



# Local Planning Strategy **Background Report**

## **Front Cover**

Title: My Neighbourhood

The front cover was painted by Zac Bailey, aged 9 as part of the community consultation undertaken for the Newcastle 2030 Community Strategic Plan. The brief was *'express in painting the Newcastle the participant would like to see in 20 years time.'*

July 2015

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## Abbreviations

ASBEC	Australia Sustainable Built Environment Council
ABS	Australian Bureau of Statistics
AEP	Annual Exceedence Probability
BTS	Bureau of Transport Statistics
CCLM	Council of Capital City Lord Mayors
CMA	Catchment Management Authority
COAG	Council of Australian Governments
CRA	Commonwealth Rent Assistance
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CSP	Community Strategic Plan
CWFP	Newcastle City Wide Floodplain Risk Management Study and Plan 2012
DCP	Development Control Plan
DECCEE	Department of Climate Change and Energy Efficiency
EEC	Endangered Ecological Communities
EIA	Economic Impact Assessment
EP&A	Environmental Planning and Assessment Act 1979
EPBC Act	Environmental Protection and Biodiversity Conservation Act 1999
ESD	Ecologically Sustainable Development
FBL	Free Board Level
FM Act	Fisheries Management Act 1994
FPL	Flood Planning Level
FSR	Floor Space Ratio
GMR	Greater Metropolitan Region (Greater Sydney, including Newcastle)
HDC	Hunter Development Corporation
HOB	Height of Buildings
HNA	Housing Needs Analysis
ID	Informed Decisions Pty Ltd
LEP	Local Environmental Plan

## Abbreviations (cont)

LGA	Local Government Area
LHRC Plan	Lower Hunter Regional Conservation Plan 2009
LHRS	Lower Hunter Regional Strategy
LPS	Local Planning Strategy
NDCP	Newcastle Development Control Plan
NEMS	Newcastle Environmental Management Plan 2013
NLEP	Newcastle Local Environmental Plan
NPW Act	National Parks and Wildlife Act 1974
NUS	Newcastle Urban Strategy
OEH	Office of Environment and Heritage
PBP	Planning for Bushfire Protection 2006
PMF	Probable Maximum Flood
RCP	Regional Conservation Plan
RDS	Residential Development Strategy
SAFE	Safe, Assessable, Friendly and Efficient
SEIFA	Socio-Economic Indexes for Areas
SEPP	State Environmental Planning Policy
SEWPAC	Department of Sustainability, Environment, Water, Population and Communities
TCON	The City of Newcastle
TSC	Threatened Species Conservation Act 1995
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHO	World Health Organisation
WM Act	Water Management Act 2000



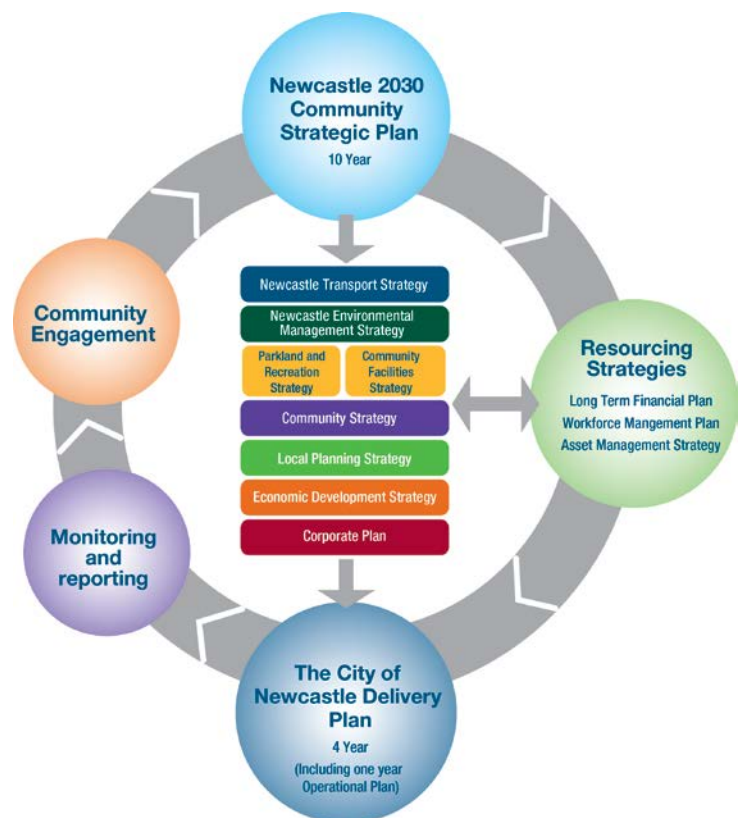
## Executive Summary

The City of Newcastle has transformed the Newcastle Urban Strategy that was first prepared in 1998 into a local planning strategy (*'the Strategy'*). The Strategy is a comprehensive **land use strategy** that will guide the future growth and development of the City of Newcastle.

The Strategy specifically aims to implement the land use directions from Newcastle 2030 Community Strategic Plan (CSP). This is achieved through principles, strategies and actions which are based upon the core objectives from the CSP. The Strategy also reflects the outcomes of Council's other core strategies as they relate to land use.

The Strategy also aligns with other strategic land use strategies at the State level such as the Lower Hunter Regional Strategy (NSW DP, 2006) and complements the Newcastle Urban Renewal Strategy (NSW DPE, 2014) for the Newcastle City Centre.

The Strategy will provide a land use planning platform to move towards a smarter, more liveable, more resilient and sustainable Newcastle.



# 1. Introduction

## 1.1 What is the Local Planning Strategy?

The Local Planning Strategy (LPS) is a comprehensive **land use strategy** that will guide the future growth and development of the Newcastle to 2030 and beyond.

## 1.2 Purpose of the Background Report?

The LPS is an evidence based analysis of land use planning issues, being supported by this comprehensive background report. This has been compiled from the series of themed working papers that were released for public comment.



# Local Planning Strategy

## Chapter 2: **Background and legislative context**

## **Chapter 2 Cover**

Title: Alone in the Library

The chapter cover was painted by Elena Rossi, age 8, as part of the community consultation undertaken for the Newcastle 2030 Community Strategic Plan. The brief was *'to express what the participant values most about Newcastle and/or the strengths of Newcastle'*.



### ***What is the purpose of this chapter?***

This chapter describes the existing legislative and policy environment in which the Local Planning Strategy will be prepared. It also discusses the relationship between a renewed strategy and the Newcastle Urban Strategy and the Community Strategic Plan 2030.

# 1. Legislative and Policy Context

## ***NSW 2021***

*NSW 2021* is a 10 year plan prepared by the State Government to rebuild the economy, return quality services, renovate infrastructure, restore accountability to government, and strengthen the local environment and communities. It replaces the State Plan as the NSW Government's strategic business plan.

*NSW 2021* provides a clear mandate for sound urban planning that encourages an urban form consistent with the principles of new urbanism.

The plan contains 32 goals and 180 targets with priority actions to support the achievement of each target.



Regional Action Plans are to be prepared by the State Government to align with the *NSW 2021*.

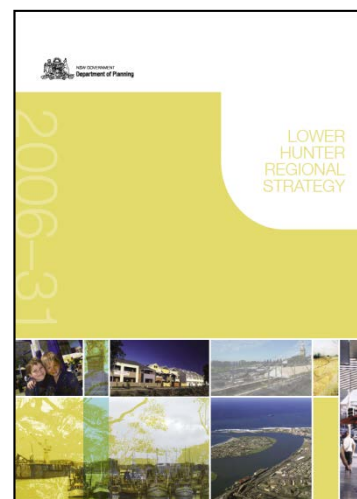
## ***Hunter Regional Action Plan***

The Hunter Regional Action Plan's vision is that the Hunter will consolidate its place as one of Australia's education, innovation and knowledge centres, capitalising on the region's natural resources and green energy space while building one of Australia's most desirable urban regions.

## ***Lower Hunter Regional Strategy***

The Lower Hunter Regional Strategy (LHRS) was released by the Department of Planning and Infrastructure in 2006. The LHRS was prepared to ensure the region develops in a strong and sustainable way.

The Regional Strategy is the strategic land use planning framework to guide the sustainable growth of the Lower Hunter over the next 25 years.



The key elements of the Strategy are to:

- Provide for up to 115 000 new dwellings by 2031 ensuring the potential to accommodate both the changing housing demands of smaller households and reduced occupancy rates of the existing population as well as meeting the housing demands for an additional 160 000 people.
- Identify and protect new green corridors between the Watagan Ranges and the Stockton Peninsula, across the Wallarah Peninsula and along the riverine environments of the Karuah River and the foreshores of Port Stephens.
- Promote Newcastle as the regional city of the Lower Hunter, supported by a hierarchy of major regional centres at Charlestown, Cessnock, Maitland and Raymond Terrace, emerging major regional centres at Morisset and Glendale–Cardiff as well as specialised centres and lower order centres.
- Boost the economic and housing capacity of key centres by refocusing a higher proportion of new housing in these centres. This will help to maintain the character of existing suburbs, provide greater housing choice, maximise use of existing and future infrastructure, including public transport, and achieve a more sustainable balance of infill to greenfield development.
- Utilise dwelling and employment projections as a focus for detailed planning of centres.
- Provide capacity within employment zones, major centres and strategic centres to accommodate up to 85 per cent of the anticipated 66 000 jobs required by 2031.
- Monitor the supply of residential dwellings and employment land through the creation of a new Lower Hunter Urban Development Program.
- Enable the release of up to 69 000 new greenfield lots in a coordinated way, with improved neighbourhood design and more efficient use of infrastructure.
- Where development or rezoning increases the need for State infrastructure, the Minister for Planning may require a contribution to the infrastructure having regard to the State Infrastructure Strategy and equity considerations.
- Maintain or improve the Region's biodiversity through a Regional Conservation Plan, which will establish a framework for biodiversity protection.
- Identify and protect environmental assets, rural land and natural resources, landscape and rural amenity, rural communities and the character of existing rural villages.

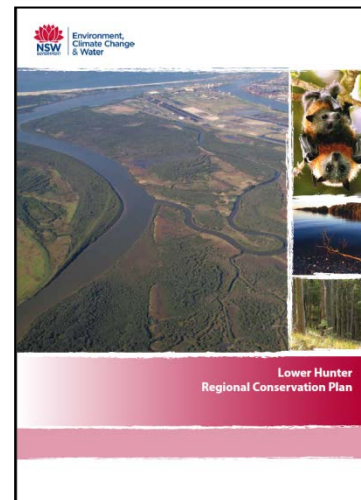
## ***Lower Hunter Regional Conservation Plan***

The Regional Conservation Plan (RCP) sets out a 25-year program to direct and drive conservation planning and efforts in the Lower Hunter Valley. It is a partner document to the Government's Lower Hunter Regional Strategy (LHRS) that sets out the full range of Government planning priorities, and identifies the proposed areas of growth.

Stage 1 of the RCP was announced in late 2006. This included the establishment of new conservation reserves to be managed by the then Department of Environment and Climate Change.

These new reserves comprise approximately 20,000 hectares of various high conservation value Government lands to form the backbone of major new conservation corridors including:

- A new 'Green Corridor' stretching from the Watagan Ranges, through Hexham Swamp to Port Stephens (approximately 14,600 hectares).
- Important areas around Port Stephens in the Karuah area (3,000 hectares).
- A large addition to Werakata National Park near Cessnock (2,200 hectares).



These public land transfers are a significant step in creating the necessary conservation outcomes for the Lower Hunter, including important linkages for biodiversity.

A system of providing offsets to compensate for the loss of native vegetation for urban development will be developed in accordance with government policy and guidelines. Priority for offsets will be in areas that make the most significant conservation contribution in the Lower Hunter. Such freehold land will contribute to the creation of the three priority corridors within:

- the Watagan Ranges to Port Stephens
- the South Wallarah Peninsula
- Werakata National Park.



In addition, other areas which make sensible additions to existing conservation reserves or conserve features currently under-represented in the formal conservation reserve system will be considered.

The plan provides options for management of freehold land for conservation in perpetuity. The intended approach to facilitate the dedication of freehold biodiversity land offsets to the NSW Government is through the provisions of the Environmental Planning and Assessment Act 1979 (EP&A Act), in particular, the current provisions relating to planning agreements.

The RCP also:

- canvasses tools and mechanisms that could be used in the medium to longer term to secure additional lands needed to offset the biodiversity impacts from development proposed in the LHRS and 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)
- provides direction for local councils who are preparing new Local Environmental Plans, so that they may merit biodiversity certification (certification aims to streamline development assessment and approvals)
- Identifies a further 65,000 hectares 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 Hunter–Central Rivers Catchment Management Authority (CMA)).

Figure 2.1: Lower Hunter Regional Strategy Map. Source: Lower Hunter Regional Strategy, Department of Planning and Infrastructure

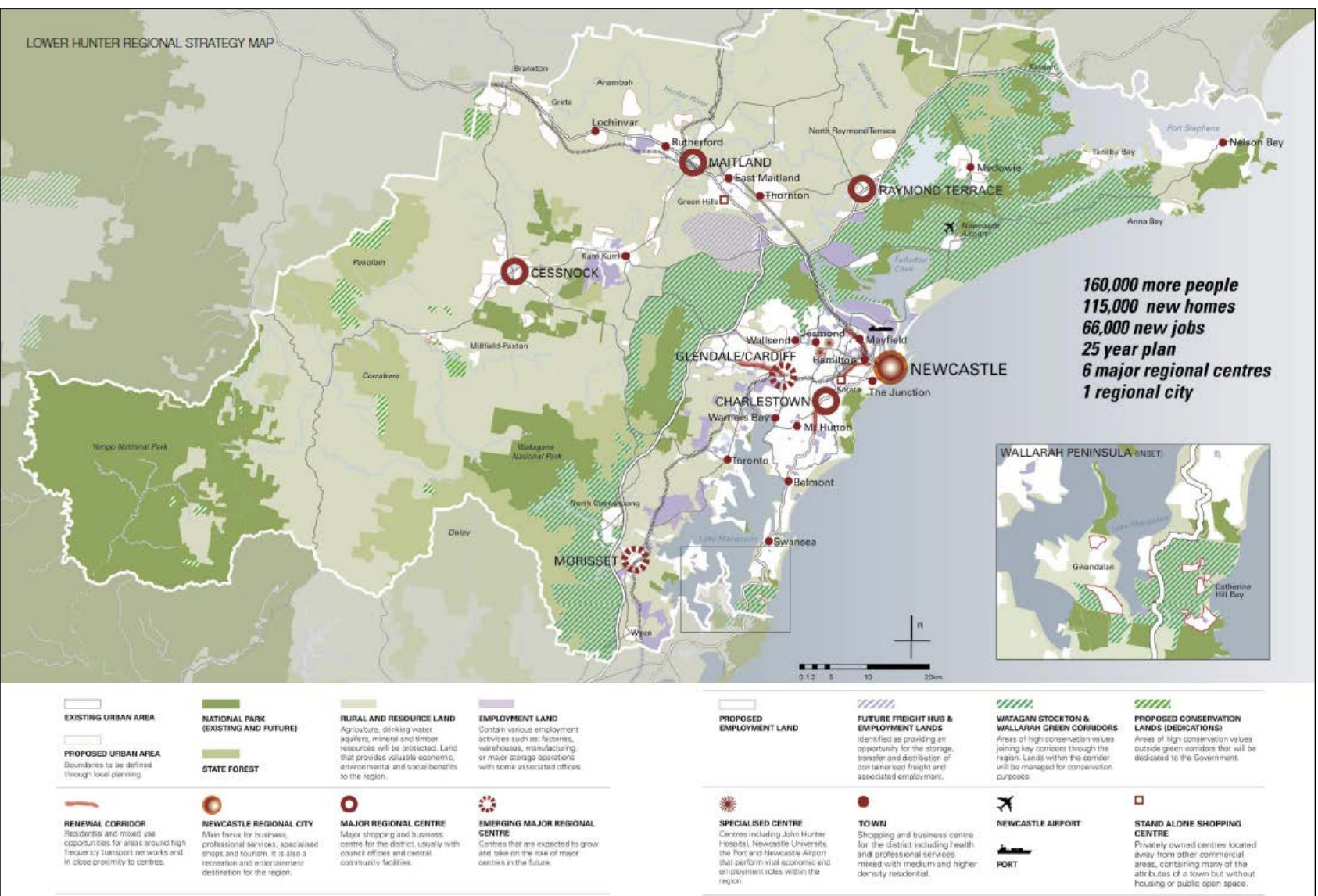
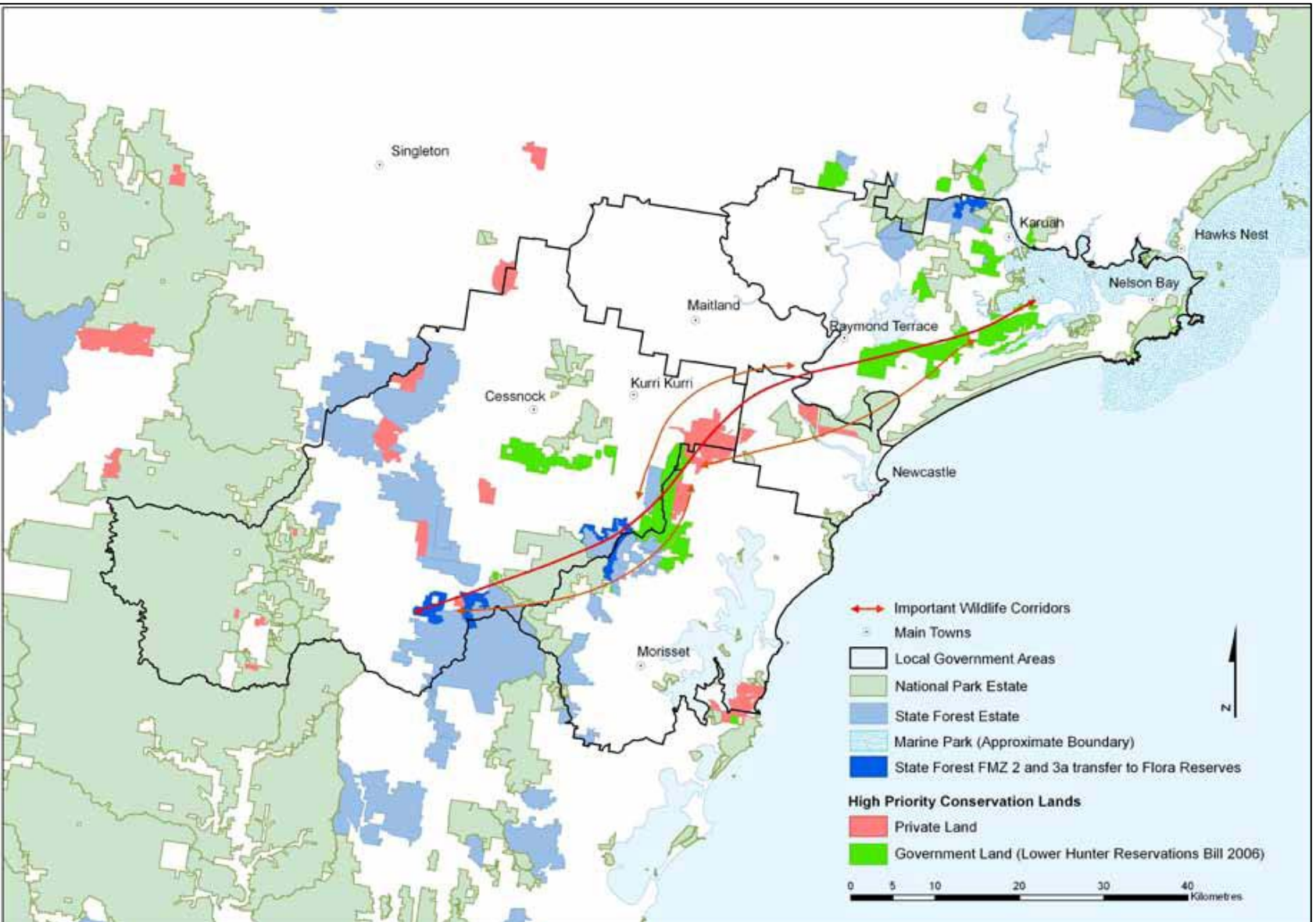


