7% of all occupied private dwellings in Port Stephens LGA (compared to an average of 21.9% for the Greater Metropolitan Region and 17.3% in non-metropolitan NSW).

Using Centrelink data the Department has calculated what proportion of people on low incomes in the private rental market and in receipt of Commonwealth Rent Assistance (CRA) are paying more than 30% of their income and therefore will be in housing stress. At June 2009 Port Stephens had 4,704 residents in receipt of CRA and 30.6% are in housing stress. The vast majority of those in stress (55.8%) are single person households, with a further 26.4% being single parent households. This is reflective of the broader trend amongst outer metropolitan regions with 67.2% of all CRA recipients in housing stress being single households in the rest of the Greater Metropolitan Region. This indicates that the private rental market is not catering adequately for low income single person households in particular. This is at least partly due to insufficient housing diversity, particularly an inadequate supply of affordable private rental dwellings with one or two bedrooms to meet demand. The fact that a significant proportion of CRA recipients in housing stress are on the Aged Pension suggests there are insufficient affordable housing opportunities for older lower income earners.

From the 2006 Census, 51% of all low and moderate income households renting in the private rental market in Port Stephens LGA are in housing stress. This represents an increase in the number of low and moderate income households in stress from the 2001 Census.

NSW Department of Housing has identified just under 1000 social housing dwellings in the LGA. The incidences of social housing varies dramatically across the LGA, with many localities having little or no social housing. Raymond Terrace having 14.9% of its housing rented as public housing with

659 of the LGA's 859 public housing rental dwellings in 2006. 3.6% of the LGA's occupied private dwellings are public housing.

The uneven distribution of social housing in Port Stephens LGA is of concern. Almost all the LGA's public housing is in Raymond Terrace. The concentration of such housing leads to a difficulty with some people who live elsewhere accessing social housing near their original community, and also leads to the potential stigmatisation of areas with large amounts of social housing. On the other hand, Raymond Terrace has the highest concentration and accessibility to services in the LGA to assist disadvantaged people. Raymond Terrace is already experiencing high levels of anti-social behaviour with the perception it is the high levels of public housing being the issue. Council is involved in ongoing discussions with the NSW Department of Housing to consider options to manager growth and subsequent positive and negative social impacts of public housing.

Around 3% of the occupied housing stock of the LGA was caravans and cabins in 2006, a decrease on the 2001 levels. However, this statistic needs to be interpreted in the light of many caravan parks increasing their stock of manufactured homes. Manufactured homes are frequently classed as "medium density" housing in the Census count. In addition there have been a number of new manufactured home villages established in the LGA in the past two decades.

Those living permanently in caravan parks or manufactured homes are often relatively low income, and are often aged. The location of this form of accommodation on the urban periphery and in otherwise rural areas means that the occupants have limited access to the services offered in urban centres, and can lead to social disadvantage.

Compared to Port Stephens a much greater proportion of households in Lake Macquarie LGA were in mortgage stress in 2006 (46%) relative to 2001 (29%). The proportion in rental stress was similar in 2006 (51%) to 2001 (50%). The median purchase and rental prices in Lake Macquarie and Newcastle have generally followed the same trend since 2008.

5.3 Housing Approvals

From 2000 to 2010 a total of 5464 dwellings were approved in Port Stephens. An average of 347 houses and 198 multi-unit dwellings per year. This equates to a yearly average of 545 dwellings approved in total (Note: ABS Building Approvals data).

Dwelling approval trends exhibit considerable volatility in the number of detached and medium density dwellings approved each year, as shown in Figure 18. Detached dwelling approvals have fluctuated above and below 250 dwellings per year since 2004-2005, below the 10 year average of 347 detached dwellings per year.

Furthermore, the LGA's share of Lower Hunter housing production has steadily declined from around 20% of the subregion's approvals in 2001 to 13% in 2010 on the basis of an average trend line, as shown in Figure 19. This is due to a

decline in housing production in the LGA, as well as an increase in production in other Lower Hunter LGA's.

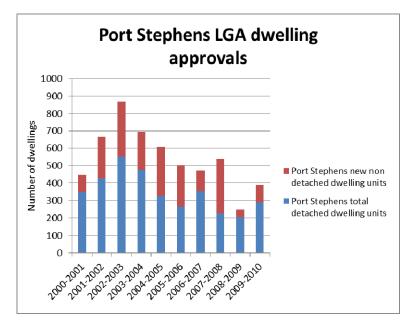


Figure 18: Dwelling Approvals in Port Stephens LGA Source: ABS Building Approvals

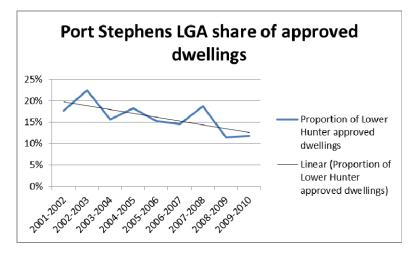


Figure 19: Port Stephens Share of Lower Hunter Approvals Source: ABS Building Approvals

Hunter Water Corporation data show that 3903 dwellings were completed over the same period, equating to 390 dwellings per year (Source: DoP UDP data, 2010). Completion data tend to lag in time behind approvals data because an approval is granted before a dwelling can be constructed. The difference between approvals and completions data is likely to be mainly due to medium density dwellings receiving approval, but not being constructed. This difference is particularly evident in the years following the approval "spike" in 2007-2008 when a significant number of medium density dwellings were approved but have not been constructed due to oversupply combined with a downturn in the market.

Port Stephens LGA has made a greater contribution towards achieving the Lower Hunter dwelling capacity targets of the LHRS than have other LGAs in the Lower Hunter overall. Port Stephens has approved 13% of the target number of dwellings, relative to 10% for the Lower Hunter overall.

Both approval and completion data show a slowdown over the last couple of years, with an increase in the last year. However it is expected that the demand for new dwellings will increase in future years due to the release of new urban land, particularly in Medowie and North Raymond Terrace (Kings Hill).

Dwelling approval trends also show that the proportion of medium density dwellings and units is increasing as a proportion of total approvals (32% over 1999-04 to 42% over 2005-09). It is anticipated that the long-term trend will see the average proportion of medium density to total dwellings to be in the order of 35-40%, once the volatility of the last few years has settled. Since 2000, detached dwellings have comprised 64% of approvals, and medium density approvals 35%, as shown in Figure 20. This is the same as the Lower Hunter as a whole.

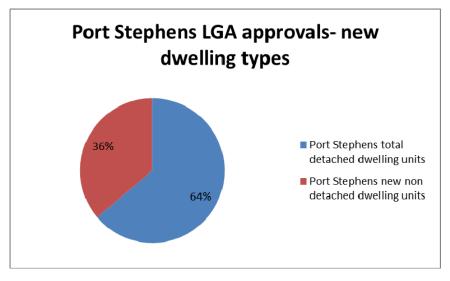


Figure 20: Dwelling Approval Types Since 2000 Source: ABS Building Approvals.

5.4 Economic

The Port Stephens Economic Development Strategy identified that the local economy is healthy with growth over the last 10 years being generated by population growth and a strengthening of the key industry sectors (airport/aviation; RAAF and defence support; engineering industries – mining industry and heavy engineering related; construction); and the overall strength of Newcastle and the Hunter Region. (Refer to Figure 21)

Port Stephens has "four economies":

• Defence and Aviation – the RAAF base, defence support, and the airport and aviation related- 3300 jobs, mainly high skill and full time

- Global Manufacturing and Logistics largely mining support and heavy industry, but including aluminium production – 3700 jobs, mainly high skill and full time
- Services retailing and services based at Raymond Terrace 3000 jobs, full and part time
- Services and Tourism retail and services for the local population and tourists 4400 jobs, full and part time with seasonality.

There are pressures in some sectors, including a softening in the tourism sector, which is experiencing competition and is being affected by national trends in the visitor market; and retail which is under pressure from escape spending to Newcastle and Maitland as well as on line shopping. The strong seasonality of the tourism industry is a challenge for the LGA.

The major economic advantages of Port Stephens relate to place (environment and lifestyle and accessibility – regional, state, national and international); industry base; and economic infrastructure (airport, industrial land).

The major constraints include: limited higher order knowledge-based services; current skills shortages (particularly skilled trades in manufacturing and construction); infrastructure gaps (particularly roads, energy and services in industrial areas – eg. airport zone, Tomago); current weaknesses in the tourism market; and limited public transport.

The Strategy found that the LGA needs to develop a broader base of employment, including higher order services; develop employment skills in the workforce; reduce unemployment rates; and create sufficient employment opportunities in the LGA for a growing population generated by new town developments (Medowie and North Raymond Terrace/Kings Hill).

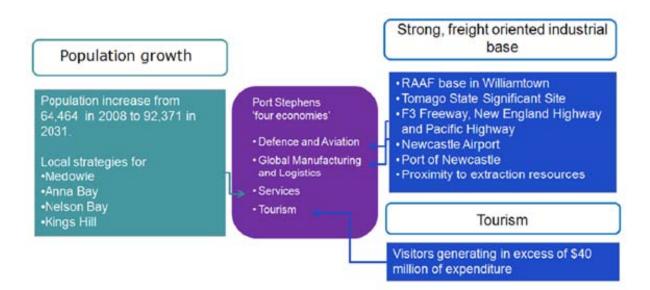


Figure 21: Main Components of the Port Stephens LGA Economy Source: SGS Commercial and Industrial Lands Study 2010

10,154 jobs need to be generated in the LGA by 2031 to accommodate the increased labour force resulting from the population growth envisaged by the LHRS. This level of jobs growth has been achieved during the past decade.

Figure 22 shows the LGA has a reasonable level of employment self containment with around 63% of working residents being employed within the LGA. However, given the strong growth of the Tomago area and the likely growth of the DAREZ Business Park, there is scope to increase the proportion of residents working within the LGA.

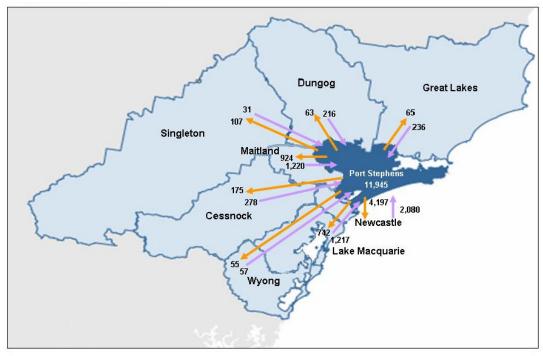


Figure 22: Commuter Flows and Employment Source: Port Stephens Economic Development Strategy

Local employment in the new town centres (home businesses and local services) will only deliver around 30% of the jobs required. Additional jobs will need to be in business services and retail in a revitalised Raymond Terrace, in an expanded tourism sector, in manufacturing in Tomago, and in higher order technology jobs in aviation and defence at Williamtown and the Airport (DAREZ Business Park).

Tomago has the capacity to generate over 3000 jobs; and businesses servicing the local population have the capacity to generate 1500-2000 jobs.

There are also likely to be opportunities in health and community services to service an ageing population.

5.4.1 Centres

Raymond Terrace, the LGA's major regional centre, hosts a broad range of activities. Of around 138,000 m2 of total occupied floorspace, retail trade comprises 84,500 m2 (61%). The balance of floorspace is attributable to non-retail activities, including the largest amount of government activity and a large proportion of business services in the

LGA. Raymond Terrace provides activities that serve the surrounding region, including activities that may be accessed infrequently.

Raymond Terrace also hosts a notable amount of manufacturing, construction and wholesale activity compared to most other centres. These industries are generally located in the 5(g) Special Urban (Flood Affected) zone on the edge of the centre.

Salamander Bay, shopping centre has about a third less floorspace than Raymond Terrace. There is around 46,000 m2 of occupied floorspace in this centre and around 600 m2 of vacant floorspace.

It does not have a large share of non-retail (serviced based) activity.

Nelson Bay also has a significant share of non-retail activity reflecting the business and personal servicing needs of the surrounding population and tourists. There is around 53,000 m2 of occupied floorspace.

Tanilba Bay (13,000 m2 of occupied floorspace), **Anna Bay** (7,374 m2 of occupied floorspace), and **Medowie** (7,000 m2 of total occupied floorspace, plus a large open air car parking area with around 5,000 m2 of land on vacant lots) all serve local catchments.

The **North Raymond Terrace (Kings Hill)** town centre is yet to be developed and its local population will be served by the Kings Hill town centre and Raymond Terrace. It is likely to have a supermarket, a number of speciality shops and basic services, such as a doctor, hairdresser and the like. At full development, the town centre and other small village centres at Kings Hill collectively may have between 7,500 and 10,000 m2 of total floorspace.

At lower levels of the Commercial Centres Hierarchy, Shoal Bay, Karuah, Salamander Bay, Randall Ave, Raymond Terrace East, Soldiers Point, Lemon Tree Passage, Salt Ash, Fingal Bay, Nelson Bay (Austral St and Armadale Ave), Fern Bay, Corlette, Hinton, Woodville, and Seaham, only cater for limited day to day needs of the population.

5.4.2 Industrial Employment Lands

Tomago is the LGA's largest industrial precinct with 767 ha of zoned land. To the east of this 4(a) Industrial zoned land, another 352 ha of land is zoned IN1 General Industrial under the provisions of the State Environmental Planning Policy (Major Development) 2005.

In 2010 there were 58 ha of occupied floorspace representing around 74 per cent of industrial floorspace within the LGA. The precinct is dominated by manufacturing activity, split between heavy and local light uses.

The Defence and Airport Related Employment Zone (**DAREZ Business Park**) at Williamtown has an initial 90 ha of zoned land that would produce an estimated 270,000 m2 of floorspace (Buchan 2007). Development at DAREZ Business Park must support a defence and airport related employment area. Further rezoning is under investigation.

The 186 ha **Heatherbrae** industrial precinct has far more diverse industry types than Tomago. The largest amount of floorspace is occupied by the construction industry related manufacturing uses. Heatherbrae has been identified, in the first instance, as the target area for bulky goods retailing as it is considered the most suitable location from a strategic planning and market perspective.

The **Salamander Bay** industrial precinct is located close to Salamander Bay centre and is the closest industrial area to the urban areas on the northern tip of the Tomaree Peninsula, including Nelson Bay. There are around 10 ha of industrial zoned land in this precinct of which 4ha was occupied floorspace in 2010. Most of the activity here is of a local light nature, reflecting the precinct's role in serving the local population.

There was over 3ha of occupied floorspace in the 28 ha **Taylors Beach** industrial precinct in 2010. Most of the activity here is of a local light nature including bulky goods retail. Again, this reflects the precinct's role in servicing the local population. The floorspace is occupied by a broad range of industries compared to other precincts.

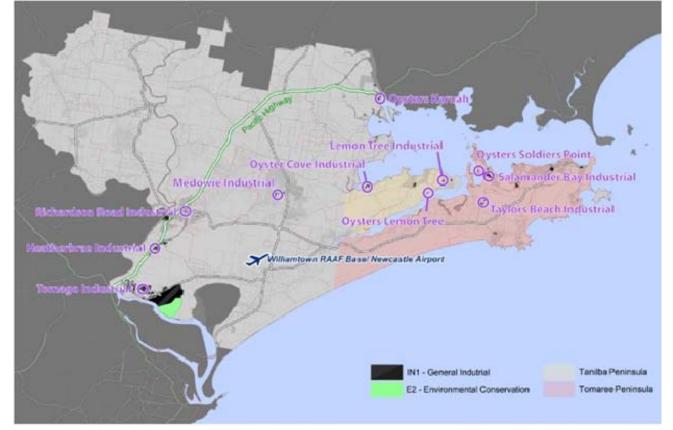
Lemon Tree Passage industrial precinct is located on the Tilligerry Peninsula between Tanilba Bay and Lemon Tree Passage. In 2010 there was around 0.7 ha of occupied floorspace on a total of 6 ha of industrial zoned land in the precinct. Most of the activity is of a local light nature.