Figure 2.2: High priority regional conservation areas for the Lower Hunter Region – Stage 1 outputs. Source: Lower Hunter Regional Conservation Plan, Department of Environment and Heritage.





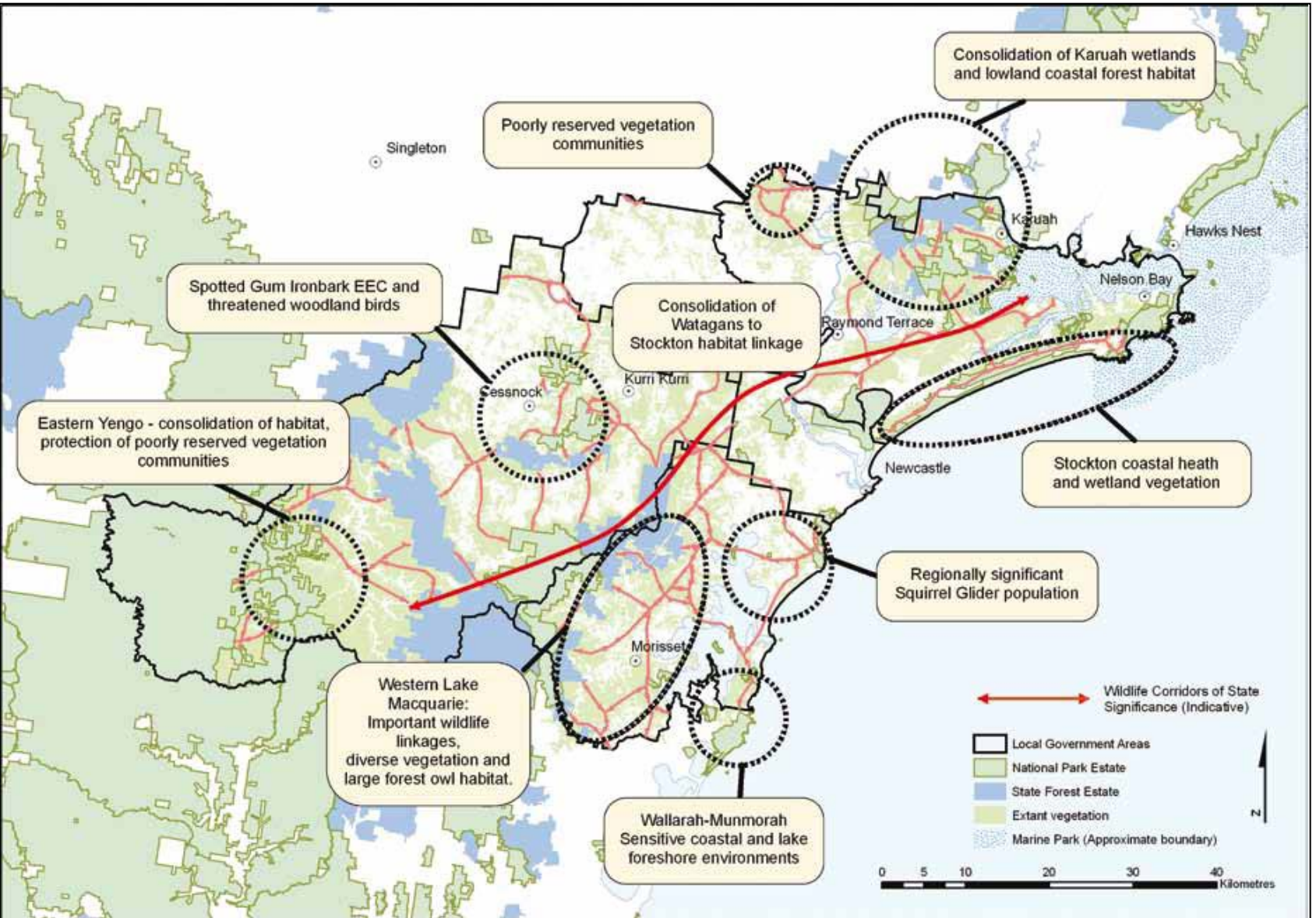


Figure 2.3: Other regional investment priorities for the Lower Hunter Region. . Source: Lower Hunter Regional Conservation Plan, Department of Environment and Heritage.



## ***Newcastle - Lake Macquarie Western Corridor Planning Strategy***

The Lower Hunter Regional Strategy recognises the lands in the Newcastle–Lake Macquarie western corridor as proposed urban, employment and environmental conservation lands. This corridor covers land from Beresfield to Killingworth, including Minmi, Cameron Park, West Wallsend and Edgeworth.

The Newcastle–Lake Macquarie Western Corridor Planning Strategy identifies key planning principles and known infrastructure requirements that will guide future urban expansion and conservation in the western corridor. The planning principles take into consideration proximity to existing residential areas and employment lands, site constraints, major transport linkages and regional and local conservation corridors.

The planning principles and infrastructure requirements provide the key considerations in the preparation of environmental studies that accompany rezoning proposals.

The anticipated development projection for the western corridor is 8000 dwellings after taking into consideration site constraints. This represents a potential dwelling yield of around eight dwellings per hectare. This planning strategy recognises a potential 1500 hectares of employment lands in the north (Black Hill) and south (West Wallsend and Killingworth) of the corridor that will provide additional employment opportunities to further strengthen the regional economy.

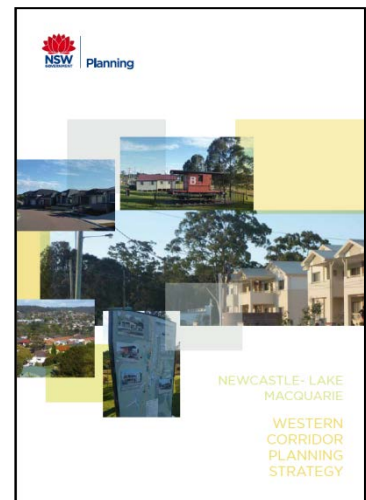
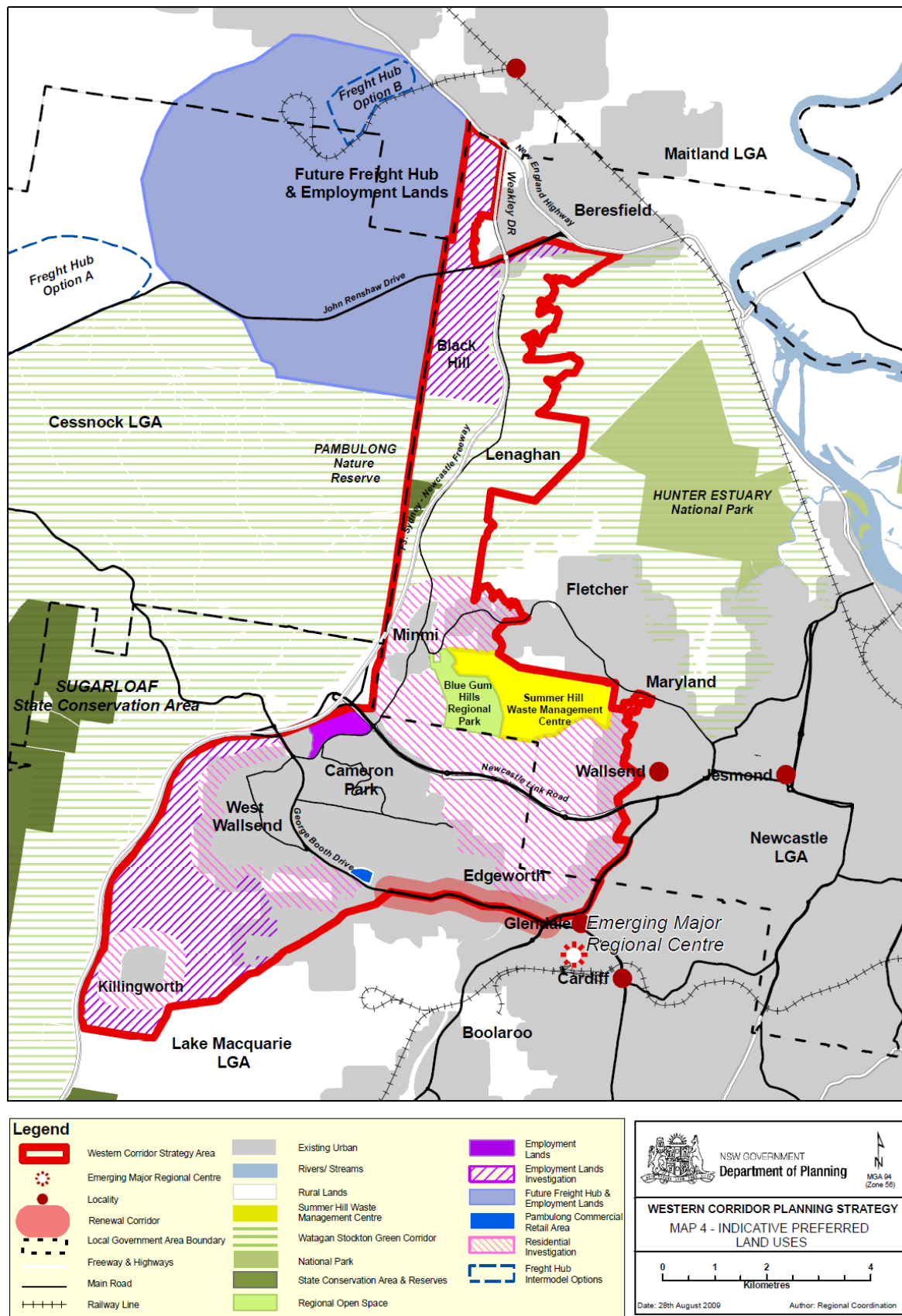


Figure 2.4: Indicative preferred land uses. Source: Western Corridor Planning Strategy, Department of Planning and Infrastructure.



## ***NEWCASTLE 2030 Community Strategic Plan***

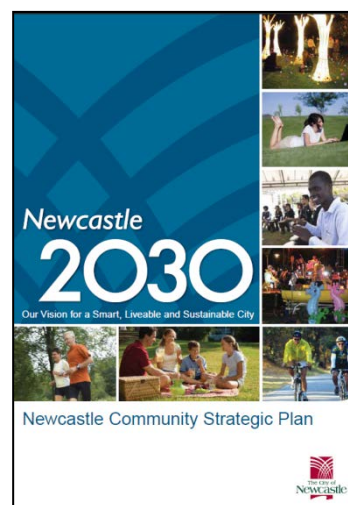
Newcastle 2030 is a long-term community strategic plan, required under NSW Government legislation and developed to guide and inform policies and actions throughout the city for the next decade. This vision sets the direction for the growth of the city, it represents what the community values and what they want improved.

The community's vision for Newcastle is for a smart, liveable and sustainable City.

The Community Strategic Plan contains: 7 strategic directions, 23 objectives to be achieved over the next ten years and strategies to achieve these.

The 7 strategic directions are:

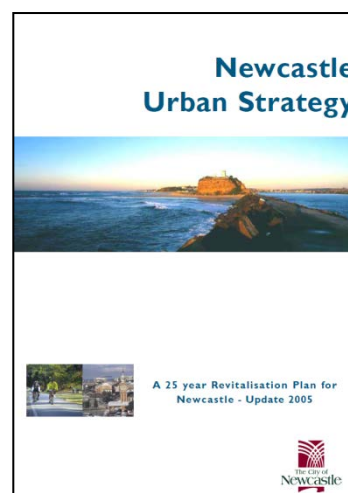
1. A Connected City
2. A Protected and Enhanced Environment
3. Vibrant and Activated Public Places
4. A Caring and Inclusive Community
5. A Liveable and Distinctive Built Environment
6. A Smart and Innovative City
7. Open and Collaborative Leadership



### ***Principles of Newcastle Urbanism***

'New Urbanism' is an urban design movement which promotes walkable neighbourhoods that contain a range of housing and job types. It is strongly influenced by urban design standards that were prominent until the rise of the car and embodies principles such as traditional neighbourhood design and transit-oriented development.

Council endorsed the Newcastle Urban Strategy (NUS) in 1998. The strategy was updated in 2005 and 2009 following the reviews of economic, social and environmental information available at the time. The NUS introduced the concept of 'Newcastle urbanism' which is based on the principles of 'new urbanism'.



The LPS replaces the NUS and will fit within the new planning framework for State, regional and local planning policies.

The aim of ‘Newcastle urbanism’ is to provide greater choices to the community, in terms of housing, employment, transport, and social and cultural services, while offering reduced travel demand, improved air quality and greater identity for Newcastle, its city centre, and its district and neighbourhood centres.

The community’s commitment to the principles of ‘Newcastle Urbanism’ was recently reaffirmed in the shared community vision for “*a smart, liveable and sustainable city*” under Newcastle 2030 Community Strategic Plan. The Strategic Directions and Objectives set in the Newcastle 2030 Community Strategic Plan effectively encompass all of the principles of ‘Newcastle urbanism’. This has been demonstrated in Table 2.1 below.

**Table 2.1: Comparison of the principles of 'Newcastle urbanism' and the objectives of the Community Strategic Plan 2030 to create a new set of principles for the Local Planning Strategy.**

Newcastle Urbanism Principles	Relevant Community Strategic Plan Objectives 2030	Proposed new Local Planning Strategy principles
<p>Create or contribute to a highly inter-connected street system offering improved pedestrian, bicycle and traffic efficiency, a pleasant environment and increased opportunities for social and economic exchange between people</p>	<p><b>Connected City</b></p> <ul style="list-style-type: none"> <li>• Effective and integrated public transport</li> <li>• Linked networks of cycle and pedestrian paths</li> <li>• A transport network encouraging energy and resource efficiency</li> </ul>	<p>Land uses at appropriate densities will be located to support <b>effective and integrated public transport</b></p>
<p>Promote public transport, walking and cycling as viable alternatives to the car as well as support the movement of goods around the city and region for commerce and industry by road and rail</p>		<p>Walking cycling and public transport will be viable options for the majority of trips by <b>linking networks of cycle and pedestrian paths</b></p> <p>The urban form will support a <b>transport network encouraging energy and resource efficiency</b></p>
<p>Adapt existing buildings to new uses wherever possible</p>	<p><b>Protected and Enhanced Environment</b></p> <ul style="list-style-type: none"> <li>• Greater efficiency in resource use</li> <li>• Our unique natural environment is maintained, enhanced and connected</li> <li>• Environment and climate change risks and impacts are understood and managed</li> </ul>	<p>The environment will be protected and enhanced by <b>greater efficiency in resource use</b></p>
<p>Be responsive to site conditions, both natural and human, including prominent landscapes and townscapes such as ridges, water bodies and other topographic features, such as the City Centre skyline</p>		<p>The land use pattern will respond to and adapt to <b>environment and climate change risks and impacts</b></p>
<p>Protect and preserve ecosystems by minimising (or eliminating) air, soil and water borne pollutants</p>		<p>Opportunities to <b>enhance and connect the natural environment will be pursued</b></p>

Newcastle Urbanism Principles	Relevant Community Strategic Plan Objectives 2030	Proposed new Local Planning Strategy principles
Create or contribute to high quality public spaces that are addressed by buildings and/or streets	<b>Vibrant and Activated Public Places</b> <ul style="list-style-type: none"> <li>Public places that provide for diverse activity and strengthen our social connections</li> <li>Culture, heritage and place are valued, shared and celebrated</li> <li>Safe and activated places that are used by people day and night</li> </ul>	Development addresses public spaces and is scaled for the pedestrian to provide <b>vibrant and activated public places for diverse activity and to strengthen our social connections</b>
Provide buildings and places that are scaled for the pedestrian		Development will <b>protect culture, heritage and place</b>
Acknowledge that streets are the primary public places for access and exchange between people, and should be made safe, friendly, attractive and efficient		The urban form will encourage <b>safe and activated places that are used by people day and night</b> . Streets are the primary spaces for access and exchange between people, and should be made safe, friendly, attractive and efficient
Help build a sense of place		
Contribute to the community and social equity	<b>Caring and inclusive community</b> <ul style="list-style-type: none"> <li>A welcoming community that cares and looks after each other</li> <li>Active and healthy communities with physical, mental and spiritual wellbeing</li> <li>A creative, culturally rich and vibrant community</li> </ul>	The urban environment will promote <b>active and healthy communities with physical, mental and spiritual wellbeing</b> by providing opportunities for social interaction, by encouraging physical activity and by providing access to essential services and community facilities by all people close to their homes
Improve access for all people, including those who are socially, culturally, physically or economically disadvantaged		

Newcastle Urbanism Principles	Relevant Community Strategic Plan Objectives 2030	Proposed new Local Planning Strategy principles
Contribute to a well defined public realm with clear focal points and edges	<b>Liveable and Distinctive Built Environment</b> <ul style="list-style-type: none"> <li>A built environment that maintains and enhances our sense of identity</li> <li>Mixed-use urban villages supported by integrated transport networks</li> <li>Greater diversity of quality housing for current and future community needs</li> <li>Best practice energy and water efficient buildings and infrastructure</li> </ul>	<b>Buildings and infrastructure will adopt best practice energy and water efficiencies</b>
Use architecture that reflects and supports local culture, heritage and identity, and responds to local climatic conditions		<b>The built environment will maintain and enhance the City's identity</b> by protecting and enhancing heritage buildings, streetscapes, views and key features as well as encouraging building innovation that respects the scale and bulk of the existing urban fabric.
Construct buildings that are capable of accommodating more than one use, and adaptable to uses other than the purpose(s) for which they were originally designed		<b>The existing centres will be reinforced as mixed-use urban centres supported by integrated transport networks</b>
Be energy efficient in the materials and building techniques used, recycling and reducing the use of resources whenever possible		
Help neighbourhoods in city, district and suburban locations, to become fine grained mixed use centres, 'urban villages', when suitable		
Contribute to incremental development of urban villages that will have higher employment and resident densities than post-war suburban development		

Newcastle Urbanism Principles	Relevant Community Strategic Plan Objectives 2030	Proposed new Local Planning Strategy principles
Recognise and capitalise on the shifts of decentralisation, and anticipated changes to work practices arising from the evolution of the knowledge or information based economy, and the decline of the industrial age	<b>Smart and innovative City</b> <ul style="list-style-type: none"> <li>A vibrant, diverse and resilient green economy built on educational excellence and research</li> <li>A culture that supports and encourages innovation and creativity at all levels</li> <li>A thriving city that attracts people to live, work, invest and visit</li> </ul>	<p><b>A creative, culturally rich and vibrant community</b> will be encouraged by providing a <b>greater diversity of quality housing</b>, business and recreational opportunities within each suburb for <b>current and future community needs</b></p> <p>The land use pattern will reinforce the mixed use centres, educational nodes, provide opportunities for technology based businesses and industries and support technological infrastructure to encourage a <b>vibrant, diverse and resilient green economy</b> and a <b>culture that supports and encourages innovation and creativity at all levels</b></p> <p>The urban environment will support a <b>thriving city that attracts people to live, work, invest and visit</b></p>
Acknowledge Newcastle is part of a hierarchy of interrelated and interdependent neighbourhoods, districts and cities of the Lower Hunter. Development must therefore fit within this urban context	<b>Open and Collaborative Leadership</b> <ul style="list-style-type: none"> <li>Integrated, sustainable long-term planning for Newcastle and the Region</li> </ul>	Land use policy will promote <b>integrated, sustainable, long-term planning for Newcastle and the Region</b>
Acknowledge the role of Port of Newcastle and associated industry in Newcastle's economy as contributing to the region's competitive advantage, and as a stimulus for economic growth.		



## ***Newcastle Local Environment Plan 2012***

The strategic directions of the LPS are predominantly delivered through Council's Local Environmental Plan. In 2006, the NSW Government gazetted an order ([Standard Instrument \(Local Environmental Plans\) Order 2006](#)) for preparing new Local Environmental Plans (LEPs). The order standardised the language, land use zones, definitions and format of all LEPs across the State. It also incorporated development provisions such as floor space ratios and heights of buildings that were previously provisions of the development control plan.

The Newcastle Local Environmental Plan 2012 was notified in June 2012. The Plan is considered a 'conversion' plan meaning that as far as possible land use zones and development provisions were matched to the Newcastle Local Environmental Plan 2003 and the City Centre Local Environmental Plan 2008 as closely as possible.

A future comprehensive amendment to the LEP is proposed based on the recommendations of the LPS.

## ***Newcastle Development Control Plan 2012***

The Newcastle Development Control Plan 2012 provides further detail to the land use controls under the Local Environmental plan and is also a key tool in the delivery of the LPS.





# Local Planning Strategy

## Chapter 3: **Future City**

### **Chapter 3 Cover**

Title: What could happen?

The front cover was painted by Abigail Slater, age 12, as part of the community consultation undertaken in 2009 for the Newcastle 2030 Community Strategic Plan. The brief was '*to express in painting the Newcastle the participant would like to see in 20 years time*'.

## 1. What is the purpose of this chapter?

The purpose of this chapter is to explore some of the challenges and opportunities Australian cities may face over the next two decades and beyond.

The chapter is divided into three main sections; a literature review, a discussion on '*what the experts say?*' and implications for the strategy. The literature review discusses topics such as climate change, peak oil, a growing and aging population, social connection and wellbeing, employment, skills, food security, the global financial crisis, infrastructure, transport and housing affordability.





## 2. Literature Review

There is much information on how Australian cities should and could grow. The following discussion identifies challenges and opportunities that may influence the future of Australian cities, including the City of Newcastle. The purpose of this discussion is to provide context to Council's strategic land use planning.

### *Environment*

#### **The natural environment: Inputs and Outputs**

Cities create environmental problems due to the need for and disposal of resources required to support a growing population (Council of Australian Governments [COAG], 2010).

Essential resources required to sustain a city include sufficient land, water, energy and food; all of which generate large amounts of waste such as rubbish and sewerage (Forster, 2007). Disposing of resources in an unsustainable manner directly or indirectly affects our natural environment resulting in air, land and water pollution (Forster, 2007).

According to the ABS (2010), Australia is one of the largest contributors of waste (in actual volume) in the world and this is primarily due to its growing population and economy. Over the past decade, the total volume of waste generated in Australia has doubled and the total volume of waste continues to grow especially in waste associated with new technologies (e-waste) (ABS, 2010). Australians generate more than 140,000 tonnes of e-waste a year (Council of Capital City Lord Mayors [CCCCLM], 2010). This figure is growing three times faster than general waste (CCCCLM, 2010). Main contributors of waste in Australia include household rubbish, wastes from commercial and industrial activities and construction and demolition (ABS, 2010).

**"If we use less, if we consume less, we're going to have more."**

**Colin Baker (2012)**

In Australia burying rubbish that cannot be reused or recycled in landfills is the main form of waste management. This activity contributes to global warming due to increased methane in the atmosphere which is formed when the materials decompose. Additional environmental problems associated with landfills include the production of leachate which has the potential to contaminate water sources and soil (ABS, 2010).

Cities can be more sustainable by treating and reusing wastewater, recycling materials such as glass, plastics, paper and metals, composing organic waste and using materials produced by waste by one industrial process to input into another (Australian Government, 2010).

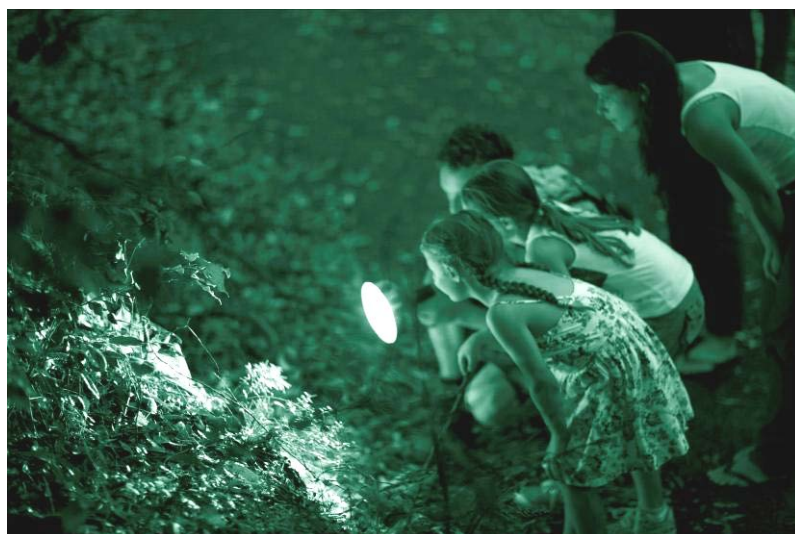
## Air

Air pollution is a form of waste. Australian cities have low levels of air pollution compared to others overseas however air pollution remains a concern for Australian cities. Australia's largest cities are prone to photochemical smog caused largely by private car usage (Australian Government, 2010). Photochemical smog can have an effect on the environment, on people's health and even on various materials. The main visible effect is the brown haze that can be seen above many cities. The brown tinge is caused by very small liquid and solid particles scattering the light. The biggest concern about photochemical smog is the effect it has on people's health (Department of Sustainability, Environment, Water, Population and Communities [SEWPAC], 2011).

## Biodiversity

Australia's "megadiverse" biodiversity, where 7-10% of the world's species live, has been declining since European settlement (SEWPAC, 2011). This refers to population size, geographic range and genetic diversity of species across all groups of plants, animals and other forms of life (SEWPAC, 2011).

Declining species numbers is largely due to past and present human activities. These include widespread land clearing, agriculture, early burning practices, introduction of feral animals, drainage of wetlands, intensive harvest of fish stocks and many more. Continuation of these activities combined with climate change and population growth is an ongoing challenge for Australian cities. Our unique biodiversity needs to be managed carefully for intergenerational equity and its own intrinsic value, so that the children of today can enjoy



and live in the natural environment at its best. Further degradation of the environment can "seriously affect the delivery of environmental benefits....and reduce our quality of life....ecosystems and the biodiversity that they support provide services that are fundamental to human life,

such as regulation of the atmosphere, maintenance of soil fertility, food production, regulation of water flows, filtration of water, pest control and waste disposal" (SEWPAC, 2011).

## Water availability and use

Australian cities are “thirsty” and consume unsustainably high levels of water (Forster, 2007). Between 2009-2010 the top three consumers of water were agriculture, domestic water supply (water supply, sewerage and drainage service industries) and forestry, fishing services and administration industries (ABS, 2011). Electricity and gas supply, manufacturing and mining then followed. In NSW (from 2009-2010), the top consumers of water were agriculture, domestic water supply, industry, manufacturing and mining (ABS, 2012).

Water is critical for sustaining life. “We could not exist without taking water out of the natural environment and using it for domestic and productive purposes” (SEWPAC, 2011). Securing quality drinking water is a significant challenge for Australian cities. According to SEWPAC (2011) Australia uses little (5%) of our total renewable freshwater compared to other countries such as the United States (20%) and Italy (43%). However, per person, Australians use greater volumes of water compared to other nations with greater populations such as those within Europe, Japan, Korea, South America and more (SEWPAC, 2011).

Water supply is threatened because of costly infrastructure to capture, store and reticulate water such as dams, reservoirs, and pipelines. An uncertain future climate and greater demand also threaten water security (Forster, 2007).

**"When the well's dry, we know the worth of water."**

Water use places great pressure on the natural environment which needs to be managed. Taking too much water out of

**Benjamin Franklin**  
(1706-1790)

Australia's river and ground water systems can have detrimental consequences by reducing environmental flow. This can place pressure on natural systems that rely on the system particularly in times of drought (SEWPAC, 2011).

Ensuring quality water supply can create jobs and stimulate economic growth, particularly in agriculture (The City of New York, 2011). The health, welfare, and economic wellbeing of our cities are closely linked to the quality of our drinking water (The City of New York, 2011).



## Climate change and global warming

“Australia is likely to become warmer, with uncertain rainfall changes in the north, and less rainfall and more droughts in the south. Heat waves and heavy rain events are likely to become more frequent worldwide, with less snow, more fires, more heavy rainfall events and more intense cyclones. Sea-ice and snow are likely to increase in high latitudes and likely to decrease in most sub-tropical and temperate land areas. The area affected by droughts is likely to increase and tropical cyclones are likely to become more intense” (CSIRO, 2011).

Australian cities are likely to be impacted by extreme weather events in the future (CCCLM, 2010). This is concerning as 85% of Australia’s population live on the coast. Our homes, services, workplaces are all located there (CCCLM, 2010). According to the Newcastle Coastal Revitalisation Strategy (2010) low lying coastal areas and foreshores are under threat (The City of Newcastle, 2010). The nation will need to consider how we “drought-proof” our cities, improve water efficiency and best manage our coasts, infrastructure and agriculture against potential natural disasters such as flooding and coastal erosion (CCCLM, 2010).



## Peak oil and energy use

The consumption of energy in our cities is largely responsible for the increase in greenhouse gases accelerating climate change (OEH, 2009). Fossil fuels are a finite resource with access becoming more difficult. The point at which output can no longer increase and production begins to level off is referred to as peak oil (Graefe, 2009). Determining how long the supply will last has become even more pressing because the world’s energy demand is expected to rise steeply over the next 20 years (Graefe, 2009).

In Australia manufacturing and transport were the largest consumers of energy usage however we are all (domestically) responsible (ABS, 2012). The creation of better designed, more energy efficient homes can make a difference including adaptive reuse of existing buildings (COAG, 2010). The COAG highlight the need for lower-emission transport fuels, more fuel efficient vehicles, lower-emissions transport modes, better planned public transport

systems and higher density compact cities to improve sustainability and reduce dependence on oil (COAG, 2010).