The 7 ha industrial precinct in **Medowie** is located close to the Medowie town centre. In 2010 there was around 0.7ha of occupied floorspace, all of a local light nature.

Several small industrial precincts have specific functions related to their location. The first is on Richardson Road, close to Raymond Terrace and just to the west of the Pacific Highway. The two lots include a service station, a self storage facility and a number of currently vacant commercial buildings.

The second is Oyster Cove at the beginning of the Tilligerry Peninsula. This precinct hosts marine related activity, principally boat making and repairs.

The third is the three precincts of industrial land which are used solely for the purpose of oyster farming. These are located near Karuah, Lemon Tree Passage and Soldiers Point.



Location of the industrial land in the LGA is identified at Figure 23.

Figure 23: Industrial Areas in the LGA Source: SGS Commercial and Industrial Lands Study 2010

5.4.3 Rural Industry

According to the Rural Lands Study, the agricultural sector of the LGA is relatively small, with a total value of \$14.5 million in 2005-2006. Poultry for meat, cattle for slaughter, dairy and mushrooms comprised 91% of the value of production. It is estimated that 238 people are employed in agriculture, with most part time.

In addition, commercial fishing of the area around Port Stephens-Great Lakes contributed \$14.8 million value of output and aquaculture \$15 million (including oysters at \$3.5 million) in 2005. Around 380 people work in these two industries, with most part time.

5.5 Environmental

5.5.1 Terrestrial Ecosystems

Port Stephens LGA enjoys substantial biodiversity due to the variety of ecosystems it contains. These include open forest, rainforest, riparian

forest, coastal swamp forests, woodland, heath and sedge land. A number of vegetation communities in Port Stephens are classified as Nationally, State or Regionally significant.

The LGA contains 58 endangered or threatened fauna species and 20 endangered or threatened flora species. (Source Department of Environment and Conservation Wildlife Atlas). These are provided legal protection under the New South Wales Threatened Species Conservation (TSC) Act. The LGA is also known for having a koala population that is iconic to the area.

There are around 32,156 ha of protected land in the LGA that support biodiversity conservation. These include National Parks (18,885 ha), State Forest (3,468 ha), public Community Land classified as `natural area' (532 ha) and 'foreshore areas' (242ha), private and public land zoned Environmental Protection (9,029 ha) (excluding National Parks Estate, community land classified as natural area and foreshore areas which has already been counted, and the Port).

Pressures on terrestrial biodiversity in Port Stephens include land clearing for agriculture, mining, and urban development, habitat and corridor fragmentation, invasion by introduced plant and animal species, and altered fire regimes. The area's iconic koala population is also under a large degree of pressure indicated by anecdotal evidence, such as dramatic decline in koalas in care and vehicle fatalities, which suggests that the koala population is reaching a tipping point from which it may not recover.

5.5.2 Freshwater Ecosystems

Freshwater ecosystems in Port Stephens LGA include freshwater wetlands, freshwater streams, the upper reaches of some river systems and substantial groundwater dependent ecosystems. Several of these ecosystems are important for supplying potable water to the region, including the Williams River, Grahamstown Dam and Tomago Sand Beds.

Freshwater wetlands in the LGA include coastal freshwater swamps, marshes, hanging swamps, and intermittently inundated floodplains along the Hunter and Williams Rivers. State Environmental Planning Policy 14 Coastal Wetlands (SEPP 14), identifies and protects a number of the important freshwater wetlands that are located near Raymond Terrace, Medowie, Karuah, the Tomaree Peninsula, and along the Hunter and Williams Rivers.

The total area of wetlands in the LGA (estuarine and freshwater) is around 17,511 ha. 10% of these wetlands are located on National Parks Estate, 3% are listed as internationally significant wetlands under the 'Convention on Wetlands of International Importance' held in Ramsar Iran, and 68% are protected by State Environmental Planning Policy (SEPP) 14 – Coastal Wetlands. 18% of the LGA is classified as wetlands.

The LGA also contains substantial freshwater aquifers. These include the Tomago, Tomaree and Stockton aquifers that cover an area of approximately 275 square kilometres (Department of Sustainable Natural Resources, 2003).

The health of freshwater ecosystems in Port Stephens is threatened by pressures that include declining water quality, reclamation and drainage, clearing, cropping and grazing, altered hydrology and introduced species. The invasion of aquatic weeds continues to degrade these environments.

A variety of freshwater wetlands in the LGA are listed as endangered ecological communities. These include: Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions; River-Flat Eucalypt Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions; Swamp Oak Floodplain Forest of the NSW North Coast, Sydney Basin and South East Corner bioregions; Swamp Sclerophyll Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions; Swamp

5.5.3 Coast and Estuary

The Port Stephens coastal zone stretches from Fern Bay in the south to Yaccaba Headland in the north, including Shoal Bay Beach. A significant proportion of this zone includes Stockton Bight, as well as rocky headlands and ocean beaches that are located on the Tomaree Peninsula.

Activities with the potential to affect the water quality and health of the coastal zone in Port Stephens primarily include agricultural run off, stormwater pollution, beach erosion (particularly at Shoal Bay) and the discharge of treated sewage effluent in the coastal zone.

The Port Stephens LGA contains two major estuarine systems that contribute significantly to the environmental, aesthetic, economic, recreational and lifestyle attributes of the LGA. These are the Port Stephens and Hunter estuaries.

The Port Stephens Estuary covers an area of approximately 140 square kilometres and the Hunter Estuary around 26 square kilometres. In addition to their environmental values, both estuaries are extremely valuable to the economy and lifestyle of Port Stephens.

The Port Stephens Estuary supports a wide variety of estuarine habitats including the largest area of mangrove in NSW, approximately 18% of the remaining saltmarsh in NSW and extensive seagrass beds. The Estuary and adjacent wetlands also provide important habitat for migratory waders and commercially important species of fish. The Estuary supports several endangered species including birds, reptiles and mammals. The health of the Hunter River Estuary has been highly modified due to historic river and land use management practices, however, the Estuary still has a valuable prawn and oyster industry.

Modern pressures include potential industrial development, river bank loss and erosion, loss of aquatic habitat, long term sedimentation and erosion processes, poor water quality, introduced plant and animal species, changed hydrological regimes, obstacles to fish passage and changes in weather patterns and sea levels associated with climate change.

While water quality in the Port Stephens estuary is considered good in that it generally satisfies Australia and New Zealand Environment Conservation Council (ANZECC) water quality guidelines, indicators show a longer term decline in water quality, particularly in certain catchments.

Environmental pressures include the loss of seagrass beds, changed hydrological regimes, clearing of native vegetation, polluted stormwater and agricultural runoff, noxious and environmental weed invasion and declining water quality. In June 2005, declining water quality in Tilligerry Creek resulting from urban and rural settlement caused the closure of an oyster harvesting zone. In 2007-2008 some of the zone initially closed was reopened, however part of the area still remains closed to harvesting.

5.6 Aircraft Noise

Considerable areas of the Port Stephens LGA are affected by the combination of the current and future operations of the Hawk and Hornet aircraft and the predicted noise impacts of the Joint Strike Fighter.

The RAAF Base is located at Williamtown and the associated Salt Ash Air Weapons Range (SAWR) is located approximately 6 km to the north-east of the Base and is used for air-surface gunnery and bombing practice.

The Royal Australian Air Force (RAAF) is planning for the progressive introduction of the Joint Strike Fighter military aircraft commencing from 2017-2018 and the progressive retirement or "phasing out" of existing Hawk and Hornet military aircraft by 2025.

Where land is likely to be affected by aircraft noise, Council is required to take into consideration aircraft noise/ANEF maps and Australian Standard 2021-2000 Acoustics - Aircraft Noise Intrusion - Building siting and construction ("AS 2021-2000"). Depending on the noise environment, certain types of

development may not be suitable, or may be suitable only with appropriate noise attenuation measures.

In August 2011, the Department of Defence released the ANEF 2025 for the RAAF Base Williamtown and Salt Ash Air Weapons Range. ANEF 2025 reflects the operation of the Joint Strike Fighter combat aircraft after 2018 and the continued operation of the Hawk aircraft.

The former ANEF 2012 also remains relevant. It reflects the continued operation of existing Hawk and Hornet aircraft and is expected to continue until at least 2018.

The abovementioned two maps combined form an Aircraft Noise Planning Area within which aircraft noise should always be considered in planning and development decisions.

For full details of the current ANEF maps go to the Department of Defence website.

5.7 Flood Prone Land

Large areas of the LGA are potentially affected by flooding, as shown in Figure 24. Flooding is caused by a number of factors including the flooding of the Hunter River, flooding of the Williams River, localised catchment flooding, very high tides and storm surge. Each of these causes of flooding has its own characteristics and impacts, including warning time and duration. Flood events from various causes can occur independently or at the same time.

Flooding has a significant impact on the location of land uses, and on infrastructure, such as transport.

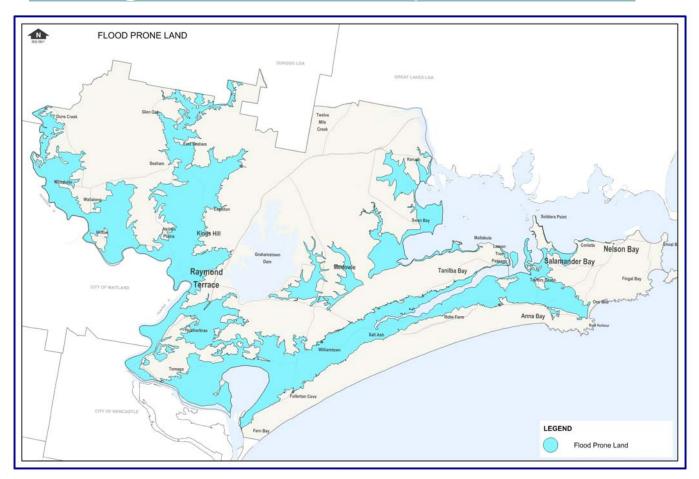


Figure 24: Flood Prone Land

5.8 Climate Change

A major impact of climate change is sea level rise. In 2010 the NSW Government has set sea level rise planning benchmarks of an increase above 1990 mean sea levels of 40cm by 2050 and 90cm by 2100.

The then Department of Environment Climate Change and Water (now Office of Environment and Heritage) analysis for the Hunter Region states that by 2050 days are projected to be hotter by 1 to 3°C.

Rainfall is projected to increase in all seasons except winter which will not change. The greatest increases are projected to occur in summer, particularly in the far south of the Hunter region, where rainfall is projected to increase by up to 50%.

There will more likely than not be a slight increase in annual runoff (with estimates ranging from -5 to +12%) with likely increases in summer and autumn and decreases in spring.

However, increased evaporation is likely to result in no net change in water balance for many areas.

Along the coast, storm events and sea level rise are projected to have a significant impact. Sea level rise and the potential for increased storminess will exacerbate the risks of coastal erosion, as well as subsequent inundation of low-lying areas. Coastal erosion is likely to result in a recession of sandy parts of the coastline.

The frequency of very high or extreme fire risk days is predicted to increase. Increases in temperature, evaporation and high fire risk days could increase fire frequency and intensity. The fire season is likely to be extended as a result of warmer temperatures.

Rising sea levels are likely to have a major impact on biodiversity.

A number of ecological communities may be threatened and most communities are likely to undergo some change in species composition. Salt water wetlands on the immediate coastline are likely to be affected by rising waters. Other coastal low-lying communities such as wet heaths, coastal forests and freshwater wetlands are likely to be at risk from erosion, salt water inundation of water tables and increased sedimentation on the floodplains.

Saltwater migrating further upstream is likely to have implications for farm irrigation and groundwater. Increased temperatures and the potential for more frequent bushfires are likely to impact on ecosystems across the region. There is likely to be sediment deposition on the coastal floodplains and salt water incursion into subsoils and water tables.

Rising sea levels are predicted to cause increased erosion of coastal dunes.

Soil organic matter content is likely to improve; however, many soil problems, such as acidification, salinity and mass movement, are likely to become worse. Acid sulphate soils in the coastal lowlands will continue to produce acid; however, this effect will reduce over time as sea levels rise.

The major impact on the coastal zone is likely to be from sea level rise and resulting inundation and erosion. Rising sea levels may exacerbate flood risk around estuaries and in coastal rivers and floodplains. In addition, any increase in rainfall intensity in severe storms may impact on flood risk more broadly across the area. Infrastructure and urban development, such as housing, located on the large, low lying floodplains of the Hunter River and Karuah/Myall river systems, as well as adjacent to the estuaries, will be particularly vulnerable. The proximity of development to the coast will make these areas vulnerable to the impacts of coastal erosion.

Key infrastructure that is likely to be affected as water levels rise includes low lying roads adjacent to estuaries such as Port Stephens.

With the assistance of Commonwealth funding Port Stephens Council has assessed the highest risks to the LGA. These risks and possible responses are

outlined in the Local Adaptation Pathways Program for Climate Change Assessment Report 3 Adaptation Action Plan. The prioritised risks are shown in Figure 25.

Risk Identifier	Risk Description	Risk Level
ST3	Impacts to stormwater systems	EXTREME
ST4	Localised flooding	EXTREME
SLR1	Loss of access on key roads, access to emergency services etc	VERY HIGH
SLR3	Impacts to stormwater system	VERY HIGH
SLR4	Increase in coastal and foreshore erosion (including undermining of vegetation)	VERY HIGH
SLR5	Risk of liability to Council	VERY HIGH
SLR7	Impacts to sewerage system and on-site sewage through increased water table	VERY HIGH
SLR10	Cost to Council to protect, maintain and redesign assets	VERY HIGH
SLR15	Loss of foreshore assets, property and tourism-associated assets, incl surf dubs, wharfs, boatramps	VERY HIGH
LR1	Increase in fire intensity / type of fires	VERY HIGH
MR2	Increased drainage issues	VERY HIGH
ST1	Damage to infrastructure / buildings	VERY HIGH
ST8	Long term cost to Council	VERY HIGH
HT1	Increased bushfire risk	VERY HIGH
HD1	Increase in bushfires	VERY HIGH

ST = increase in storm frequency / intensity

SLR = sea level rise

LR = less rainfall

MR = more rainfall

HT = higher temperatures

HD = increase in number of hot days

Figure 25: High Risks of Climate Change to Council responsibilities

5.9 Heritage

Non-Aboriginal cultural heritage in Port Stephens includes historic villages, heritage conservation areas at Raymond Terrace, Hinton, rural landscapes, significant early residences such as Tomago House and Tanilba House, lighthouses, churches, cemeteries, war memorials, courthouses, schools, shipwrecks, archaeological remains such as the Irrawang Pottery site, cottages and early subdivisions such as Henry Halloran's 1930s development at Tanilba Bay.

The Port Stephens Community Based Heritage Study completed in 2003 identified sites of heritage significance in the LGA. Many of these are included in the Heritage Schedule of the Port Stephens Local Environmental Plan 2000, and will be included in the new Principal LEP.

Many sites and areas of significance to Aboriginal people are located within Port Stephens, including shell middens, scarred trees, occupation and ceremonial sites and places of spiritual value. In the area stretching from Wallis Lakes to Newcastle there are 37 recorded Ceremonial Sites (stone arrangements, bora grounds, carved trees and burial sites), 115 recorded

campsites (mia mia, scarred tree, open campsite, shelter with deposit, well, fish trap, abraded grooves and quarries) and over 100 middens.

Aboriginal people have always had culturally specific associations with the natural landscape, making their cultural values inseparable from natural values. As a result, land use change that destroys or degrades the natural landscape impacts directly upon Aboriginal cultural values. In Port Stephens land use change of this nature is prevalent, arising from high rates of population growth and associated development.

5.10 Transport

The dispersed nature of urban development in Port Stephens makes it very dependent on an efficient transport network.

There is strong seasonality in traffic movement due to the tourist industry, and the area is heavily dependent on motor vehicles for day-to-day transport despite being relatively flat and suitable for walking and cycling.

In the foreseeable future, medium and long trips in Port Stephens will remain predominantly road based due to the dispersed nature of urban development however a shift in transport modes combined with greater employment self sufficiency will be needed to ensure road infrastructure has sufficient capacity.

The road hierarchy and 2005 traffic volumes are provided in Figures 26 and 27. Two north-south transport corridors, being the Pacific Highway and Nelson Bay Road, dominate the LGA.

The Pacific Highway connects Sydney to Brisbane and is one of the most significant transport corridors in Australia. The junction of the New England Highway (the inland route from Brisbane to Sydney) with the F3 Freeway is just beyond the southern border of the LGA. The northern extension of the F3 Freeway to Heatherbrae will further reduce travel times to destinations to the south, such as Sydney, by approximately 10 minutes. In 2010 the proposal was in the final planning stage.

Nelson Bay Road connects the Tomaree and Tilligerry Peninsulas to Newcastle. The long and narrow width of the peninsulas means that access to and from them is restricted to this one road. Therefore, population growth and growth in traffic on the Peninsulas will lead to a corresponding increase in traffic volumes on Nelson Bay Road. Nelson Bay Road also provides connections to current and future local and regional employment areas, namely Newcastle Airport, Thornton/Beresfield, Tomago, Kooragang and Carrington.



Figure 26: 2005 Traffic Volumes (RTA)



Figure 27: 2031 Traffic Volumes (RTA and PSC)

Other transport modes such as ferries and public buses are underutilised, possibly due to the need for better connectivity, frequency of services and improved supporting infrastructure.

Rail - the north/south Sydney to Brisbane rail line travels via Maitland, Dungog and Gloucester, before returning to a north/south alignment at Taree. As a result it does not traverse the LGA.

The PSPS describes Council's land use strategy to 2036 and provides the basis for the Council's Principal LEP. All communities in Port Stephens are considered to be significant and all play an important role in how Port Stephens functions as an area.

This Section describes Council's strategy for residential, commercial and industrial development in Port Stephens.

It includes sites identified in the Department of Planning and Infrastructure's Lower Hunter Regional Strategy, supplemented by potential urban land at Wallalong.

The identification of these sites has had regard to the existing urban development pattern in Port Stephens, land supply and demand, and land use constraints. Constraints include natural hazards, the Green Corridor, ecology, aircraft noise and future servicing plans. Details provided include approximate development yield, anticipated timeframes, development priority and particular opportunities and constraints applying to the land. Refer to Port Stephens Planning Strategy Map in Appendix 3.

The PSPS Map provides an overview of the new areas of growth in the LGA. The Primary Growth Corridor for the LGA stretches from North Raymond Terrace (Kings Hill) to the regional centre, Raymond Terrace down to the Heatherbrae Enterprise Corridor and anchored by Tomago in the South. There is also an Eastern Growth Corridor encompassing Medowie, Williamtown, Newcastle Airport and Fullerton Cove/Fern Bay. However, the potential for additional growth in the medium to long term in the Eastern Growth Corridor area will be re-evaluated following review of the Lower Hunter Regional Strategy completion and of the Raymond Terrace/Heatherbrae Growth Strategy.

The Tomaree Tourism and Lifestyle Growth Area is located at the eastern extreme of the LGA and highlights the dual role the area has. Wallalong is identified as a Potential Urban Release Area subject to resolution of infrastructure delivery.

6.1 A Framework for Growth and Conservation

The Integrated Planning Framework (IPF) adopted by Council in June 2010 includes a statement of "Sustainability at Port Stephens" which has been used as the basis for the land use strategy contained in the PSPS. Relevant aspects of the "Sustainability at Port Stephens" statement include:

Sustainability will be:

- The basis for planning the overall design of new urban release areas
- The basis for planning a balance between development and environment in the LGA

• Achieving intergenerational equity for environmental conservation and service provision and the basis for financial management of Council.

Governance Framework

A framework is established to coordinate the policies, budgets and work programs of agencies to deliver Port Stephens 2022 and in particular a framework to improve the cohesive approach of State agencies to implementing Port Stephens 2022, the Lower Hunter Regional Strategy and the State Plan in Port Stephens.

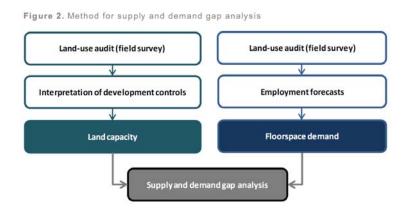
Good Development

Port Stephens Council stands for "good development", that is supporting development that:

- Fulfils the Lower Hunter Regional Strategy directions;
- Respects the coastal and environmental attributes and heritage of the LGA
- Establishes reasonable clarity about the long term development pattern and capacity of the LGA for the development industry, investors and the community
- Is consistent with State and local legal and policy framework
- Is based upon policies providing increased certainty to the development industry, investors and the community and supporting increasingly efficient development assessment.

6.2 Analysis of Commercial and Industrial Land

The Commercial and Industrial Lands Study (SGS, 2010) undertook a gap analysis to forecast demand for floor space for commercial and industrial areas with the available supply of land. The existing supply for commercial and industrial floorspace was measured by conducting a land use audit of all commercial and industrial zoned land. The audit involved a field survey of current activity in each building.



A low supply scenario and a high supply scenario were developed. The actual supply of land available for commercial and industrial development in

Port Stephens LGA is somewhere in between these two scenarios and as a result will need to be closely monitored to ensure supply is available.

The low supply scenario made the following assumptions:

- No additional floorspace can be absorbed on currently occupied lots (in practice, some businesses might add new floorspace as their operations expand but this is likely to be offset by other businesses which take on more employees but do not increase their building floor space)
- Any lots that are currently occupied by residential development are not available to be redeveloped
- Vacant lots will be developed at the same intensity as existing lots in the precinct. That is, vacant lot capacity will be determined by multiplying the area of land on vacant lots by the existing floor space ratio across the precinct as determined from the land use audit.

The high supply scenario made the same assumptions as the low scenario, except that vacant lots could be redeveloped within the constraints of the applicable floor space development controls, as follows:

- 1.8:1 for commercial centres
- 1:1 for 5(g) Special Urban (Flood Affected) Zone 1:1 for industrial precincts

An estimate of future demand for floorspace was developed from employment forecasts published by the Transport Data Centre (TDC). These employment forecasts are that total employment in the LGA is expected to increase by 5,320 jobs (21.3 per cent) from 2006 to reach 30,240 jobs in 2031. However, this data did not reflect what was actually occurring on the ground and an amended estimate of 10,154 jobs is projected.

The forecast shows only a small increase for manufacturing and an overall decrease in construction employment over the forecast period. This was not consistent with regional industry trends, evidence of local business development and strategic drivers. As such, SGS prepared an additional alternative employment forecast scenario for Tomago and Heatherbrae which projects a growth of 2,221 jobs in that area, a much higher figure than the increase of 429 jobs in the TDC estimates.

Otherwise, the overall increase in employment is driven by a large growth in the accommodation and food services industry sector as well as population serving industries, public administration and safety, retail trade, health care and social assistance, and education and training.

6.3 Centres and Hierarchy

The PSPS establishes a hierarchy and network of urban centres. Raymond Terrace is identified as the regional centre, which is supported by specialised centres, town centres and a wide network of smaller neighbourhood centres and villages.

What is a centre?

A centre is a concentration and/or combination of retail, commercial, civic, cultural and residential uses, ideally focused around transport facilities. The highest order of centre (ie. Regional Centre) will contain the highest order of services (ie. Police Local Area Command). The level of services provided declines as the centres progressively cater for a more immediate catchment (ie. a smaller village centre will provide basic services, such as supply of milk and bread).

The planned growth of centres will enable the people of Port Stephens LGA to have access to the services they need as close as possible to where they live, and that higher level centres are able to develop a wide range and depth of services and commercial businesses.

The PSPS establishes a hierarchy of commercial centres. This hierarchy is based on the function performed by each centre, and shown in Figure 28 and 29. It supplements the hierarchy of the LHRS by including smaller centres, such as villages, small village centres and neighbourhood centres.

The hierarchy for the centres in Port Stephens LGA is based on

- Information provided during consultation
- The existing level of activity in each of the centres
- Retail modelling of current market share
- Likely future demand as indicated by State and local planning documents
- Likely future demand as indicated by official government forecasts
- Accessibility by private vehicle (given the high reliance on private vehicles and the dispersed settlement of the LGA)

LOCAL GOVERNMENT AREA		Port Stephens
REGIONAL CENTRE	Each LGA in the Lower Hunter has an identified regional centre, which is the hub for that LGA. It has a concentration of business, higher order retailing, employment, professional services, and often civic functions and facilities. It is a focal point for transport networks and may service a number of districts.	Raymond Terrace
SPECIALISED CENTRES	Specialised centres are areas containing airports, hospitals, universities, research and/or business activities that perform vital economic and employment roles.	Salamander Bay (stand alone Retail) Williamtown (Air Services) Heatherbrae (Enterprise Corridor) Nelson Bay (Tourism)
TOWN CENTRES	Town centres contain shopping and business for the surrounding district, including health and professional services mixed with medium density housing.	Nelson Bay (also specialist centre) Tanilba Bay Anna Bay Medowie Raymond Terrace North (Kings Hill)
VILLAGE CENTRES	A village centre is a strip or cluster of shops in a mostly residential area to meet the day to day needs for local residents and workers.	Shoal Bay Karuah Salamander Bay (north) Raymond Terrace (Lake Side)
SMALLER VILLAGE CENTRES	A smaller village centre is a village centre, but on a smaller scale. Services available to these communities may be limited to a pub or general store.	Soldiers Point Lemon Tree Passage Salt Ash Fingal Bay Nelson Bay (Austral St and Armadale Ave) Fern Bay Corlette Hinton, Woodville and Seaham



This subcategory of smaller village centre contains either no commercially zoned or occupied floor space, and may be a congregation of dwellings in a rural area. Boat Harbour Mallabula Fullerton Cove One Mile Swan Bay Taylors Beach Wallalong

Figure 28: Centres Hierarchy

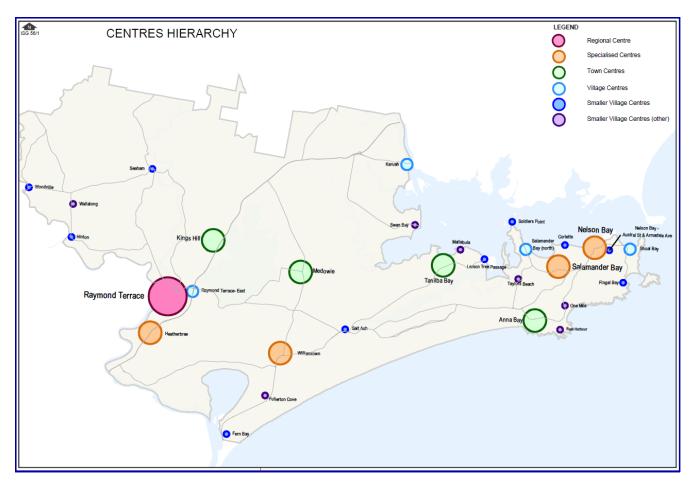


Figure 29: Map of the Hierarchy of Centres

6.3.1 Regional Centre - Raymond Terrace

Raymond Terrace is designated as a regional centre in the LHRS. Council's Commercial and Industrial Land Study has confirmed this role.

The population of Raymond Terrace-Heatherbrae-Nelsons Plains area is projected to increase from 13,346 people in 2009 to 21,380 people in 2031, or by 8034 people. The LHRS specifically identifies an additional 300 dwellings in Raymond Terrace. This can be largely attributed to the development of the North Raymond Terrace/Kings Hills area. The high level of expected population growth in areas such as Medowie, Nelsons Bay and Fern Bay will also generate additional demand for those activities in Raymond Terrace which serve the LGA catchment.

The large amount of flood prone land may limit redevelopment potential in the centre. While developments should be assessed on a case by case basis with regard to any flooding implications, it is appropriate that the area north of Bourke Street be retained for local light industry. This land use can often accommodate the increased floor heights and drainage works required to mitigate potential flood damage.

The river outlook is an underutilised asset of the centre. As the centre grows, consideration should be given to how the open space can be best utilised.

The commercial/retail floorspace forecasts for Raymond Terrace show an increase in demand of around 15,000 m2 which can be accommodated within the current supply of zoned land - 3(a) Business General and 5(g) Special Urban (Flood Affected). There is significant underutilised land in Raymond Terrace which can be put to a more intensive use.

However, overall demand is likely to be higher in practice given the substantial increase in office space and health and community service facilities that will be required for Raymond Terrace to meet the profile of a major regional centre.

6.3.2 Town Centres

Nelson Bay

Nelson Bay's dual role in servicing both the local resident population and the strategically important tourism industry is noted in the Port Stephens Economic Development Strategy and the Draft Nelson Bay Town Centre and Foreshore Strategy. Nelson Bay's tourism role is of regional importance.

The LHRS includes projections for an additional 1200 dwellings for Nelson Bay. However, this is interpreted that, the projection relates more broadly to the Tomaree Tourism and Lifestyle Growth Area, not the individual suburb of Nelson Bay. Population projections for the Nelson Bay area indicate that the population will increase from 5,522 people in 2009 to over 7,020 people in 2031. Population in the neighbouring Salamander Bay - Soldiers Point - Taylors Beach area, is expected to increase from 6,318 people in 2009 to 7,833 people in 2031, (an increase of 1,515 people) and will also have an impact on demand for services in Nelson Bay. A key element for the economic growth and revitalisation of Nelson Bay will be the likely need to intensify residential development in the town centre. Providing more diverse housing choice will assist in the need to attract permanent residents to the area, as well as support the town centre outside of the peak tourism season.

Commercial/retail floorspace demand is forecast to increase almost 15,000 m2 between 2009 and 2031. This is equivalent to the increase in floorspace forecast for Raymond Terrace. There is insufficient capacity under current land use patterns to accommodate this demand, even though there is a substantial amount (4,350 m2) of vacant floorspace.

There is a low average floor space ratio across the centre, which is likely due to the large number of open air car parks. This means there is a need for more intensive development or more commercially zoned land to meet future demand. Given the centre is contained by high to medium density residential, expansion beyond the existing commercially zoned land is not recommended. Intensification of development would be a more suitable option.

Development of the existing car parks could provide additional car spaces, retail, commercial and residential uses, and may also provide stimulus for rejuvenation elsewhere in the centre. Furthermore, the Draft Nelson Bay Town Centre and Foreshore Strategy proposes controls that will provide for additional commercial and residential floor space within the town centre to meet these future demands. There is however a risk that the southern part of the centre (up the hill) may become more deserted if redevelopment tends to focus around the end of town closest to the water.

The Draft Nelson Bay Town Centre and Foreshore Strategy identifies the need for additional community services such as a new medical centre and a Council annex in Nelson Bay. The addition of such facilities is not captured in the floorspace demand forecast.

Tanilba Bay

Population projections for the Lemon Tree Passage- Mallabula- Oyster Cove- Tanilba Bay area indicate that the population will increase from 6,423 people in 2009 to 7,760 people in 2031, an increase of 1,337 people.