Reduced supply of oil will increase petrol prices and increase transport costs. The sprawling, low density nature of Australian cities means that we are heavily reliant on private vehicles for most of our trips (Australian Government, 2010). Public transport is poor outside the major cities and our urban

form means that public transport is unviable (Grattan Institute, 2012) without significant subsidisation. Increasing fuel costs has severe implications on personal mobility and access to essential services, recreation and employment (Australia Sustainable Built Environment Council [ASBEC], 2010).

At present, coal and other fossil fuels are important, albeit finite resources to power the world's energy supply systems. Many countries are moving towards low emission energy generation and away from fossil fuels like oil and coal (Department of Climate Change and Energy Efficiency [DECCEE], 2012). The introduction of a price on carbon in 2012 signals the Australian Government's (DECCEE, 2012) commitment to reducing greenhouse gas emissions and promoting alternate energy generated by wind, water, sun and waves (CSIRO, 2012). At this stage, the cost of sustainable alternatives compared to the cost of fossil fuel based energy production means that sustainable energy is still a minor contributor. However, it stands to reason that at some point this will change. Whether this occurs incrementally because of the increasing cost of fossil fuels compared to sustainable sources or suddenly because of technological advancement is unknown. If a low cost, easily manufactured solution arises the impact on coal mining and power production industries could be dramatic (CSIRO, 2012).

## People

### Growth and the compact city

More than 70% of the world's population will live in cities by 2050 (COAG, 2010). Such high levels of urban growth present opportunities and challenges for the future. Global challenges include the impacts on the environment, including loss of biodiversity, limits to water availability, impact of greenhouse gases and food security (SEWPAC, 2011). Improvements in liveability such as housing availability and affordability, access to services, infrastructure, green space and traffic congestion are essential (SEWPAC, 2011). Opportunities as a result of immigration may address certain issues such as skills shortages and ageing population while contributing



to living standards and Australia's economic prosperity. Immigration is said to make Australia a "more dynamic, vibrant and welcoming place that is more connected to the rest of the world" (SEWPAC, 2011). There is much debate as to whether population and immigration should be increased or stabilised (SEWPAC, 2011).

The historical focus of providing new low density housing in previously undeveloped areas has resulted in low levels of public transport provision, increasing congestion and travel times, and high costs in providing essential infrastructure, services and facilities to support new neighbourhoods (The Department of Planning and Infrastructure, 2006).

There are many benefits associated with urban consolidation. Newman and Kenworthy (2010) believe that "overcoming car dependence is a key requirement of future sustainable cities.....the key change is to raise the density of urban areas to reduce the need to travel and subsequent fuel use, decrease green house gas emissions and moderate social harms associated with car dependency" (ASBEC, 2010). There are a range of other factors influencing transport choices such as the shape of our cities, distribution of land uses and history of constructing more roads rather than investing and promoting other modes of transport (ASBEC, 2010). The continued construction of roads, previously thought to



alleviate congestion problems only leads to more congestion problems and urban sprawl (Australian Government, 2010).

The benefits of compact cities include potentially healthier, more vibrant communities, more accessible services, more appropriate housing, more efficient use of land and

infrastructure (ASBEC, 2010). Compact cities encourage walking and cycling and public transport use thereby encouraging more physical activity, less pollution and congestion. Compact cities reduce the demand for greenfield development thereby reducing impacts on agricultural and environmental assets.

Despite the recognised benefits of increasing the density within the existing urban footprint there are significant challenges to overcome the concerns commonly expressed by the development industry and community. Some of the key arguments against densification are discussed in *Cities for the Future: Baseline Report and Key Issues* (ASBEC, 2010) and summarised below:

- The relationship between density and private transport use does not acknowledge household decisions such as household income and how it affects transport choice.
- The relationship between density and private transport use does not acknowledge culture and the reason people opt to drive over other modes of transport. It can be difficult to change urban form without changing the culture. For example ones perception of public transport.
- Compact cities may be unpopular and politically unfeasible with many communities consistently exhibiting a strong preference for a suburban lifestyle.
- Density can be ineffective or too slow: planning for higher density and making larger investment in transportation infrastructure can be a slow and challenging process to implement.
- The changes are often considered to not justify the often substantial public investment involved.



- The measures will take too long to make a material contribution to contribute to combating the threat of dangerous climate change.
- Higher density development may raise costs for businesses. Businesses in well serviced areas which consist of high amenity may have higher costs than others in more remote locations.
- Low density has advantages that appear overlooked such as scale economies, lower cost of housing, modernity and desirable attributes of greater personal space (ASBEC, 2010).

Additional concerns related to urban consolidation can include larger amounts of stormwater runoff and domestic waste, short term problems whilst in transition such as high levels of air pollution, expensive land values potentially affecting housing affordability and social inclusion and high infrastructure costs due to need to upgrade or provide new services and facilities (Smith, 1997).

## Aging population

An aging population is described as a rapid increase in the number of older persons relative to other groups, especially the working age population (Hugo, 2003). Between 2010 and 2020 the number of people aged 65-84 years is expected to increase by more than 40% and the number of people aged over 85 years is expected to increase by a quarter nationally (SEWPAC, 2011).

Our aging population is commonly viewed negatively. It is often discussed in the context of healthcare and housing and how this may impact Australia's economy. There are significant challenges resulting from an aging population however there are also opportunities and benefits.

The Australian government supports aging in place where appropriate (Department of Health and Ageing, 2011). A key

challenge is to provide appropriate housing in well connected locations, close to services and facilities and with access to public transport. Aging in place requires adaptable housing that



continues to meet people's physical needs as they age. Housing that is well located close to shops and transport underpins the principles of urban consolidation and the focus of much city strategy. Therefore the aging population may provide a catalyst to support the greater residential populations around our town centres and transport nodes. The challenge then is to provide appropriate and desirable housing stock in those areas.

Providing a diversity of housing close to employment or transport nodes is essential to ensure that the diversity of city functions is maintained.

## Social connection and wellbeing

“Humans are social animals: relationships are crucial to our wellbeing. A lack of social connection leads to loneliness and isolation, experiences far more harmful than previously realised” (Grattan Institute, 2012).

There are signs that isolation and loneliness are increasing and unevenly distributed in Australia (Grattan Institute, 2012). Research undertaken by Grattan Institute (2012) indicates that friendships and neighbourhood connections are diminishing. An ever changing population means this may continue to worsen as a quarter of Australian households consist of people living by themselves (Grattan Institute, 2012). One person households are fast-

growing in Australia and are expected to grow from 24% of all households in 2006 to 28% in 2030 (Grattan Institute, 2012).

The number of one-parent families is also projected to increase strongly, rising between 40% and 77% over the next 25 year period from 2006-2031 (Grattan Institute, 2012).

Evidence suggests that people living on their own are more likely to experience loneliness. Loneliness can result in declining health and wellbeing. Higher likelihood of isolation is expected to increase due to the large and growing number of aging people, sole parents and people with English as their second language as they are unlikely to speak to people outside their household or smaller community (Grattan Institute, 2012). Sadly, many elderly people consider the television to be their main form of company (Grattan Institute, 2012).





A well connected 'social' city is important as people share information, resources and skills making cities more dynamic and resilient. Interactions with others inform our expectations of them and teach us about social norms. They make us part of a society. Without them we can not establish the mutual expectations and trust that is the foundation for economic exchange and a healthy democracy. People on lower incomes and with disabilities have lower trust in others, creating a barrier to social connection for groups who are already disadvantaged (Grattan Institute, 2012).

Proximity to services and facilities, mobility and shared spaces are important because despite other ways of connecting, face to face contact remains a crucial way to develop and sustain our personal relationships. Grattan Institute (2012) suggests that in many parts of Australian cities, not having a car is a huge barrier to mobility. Many people who cannot afford a car or cannot drive are not well served by public transport (Grattan Institute, 2012). For example people in more remote locations can find it difficult to access primary health care. The Australian Government has a vision for a stronger, fairer, more resilient nation....that ensures that advantages and opportunities are available in cities are distributed equitably (COAG, 2010).

"Society is happier when the gap between rich and poor is reduced."

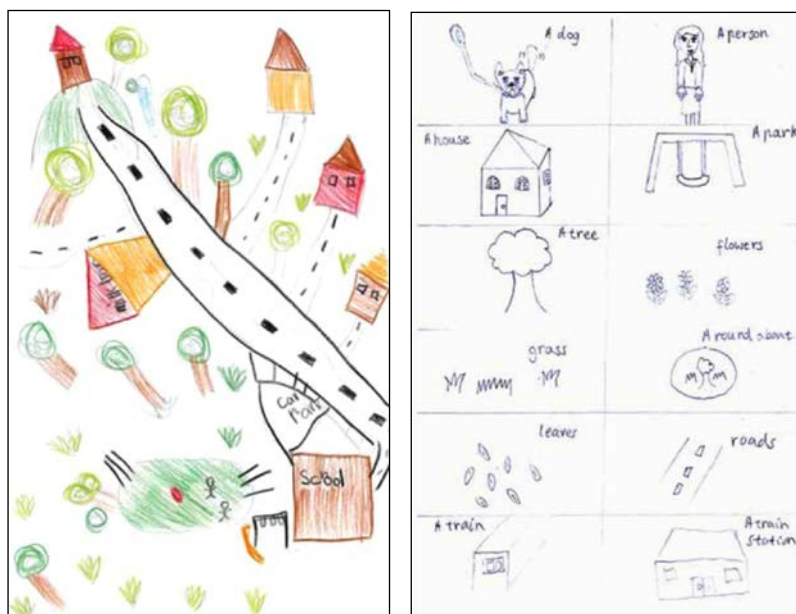
**Michael Wood**  
(2012)

The way in which we plan and develop our cities influences social connection. Poor transport networks result in people spending large amounts of time in cars while limiting time for family and friends. Open space and recreation areas such as parks and sports fields within an easy walk to housing also make it simpler for people to meet encouraging a healthier lifestyle. Clustering services and facilities in proximity to where people live makes us feel not only safe due to increased passive surveillance but a sense of belonging and territory. (Grattan Institute, 2012).

## Learning and development

The images following were drawn by children who were asked to draw their neighbourhood. An analysis of the images undertaken by the Grattan Institute highlights the importance of walkable neighbourhoods. As demonstrated below, children who walk to school are better oriented and connected to their local community and the people who live there. This is shown in the image on the left hand side which includes street names, identified friends' houses and described people and places in detail. Children who were driven to school often drew a car as the central focus, and abstract or unrelated images divided into different windows (like the picture on the right) (Grattan Institute, 2012).

**Figure 3.1: Drawings by children who walked or were driven to school. Source: (VicHealth, 2011); (Lee, H., 1989); for a discussion of children's independent mobility and their social connectedness, see (Love and Whitzman, 2011)**



## Active Living

Australians are less active than they use to be.

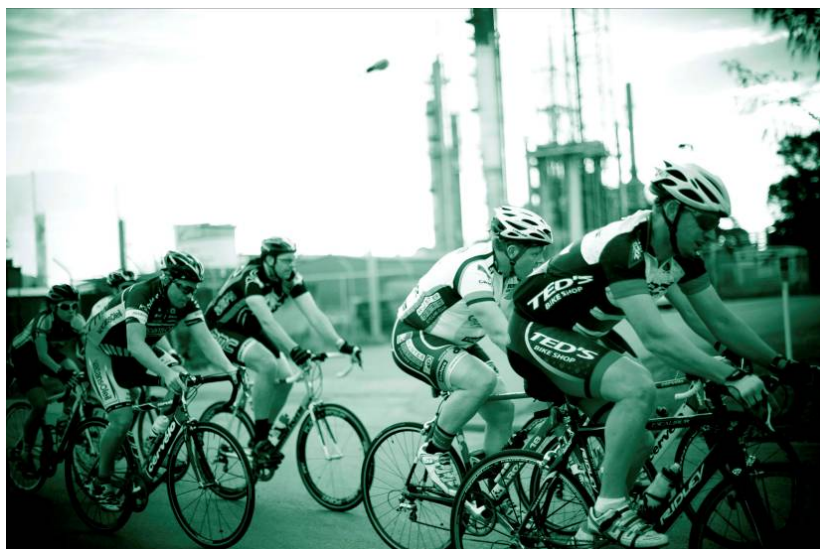
This is a serious problem as staying active reduces the risk of health problems such as obesity, cardiovascular disease, type II diabetes, colon and breast cancer and depression which can have social implications. Financial costs associated with inactivity are high and equate to \$1.5 billion a year for Australia (NSW Government, 2010).

Based on current trends, 65% of young Australians will be overweight by 2020. "For the first time in living memory life expectancy in developed countries such as Australia may start to fall due to the obesity epidemic in children and young people" (NSW Government, 2010).

"Just over 50% of the population does enough physical activity each week. If the proportion could be raised to 70%, that would save 2000 lives a year throughout Australia – equivalent to stopping all deaths on Australia roads, and more."

**NSW Government (2010)**

Striving for a more active population is a challenge for Australian cities. When we are active, we participate in more community activities, are more productive, and reduce the environmental impacts of car dependence. Huge costs associated with high car dependence could be greatly reduced if we decided to walk, cycle and use more public transport (NSW Government, 2010).



Improving the walkability of our streets and the connectivity of our urban environment is one way to encourage active living. Well located and designed open space can also encourage active lifestyles by providing opportunities for formal and informal recreation (NSW Government, 2010).

## *Culture and Heritage*

“Culture is a way of understanding and living in the world. Heritage is the environment, objects and places that we inherit from the past and pass on to future generations to use, learn from and be inspired by. Together these frame our understanding of the past and influence the decisions we make about what is worth keeping” (Environment and Heritage, 2011)



Australia enjoys a rich and enduring heritage and a dynamic culture. Australian Cities are the custodians of much European heritage and Aboriginal people have strong connections to many sites and landscapes. Preserving our combined culture and heritage is important to us and future generations.

Compact cities minimise the urban footprint and are therefore less at risk of conflicting with aboriginal sites and landscapes. Cities can also provide the infrastructure such as museums and galleries to protect and share our culture and heritage. They also provide an environment in which to celebrate our culture and yield opportunities to adapt and conserve our heritage for the benefit of everyone.

## Economy

### Employment shifts

In the 1970s Australia entered the global economy and several thousand manufacturing jobs were lost and jobs within the business, finance and community services sectors grew (Australian Government, 2010). Cities with a reliance on manufacturing were greatly affected (Australian Government, 2010).



Since the 70s the Australian economy has restructured as a response to changing global markets, global corporatisation, trade and financial restructuring, labour markets and technological change. The Australian economy has transitioned to a service-based economy.

These economic shifts have resulted in significant changes to Australian cities. For example, many traditional industrial areas and their warehouses and supporting infrastructure that were abandoned are now the sites of gentrification activities, many professional roles can be undertaken away from a central office building, home based business assisted by the internet are thriving, international labour markets can be accessed by technology and online retail threatens traditional shops (Australian Government, 2010).

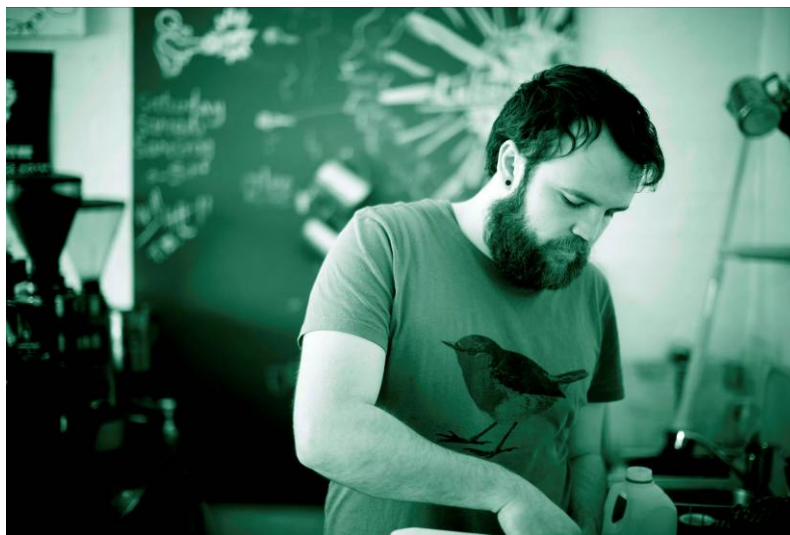
Cities are traditionally the places of innovation and progress. This is assisted by sharing a compact geographic area with many people that have different backgrounds, skills and ideas. Technology may substitute the need for physical closeness. However, until then the City remains the melting pot of social, cultural and technological ideas. The world economy is dynamic and therefore a change in employment is inevitable. A city that supports diversity in its people and in its economy may encourage innovation and will whether economic changes better than an economy with a limited focus and a homogenous population (Australian Government, 2010).