Additional demand for retail and services is likely to be generated by the new residential development by Landcom (Koala Bay) in nearby Mallabula.

Commercial/retail floorspace demand is forecast to increase by around 3,400 m2 between 2009 and 2031. There is sufficient capacity under current controls.

Anna Bay

Population projections for the Anna Bay - Boat Harbour - Fishermans Bay-One Mile-Bobs Farm area indicate population will increase from 5,503 people in 2009 to 6,600 people in 2031, an increase of 1,097 people. Anna Bay is the only centre within this area, and will be the focus of activity generated by the population increase.

The Anna Bay Strategy and Town Plan (2008) states that the town centre should develop with mixed-use buildings with residences or serviced apartments above shops or professional office space on the street level. The Strategy includes a small expansion of commercial zoned land in the west of the town centre. The existing commercial area of Anna Bay is proposed to remain the local centre for commercial activity, with light industrial located at the western entrance of Anna Bay to provide employment opportunities and encourage redevelopment of the town centre to commercial and residential uses.

Commercial/retail floorspace demand is forecast to increase by around 2,000m2 by 2031. This increase in demand can be accommodated under the existing controls and land use patterns in the short term only. This indicates that the expansion of commercial zoned land in the west of the centre and location of light industrial activity to the western entrance of Anna Bay, as proposed in the Strategy, will be necessary unless development can be intensified in the existing zoned areas.

Medowie

Population projections for the Medowie-Ferodale-Campvale area indicate population will increase from 8,858 people in 2009 to 15,167 people in 2031, an increase of 6,309 people.

Commercial/retail floorspace demand is forecast to increase by around 2,000 m2 to reach almost 9,500 square metres by 2031. Under the more supply constrained scenario in the gap analysis, there will be insufficient capacity under current controls to accommodate this demand by 2031. The Medowie Strategy proposes 12ha of commercial land.

North Raymond Terrace / Kings Hill

Kings Hill is yet to be developed. It is proposed to have a population of 11,000 people in 4500 dwellings at full development.

Approximately 8,500 m2 of retail floorspace at the town centre level (inclusive of 2,500 m2 of supermarket floorspace) could be supported.

An additional total of around 2200 m2 of retail floorspace (inclusive of around 110 m2 of supermarket floorspace) could also be supported at the neighbourhood centres within Kings Hill.

This level of provision is based on a similar distribution of available expenditure as Medowie. However, Kings Hill is closer to Raymond Terrace and therefore the results of the retail modelling are likely to indicate an upper limit for supportable floorspace at Kings Hill.

The Commercial and Industrial Lands Study recommended that retail and commercial floorspace in Kings Hill should be limited to that which serves the immediate population so as not to undermine the role of Raymond Terrace. The above figures are based on this premise.

Salamander Centre

Salamander has a retailing focus and has the primary characteristics of a stand alone shopping centre. However, the centre benefits from additional services such as a library/community facility which are usually found in the more traditional main streets. As this centre continues to evolve, Salamander's role in the established centres hierarchy will need to be considered further, particularly the relationship with the established town centre of Nelson Bay.

Growth will be accommodated across the entire Peninsula but the largest increases will be in the Anna Bay and Nelson Bay areas. Overall, this growth will add considerable demand for retailing on the Peninsula.

Commercial/retail floorspace demand in this centre is forecast to increase by 15,000 m2 to 2031. This is the same as the forecast increase for Raymond Terrace. However, as noted above, Raymond Terrace is likely to experience growth in excess of the forecast as it broadens its range of services to fulfil its role as a major regional centre. With the inclusion of adjacent Council land in the centre, there is enough land supply to meet demand.

6.3.3 Villages

Shoal Bay

Population projections for the Shoal Bay-Fingal Bay area indicate population will increase from 3,372 people in 2009 to 3,743 people in 2031, an increase of 371 people.

Commercial/retail floorspace demand is forecast to increase by around 17,000 m2 between 2009 and 2031. However, this is almost entirely growth in accommodation. Employment in the Shoal Bay area in the accommodation and food services sector is forecast to increase from 232 jobs in 2006 to 336 jobs in 2031 (a 45 per cent increase).

While the gap analysis shows a shortage of capacity in this centre, additional demand for floorspace may be accommodated on land with a non-commercial zoning suitable for hotels or other short term accommodation.

Further development of hotels in the commercial zoned area should be discouraged so that there is sufficient capacity for a small increase in commercial development which would enhance the tourism offer and also cater for local residents.

Karuah

Population projections for the Karuah-Swan Bay-Twelve Mile Creek area indicate population will increase from 1,520 people in 2009 to 2,081 people in 2031, an increase of 561 people.

Commercial/retail floorspace demand is forecast to increase by around 1,500 m2 between 2009 and 2031. This demand could be entirely accommodated within existing vacant buildings (assuming they are fit for purpose) and there are also a number of vacant sites which could be developed.

Karuah is likely to continue to adjust from its previous role as a motoring stop over to a local centre servicing the needs of a growing residential population over the longer term.

Salamander Bay (Randall Avenue)

Population projections for the Salamander Bay - Soldiers Point - Taylors Beach area indicate population will increase from 6,318 people in 2009 to 7,433 people in 2031, an increase of 1,115 people.

Salamander Bay (Randall Avenue) is likely to continue its current function of meeting the basic needs of the surrounding local community, while the stand alone shopping centre of Salamander Bay

will cater for the majority of retailing. The nearby town centre of Nelson Bay will also host an increasing number and diversity of services.

Although an increase of around 1,000 m2 of commercial/retail floorspace is expected over the forecast period, this can be largely accommodated within existing vacant floorspace but there will be a shortage of around 200 m2 of floorspace in 2031 under the most supply constrained scenario.

Raymond Terrace East (Lake Side)

The purpose of this centre is only to provide for the day-to-day needs of people who live or work in the local area.

There are around 3,600 m2 of occupied commercial/retail floorspace, which is forecast to increase by around 1,300 m2 between 2009 and 2031.

There are currently no vacant lots and only a small amount of vacant floorspace (around 150 m2). Most demand for increased floorspace is attributable to the tavern and child care. This demand is likely to be met by intensifying development on the sites currently occupied by the tavern and the child care facility.

Given the proximity of the major regional centre of Raymond Terrace, no expansion of the commercial zoning at Raymond Terrace East is recommended by the Commercial and Industrial Land Study. This will protect the integrity of the Centres Hierarchy.

Soldiers Point

There is around 1,742 m2 of commercial/retail floorspace which is forecast to increase by around 500 m2 between 2009 and 2031. There is sufficient capacity to accommodate this additional floorspace demand.

Lemon Tree Passage

There is around 2,500 m2 of commercial/retail floorspace which is forecast to increase by 700 m2 between 2009 and 2031.

The centre is operating at close to capacity. Analysis shows a shortage of supply in the longer term (2031) in the most constrained scenario, however the forecast demand is dispersed across a number of floorspace users and is therefore unlikely to reach a critical level where more commercially zoned land is required. Further, there appears to be capacity for renewal of some sites occupied by houses at the southern end of Cook Parade.

Salt Ash

There are no plans for increased residential density in the areas surrounding the centre. Any increased demand is likely to come from additional passing traffic as development on the Peninsulas occurs.

There is around 1800 m2 of commercial/retail floorspace which is forecast to increase by around 450 m2 between 2009 and 2031. This increase could be easily accommodated on the two lots which currently host the petrol station and other retail activities. These lots should constitute the extent of the centre.

Fingal Bay

There is 1000 m2 of commercial/retail floorspace which is expected to decrease by around 150 m2 between 2009 and 2031. Growth is more likely to occur in the nearby village centre of Shoal Bay.

There may however be opportunities for Fingal Bay to host some small businesses that do not require high exposure to passing trade, prefer cheaper rents and are attracted by the lifestyle elements of the Peninsula. This type of demand is not captured in the forecast.

Nelson Bay (Austral Street and Armadale Avenue)

There is around 1,400 m2 of occupied commercial/retail floorspace. The size and role of this centre should not change as the town centre of Nelson Bay is within close proximity and should be the focus of future development.

Fern Bay

Retail activity in Fern Bay consists of a general store on Nelson Bay Road.

Significant new residential development is expected at Seaside Fern Bay to the north. Population projections indicate population will increase from 1,906 people in 2009 to 5,211 people in 2031. This will increase demand for more retail in the area. While some of this demand will be accommodated outside of the LGA, it will likely support some degree of local retailing.

The site with the existing general store and the adjacent site on the corner of Vardon Road, which contains a house, should be investigated for commercial zoning. Additionally, a small area of commercially zoned land is proposed within the new Seaside estate via a clause in LEP 2000. However, the final location of site has not been determined by the developer and the amount of commercial land may need to be increased to accommodate increased demand.

Should opportunity and demand arise for additional commercial/retail activity to be attracted to the area, the location will need to support the existing identified commercial areas as per the established Commercial Hierarchy.

Corlette

The Commercial and Industrial Land Study found there is no additional floorspace demand to 2031 and the centre will continue to function as it does currently.

Hinton, Woodville and Seaham

Hinton, Woodville and Seaham are three of the four centres located in the Rural West area of the LGA, the other being Wallalong.

Population projections published for the Rural West area indicate population will increase from 5,225 people in 2009 to 6,203 people in 2031. Most of the additional demand is likely to continue to be met by either Raymond Terrace or centres within the Maitland LGA, and no single rural centre will develop a critical mass to induce the need for additional retail.

Other

A number of small centres have either no existing active commercial floorspace or no zoned commercial land. Given the small populations surrounding these centres, proximity of alternative centres and/or constraints such as flooding, the Commercial and Industrial Study identified no need for commercially zoned land in these centres. The centres are as follows:

- Boat Harbour (contains commercial zoned sites, however, there is no commercial activity).
- Mallabula (contains commercial zoned land with an old general store/ house but store appears unused)
- Fullerton Cove
- One Mile
- Swan Bay
- Taylors Beach
- Wallalong

6.3.4 Special centres (Defence and Airport Related Employment Zone (DAREZ) Business Park)

Williamtown contains the RAAF Base and Newcastle Airport. Aside from the airport, there is presently no commercial or retail activity. There are a couple of service stations nearby along Nelson Bay Road.

The Williamtown Defence and Airport Related Employment Zone (DAREZ Business Park) is zoned for a focused defence and airport related employment area.

Market analysis conducted by Buchan (2009) estimates the initial 90 ha of zoned land would translate into around 68 ha of effective land and that the 68 ha would produce a total of 270,000 m2 of floorspace and 3,838 jobs.

The success of the DAREZ Business Park is closely linked to the contained growth of the Newcastle Airport. The Newcastle Airport Master Plan (NAMP) sets out the management of the projected growth across the site ensuring the integrity of the operations on the RAAF Base.

The Master Plan indentifies 5 precincts (Apron reserve, Passenger terminal reserve, Aerospace precincts (2), Business Park and Car Parking).

The Business Park precinct proposes commercial offices and associated limited retail facilities. The Precinct has a capacity to contribute a large component of employment lands to the LGA. The implementation of both the NAMP and DAREZ Strategy is consistent with the identification of the two areas as proposed employment lands in the LHRS.

No additional employment or commercial lands are recommended excluding the investigation areas adjacent to the DAREZ Business Park. These investigation areas are not located in the LHRS Green Corridor which is located on the southern side of Cabbage Tree Road.

Additional area around the Business Park may be required in the future. The extent of additional land required will be determined through strategy development and review of the original DAREZ Strategy.

6.4 Accommodating more housing

The Department of Planning and Infrastructure has identified in the Lower Hunter Regional Strategy 2006 the following new dwelling projections for Port Stephens:

Centres	3300
Urban infill	2000
New release areas	7200
Total dwellings	12,500

Included in the above are dwelling projections for the following centres:

Raymond Terrace	300
Nelson Bay (specialised centre)	1200

While the LHRS provides projections for certain locations within the LGA, the PSPS identifies in greater detail where this growth should occur.

The dwelling projections in the PSPS are estimates of a probable outcome, and are not targets. The actual figures are affected by changes in economic, social and environmental factors that influence land development and market demand.

In addition, the following factors can affect the availability of land and need to be taken into account:

- Reluctance on the part of some landowners to make land available for development.
- The potential dwelling numbers of existing zoned land within some areas often rely heavily on urban consolidation/infill being achieved. Examples of these areas include Nelson Bay and Raymond Terrace.
- Lead times in the rezoning and development of land, including the provision of sufficient infrastructure.
- Impact of demographic trends and their changes over time.
- The need to provide a spread of future release areas in a range of locations to provide location choice, product choice and competition.
- Impact of potential constraints on future release areas (eg. aircraft noise, ecology, flooding, bushfire, infrastructure costs, fragmented land ownership).
- Not all land identified within the growth areas will be developed for urban uses.

The rezoning of land identified in the new growth areas or the development of existing zoned land within the infill growth areas for urban, commercial or industrial uses needs to be subject to more detailed investigations to determine capability and future yield.

Based on the previous seven years' average for dwelling approvals, it is estimated that future dwelling demand will continue at an average rate of 340 houses and 220 multi-unit dwellings per year.

Figure 30 shows there is a potential for an additional 7,772 dwellings to be developed on existing residential zoned land in Port Stephens, eg. Vantage Estate at Corlette, North Raymond Terrace (Kings Hill). However, this supply is likely to be lower due to the impact of possible development constraints identified at the subdivision development stage. Further the figures are significantly higher due to the new release area of Kings Hill being rezoned in December 2010. Note that Figure 30 generally reflects the larger residential zoned sites yet to be subdivided as opposed to general infill development on smaller lots as indicated on Figure 31.

Locality	Dwellings
Kings Hill	4,500
Raymond Terrace - Heatherbrae - Nelsons Plains	480
Rural West	0
Medowie	220
Karuah	124
Tilligerry – Lemon Tree Passage – Mallabula – Tanilba Bay	201
Anna Bay – Boat Harbour – Fishermans Bay - One Mile -	234
Shoal Bay – Fingal Bay	40
Nelson Bay	169
Salamander Bay – Corlette – Soldiers Point – Taylors Beach	408
Rural East	0
Fern Bay - Fullerton Cove	1,396
Total	7,772

Figure 30: Estimated Residential Zoned Potential Dwelling Yields 2011-2036 (sites awaiting subdivision)

6.4.1 Infill

Infill areas include redevelopment within established urban areas. This redevelopment may take the form of an increase in residential density, such as the development of villas, townhouses, senior living or residential flat buildings. Infill redevelopment can also include small scale subdivision of previously undeveloped land within the existing urban area, or the reuse of land from another land use, such as industry, to a residential use.

The LHRS projected a total of 5500 additional dwellings in existing urban areas of Port Stephens.

Locality	New Dwellings
Kings Hill	0
Raymond Terrace – Heatherbrae - Nelsons Plains	800
Rural West	70
Medowie	63
Karuah	100
Tilligerry - Lemon Tree Passage - Mallabula - Oyster Cove - Tanilba Bay	200
Anna Bay - Boat Harbour - Fishermans Bay - One Mile	150

Shoal Bay - Fingal Bay Nelson Bay	150 600
Salamander Bay - Corlette - Soldiers Point - Taylors Beach	230
Rural East	50
Fern Bay - Fullerton Cove	42
	2455

Figure 31: Estimated Potential Infill Dwelling Yields.

6.4.2 New Release

New Release or Greenfield Release Areas refers to new urban development at the fringe of existing urban areas. By definition, they involve an expansion of the residential areas into land previously occupied by rural or other non urban land uses.

Port Stephens LGA is highly constrained for residential development due to environmental factors, flooding and aircraft noise. It is important that any areas with urban potential be protected from premature development which may affect that land's urban development in the medium to long term. Council's resolution on the 25th August 2009 to support the identification of Wallalong as a new town is important because it signals an intention to develop new urban land at Wallalong as well as intensify the existing development, as appropriate. It is critical that premature development such as large lot or rural residential development does not occur at Wallalong in the interim.

It is estimated that, excluding the Wallalong Potential Urban Release Area, the total land supply for residential land in Port Stephens over the period 2011 to 2036 will be 13,241 dwellings. The spatial distribution of this supply is shown in Figure 32. This figure assumes all prospective release areas are rezoned. It also assumes that the forecast estimates of infill within existing urban areas will be achieved. Based on these dwellings being constructed over this period, this would result in an average dwelling gain of 520 dwellings per annum.

Given that the current average annual (7 year) demand is expected to continue to be in the order of 560 dwellings per annum, this supply is not considered to be sufficient. However, the availability of additional dwellings within the Potential Urban Release Area and new release areas means that additional land stocks are available to be brought forward to make up for the shortfall in demand. Total land supply for residential land could increase from 13,241 to 14,441 by simply utilising land set aside as Wallalong Potential Urban Release Area which would increase the average dwelling gain from 520 to 568.

Figure 32: Summary of Potential Dwelling Yields

AREA	Priority	Development Type	New Release Timing	Duration	Dwelling Yield	Average Density
Raymond Terrace North (Kings Hill)	1	New town	2014	25 - 30 years	4,500	15+
Raymond Terrace - Heatherbrae - Nelsons Plains	1	Infill New Release	2011	10 - 15 years	1,280	10 -15
Rural West	2	Infill	N/A	25 - 30 years	70	N/A
Medowie	1	Infill New Release	2009	20 - 25 years	2,704	15+
Karuah	2	Infill New Release	2012	25-30 years	474	10+
Tilligerry - Lemon Tree Passage - Mallabula - Tanilba Bay	2	Infill New Release	2015	15 - 25 years	556	12
Anna Bay	1	Infill New Release	2012	15 years	440	10 - 15
Shoal Bay - Fingal Bay	2	Infill	2010	15 years	190	12
Nelson Bay	2	Infill	2010	25 years	769	15+
Salamander Bay - Corlette - Soldiers Point - Taylors Beach	1	Infill	2013	10 years	265	12 - 15
Rural East		Infill	N/A	25 years	50	N/A
Fern Bay - Fullerton Cove	1	New Release Infill	2010	15 - 20 years	1438	10 - 12
TOTAL					13,241	
Wallalong Potential Urban Release Area	3	New Release	N/A	20 - 25	1,200	N/A
TOTAL					14,441	

6.4.3 Densities

The PSPS seeks to facilitate the provision of a diversity of housing in the LGA. Higher densities are planned close to centres, with lower densities located further away. Most of the LGA's residential areas will remain low density, and mainly detached housing.

The existing Port Stephens LEP 2000 includes details of the permissible maximum densities in residential zones as follows:

Housing type	Zone	Precinct	Min. site area per dwelling	Floor space ratio	Maximum height
Dwelling house	Dwelling house 2 (a), 2 (c) Uns		500 m2	0.5:1	9m
	2 (a)	Hill Tops	600 m2	0.5:1	9 m
Dual occupancy housing	2 (a)	Unspecified areas	300 m2	0:5:1	8 m
	2 (c)	Unspecified areas	250 m2	0:5:1	8 m
	2 (a)	Upper Slopes	500 m2	0.5:1	8 m
	2 (a), 2 (c)	Foreshore and Lower Slopes	300 m2	0.5:1	8 m
	2 (a), 2 (c)	Town Centre Edge, Town Centre Housing, Wahgunyah Neighbourhood	250 m2	0.5:1	8 m
Urban housing	2 (a)	Upper Slopes	500 m2	0.5:1	8 m
	2 (a)	Unspecified areas	300 m2	0.5:1	8 m
	2 (a)	Foreshore and Lower Slopes	300 m2	0.5:1	8 m
	2 (a)	Town Centre Edge, Wahgunyah Neighbourhood	250 m2	0.5:1	8 m
	2 (c)	Town Centre Housing	150 m2	1.8:1	15 m
	2 (C)	Foreshore, Unspecified areas	150 m2	1.8:1	15 m

The DCP contains provisions to ensure that the amenity of existing and new dwellings meet minimum acceptable standards. Particular attention is to be provided to managing the transitional areas between higher density and standard residential (detached dwellings) areas.

Mixed residential/commercial development is encouraged in all centres. This will further diversity housing options and increase activity levels in the centres.

A number of localities have additional "locality provisions" in the DCP which apply to medium density housing. These provisions aim to achieve specific objectives for that locality and to ensure development is consistent with a desired local character.

The PSPS encourages medium density housing areas be located in the immediate vicinity of the regional centre of Raymond Terrace and in all the town and village centres providing retail, commercial and community services and facilities to support medium and higher density residential development. Further, if higher and medium density housing is provided as part of mixed use development in the centres, it can increase the centres' vitality and adaptability.

A number of principles have been developed to guide the location of medium density housing areas:

- 1. Residential densities should be highest near the centres and lowest at the outer edge of the urban area in response to a decreasing level of access to services and public transport.
- 2. Medium density housing, such as apartments, seniors living developments, townhouses, small lot housing, shop top housing and dual occupancy, should be generally within a:
 - Five minute walk (400m) of a centre, or
 - Five minute walk (400m) of bus stops with frequent services to major centres, or
 - Ten minute walk (800m) of the regional centre (Raymond Terrace) and the town centres, or
- 3. Selected area of high amenity or area of suitable topography for such development, with adequate social and physical infrastructure and an acceptable level of visual or amenity impact.
- 4. Not identified on a Flood Planning Area map.
- 5. Not adversely affected by aircraft noise.
- 6. Not adversely impacted by sea level rise.

The above principles will provide the guidance to implement the new residential zones in the new Principal LEP. However, they are principles and will need to be considered in the context of the existing topography and built environment for each locality when allocating new zones. It is noted that some of the existing medium density would be unable to meet the principles and may currently experience limited access to services or adverse development constraints (eg flooding).

The density of development of Manufactured Home Villages effectively makes them a form of medium density housing. As a result, they should, where practicable, be located according to the above principles. As manufactured homes provide affordable housing, and often contain residents on low incomes they should be located where residents have good access to services and not in isolated locations.

6.4.4 Rural Residential

Figure 33 shows that the current number of rural residential lots (3933) is extensive. The Rural Lands Study found there are a relatively low number of vacant rural residential lots within the 1(c) zone lots (122

lots). In addition, there are also existing rural-residential lots and uses within 1(a) Rural zone.

All areas of the LGA have experienced a decline or very low numbers of dwelling approvals on rural residential lots over the past 10 years. Dwelling approvals on 1(c) zoned lots have been consistently declining over the last 10 years, from 80 dwellings in 1999 to 30 dwellings in 2008.

Rural residential development is usually less energy and resource efficient than urban development. In addition, it is often responsible for a range of negative environmental impacts. The LHRS is clear about the importance of limiting rural residential development to appropriate locations. Further, rural residential areas can occupy areas which otherwise may be suitable for urban development, an important issue in an LGA with a dwindling supply of potential urban land. It is acknowledged there may be merit for limited, relatively minor extension of exiting rural residential development where there is no adverse impact on either future land use capabilities or infrastructure. Excluding these potential minor extensions the PSPS does not propose significant additional releases of rural residential lots.

Accordingly, the development of additional rural residential lots at Wallalong is not supported by the PSPS due to its Potential Urban Release Area status.

Locality	No. Rural 1(c) lots (% total rural land use)	Vacant 1(c) lots
Raymond Terrace -	139 (40.4)	3
Tomago		
Fern Bay – Anna Bay	908 (52.9)	7
Karuah – Swan Bay	160 (58.3)	0
Medowie	1,403 (87.4)	90
North – west	1,323 (40.9)	22
(includes Wallalong,		
Hinton, Seaham,		
Brandy Hill,		
Woodville)		
Total	3,933	122

Figure 33: Existing Rural Residential Lots Source: 2010 Rural Lands study

6.5 Employment/ Industrial

Port Stephens is a major supplier of industrial land in the Lower Hunter. The PSPS aims to ensure that there is a sufficient supply of a diversity of industrial land to meet market demand.

In addition, RAAF Base Williamtown is a major employer, and many businesses in the LGA rely on its ongoing operation. From an economic perspective, it is important that the RAAF Base continue to perform a major defence role, and that planning strategies facilitate this activity.

6.5.1 General Industrial (including Port)

Tomago and Heatherbrae are the two most important suppliers of general industrial land catering for needs other than servicing the local population.

These two areas are located close to the Port and it is essential they be provided with adequate infrastructure to enable unimpeded development consistent with planning requirements. In particular, transport access and the major road system must be free flowing to major destinations and markets.

Tomago

Due to its isolation from residential areas this industrial area is very suitable for heavy industrial uses. An important issue will be maintaining and improving transport access, especially Tomago Road.

Floorspace demand is forecast to increase by around 65,000 m2 between 2009 and 2031 in the TDC based scenario, and 280,000 m2 in the adjusted scenario. The latter takes into account regional industry trends, evidence of business development in the local area, and strategic drivers, which all indicate that Tomago has strong growth prospects.

The gap analysis, which does not include the land rezoned by the Major Development SEPP, shows that there is sufficient zoned land to accommodate this demand, assuming that large parcels of currently vacant land can be subdivided.

Heatherbrae

Floorspace demand is forecast to increase by around 13,000 m2 between 2009 and 2031 in the TDC based scenario and 18,000 m2 in the adjusted scenario. There is sufficient zoned land to accommodate this demand. However, a large share of the available land is not currently subdivided. The true capacity of this precinct will depend on whether large parcels of currently vacant land can be subdivided.

This precinct is some distance from residential areas (important to prevent interaction between incompatible uses) and has large lots.

Heatherbrae has been identified in the PSPS as an Enterprise Corridor. As part of the Raymond Terrace/Heatherbrae Growth Strategy the area will be reviewed for future likely demand for employment which will have specific locational requirements to support strong growth. In the first instance, Heatherbrae will be investigated for bulky goods retailing in the LGA with additional economic analysis currently underway as part of the sub-strategy. The RTA has recently confirmed the final location of the Heatherbrae bypass which is timely given the

commencement of the Growth Strategy. It is important to ensure the role of Heatherbrae is strengthened and provides a positive contribution to the Primary Growth Corridor of the LGA.

6.5.2 Local Industrial Areas

Local industrial areas provide essential services for the local population as well as employment. The PSPS seeks to safeguard their role and to ensure they are protected from incompatible land uses.

The analysis undertaken in the Commercial and Industrial Land Study indicates that there is sufficient zoned land to accommodate forecast demand in most industrial precincts. However, a large share of the available land in some precincts is not subdivided. The yield of each precinct will depend on whether large parcels of currently vacant land can be subdivided and serviced and at what cost.

Salamander Bay Industrial

There is around 39,000 m2 of floorspace on 10 ha, and demand is forecast to increase by around 3,500 m2 between 2009 and 2031. This means there will be a shortage of supply in the longer term under both supply scenarios.

This excess demand could potentially be accommodated within the Taylors Beach precinct. However, this precinct is further from the urban areas on the northern tip of the Tomaree Peninsula where significant population growth is anticipated.

Taylors Beach Industrial

There is 34,000 m2 of floorspace and 3 ha of zoned land. Demand is forecast to increase by around 6,500 m2 between 2009 and 2031. There is sufficient capacity to accommodate this floorspace however a large share of the available land is not currently subdivided.

Although there is some existing bulky goods retailing activity in this precinct, the findings of the Commercial and Industrial Land Study suggest that there is no need for such premises to be located in industrial areas within Port Stephens LGA. Additionally, there appear to be significant office components of some recently constructed buildings in this precinct. Office development should only be permitted where it is truly ancillary to industry. It is important to restrict office activities to centres rather than industrial precincts, because to do otherwise would undermine the functioning of centres.

Lemon Tree Industrial

There is around 6600 m2 of floorspace on 6 ha of zoned land. Demand is forecast to increase by around 1,000 m2 between 2009 and 2031 in

this precinct and can be accommodated under current controls and land use patterns.

Medowie Industrial

There is about 6800 m2 of floorspace on 7.3 ha of zoned land. In line with the employment projections for the types of industries currently occupying the Medowie industrial precinct, floorspace demand is forecast to fall over the longer term. However, demand is likely to be higher than suggested by these forecasts as a result of the significant amount of new urban development planned in the area. The Medowie Strategy identifies a potential 6.6 ha industrial land which should be sufficient to cater for additional demand.

Other Industrial

Two lots of industrial zoned land on Richardson Road, Raymond Terrace, just to the west of the Pacific Highway, should not be expanded. The area is close to residential land uses which limit activities which could take place on site.

Oyster Cove hosts marine related activity, principally boat making and repairs, and the industrial zoned area does not need to be expanded.

There are three precincts of 4(a) zoned industrial land which are used solely for the purpose of oyster farming. These are located near Karuah, Lemon Tree Passage and Soldiers Point. These areas are unlikely to need expansion.

6.6 Rural

Note: Rural residential development is addressed in Section 6.4.4 above.

6.6.1 Rural Production

The Rural Lands Study has identified that the economic output of the LGA's rural activities is relatively low. However, it still is an important contributor to the local economy and may become more important as freight costs rise and local production of food assumes a higher priority.

The PSPS supports strategies to:

- Ensure that current and future agriculture is not compromised by the fragmentation of rural land
- Encourage sustainable agricultural production by maintaining and enhancing the natural resource base
- Encourage a wide range of agricultural and other complementary rural uses such as tourism which have regard to environmental impact
- Ensure that there is adequate transport infrastructure to transport the commodities produced in the LGA to markets.

6.6.2 Landscape

Port Stephens has scenic rural landscapes, characterised by coastal plains, river valleys, forests, wetlands and wooded ridgelines. These landscapes contribute greatly to local identity and to the attractiveness of the area for residents and tourists.

The PSPS seeks to focus development in defined areas and to protect the scenic qualities of the coast, waterways and rural areas from inappropriate development.

6.7 Conservation Areas

The LHRCP establishes a strong foundation for environmental conservation priorities in the LGA. This foundation is complemented by large areas of land which are held in the reserve system or have other statutory protection, such as the extensive areas of SEPP 14 wetlands.

The work undertaken in producing the PSPS supports an action of the Integrated Strategic Plan Council Delivery Program to refine the accuracy of the information relating to the status and value of the biodiversity in the LGA, in order to ensure that the best possible information is used in zoning and development approval decision making.

The use of the Port Stephens Conservation Assessment Tool (CAT) provides an integrated and consistent approach to Council's environmental information holdings and is strongly supported.

6.7.1 Green Corridor

The Watagan to Stockton Green Corridor is one of the most important elements of the LHRS and LHRCP. It affects large areas of the LGA. PSPS is based on ensuring development does not adversely affect the Green Corridor. At the same time, it is recognised that the boundaries for the Green Corridor may require further interpretation and adjustment as more detailed local information becomes available.

Minor corridors which link areas of conservation significance and the Green Corridor should be identified and protected. The goal should be a network of priority conservation areas and corridors which are viable over the long term, throughout the LGA.

6.7.2 National Park Estate

The land in the National Park Estate is one of the LGA's most valuable assets. It is a major tourist attractor. These lands form much of the Green Corridor and also include other lands of regional significance. The PSPS seeks to ensure that urban development is consistent with sound management of these environmental assets.