## Education and Skills

The skills people learn through formal education and work experience can influence how productive they are in the workplace. The role of early childhood development, schooling and higher education is vital to support a growing population and economy. Educational infrastructure and services should be accessible, affordable and of high quality, addressing educational disadvantage (COAG, 2010).

Traditionally, higher education institutions particularly universities were established in cities. However, many of these institutions are now establishing campuses in regional areas or taking advantage of technology to deliver education programmes remotely and internationally. As technology continues to advance this may reshape how people learn, removing locational disadvantage (COAG, 2010).



Education will continue to play an important role in cities by promoting them as the centres of the knowledge-based economy into the future (COAG, 2010).

## Technology

Some of the greatest changes that we will witness in our society will come from technological advancement and change.

The UN Habitat organisation recently explored the role of social media in changing cities. Visions included people interacting with the built environment via media boards or ‘walls’, momentary art walls, disaster warning systems, cultural exchange, product or knowledge sharing, tracking energy usage in real time, community engagement and personalised news. (UN Habitat, 2012).

On another front, Google has invented a driverless car that has been granted permission to drive in 3 US States. The car could improve efficiency of the existing road network, reduce travel times and congestion.



## Food Security and Production

Food security means “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life” (World Health Organisation [WHO], 2012). People must be able to physically and economically access food to meet their dietary needs and preference (WHO, 2012). The dietary disparity between western and developing countries is recognised by the World Health Organisation (2012) that state “in many countries health problems relating to dietary excess is an increasing threat” (WHO, 2012). Famine and malnutrition continues to threaten many developing nations.

The following issues affect ones access to food:

- Population growth
- Increased competition for land and water
- Diversions of food to other uses such as biofuels
- Climate change
- Economic development leading to changes in food consumption
- Sterilisation of agricultural land by urban development
- Degradation of existing agricultural assets due to poor management
- Growing resistance of weeds and pests to herbicides and pesticides
- Genetically modified crops
- Increasing transport and distribution costs (CSIRO, 2011).



There is a great deal of debate around food security with some arguing that:

- There is enough food in the world to feed everyone adequately; the problem is distribution.
- Future food needs can, or cannot be met by current levels of production.
- National food security is paramount or no longer necessary because of global trade.
- Globalisation may, or may not lead to the persistence of food insecurity and poverty in rural communities (World Health Organisation (WHO), 2012).

The form of our future cities will have a significant impact on how much arable land remains to feed a future population. Urban sprawl into previously undeveloped areas sterilise land that could often be used for food production or encroach into land that provides buffers to agriculture. Corporatisation and globalisation of food production often means that the smaller market gardens and farms that traditionally supported a city are no longer viable. Pressure to develop these lands for urban purposes is strong (Donovan et al, 2011).

There are significant risks to how we currently produce food including:

- Increased fuel and therefore transport costs
- Continued degradation and reduced productiveness of agricultural lands
- Increased impact of pesticide resistant pests
- Uncertain climate conditions
- Uncertain access to water resources (CSIRO, 2011).

Minimising the impact of development on existing agricultural lands is essential to ensure that Australia and the world are resilient to a growing population and uncertain climatic future (CSIRO, 2011).

## **Global financial crisis**

The global financial crisis (GFC) is considered by many economists to be the worst financial crisis since the Great Depression of the 1930s. Australia's financial system has proven to be more "resilient" than other countries such as America and parts of Europe. Despite this, Australia's economic growth has slowed and unemployment rates have risen (ABS, 2010).

The most observable impacts from the GFC on Australian cities are reduced development as financial institutions are more cautious about lending. Housing affordability and living and employment levels have been impacted by the GFC (ABS, 2010). Retail spending also dropped with flow on effects to main street retail outlets. Macquarie University (2010) observes that challenges for businesses may find "overseas orders sluggish due to declining demand in international markets or because overseas buyers are facing complexity in obtaining adequate credit".

## **Infrastructure**

Infrastructure is required to support our growing population and promote national productivity and economic growth (COAG, 2010). Infrastructure may be defined as the fundamental physical and organisational structures needed for the operation of a city. Most often the term

is applied to technical structures that support a society, such as roads, waste, water and sewerage systems, stormwater, electrical and telecommunications networks. However, it may also include other structures such as community and recreational facilities, open space, education facilities and hospitals.

Australian cities need to efficiently deliver and maintain quality infrastructure into 2030. This means delivering the right infrastructure in the right location at the right time. Infrastructure needs be identified, prioritised, coordinated and delivered (NSW Government, 2012).

“Australia’s infrastructure is not keeping pace with either current or projected demand. Without resolution, these capacity constraints will continue to impose negative outcomes on national productivity.....investment by governments in high quality infrastructure projects is critical” (Infrastructure Australia, 2012).

The Australian Government highlights the need for greater infrastructure funding assistance in order to reduce backlog and contribute to operational and maintenance costs. Costs associated with infrastructure may need greater private and public investment into the future (Infrastructure Australia, 2012). Better use of existing infrastructure is also important and will reduce costs associated with constructing new infrastructure (Australian Government 2012).

Australia currently lags behind many other developed nations in respect to providing the nation with fast, reliable, modern communication technologies, which is an essential element in a modern knowledge-based economy (COAG, 2010). Providing households and workplaces with high-speed broadband is a challenge and if not provided can impact upon productivity and global competitiveness (COAG, 2010). High-speed broadband will have significant impact on the way cities work, in areas such as:

- Delivering government and health services
- Providing opportunities for flexible work and education
- Ensuring social and community connections
- Developing smart infrastructure to manage transport
- Enabling commercial transactions (COAG, 2010)

High speed broadband can also improve connectivity and reduce road congestion within cities by using communication technologies for work, education and to conduct business (Australian Government, 2010).

## *Integrated Transport*

Integrated land use and transport is essential to support a well connected, inclusive, efficient and sustainable city. A transport system that is diverse, extensive, convenient and adaptive will encourage sustainability. A dysfunctional transport system characterised by limited modes, congestion, pollution and social isolation will undermine a City's future. It is important to acknowledge that all modes of transport are important to support a sustainable city (Australian Government, 2010).

The NSW Government has recently released the Draft NSW Long Term Transport Master Plan. The plan demonstrates a strong commitment to transport in regional NSW (Australian Government, 2010).

Improving connectivity between cities is a continual challenge for Australian cities. Traffic volumes between our cities continue to increase and this places pressure on road infrastructure (Australian Government, 2010).



“Connectivity between cities and connectivity within cities are equally important for both people and freight. Flows of supplies to businesses and products to consumers, information and services, residents and visitors traverse our cities as they do between them (Australian Government, 2010).

Improving connectivity within cities can be achieved by encouraging urban consolidation and placing people closer to the jobs, facilities, goods and services (Australian Government, 2010). Urban consolidation can:

- reduce congestion
- improve urban transport systems
- integrate strategic land-use and infrastructure planning
- use infrastructure more effectively and
- expand telecommunications networks (Australian Government, 2010).

Freight movement is another challenge for Australian cities. Freight distribution networks should effectively connect freight nodes (airports, ports, inter-modal facilities, truck depots) with warehouses, wholesalers and retailers. The cost of road congestion on freight is significant with some key routes to and from import and export nodes competing with other road users. Rail alternatives for freight are often constrained by passenger services and diesel powered engines create noise that make them unpopular in residential areas (Australian Government, 2010).

## *Housing*

### **Housing Affordability**

Housing affordability relates to a person's ability to pay for housing. It is a complex issue, impacted by the local housing and labour markets as well as larger economic, environmental and social forces. When people struggle to meet the cost of housing, researchers describe it



as housing affordability stress (Australian Housing and Urban Research Institute, 2012).

Measures of housing affordability stress are contested. However, in Australia housing affordability stress is measured as those households spending more than 30 per cent of their income on housing, while earning in the bottom 40 per cent of the income range. This is not a measure of housing affordability per se as other more fortunate groups may also be under stress from housing costs (Australian Housing and Urban Research Institute, 2012).

Affordable housing is the focus of much Government and community attention. More housing does not mean cheaper houses. There are many factors that influence the cost of housing

including equity prices, real interest rates, unemployment and inflation. (Productivity Commission, 2011).

Increasing the density of housing in existing urban areas may reduce housing costs because of savings in infrastructure costs, reduced lot sizes and greater choice in dwelling types. However these savings may be eroded by increased property prices in central areas,



increasing costs of labour, materials and finance. Urban consolidation may not result in more affordable housing however housing located close to work and play may reduce living costs such as transport and therefore promote affordable living.

## **Affordable Living**

The size, type, structure, tenure and location of housing all contribute to the cost of living for households. For example, smaller, well designed, universal, energy smart homes will use less energy and water consumption. Houses in proximity to employment, services and facilities generally equates to lesser car use and petrol costs. Costs of land and house construction also affect living affordability (Australian Government, 2010).

Current trends towards inner city living (infill development) has seen house prices increase in the inner areas, creating areas of disadvantage in the outer suburbs, who are then greater disadvantaged by rising petrol prices and distance to employment and services (Australian Government, 2010). Creating a diversity of housing types within existing urban areas is a challenge and opportunity for Australian cities. Australian cities should “seek to accommodate a diversity of household types and levels of affordability in a more compact, sustainable city form” (Australian Government, 2010).

Australian cities should be accessible and affordable to people of different ages, with different incomes and needs. Our cities rely upon a variety of workers, and many of them find accessing affordable housing in inner and middle ring suburbs increasingly difficult. Cities need to ensure there is a diversity of housing supply to cater for a diversity of housing needs (CCCLM, 2010).

## **Affordable Rental Housing**

There is much focus on affordable housing in relation to securing and then servicing a mortgage. However, across NSW, more than 10 per cent of households are paying more than 30 per cent of their income on rent meaning that they are experiencing housing stress (NSW Government, 2010).

“Future demand for affordable rental housing will continue to be driven by the impact of existing housing affordability pressures, an ageing population, changes in household composition trends and general population growth pressures” (NSW Government, 2010).

The State Government (2010) predicts that households in private rental housing will increase by 80% to 3.3 million by 2045 and the proportion of lower-income private renters experiencing housing stress to increase by 120% (NSW Government, 2010).

## Key worker housing

The multiplicity of cities' functions requires a diverse labour force. However, many cities do not provide the diversity of housing needed to accommodate them close to their place of work. For example, key workers are public sector employees who provide an essential service such as nurses, home and community care workers, police officers and teachers.

"We're at a point where key workers, like police officers, teachers, nurses, ambulance officers and childcare workers are increasingly being priced out of the housing market."

Property Council of Australia (QLD)(2007).

Many of these roles are low-paid and in some larger cities key workers may struggle to live close to their place of employment. Key workers often experience long commutes and incur significant travel expenses. Some roles, such as home and community care assistants, require the worker to visit several locations. Others roles are shift work meaning that they may be starting or finishing at times when public transport is not available or perceived as unsafe such as late at night or early morning.

## Housing Diversity

Housing diversity refers to whether the range of dwelling types meets the needs of different households. Apart from size and types of dwellings, diversity includes:

- Suitability of the structure of the building
- Locations that enable members of a household to maintain their livelihoods and supports their health and wellbeing
- Security of tenure
- Affordability.

The majority of housing in Australian cities has long been single detached houses. Due to shifts in demographic towards smaller and ageing households, as discussed, this type of housing may not be needed into the future at such scale (Australian Government, 2010).

"Recent research shows that older Australians are looking for affordable, practical housing in their own neighbourhood, close to transport, local services and shops, and with access to support services that will help them remain independent" (Australian Government, 2010).

An upcoming challenge for the Government and industries that provide housing will be to deliver the right type of housing to cater for our ever changing demographic. (Australian Government, 2010)

**"Think global, Act local." Patrick Geddes (1915)**



### 3. What the experts say

A panel of experts were asked to participate in an anonymous survey to provide their ideas on future opportunities and challenges for Australian cities over the next couple of decades. The following questions were asked:

**1. What do you believe will be the best quality of Australian cities in 2030? Why?**

**2. What do you believe to be the most significant challenge for an Australian City like Newcastle over the next 20 years? Why?**

A summary of the responses is provided below.

In respect to question 1, respondents envisaged that Australian Cities in 2030 will be characterised as low carbon, sustainable cities, with distinctive local character. Cities will support healthy, connected communities that enjoy a strong sense of community.

In respect to question 2, most responses identified transport as the most significant challenge over the next 20 years. The key reasons were attributed to fuel and the challenge to provide low carbon alternatives and the providing public transport infrastructure.

Other responses identified the challenge of meeting the social and physical needs of diverse society.

## 4. Community Survey - What YOU, the experts have to say

We asked the Newcastle Community the same questions we asked the panel of experts. Here are your responses to those questions.

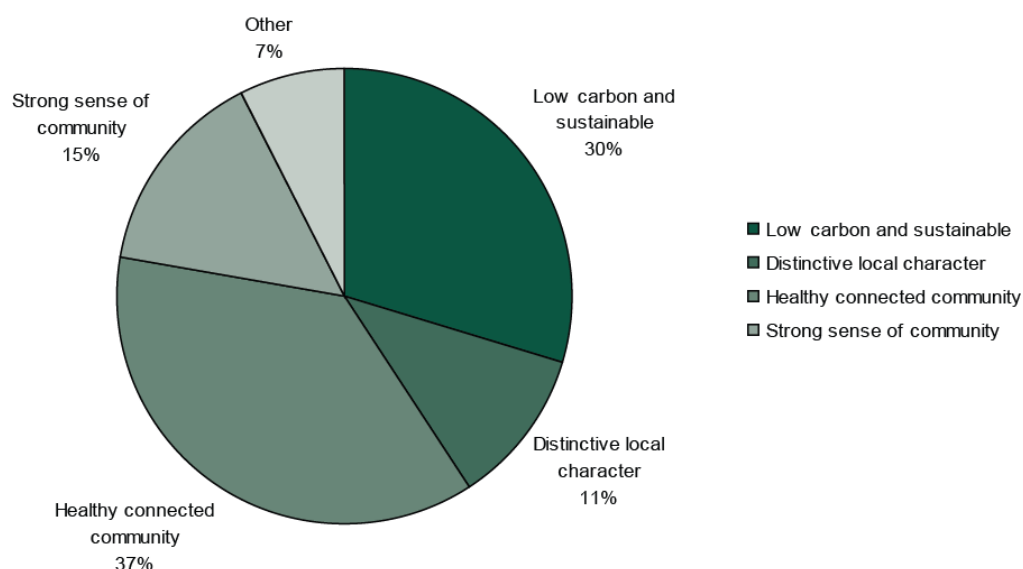
### 1. What do you believe will be the best quality of Australian cities in 2030?

Respondents were asked to choose from the following options.

- Low carbon and sustainable
- Distinctive local character
- Healthy, connected community
- Strong sense of community
- Other

The results are shown below:

**What do you believe to be the best quality of Australian cities in 2030?**



Other additional qualities that were listed by you include:

- A strong financial position
- More sustainable housing types in areas unaffected by natural hazards.



## 2. Why do you believe this will be the best quality of Australian cities in 2030?

We received many reasons why you believe these would be the most important quality of Australian cities in 2030. These reasons are provided below.