6.7.3 Port Stephens Great Lakes Marine Park

The PSPS recognises the development considerations which are contained in the Marine Parks Act. The Strategy seeks to encourage urban development which is consistent with the objectives of the Act and the Port Stephens Great Lakes Marine Park Management Plan.

6.7.4 Port Stephens Comprehensive Koala Plan Of Management

There are many areas where urban development must co-exist with the koala population. The Port Stephens Comprehensive Koala Plan of Management (CKPoM) establishes a mechanism to determine the nature of the relationship between koala habitat and development. The PSPS seeks to direct development away from important areas of koala habitat and to encourage development forms which maximise the potential of successful co-existence of koalas and human settlement.

6.8 Transport

Due to the dispersed nature of the development in the LGA, economic and social activity is very dependent on good transport links. The PSPS seeks to reinforce centres and to intensify the residential development which surrounds them, as a means of reducing dependence of the private motor vehicle to access goods and services. More intensive centres will also assist the viability of the public transport system.

6.8.1 Roads

The PSPS recognises that the major road system of the LGA requires investment to meet the needs of economic and residential growth.

Priorities for investment are:

- Nelson Bay Road from Stockton to Nelson Bay
- Duplication of the Tourle Street Bridge (in Newcastle LGA)
- Tomago Road/ Cabbage Tree Road from Tomago to Williamtown
- The extension of the F3 to Heatherbrae
- The New England Highway from Industrial Drive to the Hexham Bridge
- The Fingal Bay Link Road.

All of these links are of regional, and in some cases State, significance because they provide access to the Tomago industrial area, the Regional Airport at Williamtown, Williamtown Airbase, the North Coast and the tourism areas of Port Stephens.

It is expected that Nelson Bay Road (under the responsibility of the Roads and Traffic Authority), in response to growing traffic volumes, will

eventually become a dual carriageway along its total length between Nelson Bay and Newcastle. However, funding and timing is unknown.

Road infrastructure improvements within urban areas should recognise that while road systems provide for the conveyance of motor vehicles, they should not adversely affect the amenity, and social and economic vitality, of urban areas. Accordingly, vehicle speeds and volumes should be managed to reflect the character and nature of the surrounding urban area.

6.8.2 Freight

Efficient freight movement is a prerequisite for maximising the economic benefits of employment lands, such as Tomago, and Heatherbrae. Heavy vehicle movements should be directed to non residential streets, and road conditions along freight routes should reflect the economic contribution of these areas to the Local, State and National economies. Currently all freight movement into the LGA is by road. Some freight is received via the Williamtown airport but it is then dispatched to its final destination by road. That is why an efficient road system is so important to the LGA.

The Williamtown airport will increase its role as a freight hub, and as this develops freight traffic will need to be monitored to ensure that adequate transport infrastructure is available.

As Tomago and the airport develop, rail freight may be a viable alternative for the LGA. Needs for rail freight and opportunities to obtain rail access should be closely monitored.

6.8.3 Public Transport

Public transport in Port Stephens is mainly road based. The PSPS seeks to improve the viability and convenience of public transport by increasing the intensity of development around centres. It is important that bus shelters and other infrastructure such as pathways are provided at major bus stops in order to improve the "public transport experience" for users.

Employment areas, such as Tomago and Williamtown should be catered for by regular bus services.

Raymond Terrace will continue to develop as an interchange point between local and commuter bus routes in addition to longer distance services.

6.8.4 Pedestrian and Cyclist

Centres should be supported by well developed pedestrian and cyclist infrastructure, including shared pathways. Where possible off road

cycleways should be provided and the needs of recreational and commuter users considered.

By increasing housing densities near centres more people will be able to walk or cycle to services.

6.8.5 Airport

Newcastle Airport has undergone considerable expansion over the last decade. It now handles over one million passengers each year. The ready access to major cities and regional centres it provides is an opportunity to increase the attractiveness of the LGA to businesses and tourists.

The PSPS supports the ongoing development of the airport, and the development of airport related employment, particularly at DAREZ Business Park. It is important that frequent public transport is provided at the airport to major destinations in the LGA and elsewhere in the Lower Hunter.

6.8.6 Rail

Future improvements to the Sydney to Brisbane rail corridor - to reduce travel times, increase capacity and improve accessibility to current and future growth areas along the north coast – could include the construction of a corridor through the Port Stephens LGA.

The Newcastle Airport Economic Opportunities Study (2003) identified two opportunities for rail corridor improvements (Figure 34).

The feasibility of such a rail corridor would depend on: cost benefit analysis that finds a favourable reduction in travel times and increased passenger and freight efficiencies between Sydney and Brisbane; favourable long term rail fuel and haulage costs against road and air transport fuel and haulage costs; future growth and role of Williamtown Airport; and, future growth of coastal areas between Newcastle and Brisbane. Improvements to the Sydney to Brisbane rail corridor consistent with the above would increase rail transport accessibility for the entire LGA.

The employment lands of Tomago and Williamtown combined with the airport will bring freight and airport passengers from the region and further afield and generate the need for regional planning of transport routes. Council will be advocating to the State government to pursue the feasibility study and specifically consider the option of a direct link from the airport to Newcastle City as well as include the appropriate option in the LHRS.

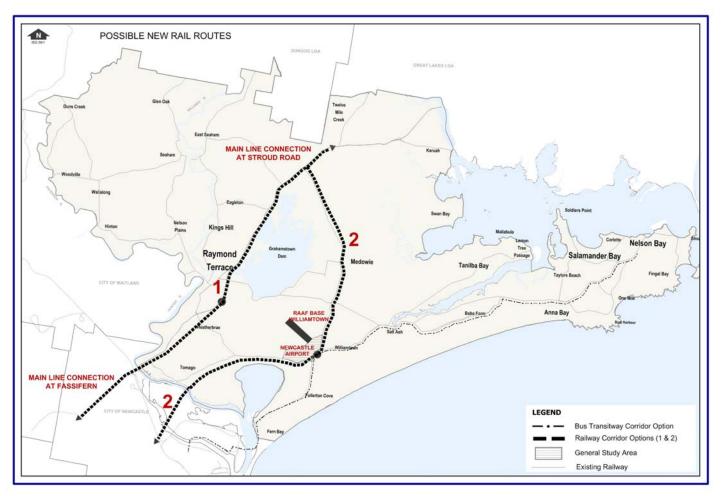


Figure 34: Possible New Rail Routes

7. Implementation

A sound land use policy framework for Port Stephens is required to effectively implement the PSPS. A suite of documents are already utilised by Council in accordance with the provisions of the Environmental Planning and Assessment Act, 1979. Some of these documents will need to be reviewed to meet the changes required by the introduction of the Standard Template Local Environmental Plan as well as ensuring facilitation of the implementation of the PSPS. Council has previously commenced work on several place based strategies which provide more specific detail for the areas identified for growth in both the LHRS and PSPS. The land use framework has the following elements:

7.1 Additional Sub-strategies

Sub-strategies will continue to be developed and updated for areas identified for growth. These strategies provide additional detail and guidance to manage growth. As each sub-strategy is completed, the PSPS will be updated via the inclusion of the relevant map in Appendix 3. Refer to Appendix 2 for a list of sub-strategies adopted or under development.

7.2 A New Principal Local Environmental Plan

Local Environmental Plans (LEP) are an integral element of the current NSW Planning system. Although prepared by local councils, LEP's are required to be made by the Minister of Planning.

As part of the NSW Planning Reform Agenda, all councils are required to prepare a new LEP to comply with the Standard Instrument (Local Environmental Plans) Order 2006. The Principal LEP is currently being prepared (2011/2012).

7.3 A New Development Control Plan (DCP)

The current DCP 2007 will need to be updated to respond to consequential changes as a result of the Principal LEP. In the development of the DCP to compliment the Principal LEP it is timely to undertake a general review and update to ensure the controls remain robust.

7.4 New Developer Contributions Plans

The current Section 94 and Section 94A Developer Contributions Plans will be reviewed to respond to the planned growth outlined in the PSPS. These plans should be prepared by Council by the time the Principal LEP comes into force.

Land Identified For Development

Planning proposals will need to be consistent with the LHRS and the PSPS. The proposals will need to be prepared in accordance with the provisions of the Environmental Planning and Assessment Act, 1979 and the DoPI Local Plan Making Guide as well as requirements of other relevant State Agencies and Council. Refer to Appendix 3 for additional detail.

7.5 Land Not Identified For Development

Land not identified for development in either the LHRS, PSPS or identified in the Green Corridor is unlikely to be supported by Council. It is acknowledged that minor rezoning proposals, which on an LGA wide scale, are considered inconsequential may be considered in the context of minimal/nil impact to the establish commercial hierarchy, residential and employment land supply and growth foot prints.

7.6 Council Delivery Program

The Integrated Strategic Plan will provide support to the implementation of the PSPS. Specifically the Council Delivery Program will provide the avenue to source funding and progress projects to facilitate sustainable planning outcomes. An example is the Raymond Terrace/Heatherbrae Growth Strategy which will provide strong direction for these areas.

7.7 Economic Development Strategy

The Economic Development Strategy will continue to be utilised to facilitate economic growth for the area. The PSPS has included components of the identified relevant actions which support and progress economic stimulus.

7.8 Conservation Priorities

The Conversation Assessment Tool (CAT) will continue to be enhanced as new information becomes available through both the development assessment and rezoning processes. Council has also commenced work on the identification of significant ecological corridors for flora and fauna which need to be protected from urban development. This work will also be added to the CAT.

7.9 Review and Monitoring

The PSPS has been developed using the best available data. Some data is more recent than others and some has a timeframe limit in keeping with the previous Strategy ie ends at 2031 rather than 2036. In keeping with sound planning practice the PSPS will be monitored and updated, if necessary, at 5 year intervals.

The Census was conducted in August 2011. These figures are not currently available. Once the figures are released the new data will be reviewed and should any significant trends alter or new issues emerge the new information will be included into the PSPS.

Centre Type	Name	Facilities Expected	Facilities Available	Challenges/ Opportunities
REGIONAL CENTRE	Raymond Terrace	Concentration of business, higher order retailing, employment and professional services. Civic functions and facilities. Focal point of subregional road and transport networks that may serve a number of districts. High school and higher education facilities.	The major centre in the LGA as well as the major transport hub. Hosts 34 % of all retail trade, almost 60 % of financial, insurance, professional, and scientific and technical services; and 80 % of public administration and safety floor space. Is the location for Raymond Terrace Court House, the Local Area Police Command and members of both State and Federal Parliament. Hunter River and Irrawang High Schools. Major sporting facilities (ie. Kings Park Sporting Complex) and skate park.	Flood prone land limits development. Limited public transport is provided. High growth in areas such as Medowie, Nelson Bay and Fern Bay will create additional demand for activities in Raymond Terrace. River outlook is an underutilised asset. Proximity to major transport link: Pacific Highway. Council has influence over development due to the ownership of two large sites (ie. land opposite police station and sporting fields). There is significant underutilised land in Raymond Terrace which can be put to a more intensive use.
SPECIALISED CENTRE	Salamander Bay	Regionally significant economic activity and employment.	Stand alone shopping centre that contains supermarkets, a discount department store and over 80 speciality shops. District library /community centre. Tomaree High School and large private school nearby. Serves the relatively large catchment of the Tomaree Peninsula.	Expansion of centre is restricted by environmental constraints, notably the wetlands to the west. Retailing demand will increase with the increase in the surrounding population. Council owns 11ha of land in the centre that has development potential.

Centre Type	Name	Facilities Expected	Facilities Available	Challenges/ Opportunities
	Williamtown	Regionally significant economic activity and employment.	Anchored by RAAF Base and Newcastle Airport. Defence and Airport Related	Flood prone land The RAAF Base and airport are of enormous significance to the LGA and the Lower Hunter directly.
			Employment Zone (DAREZ Business Park) is expected to create almost 4,000 jobs.	Aircraft noise effects in specific areas.
TOWN CENTRES	Nelson Bay	Shopping and business centre for the district.	Main broad based centre servicing the Tomaree Peninsula and specialised tourism centre.	Outwards expansion is constrained by the Tomaree National Park and the Port Stephens waterway.
		Health and professional services.	Tourism Information Centre.	The seasonal nature of the tourism industry makes it difficult to tailor supply and demand. In addition to placing pressure on infrastructure over the summer
		Medium and higher density residential.	Marina and large hospitality industry.	period.
			Tomaree Community Hospital.	Low average commercial floor space ratio across the centre, which is due to the large number of open air car parks.
			Highest residential densities in the LGA.	Increasing intensification as a result of medium density residential buildings.
			Police Station (Not 24hrs).	Potential to expand the water based and tourism
			Fire Station	industry.
			Tomaree Sports Complex.	Nelson Bay has a picturesque natural setting that draws residents and tourists to the LGA.
			Nelson Bay Senior Citizens Hall.	

Centre Type	Name	Facilities Expected	Facilities Available	Challenges/ Opportunities
	Tanilba Bay	Shopping and business centre for the Tilligerry Peninsula. Medical and professional services. Medium density residential.	Main service centre for the Tilligerry Peninsula. Supermarket and eight speciality stores. General practice and optometrist. Low residential densities. Tanilba Bay Primary School. Community Hall. Mallabula Sporting Complex. Rural Fire Station.	Flood prone and environmentally significant land limits expansion. Adjacent areas are affected by activities at Salt Ash Air Weapons Range (SAAWR). Residential expansion is underway. Places of high heritage value.
	Anna Bay	Commercial centre for Anna Bay and the adjacent area. Medical and professional services. Medium density residential.	Local convenience shops for the local catchment, including a small supermarket. Pharmacy and doctors. Anna Bay Public Primary School. Anna Bay/Birubi Point Hall. Rural Fire Station.	Tourism gateway to the Stockton Sand Dunes and surf beaches. Anna Bay Town Plan and Strategy will direct new development. Almost surrounded by areas of environmental significance/ National Parks.

Centre Type	Name	Facilities Expected	Facilities Available	Challenges/ Opportunities
	Medowie	Shopping and business centre for Medowie and the surrounding area.	A supermarket, speciality shops and hotel.	Flood prone, aircraft noise and environmentally significant lands limit development.
		Medical and professional services.	This centre also holds a number of shopping/personal services that serve the local population.	Grahamstown Dam limits development to the west. Salt Ash Weapons Range (SAWR) limits development to
		Medium density residential.	Pharmacy, psychologist, etc.	the east. Past subdivision into rural small holdings has created a
			Medowie Community Centre.	fragmented subdivision pattern making more intensive urban development difficult.
			Rural Fire Station.	Economic flow on effects from RAAF Base.
			Sporting ovals and tennis courts.	Medowie Strategy will direct new development.
				Lack of public transport.
	North Raymond Terrace/ Kings	Shopping and business centre for the Kings Hill urban release area.	Not yet developed. Sufficient land has been zoned for	Aircraft noise affected area designated as the town centre.
	Hill	Medical and professional services.	commercial, community and mixed use to permit the development of a town centre.	Development at Kings Hill should be limited to that which serves the immediate population so as not to undermine the role of Raymond Terrace.
		Medium density residential.		Proximity to the Regional Centre of Raymond Terrace will facilitate and encourage development.
				Comprehensive planning and co-ordination is being undertaken for Kings Hill.