### Low carbon and sustainable

*“Because it seems to be where the governments focus is at the moment. I think other factors are more important, such as healthy and connected communities but I don't think they will receive as much funding and therefore will 'fall off the radar'.”*

*“Without quality air, water, a sustainable local environment - the other things are temporary until choked out.”*

*“Cities will need to make this change to endure future change. Sustainable and low-carbon initiatives also often tie into the other qualities mentioned, directly or indirectly.”*

*“I believe that the emphasis on lesser reliance on fossil fuel, more affordable renewables will be the focus in the years beyond 2030.”*

### Distinctive local character

*“Maintaining the individuality of Newcastle as a city to live in and visit will be increasingly difficult against the urban sprawl of Sydney.”*

### Healthy, connected community

*“To achieve this goal (of a healthy, connected community) the city must commit to strategic developments which are sustainable, measurable, achievable, realistic and timely (SMART) across all portfolios ie., infrastructure is developed, people are educated, options are evaluated within urban/local planning considerations and cost-benefits constraints before spending, etc. This is why we develop cities...”*

*“Resilience among people will overcome many other challenges.”*

*“People are encouraged to have an active lifestyle and have a greater sense of community. The great weather and good location to the ocean is the best building blocks to develop a healthy, connected community.”*

*“Informed people make the best cities, everything else follows.”*

*“A healthy community is one which inherently appreciates the reasons and realities of a sustainable life lived within its means. I believe a quality such as this is very important for the future as humanity moves toward a more complex state. We cannot move to these states of further complexity with the existing 'forced' approaches, awareness and appreciation for finite resources.”*

*“Makes it a nice place to live. The term healthy implies sustainable living, environmental focus and all things good. The term connected implies interracial harmony, equal living standards, outward and open attitudes.”*

*“The increase in the proportion of older Australians and the increase in number of obese Australians will place unprecedented demands on the health system, unless steps are taken to ensure a healthier society. Prevention is better than cure!”*

#### Strong sense of community

*“People and suburbs will need to start to become more localised as resources become scarce and world population needs more food etc.”*

*“You can then work together and share.”*

*“I feel community is exceptionally fragmented, equality.”*

*“It is a critical factor to help overcome youth apathy and dissatisfaction.”*

#### Other

*“More sustainable housing construction / types - building in flood areas, bush fire prone areas, using less energy, move away from ‘McMansions. Research in construction methods is already advancing. Better built neighbourhoods will affect everybody.”*

*“Strong financial position. Long-term performance requires sound financial management.”*

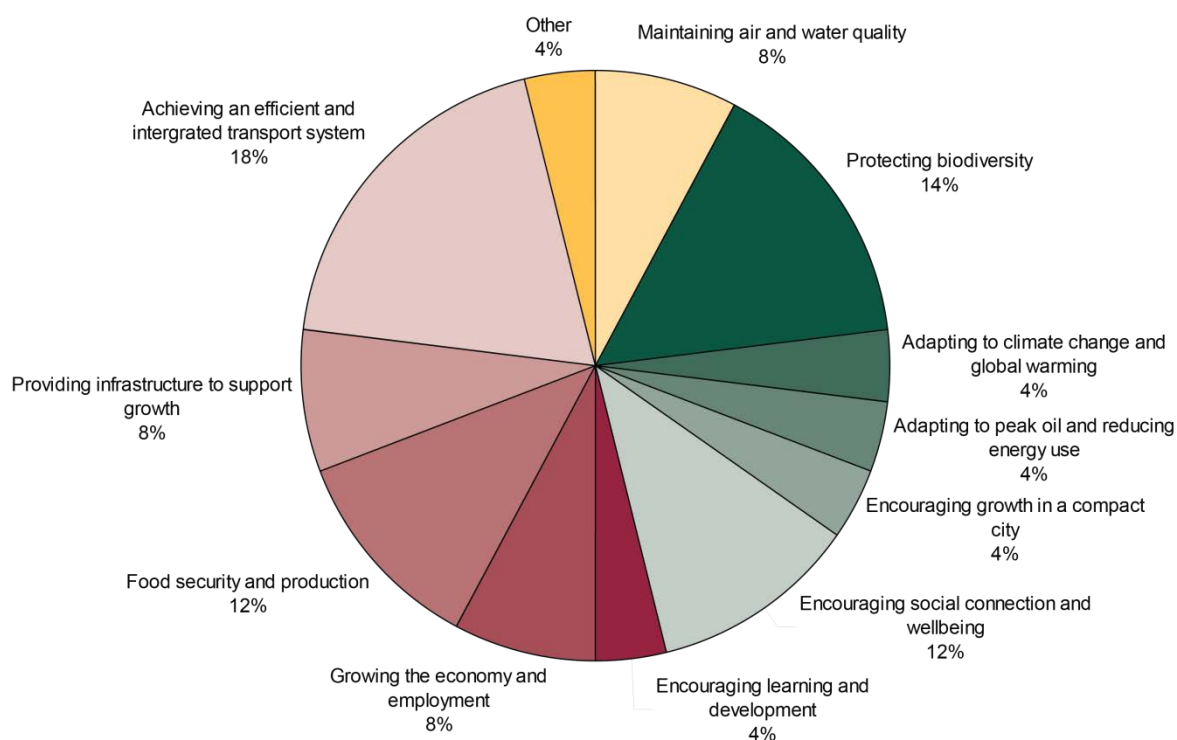
*“A day would be: people will cycle fast (& think nothing of a 6km bike commute) to one of the multiple new rail lines linking the inland with the coast which is more agricultural (some east of Watagan’s farmland having been resumed from non passive solar house development) with remnant bush linked by corridors over some roads (think bolt together corrugated steel land bridges you get in mines). They can alight at a station very close to every industrial area. Easily after or before work they can train it to a beach or one of the new river swimming areas both of which have restaurants (by then everyone can eat with cutlery). There is no dole but landcare. There is intense competition to grow the tastiest produce.”*

### 3. What do you believe to be the most significant challenge for an Australian City like Newcastle over the next 20 years?

Participants were asked to select the most significant challenge for an Australian City like Newcastle over the next 20 years. The categories and rankings are as follows:

- Achieving an efficient and integrated transport system (19%)
- Protecting biodiversity (15%)
- Food Security and production (11%)
- Encouraging social connection and wellbeing (11%)
- Maintaining air and water quality (8%)
- Growing the economy and employment (8%)
- Providing infrastructure to support growth (8%)
- Adapting to climate change and global warming (4%)
- Adapting to peak oil and reducing energy use (4%)
- Encouraging growth in a compact city (4%)
- Encouraging learning and development (4%)
- Protecting water availability and reducing use (0%)
- Meeting the needs of an aging population (0%)
- Promoting active living (0%)
- Protecting culture and heritage (0%)
- Providing housing that is affordable to purchase or rent (0%)
- Encouraging affordable living (0%)

**What do you believe to be the most significant challenge for an Australian City like Newcastle over the next 20 years?**



**4. Why do you believe this will be the greatest challenge for an Australian City like Newcastle over the next 20 years?**

Achieving an efficient and integrated transport system

*“As the Newcastle region develops there will be significant pressure on movement within the city and the region, particularly between major infrastructure areas like the airport, ports and CBD.”*

*“Funding difficulty, Newcastle is large non-capital city that has wide urban sprawl.”*

*“Difficult to do with a medium sized population. Essential to meet traffic congestion, reduced strain on infrastructure, promote a healthy lifestyle, integrate growth in an expanding geographical area.”*

*“There is an unusual mentality in Newcastle that removal of transport infrastructure is progress. We are probably the largest city in the world contemplating removal of transport infrastructure. The need and focus should be development of efficient user friendly transport infrastructure. That won't happen until we get past the ridiculous mindset that removal of a few kilometres of heavy rail will be a panacea for all that is wrong with Newcastle city.”*

*“Because it has been clear that the local government and state government are not willing to act to resolve issues (e.g. Adamstown level crossing, and Stewart Avenue level crossing).”*

#### Protecting biodiversity

*“Slamming maybe a dozen new circular higher speed rail corridors across [not under!] the landscape to areas like Redhead- Swansea, Nelson Bay- Raymond Terrace, Cessnock, Warners Bay- Charlestown. And then making inland hamlet living the most attractive. Then forming some sort of communal living to enable parents to get 19 year olds out of the house [a modified national service?].”*

*“While the city needs to expand to cater for the expected growth in population in the future, there is a need to balance urbanisation and maintaining biodiversity. Which means protecting forest, protecting the waterways etc so that wild life and human can co-exist together.”*

*“With current development and population growth on the increase, protecting and biodiversity is important for our kids and our kids kids.”*

#### Food Security and production

*“Globally this is an issue - with climate change reducing arable land and pressure to use limited agricultural land in Australia for mining or housing. The population continues to grow but we do not produce more land to provide for agriculture, jobs, housing, leisure.”*

*“Food is essential to maintain life on earth.”*

*“Australia's foreign investment policy encourages farms to be sold to offshore investors soon enough we won't own the land to produce food or any other assets to enable food production.”*

#### Encouraging social connection and wellbeing

*“Life is about honouring one another and sharing together, in both good and poor times, fragmentation is rampant, self centred financial wealth, egocentric philosophies fanaticise the physic, we need to develop equality of family time, equality of roles, provision of security of shelter, person, family and the acceptance of love through respect, bring down the walls and let families be what the lord expected them to be.”*



Maintaining air and water quality

*“Newcastle is subject to decisions made at other levels (coal mining, coal seam gas by State). The upper hunter is becoming a wasteland, with the export through Newcastle transferring dust, related industries pollution, long trains and trucks all impacting on the city. When jobs in 'green' industries outweigh this, we might have a chance.”*

*“Newcastle is vulnerable to air pollution from the coal supply chain. Not enough is being done to manage the distribution of fine coal dust. The long term effects on the health of Novocastrians could be unfortunate.”*

Providing infrastructure to support growth

*“Infrastructure investment has been woefully inadequate in recent decades.”*

*“Infrastructure has both capital costs (planning, one-off development, major projects etc) and operational (maintenance and management) costs which underpin the city's functions: without continuously developing/improving infrastructure the city cannot support current populations or future growth.”*

Growing the economy and employment

*“Historically state and local government do best when investment and employment are healthy. Other factors can only be addressed if these areas are healthy.”*

Adapting to peak oil and reducing energy use

*“This is the greatest challenge as communities like Newcastle as most of the community tends to ignore or don't understand the impacts of our reliance on oil and electricity. The sustainable development of an Australian city like Newcastle requires the balance and alternative uses of energy and oil to continue to be productive and economically viable.”*

Other

*“A balanced approach is necessary for a city like Newcastle. Too much focus on one area creates an endless endeavour to find the next moment of vogue. I encourage all those involved with future plans to be creative with challenge proposal, we cannot continue to follow news headlines, rather, think a little more laterally once in a while to really comprehend a new level of understanding.”*

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# Local Planning Strategy

## Chapter 4: **Who we are: History and community profile**

## **Chapter 4 Cover**

Title: Jumping waves at Newcastle Beach.

The front cover was painted by Isabella Zulumouski, Age 7 as part of the community consultation undertaken for the Newcastle 2030 Community Strategic Plan in 2009. The brief was *'to express what the participant values most about Newcastle and/or the strengths of Newcastle.'*

### *What is the purpose of this chapter?*

The purpose of this chapter is to provide an understanding of how our community has changed over time. The 2011 Census has provided new information to analyse established and emerging trends and use these to help plan for the community of the future. Of particular interest are the following statistics:

- Current estimated population is 154,896 persons
- Median age is 37
- Median weekly household income is \$1,165
- Median weekly rent is \$275
- 33% of households are renters
- 25% of the population is made up of couples with children
- Lone person households are the main household type
- The three largest ancestries in the City of Newcastle are Australian, English, and Irish
- In 2011, unemployment was 6%

Council has also engaged a specialist demographic consultant (known as id, the population experts) to prepare forecasts on key statistics to 2036. The standout forecasts are:

- Population at 2036 is predicted to be 180,643 persons
- Annual population growth is forecast to be around 0.6% per annum
- An additional 12,900 dwellings will be required to accommodate the 11,900 new households
- Lone persons households will persist as the dominant housing configuration
- Our age profile is expected to be weighted to the older cohorts as the baby boomers age with 1 in 5 Novocastrians over the age of 65 by 2026
- The unique 'bulge' in the 20-29 age group is likely to continue as the University grows.



A detailed community profile has been prepared for the Newcastle LGA. Where appropriate, the statistics have been compared against those for New South Wales. This provides a means to describe how our community is similar or different from the rest of the State.

As a land use strategy for an almost fully urban Local Government Area, the Local Planning Strategy will need to support the provision of enough housing, in well located areas, in diverse forms to accommodate our diverse and growing population. The protection of employment lands so that there is continued economic viability and jobs growth will be a key challenge where there is competition between land uses.

## 1. History

The Awabakal and Worimi peoples are recognised and acknowledged as traditional custodians of the land and waters of the Newcastle area.

The European history of Newcastle dates back to the colonial period when in 1797 Lieutenant Shortland explored and named the place. The first settlement was abandoned in 1802 because of a mutiny but a second attempt was successful. The new settlement comprising convicts and a military guard, arrived at the Hunter River on March 27, 1804, in three ships, the Lady Nelson, the Resource and the James.

Newcastle remained a penal settlement for nearly 20 years.

Under Captain James Wallis, commandant from 1815 to 1818, a building boom began. Captain Wallis laid out the streets of the town, built the first church on the site of the present Anglican Cathedral, erected the old gaol on the seashore, and began work on the breakwater which now joins Nobby's to the mainland.

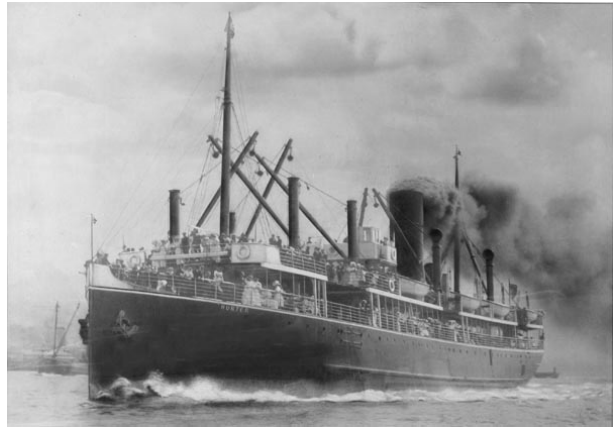
In 1823 Henry Dangar was directed to prepare a town plan. Dangar imposed a regular grid pattern on the settlement making provision for 190 allotments with a Church enclave and a market place at its centre. This street layout persists today.

Up until the 1830s Newcastle stagnated and the Crown was forced to continue its coal mine operations by retaining up to a hundred convicts for that purpose. The supply of coal to the



**Plate 2: Newcastle Railway Station.**

**Source: Newcastle Regional Library Collection.**



**Plate 1: Steamship Hunter. Source: Stewarts and Lloyds Collection, Newcastle Region Library.**

steam powered East India Company shipping fleet is regarded as the most important event in the nineteenth century as it had a profound effect on the future expansions of the town.

The first stage of the Great Northern Railway between Newcastle and East Maitland was opened in 1857. As the railway was gradually extended through the Hunter Valley and into northern New South Wales, Newcastle

served as the Port of an expanding region. Simultaneously, private railways facilitated the transport of coal to the port, permitting the opening of new mines at Minmi, Wallsend, Lambton and Waratah. As the railway network developed, the Newcastle coalfield expanded both geographically and in terms of output.

With these improvements in transportation came the villages that would eventually become suburbs to the city. In the 1830s Cooks Hill and Stockton had their beginnings and in the next decade Merewether and Wickham began to take shape. Waratah and Carrington followed in the 1850s and then Wallsend and Lambton, New Lambton and Adamstown. With the exception of Stockton, Wickham and Carrington, all these towns were closely connected with the development of the coal industry.

In the first decade of the twentieth century the South Maitland coalfield expanded its operations leading to a decline of inner Newcastle colliers. It appeared that the Newcastle economy might have to rely on its port function however, the Broken Hill Propriety (BHP) Company opened a steelworks at Port Waratah. Supported by the First World War the steelworks grew rapidly. The rapid expansion drew workers from all over Australia and caused a shortage of housing and high rents. This led in turn to new subdivisions and to more intensive development of older residential areas. The end of the war led to a contraction of the steel industry however a programme of diversification and cost cutting restored the industry. Stimulated by the steel industry the population of Newcastle (excluding Lake Macquarie Shire) grew from 54,000 in 1911 to 84,000 in 1921 to 104,000 in 1933. The significant industrial development and expanding population caused the construction of new commercial buildings, particularly hotels and stores and Newcastle City Council constructed the Town Hall and Civic Theatre in 1929.

The depression had a significant impact on the steel industry and unemployment rose to around 30%. As the decade progressed, the steel industry improved and is credited as leading Newcastle out of the depression. In 1938 the eleven municipalities were united by an Act of Parliament to form the City of Greater Newcastle.



**Plate 3: Newcastle from the air.**

**Source: Newcastle Region Library Collection.**

The Second World War had a profound effect on Newcastle which became a key industrial area of great strategic importance. BHP prepared for its wartime role and installed facilities for the production of munitions and the manufacture of special alloys.

With an economy strengthening and diversified by the war and growing consumerism of manufactured goods, Newcastle was well positioned as the Country's industrial capital. The Kooragang Island reclamation scheme was launched to create another 6,000 acres of industrial land with deep water frontage. However, after some initial successes the project was discontinued and much of the land was protected for ecological reasons.

Between 1971 and 1986 Newcastle lost 16,549 people while the surrounding centres such as Lake Macquarie continued to grow. In 1989 the City was acutely affected by an earthquake. The total damage exceeded \$1.2 billion and the loss to insurers made it the most expensive disaster in Australian History. Insurance financed the restoration of many affected buildings but many were demolished as they were too badly damaged.

In 1999, BHP closed its steelworks operation. This resulted in the loss of many jobs and drove a need for Newcastle to refocus its economic base. The continued expansion of the Hunter's coal mines resulted in the Port of Newcastle becoming the largest coal export port in the world.

Newcastle is the largest regional centre in New South Wales and the second largest non-capital urban centre in Australia. It is the service and administrative centre for the Hunter Region. Downsizing and restructuring of manufacturing industry, an expanding regional population and increased interaction with the Sydney region have changed the economy and urban fabric over the last couple of decades.