Centre Type	Name	Facilities Expected	Facilities Available	Challenges/ Opportunities
VILLAGE CENTRES	Shoal Bay	A strip or cluster of shops in a mostly residential area to meet the basic needs of residents and workers.	Significant tourist accommodation and related services. Small grocery store, bakery, newsagent, to cater for day to day needs. Medical centre that provides basic GP medical services.	The area is a major tourist area due to its physical attractiveness but high seasonality in tourist numbers. High proportion of commercial land used for accommodation. Limited ability to expand due to the proximity of the Port Stephens water body and environmentally significant areas/National Park.
	Karuah	A strip or cluster of shops in a mostly residential area to meet the basic needs of residents and workers.	General store, takeaway shops, café, etc. GP medical services. Police Station. Rural Fire Station. Community Centre	The commercial centre is still repositioning following a loss of passing traffic when the Pacific Highway was upgraded. There is considerable potential to expand residential development. Relaxed natural setting and good access to the Port Stephens water body. Limited residential demand. Karuah Growth Strategy will direct development.
	Salamander Bay (Randall Avenue)	A strip or cluster of shops in a mostly residential area to meet the basic needs of residents and workers.	Small grocer/supermarket, specialist shops and services Much smaller centre than Karuah and Shoal Bay.	Centre will continue to provide day to day needs, while Salamander Bay specialised centre will continue to provide higher order services. Flat land nearby provides a good walkable catchment for local convenience purchases. Some intensification of the neighbourhood is occurring.

Centre Type	Name	Facilities Expected	Facilities Available	Challenges/ Opportunities
	Raymond Terrace (Lake Side)	A strip or cluster of shops in a mostly residential area to meet the basic needs of residents and workers.	Small grocery store, takeaway outlet. and personal services Lakeside Leisure Centre nearby. Irrawang High School nearby. Much smaller centre than Karuah and Shoal Bay.	No shop vacancies. Proximity to Raymond Terrace means that no further floor space should be provided. Relatively low income catchment. Good variety of services.
SMALLER VILLAGE CENTRES	Soldiers Point	A strip or cluster of shops in a mostly residential area with a smaller range of products or services and a smaller catchment than a village centre.	Cluster of shops, including a beautician, real estate and general store. Limited GP medical services. Rural Fire Station nearby. Soldiers Point Community Hall.	Centre provides the day to day needs of residents. A number of vacant shops. Some intensification of the neighbourhood is occurring.
	Lemon Tree Passage	A strip or cluster of shops in a mostly residential area with a smaller range of products or services and a smaller catchment than a village centre.	General store, take away outlets, café and personal services. Higher level than other small village centres. Police Station nearby (Not 24 hours). Rural Fire Station nearby. Mallabula Community Centre.	Centre provides the day to day needs of residents. Family tourism role, highly seasonal.

Centre Type	Name	Facilities Expected	Facilities Available	Challenges/ Opportunities
	Salt Ash	A strip or cluster of shops in a mostly residential area with a smaller range of products or services and a smaller catchment than a village centre.	Hardware shop, bakery, bottle shop and fruit shop. Salt Ash Community Hall nearby.	Small population in the neighbourhood. This is not a centre of a community. Situated on Nelson Bay Road with high volumes of passing traffic, which extends the catchment population of the centre.
	Fingal Bay	A strip or cluster of shops in a mostly residential area with a smaller range of products or services and a smaller catchment than a village centre.	General store and take away outlets.	The area is very attractive. Development is constrained by Tomaree National Park. Tourists provide an additional market for businesses. High seasonality of tourism.
	Nelson Bay (Austral St and Armadale Ave)	A strip or cluster of shops in a mostly residential area with a smaller range of products or services and a smaller catchment than a village centre.	Small supermarket, liquor store, personal services, butcher, baker and take-away outlet.	The centre serves a neighbourhood catchment, with a small amount of passing trade. The surrounding area is slowly intensifying. Tourists provide an additional market for businesses.

Centre Type	Name	Facilities Expected	Facilities Available	Challenges/ Opportunities
	Fern Bay	A strip or cluster of shops in a mostly residential area with a smaller range of products or services and a smaller catchment than a village centre.	A general store and café.	 Fern Bay contains a considerable amount of moveable/relocatable housing. More of this housing is being developed. Fern Bay is set to experience a significant population increase due to the development of the Seaside Estate and the retirement and manufactured home villages. Flood prone and environmentally significant lands limit development. Considerable passing trade on Nelson Bay Road.
	Corlette	A strip or cluster of shops in a mostly residential area with a smaller range of products or services and a smaller catchment than a village centre.	General store, a beautician, restaurant and hardware.	Only limited growth is expected in this area, and increased retail and service demand is likely to be satisfied by the larger centres of Salamander and Nelson Bay.
	Hinton, Woodville and Seaham	A strip or cluster of shops in a mostly residential area with a smaller range of products or services and a smaller catchment than a village centre.	Victoria Hotel, Hinton. General stores, newsagents and some retail. Community halls at Hinton and Seaham	All these three centres are located in the Rural West and are surrounded by rural lifestyle properties. Dispersed nature of these properties means that the catchment population is limited, and this limits the amount of trade. The towns are picturesque and/or have historic character. The Hinton Heritage Conservation Area extends over the main residential area. To ensure the continued protection of the village and rural residential character

Centre Type	Name	Facilities Expected	Facilities Available	Challenges/ Opportunities
				a sub-strategy may be an option as it would consider mechanisms such as the identification of additional potential rural residential land which acts as a barrier to residential growth.
SMALLER VILLAGE CENTRES (OTHER)	Boat Harbour Mallabula Fullerton Cove One Mile Swan Bay Taylors Beach Wallalong	A multi-purpose shop with a very small catchment or remote location.	Nil local services	Limited intensification options Inability to attract basic services ie. general store. Picturesque areas. Generally isolated from other settlements.

Appendix 1: Details of Port Stephens LGA Centres.

Note: The Facilities Available column is to provide a general understanding of what facilities are available in each centre and is therefore only a snap shot in time as they will likely change.

Name	Status
Anna Bay Strategy and Town Plan	Adopted by Council 16 December 2008.
Karuah Growth Strategy	Adopted by Council 20 December 2011.
Medowie Strategy	Adopted by Council 24 March 2009.
Nelson Bay Town Centre and Foreshore Strategy	Draft Strategy 2011.
Raymond Terrace/Heatherbrae Growth Strategy	Stage 1 traffic and parking study completed in 2011. Stage 2 commenced.

Port Stephens Planning Strategy - sub strategies

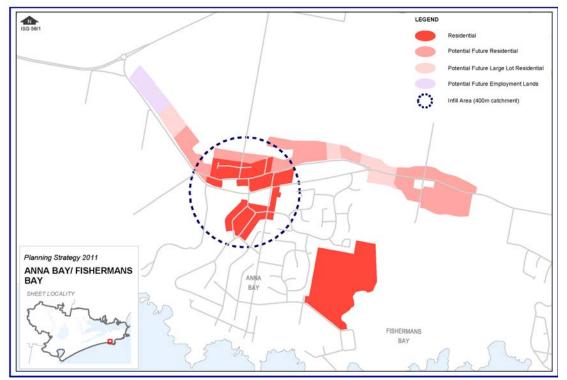
Appendix 3 Future Growth Areas

Мар	Suburb
Map 1	Anna Bay
Map 2	Fern Bay – Fullerton Cove
Map 3	Heatherbrae -Tomago
Map 4	Karuah
Map 5	Medowie
Map 6	North Raymond Terrace (Kings Hill) – Raymond Terrace
Map 7	Soldiers Point
Map 8	Taylors Beach
Map 9	Tilligerry – Lemon Tree Passage
Map 10	Tomaree – Shoal Bay – Corlette – Nelson Bay
Map 11	Wallalong

Port Stephens Planning Strategy – Growth Areas

Appendix 3 Future Growth Areas





Anna Bay

Identified in the Lower Hunter Regional Strategy – urban expansion.

Land use will be guided by the Anna Bay Strategy and Town Plan (2008). Note above Map reflects the adopted Anna Bay Strategy and Town Plan Map on page 27 of that Strategy.

Opportunities exist for increasing existing densities to maximise access to existing infrastructure. Development constraints include:

Flood Prone Land Drainage Ecological considerations Bushfire Prone Land Steep Lands Stockton Sand Dunes Coordination and staging of development

Fishermans Bay was not identified like Anna Bay in the Lower Hunter Regional Strategy, however, there is a large land holding which is currently zoned residential that has been included in the potential dwelling yields.

Timing: 2012 for approximately 15-20 years. Infill residential/commercial potential: 150 dwellings. Residential zoned land (green field) potential 234 dwellings. Potential residential: 56 dwellings. Estimated yield: 10 - 12 dwellings/ha.





Fern Bay - Fullerton Cove

A predominantly rural area, with a small township at Fern Bay, located on the southern boundary of the LGA. Opportunities exist for increasing densities to maximise access to existing infrastructure.

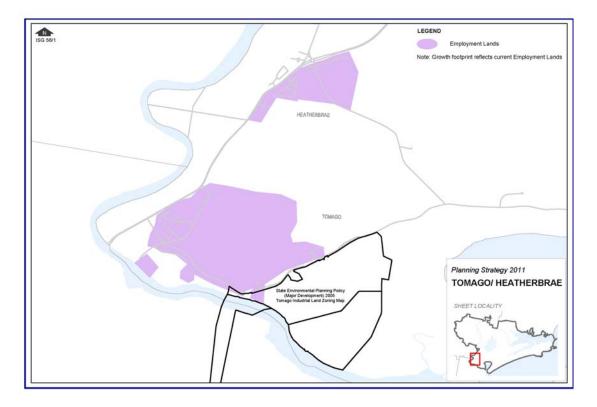
Additional commercial zoned land is required.

Development constraints include:

Ecological considerations Bush Fire Prone Land Acid Sulphate Soils Flood Prone Land Koala Habitat Heritage Aircraft Noise Coastal Hazards

Timing: 2010 for approximately 15-20 years Infill residential potential 42 dwellings. Residential zoned land (green field) potential 1,396 dwellings. Estimated yield 10-12 dwellings/ha

Map 3



Tomago and Heatherbrae are both identified in the Lower Hunter Regional Strategy and are both within the Primary Growth Corridor for the LGA.

Heatherbrae

Heatherbrae is identified as an Enterprise Corridor. The bypass road location for Heatherbrae was finalised by Roads and Traffic Authority in 2010. Land capacity and repositioning of the area will be reviewed as part of the Raymond Terrace/Heatherbrae Growth Strategy. Floor space demand is forecast to increase by around 13,000 sqm between 2009 and 2031 in the Transport Data Centre based scenario and 18,000 sqm in the adjusted scenario. Currently there is sufficient land to accommodate demand. Heatherbrae has been identified as the key location for bulky goods retail in the LGA. Repositioning of this area facilitated by the development of the Raymond Terrace/Heatherbrae Growth Strategy will likely see an increase in demand for additional employment generating lands.

Tomago

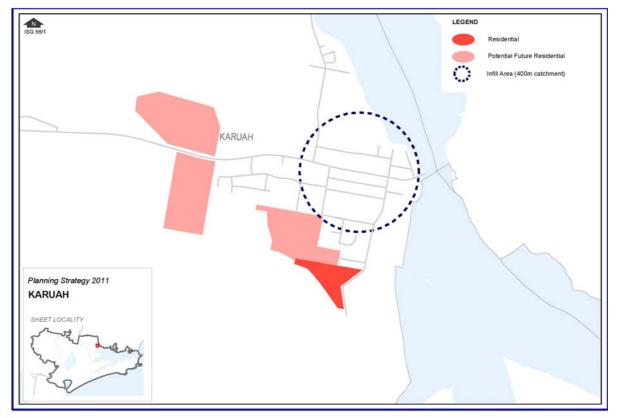
Floor space demand is forecast to increase by around 65,000 sqm between 2009 and 2031 in the Transport Data Centre based scenario and 280,000 sqm in the adjusted scenario.

The latter takes into account regional industry trends, evidence of local business development and strategic drivers which all indicate that the Tomago precinct has strong growth prospects over the forecast period.

The gap analysis, which does not include the land on the State Significant Site, shows that there is sufficient zoned land to accommodate this demand.

A large share of available land in Tomago and Heatherbrae is not currently subdivided. The true capacity of these precincts will depend on whether large parcels of currently vacant land can be subdivided and serviced at an affordable cost. The precinct is sufficiently distanced from any residential areas to allow for heavy industrial activity. The large lot size and ease of access to highways are also attractive to heavy industry.





Karuah

Identified in both the Mid North Coast and Lower Hunter Regional Strategies. The land shown as "potential future residential" has been identified in the Karuah Growth Strategy which was jointly undertaken between Ports Stephens and Great Lakes Councils (Port Stephens - adopted 20 December 2011 and Great Lakes adopted 6 December 2011). The Strategy identifies the potential for around 600 new dwellings (existing residential zoned land and potential residential zoned land, however, the growth rate is currently around 10-11 per year. It is anticipated that only about half of this projection will be reached by 2036.

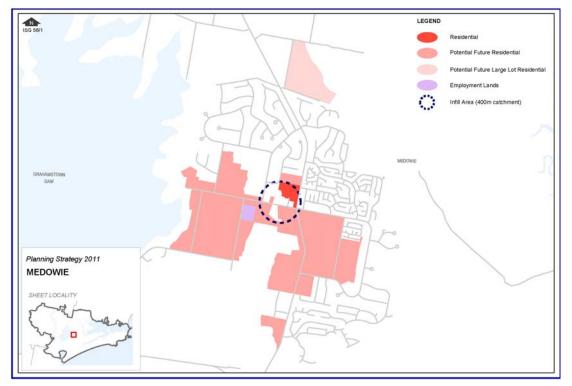
Infill development is expected to be minor given the area's distance from significant employment areas and higher order services.

Development constraints include:

Ecological considerations Flood Prone Land Acid Sulphate Soils SEPP 14 Wetlands Bush Fire Prone Land

Timing: 2010 for approximately 15-25 years Infill residential potential 100 dwellings Residential zoned land (green field) potential – 124 dwellings Potential residential: 250 Estimated yield 10-12 dwellings/ha

Map 5



Medowie

Identified as a new urban release area in Lower Hunter Regional Strategy.

Sub-strategy – Medowie Strategy (2009)

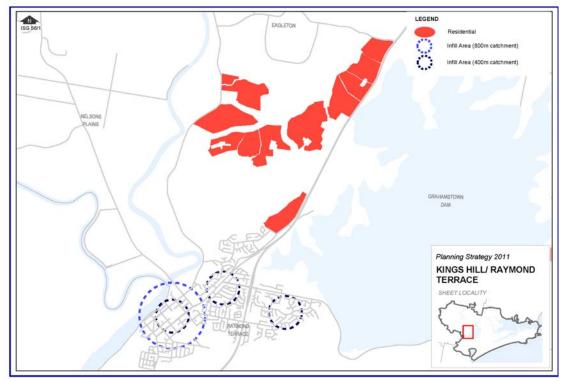
Medowie is currently a rural village, with significant areas of rural-residential development.

Development constraints include:

Flooding Prone Land Aircraft noise Ecological considerations Bushfire Prone Land Fragmented land ownership (ie rural-residential lots)

Timing: 2009 for approximately 20-25 years. Infill residential: 63 dwellings. Residential zoned land (green field) potential 220 dwellings. Potential residential: 2,421 dwellings. Estimated yield: 15+ dwellings/ha.

Map 6



North Raymond Terrace (Kings Hill)

Identified in the Lower Hunter Regional Strategy – new release area. Forms part of the Primary Growth Corridor for the LGA. Rezoned under Port Stephens Local Environmental Plan (Kings Hill, North Raymond Terrace) 2010 - 10 December 2010. Voluntary Planning Agreements required to deliver infrastructure.