The State government acknowledges that Newcastle is the focus of future population and employment growth, and will remain the Hunter Region's primary centre.

## 2. Community Strategic Plan

The Community Strategic plan is a shared community vision for Newcastle. The vision was set by the community and therefore reflects ‘*who we are*’. The vision is:

In 2030 Newcastle will be a Smart, Liveable and Sustainable City. We will celebrate our unique city and protect our natural assets. We will build resilience in the face of future challenges and encourage innovation and creativity. As an inclusive community, we will embrace new residents and foster a culture of care. We will be a leading lifestyle city with vibrant public places connected transport networks and a distinctive built environment. And as we make our way toward 2030, we will achieve all this within a framework of open and collaborative leadership.

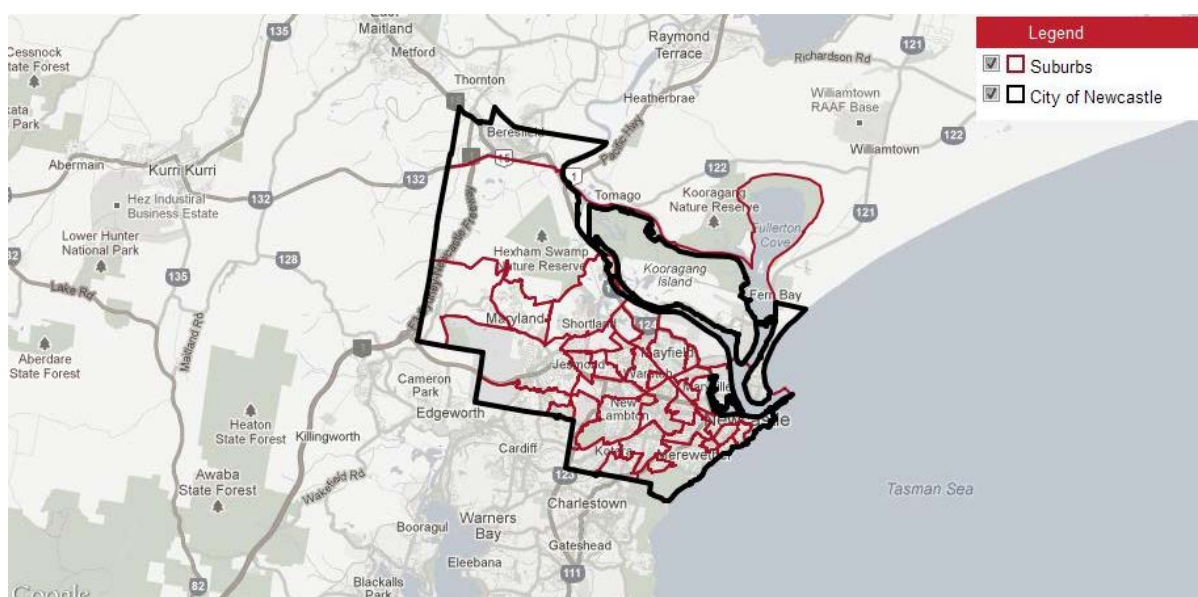


### 3. Community Profile

A community profile provides a comprehensive statistical picture of a community. The profile is largely informed by Census statistics collected by the Australian Bureau of Statistics.

Statistics have also been sourced from the [Bureau of Transport Statistics \(BTS\)](#) and [Bureau of Crime Statistics and Research](#).

**Figure 4.1: City of Newcastle.**



### Snapshot Statistics

**Table 4.1: Snapshot statistics for Newcastle compared to New South Wales and Australia, 2011. Source: ID Profile.**

Snapshot statistic	City of Newcastle	New South Wales	Australia
Median age	37	38	37
Median weekly household income	\$1,165	\$1,237	\$1,234
Couples with children	25%	32%	31%
Older couples without children	8%	9%	9%
Medium and high density Housing	28%	31%	25%
Households with a mortgage	31%	32%	33%
Median monthly mortgage repayment	\$1,777	\$1,993	\$1,800
Median weekly rent	\$275	\$300	\$285
Households renting	33%	29%	29%
Non-English speaking backgrounds	8%	19%	16%
University attendance	7%	4%	4%
SEIFA index of disadvantage 2006	983	1003	1005



## Key statistics

### Population

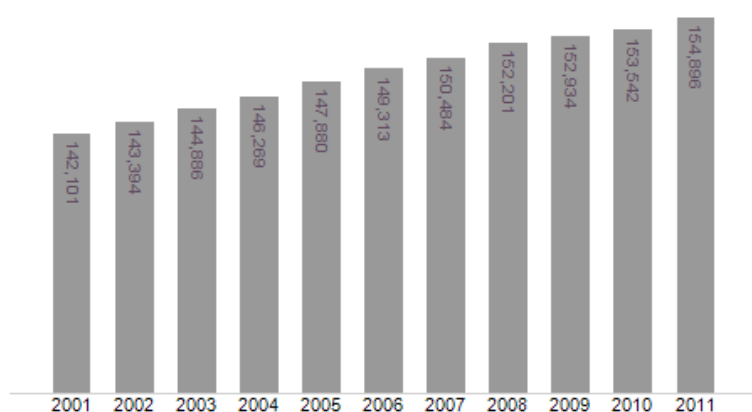
The Census population of Newcastle in 2011 was 148,531 persons. This represents an increase of 6,778 people from 2006.

The current estimated residential population of Newcastle is 154,896.

**Table 4.1: Estimated residential population, 2006-2011. Source: ID Profile.**

City of Newcastle	2011			2006			Change
Population	Number	%	NSW	Number	%	NSW	2006 to 2011
Population (exc O/S visitors)	148,531	100.0	100.0	141,753	100.0	100.0	+6,778
Males	73,155	49.3	49.3	69,151	48.8	49.3	+4,004
Females	75,376	50.7	50.7	72,602	51.2	50.7	+2,774
Australian citizens	133,243	89.7	85.5	127,568	90.0	85.8	+5,675
Eligible Voters (aged 18+)	105,845	71.3	64.8	100,852	71.2	64.5	+4,993

**Estimated Resident Population, City of Newcastle**



Source: Australian Bureau of Statistics, Regional Population Growth, Australia (3218.0). Compiled and presented by .id the population experts

‘From 2006 to 2011, City of Newcastle's population increased by 6,778 people (4.8%). This represents an average annual population change of 0.94% per year over the period.’

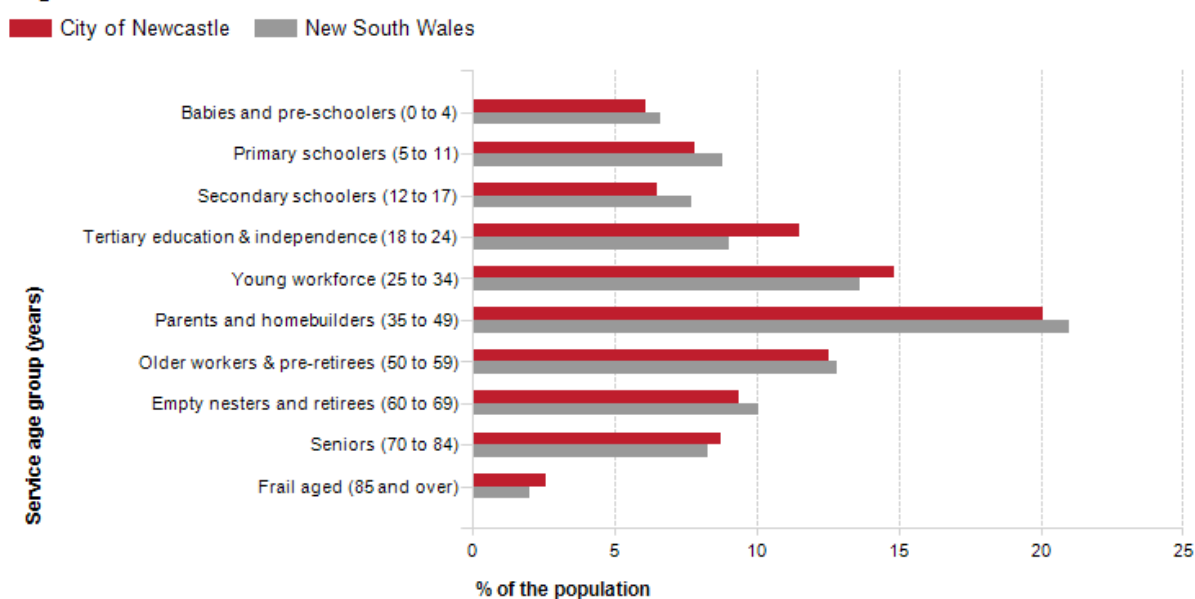
### Service Age Groups

The service age groups provide key insights into the level of demand for age based services and facilities.

**Table 4.2: Service Age Groups, 2006-2011. Source: ID Profile.**

City of Newcastle	2011			2006			Change
Service age group (years)	Number	%	NSW %	Number	%	NSW%	2006 to 2011
Babies and pre-schoolers (0 to 4)	9,002	6.1	6.6	8,262	5.8	6.4	+740
Primary schoolers (5 to 11)	11,585	7.8	8.8	11,206	7.9	9.3	+379
Secondary schoolers (12 to 17)	9,630	6.5	7.7	9,941	7.0	8.2	-311
Tertiary edu & independence (18 to 24)	17,078	11.5	9.0	16,667	11.8	9.2	+411
Young workforce (25 to 34)	22,079	14.9	13.6	20,108	14.2	13.6	+1,971
Parents and homebuilders (35 to 49)	29,832	20.1	21.0	29,374	20.7	21.9	+458
Older workers & pre-retirees (50 to 59)	18,602	12.5	12.8	17,286	12.2	12.7	+1,316
Empty nesters and retirees (60 to 69)	13,920	9.4	10.0	11,851	8.4	8.7	+2,069
Seniors (70 to 84)	12,953	8.7	8.3	13,798	9.7	8.2	-845
Frail aged (85 and over)	3,850	2.6	2.0	3,225	2.3	1.7	+625
Total population	148,531	100.0	100.0	141,718	100.0	100.0	+6,813

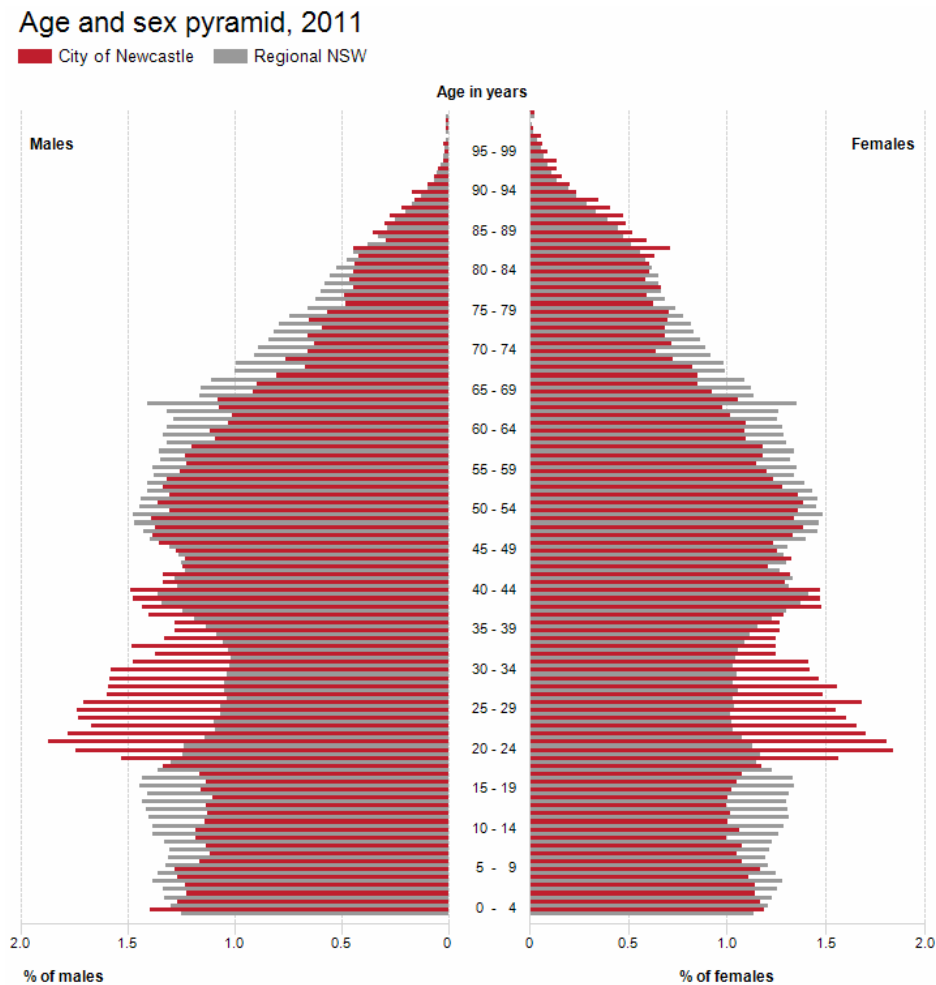
## Age structure, 2011



The major differences between the age structure of Newcastle and New South Wales were:

- A larger percentage of 'tertiary education & independence' (11.5% compared to 9.0%)
- A larger percentage of 'young workforce' (14.9% compared to 13.6%)
- A smaller percentage of 'secondary schoolers' (6.5% compared to 7.7%)
- A smaller percentage of 'primary schoolers' (7.8% compared to 8.8%)

Single year of age data is presented as an age-sex pyramid which enables the structure of the population to be compared geographically, temporally and by gender.



The pyramid illustrates the distinct ‘bulge’ in the 20-34 year age groups and a depression around 0-19 age groups compared to NSW. It also indicates that there are a greater number of women in the 75-94 age group than the State average.

#### **Box 1. Population: Implications for the Local Planning Strategy**

The University and Hunter TAFE are the likely reason for the variation from the State average in the 20-34 age groups. The continued growth of these institutions will reinforce this profile. This service group is particularly vulnerable to the availability of affordable housing and good public transport provision.

The increased number of people in the 50-69 age groups is reflective of Australia’s aging population. The implication of this in terms of land use is the provision of aging-appropriate, adaptable housing close to services and well serviced by public transport.

## Ethnicity

### Ancestry

Ancestry defines the cultural association and ethnic background of an individual going back three generations. The three largest ancestries in Newcastle are Australian, English, and Irish.

Overall, 12.4% of the population was born overseas, and 7.8% were from a non-English speaking background, compared with 25.7% and 18.6% respectively for New South Wales.

The largest non-English speaking country of birth in Newcastle was China, where 0.6% of the population, or 900 people, were born.

**‘8% of people in Newcastle come from countries where English is not the first language.’**

### Proficiency in English

Overall, 87.2% of persons spoke English only, and 1.4% spoke another language and English not well or not at all, compared with 72.5% and 3.9% respectively for New South Wales. The dominant language spoken at home, other than English, in Newcastle was Macedonian, with 0.8% of the population, or 1,245 people speaking Macedonian at home.

### Religion

Overall, 69.1% of the population nominated a religion, and 22.6% said they had no religion, compared with 73.6% and 17.9% respectively for New South Wales.

The largest single religion in Newcastle was Western (Roman) Catholic, with 25.3% of the population or 37,571 people as adherents.

#### **Box 2. Ethnicity: Implications for the Local Planning Strategy**

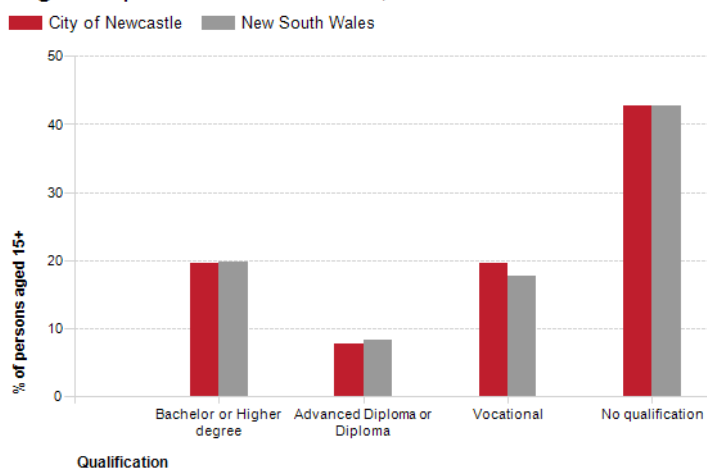
Ethnicity in Newcastle is relatively low when compared to the State average. Newcastle’s ethnic diversity reflects historic patterns with a predominance of immigrants arriving from English speaking countries. However, numbers of individuals of people arriving from non-English speaking countries are increasing.