Timing: 2014 for 25-30 years Residential zoned land (green field) potential 4,500 dwellings

Estimated yield 15+ dwellings/ha

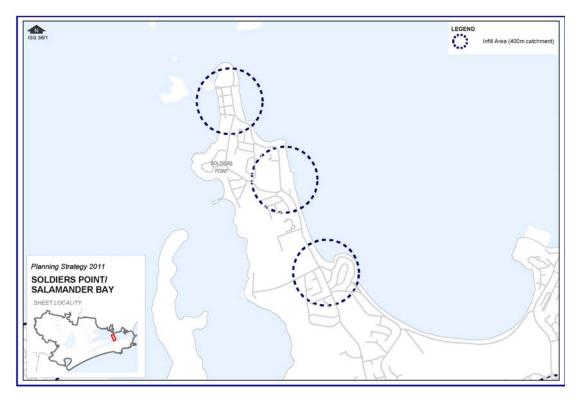
Raymond Terrace

Raymond Terrace is identified as a Major Regional Centre in the Lower Hunter Regional Strategy.

Forms part of the Primary Growth Corridor for the LGA. Land use potential will be determined by the Raymond Terrace/Heatherbrae Growth Strategy.

Development constraint issues: Economic markets for growth Repositioning of identity Flood Prone Land Heritage Conservation Area Aircraft Noise Timing: 2011 for approximately 10-15 years. Infill residential/commercial potential 800 dwellings. Residential zoned land (green field) potential 480 dwellings. Estimated yield 10-15 dwellings/ha.

Map 7



Soldiers Point

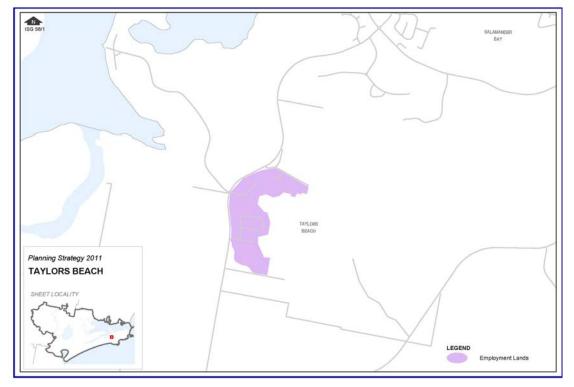
Predominantly a coastal village area. Opportunities exist for increasing densities to maximise access to existing infrastructure however, it is likely to yield only a small amount of new dwellings.

Development constraints include:

NSW Coastal Design Guidelines Ecological considerations Bush Fire Prone Land SEPP 14 Wetlands Limited available land.

No large scale new release area - potential for limited small scale infill.

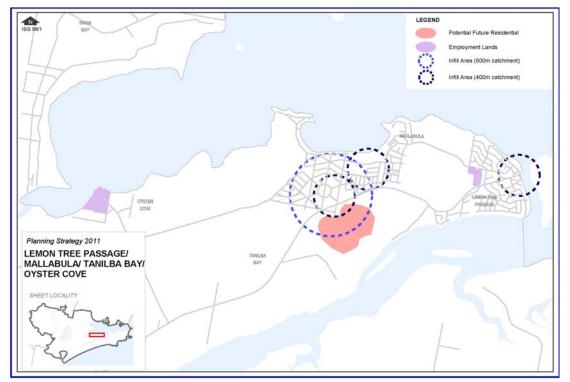
Map 8



Taylors Beach

Floor space demand is forecast to increase by around 6,500 sqm between 2009 and 2031. There is sufficient capacity to accommodate this floor space however, as is the case for the larger precincts of Tomago and Heatherbrae, a large share of the available land is not currently subdivided. The true capacity of this precinct will depend on whether large parcels of currently vacant land can be subdivided and serviced at an affordable cost.

Map 9



Tilligerry Peninsula

The Tilligerry Peninsula is a predominantly rural area with residential areas in the eastern section. Opportunities exist for increasing densities to maximise access to existing infrastructure.

Development constraints include:

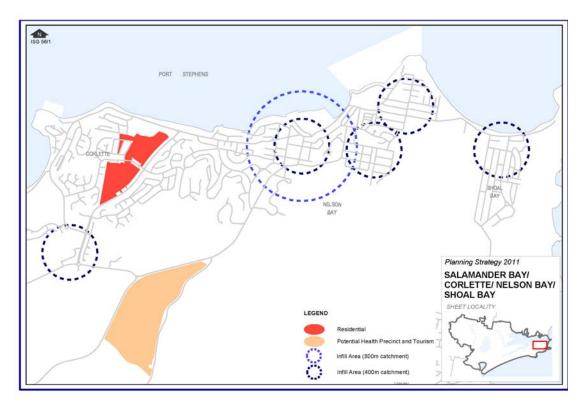
Ecological considerations Aircraft Noise Acid Sulphate Soils Flood Prone Land SEPP 14 Wetlands Bushfire Prone Land

Timing: 2015 for approximately 15-25 years. Infill residential potential 200 dwellings Potential residential 155 dwellings.

Lemon Tree Passage

Floor space demand is forecast to increase by around 1,000 sqm between 2009 and 2031 in this precinct and can be accommodated under current controls and land use patterns. It is likely to continue to operate in its current role, primarily servicing the needs of residents in the nearby Lemon Tree Passage residential area.

Map 10



Tomaree - Shoal Bay - Corlette

Predominantly coastal village area including some rural lands, forming the outlying suburbs of Nelson Bay. Opportunities exist for increasing densities to maximise access to existing infrastructure.

Development constraints include:

NSW Coastal Design Guidelines Ecological considerations Bush Fire Prone Land SEPP 14 Wetlands

Timing: 2010/2013 for approximately 15 years. Infill residential/commercial potential: 380 dwellings. Residential zoned land (green field) potential 332 dwellings. Estimated yield: 12 dwellings/ha.

Nelson Bay

Identified in the Lower Hunter Regional Strategy – specialised centre tourism precinct and town centre. Land use potential will be determined through the Draft Nelson Bay Town Centre and Foreshore Strategy.

A key issue for Nelson Bay is the need to achieve an appropriate balance between permanent residential and tourist accommodation. The future urban potential will come from intensification of development, primarily within existing zoned areas as indicated on the above map (such as medium density and multi-unit development). The residential dwelling projections are relatively conservative, however, to facilitate economic growth the commercial sector densities would need to be more substantial. Former Gan Gan Army Camp – potential Health Precinct (including private hospital and seniors living) and Tourism (including tourism attractions and ecotourism accommodation).

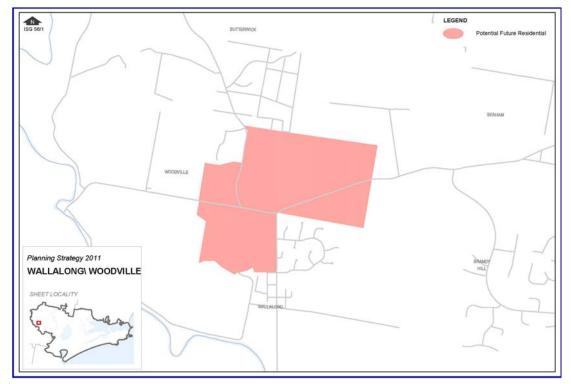
Timing: 2009 for approximately 25 years.

Infill residential/commercial potential: 600 dwellings.

Residential zoned land (green field) potential 169 dwellings.

Estimated yield: 15+ dwellings/ha.

Map 11



Wallalong

Council resolved on 25 August 2009 to include Wallalong as a new town. The site is not currently identified in the Lower Hunter Regional Strategy, however, has been identified as a Potential Urban Release Area for the LGA in the PSPS subject to resolution of infrastructure delivery. Any rezoning proposal would need to address the Sustainability Criteria in Appendix 1 of the Lower Hunter Regional Strategy.

Development constraints include:

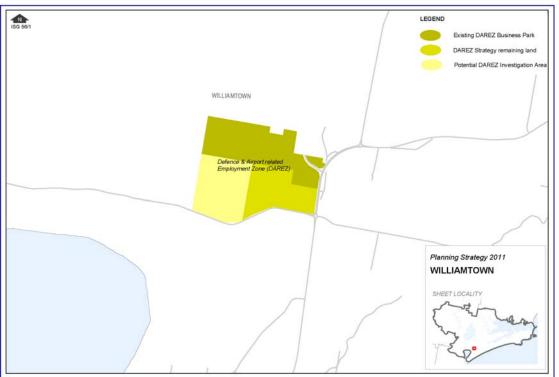
Drainage Ecological assessment Bushfire Prone Land Sloping Lands Agricultural land capability Infrastructure provision – also includes access to health and community facilities Coordination and staging of development

Timing: 2015 for approximately 20-25 years. Residential zoned land (green field) potential 3,167 dwellings (1,200 dwellings 2015-2036)

Estimated yield 10+ dwellings/ha

It is considered that the inclusion of Wallalong creates an additional urban development opportunity in the western part of the LGA. It will also provide more options in the future for residents wishing to reside in close proximity to both Maitland and Raymond Terrace.





Williamtown

Identified in the Lower Hunter Regional Strategy - specialised centre

Williamtown Defence and Airport Related Employment Zone (DAREZ) Land Use Development Strategy adopted by Council on 24 June 2008.

The first stage of rezoning of land for defence and airport-related purposes was gazetted on 13 February 2009.

There is a total of 90 ha zoned Business Park (potential effective area 68 ha) Development constraints include:

Operational requirements for both the RAAF Base and Newcastle Airport Bush Fire Prone Land

Flood Prone Land

High potential for Acid Sulphate Soils

Aboriginal heritage

Unstable soils

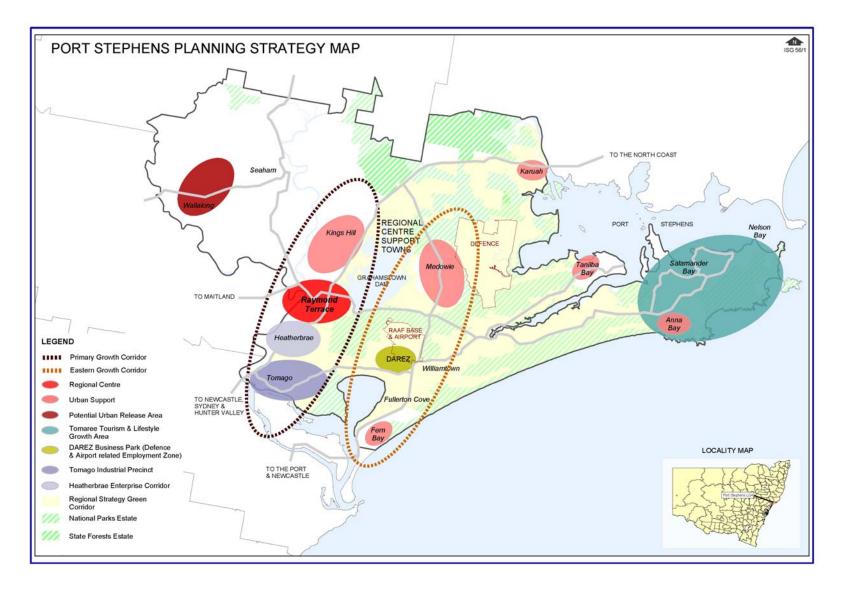
Future growth – take up of lands will be closely monitored to determine both demand and timing for additional lands.

Due to the location any future expansion or rezonings will need to consider the environmental values of the Watagan to Stockton Green Corridor.

Area identified as "DAREZ Strategy remaining lands" - identified in the Strategy, however, is subject to resolution of flooding, drainage and geotechnical constraints.

Area identified as "potential DAREZ investigation area" has been included to ensure additional access options are available as the Business Park develops as well as ensuring these lands are not compromised by inappropriate development in the interim.

Timing: 2011 for approximately 10-25 years.



References

Australian Bureau of Statistics *Building Approvals Data 2001-2010* Australian Bureau of Statistics *Census 2001, 2006* Australian Government 2010, *Australia to 2050: Future Challenges- 2010 Intergenerational Report*

Australian Institute of Health and Wellbeing.2009, *Australia's Welfare 2009* Australian Treasury (Gruen. D) 2009, *The economic outlook and challenges for the Australian economy 2010*

Buchan Consultants 2007, *Economic Development Strategy* (undertaken for Port Stephens Council)

Bureau of Meteorology 2010, *Australia Annual Climate Statement 2009'* Council of Australian Governments (COAG) 2009, *Meeting Outcomes 7 December 2009 – Capital City Planning Systems*

Department of Defence 2012 and 2025 ANEC and ANEF maps, various dates Department of Families, Housing, Community Services and Indigenous Affairs Australian Government 2010, National Housing Supply Council Second State of Supply Report

Edge Planning Consultants 2011, *Draft Rural Lands Strategy* (undertaken for Port Stephens Council)

GHD 2007, *Williamtown Defence and Airport Related Employment Zone (DAREZ) Land Use Development Strategy* (undertaken for Port Stephens Council) Williamtown Informed Decisions (id.) 2009, Population Forecasts, and Community Profile, for Port Stephens,

Infrastructure Australia: Major Cities Unit 2010, *State of Australian Cities 2010* Leyshon Consulting Pty Ltd, 2011, Review of Bulky Goods Floorspace Demand. NSW Bureau of Transport Statistics (formerly Transport Data Centre) 2010 *Employment Forecast Summary*

NSW Bureau of Transport Statistics (formerly Transport Data Centre) 2010, Freight Forecast Summary 2006-2036

NSW Bureau of Transport Statistics (formerly Transport Data Centre) 2009, 2007 Household Travel Survey Key Indicators by LGA and SSD

NSW Bureau of Transport Statistics (formerly Transport Data Centre) 2010, 2010 Population Forecast Summary

NSW Department of Environment Climate Change and Water 2009, *Lower Hunter Conservation Plan*

NSW Department of Environmental and Climate Change 2010 *NSW Climate Impact Profile*

NSW Department of Environment Climate Change and Water 2010, Wildlife Atlas, on line at

http://www.wildlifeatlas.nationalparks.nsw.gov.au/wildlifeatlas/watlas.jsp

NSW Department of Housing 2010, *Housing Profile of Port Stephens* NSW Department of Housing *Quarterly Rent and Sales Reports* various years NSW Department of Planning 2005, *Lower Hunter Regional Strategy* NSW Department of Planning 2009, *Metropolitan Development Program/Urban Development Program Workbook- Port Stephens LGA* NSW Department of Planning 2010, NSW *Statistical Local Area Population*

Projections (April 2010)

NSW Government State Plan 2010

NSW Department of Planning 1977, *Coastal Policy and supporting documents including Coastal Design Guidelines and Coastal Management Manual* Port Stephens Council 2003, *Community based Heritage Study*

Port Stephens Council 2007, *Community Settlement and Infrastructure Strategy* Port Stephens Council 2009, *Futures Strategy*

Port Stephens Council *Geographic Information System (GIS) maps* (various) Port Stephens Council 2010, *Integrated Strategic Plan*

Port Stephens Council 2010 Local Adaptation Pathways Program for Climate Change Assessment Report 3 Adaptation Action Plan

Port Stephens Council 2009 Port Stephens Climate Change Policy

Port Stephens Council 2002, Port Stephens Comprehensive Koala Plan of Management

Port Stephens Council 2007, Port Stephens Development Control Plan

Port Stephens Council 2000, Port Stephens Local Environmental Plan

Port Stephens Council, 2007, Section 94 and Section 94A Plans

Strategy Hunter consultants 2009, *Key Document Summary* (undertaken for Port Stephens Council)

SGS Economics and Planning 2010, *Commercial and Industrial Study 2010* (undertaken for Port Stephens Council)

Umwelt 2009, *Foreshore Management Plan for Port Stephens* (undertaken for Port Stephens and Great Lakes Councils)

Umwelt 2000, *Port Stephens and Great Lakes Estuary Management Plan* (undertaken for Port Stephens and Great Lakes Councils)