## Education

### Qualifications

Educational qualifications relate to education outside of primary and secondary school and are one of the most important indicators of socio-economic status.

#### Highest qualification achieved, 2011



‘33,723 people in Newcastle have a tertiary qualification.’

Analysis of the qualifications of the population in Newcastle in 2011 compared to New South Wales shows that there was a higher proportion of people holding formal qualifications (Bachelor or higher degree; Advanced Diploma or Diploma; or Vocational qualifications), and a similar proportion of people with no formal qualifications.

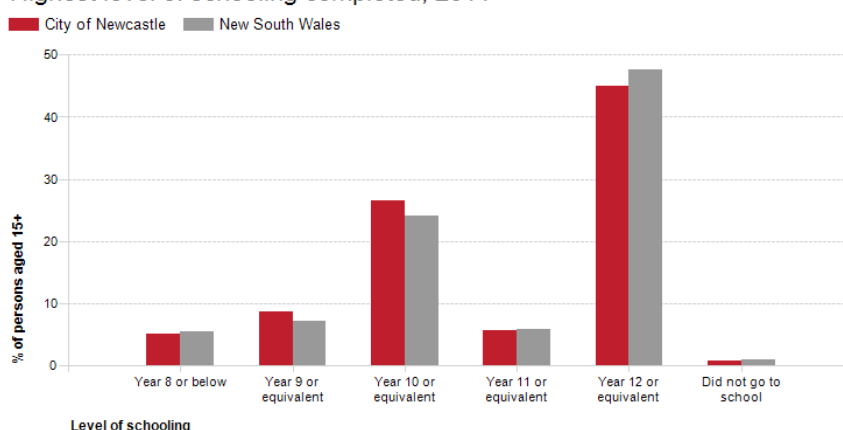
Overall, 46.9% of the population aged 15 and over held educational qualifications, and 42.7% had no qualifications, compared with 45.8% and 42.8% respectively for New South Wales.

### Highest level of schooling

In Newcastle 45% of people aged over 15 years have completed Year 12 schooling (or equivalent).

Overall, 41.2% of the population left school at Year 10 or below, and 45.0% went on to complete Year 12 or equivalent, compared with 37.9% and 47.6% respectively for New South Wales.

### Highest level of schooling completed, 2011

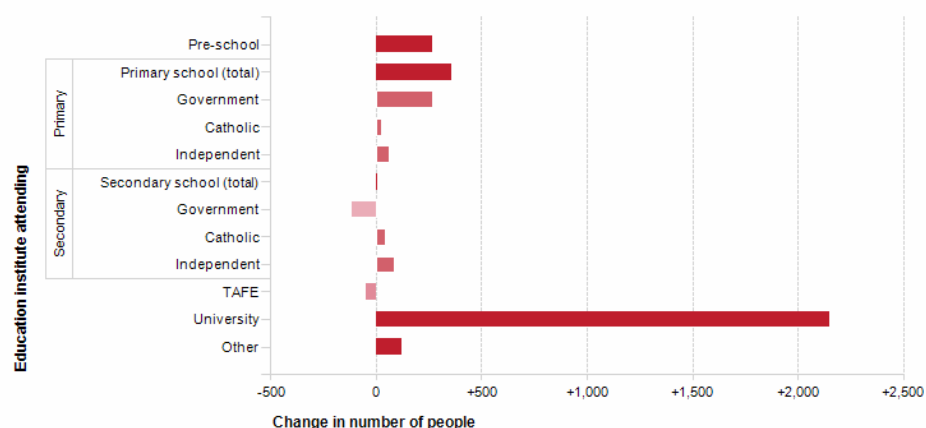


### Education institution attending

The share of Newcastle's population attending educational institutions reflects the age structure of the population, which influences the number of children attending school; proximity to tertiary education, which can mean young adults leaving home to be nearer to educational facilities and; the degree to which people are seeking out educational opportunities in adulthood, especially in their late teens and early twenties.

### Change in education institute attending, 2006 to 2011

City of Newcastle



Overall, 7.2% of the population were attending primary school, 5.3% of the population were attending secondary institutions, and 9.8% were learning at a tertiary level, compared with 7.9%, 6.5% and 6.8% respectively for New South Wales.



The largest changes in the number of people attending education institutions in Newcastle, between 2006 and 2011 were in those who nominated:

- University (+2,148 persons)
- Primary school (+357 persons)
- Primary - Government (+269 persons)
- Pre-school (+264 persons)

### **Box 3. Education: Implications for the Local Planning Strategy**

With other data sources, such as Employment Status, Income and Occupation, educational qualifications help to evaluate the economic opportunities and socio-economic status of the area and identify skill gaps in the labour market. The population of Newcastle has a range of educational levels and qualifications. It can be inferred from this that Newcastle has a diverse labour force. A diverse labour force is beneficial to the regional economy<sup>1</sup>.

The University and other regional education facilities such as the Hunter TAFE Institute are the likely reason for the variation to the State average. The continued growth of these institutions will reinforce these trends. This service group is particularly vulnerable to affordable housing availability and good public transport provision. Therefore the Local Planning Strategy should encourage a diversity of housing in areas that are well serviced by public transport.

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<sup>1</sup> Mason, Stephen and Howard, D (2010) "Regional industry diversity and its impact on regional unemployment." Southern Cross Business School.

## Disability - Need for assistance

Newcastle's disability statistics relate directly to need for assistance due to a severe or profound disability. Analysis of the need for assistance of persons in Newcastle compared to New South Wales shows that there was a higher proportion of persons who reported needing assistance with core activities.

Overall, 5.9% of the population reported needing assistance with core activities, compared with 4.9% for New South Wales.

### Box 4. Disability - Need for assistance: Implications for the Local Planning Strategy

Accessible and affordable housing close to good quality, diverse urban centres serviced by public transport is critical to any person that is in need for assistance because of a disability. Adaptable housing forms should also be encouraged to allow for people to age in place.

## Employment

Between 2006 and 2011, the number of people employed in Newcastle showed an increase of 7,829 persons and the number unemployed showed a decrease of 609 persons.

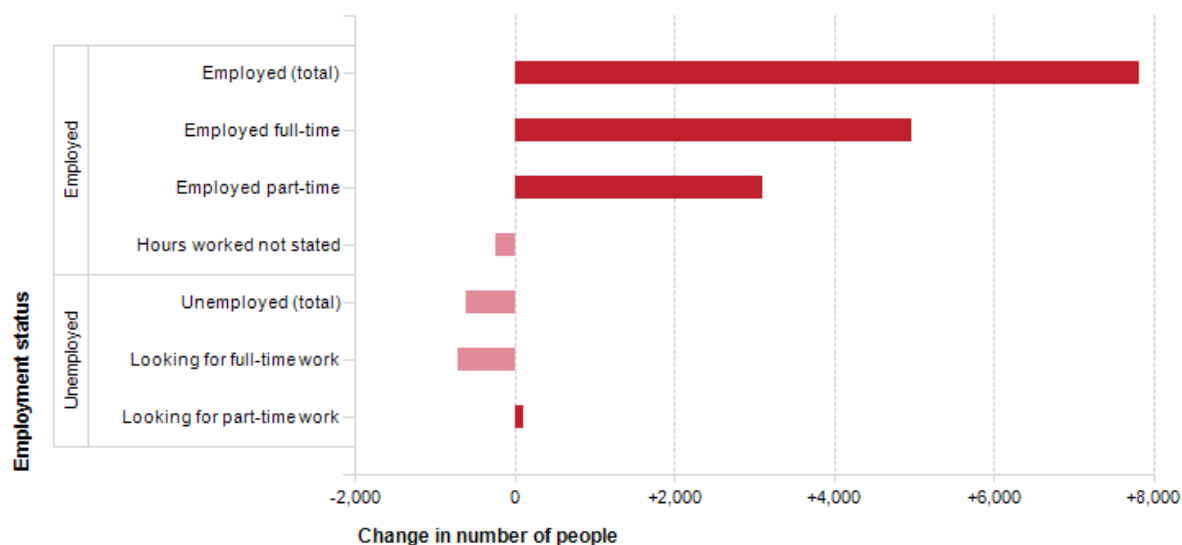
Analysis of the employment status (as a percentage of the labour force) in Newcastle in 2011 compared to New South Wales shows that there was a similar proportion in employment, as well as a similar proportion unemployed. Overall, 94.3% of the labour force was employed (either full time or part time) (57.0% of the population aged 15+), and 5.7% unemployed (3.5% of the population aged 15+), compared with 94.1% and 5.9% respectively for New South Wales.

**Table 4.3: Employment Status, 2006-2011. Source: ID Profile.**

City of Newcastle	2011			2006			Change
Employment status	Number	%	NSW	Number	%	NSW	2006 to 2011
Employed	70,256	94.3	94.1	62,427	92.7	94.1	+7,829
Employed full-time	42,961	57.6	60.2	37,990	56.4	60.8	+4,971
Employed part-time	26,077	35.0	31.8	22,982	34.1	30.6	+3,095
Hours worked not stated	1,218	1.6	2.1	1,455	2.2	2.7	-237
Unemployed	4,281	5.7	5.9	4,890	7.3	5.9	-609
Looking for full-time work	2,365	3.2	3.5	3,084	4.6	3.7	-719
Looking for part-time work	1,916	2.6	2.4	1,806	2.7	2.2	+110
Total Labour Force	74,537	100.0	100.0	67,317	100.0	100.0	+7,220

## Change in employment status, 2006 to 2011

City of Newcastle



**Table 4.4: Labour force status, 2006-2011. Source: ID Profile.**

City of Newcastle	2011			2006			Change
Labour force status	Number	%	NSW	Number	%	NSW	2006 to 2011
Total Labour force	74,537	60.5	59.7	67,317	57.3	58.9	+7,220
Not in the labour force	42,422	34.4	34.6	43,001	36.6	34.3	-579
Labour force status not stated	6,265	5.1	5.7	7,114	6.1	6.8	-849
Total persons aged 15+	123,224	100.0	100.0	117,432	100.0	100.0	+5,792

### Industry sectors of employment

An analysis of the jobs held by the resident population in City of Newcastle in 2011 shows the three most popular industry sectors were:

- Health Care and Social Assistance (11,204 people or 15.9%)
- Retail Trade (7,337 people or 10.4%)
- Education and Training (6,638 people or 9.4%)

In combination these three industries employed 25,179 people in total or 35.8% of the employed resident population.

In comparison, New South Wales employed 11.6% in Health Care and Social Assistance; 10.3% in Retail Trade; and 7.9% in Education and Training.

**Table 4.5: Industry sectors of employment, 2006-2011. Source: ID Profile.**

City of Newcastle	2011			2006			Change
Industry sector	Number	%	NSW	Number	%	NSW	2006 to 2011
Agriculture, Forestry and Fishing	181	0.3	2.2	302	0.5	2.7	-121
Mining	1,125	1.6	1.0	599	1.0	0.7	+526
Manufacturing	6,461	9.2	8.4	6,111	9.8	9.6	+350
Electricity, Gas, Water and Waste Services	1,153	1.6	1.1	907	1.5	1.0	+246
Construction	4,629	6.6	7.3	4,121	6.6	7.3	+508
Retail Trade	7,337	10.4	10.3	7,093	11.4	11.1	+244
Wholesale trade	2,004	2.9	4.4	2,039	3.3	4.7	-35
Accommodation and Food Services	5,457	7.8	6.7	4,752	7.6	6.5	+705
Transport, Postal and Warehousing	2,851	4.1	4.9	2,519	4.0	5.0	+332
Information Media and Telecommunications	878	1.2	2.3	939	1.5	2.4	-61
Financial and Insurance Services	2,359	3.4	5.0	2,137	3.4	5.0	+222
Rental, Hiring and Real Estate Services	1,076	1.5	1.6	1,074	1.7	1.7	+2
Professional, Science and Technical Services	5,219	7.4	7.9	4,336	6.9	7.3	+883
Administrative and Support Services	2,076	3.0	3.3	1,715	2.7	3.1	+361
Public Administration and Safety	4,818	6.9	6.1	4,279	6.9	6.0	+539
Education and Training	6,638	9.4	7.9	5,771	9.2	7.6	+867
Health Care and Social Assistance	11,204	15.9	11.6	9,386	15.0	10.5	+1,818
Arts and Recreation Services	962	1.4	1.5	795	1.3	1.4	+167
Other Services	2,567	3.7	3.7	2,271	3.6	3.8	+296
Inadequately described or not stated	1,268	1.8	2.5	1,280	2.1	2.7	-12
Total employed persons aged 15+	70,263	100.0	100.0	62,426	100.0	100.0	+7,837

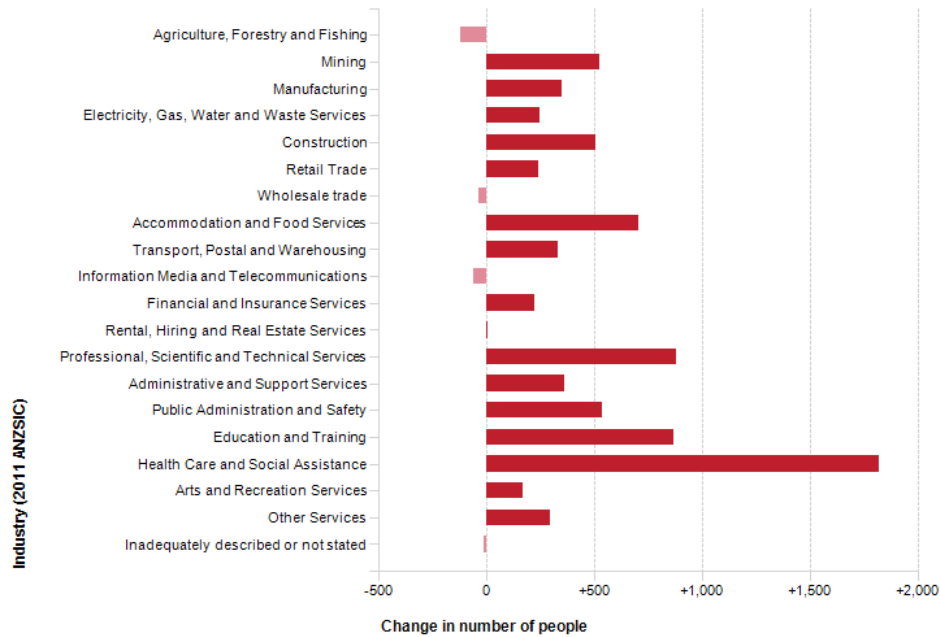
The number of employed people in City of Newcastle increased by 7,837 between 2006 and 2011.

The largest changes in the jobs held by the resident population between 2006 and 2011 in Newcastle were for those employed in:

- Health Care and Social Assistance (+1,818 persons)
- Professional, Scientific and Technical Services (+883 persons)
- Education and Training (+867 persons)
- Accommodation and Food Services (+705 persons)

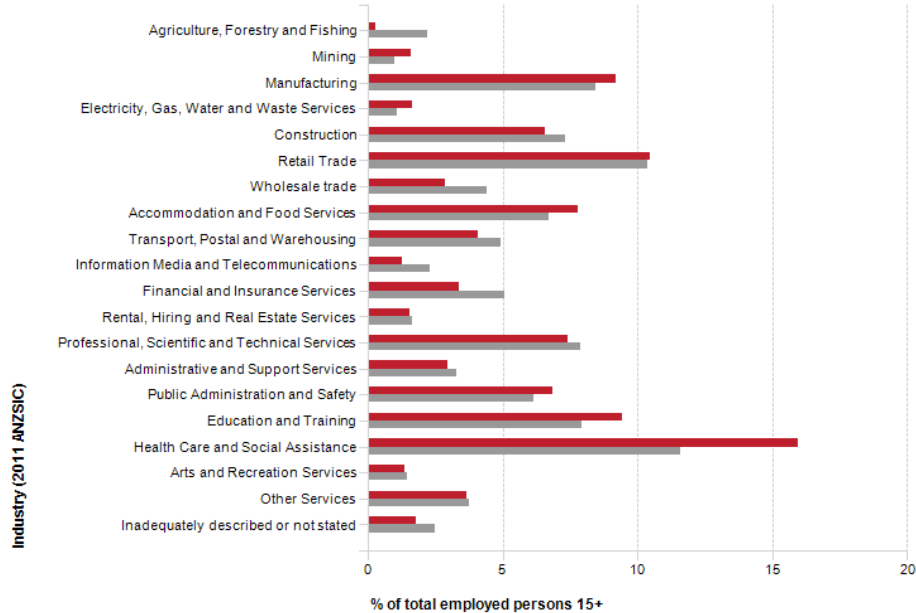
Change in employment by industry, 2006 to 2011

City of Newcastle



Employment by industry, 2011

City of Newcastle New South Wales



## Occupations

Newcastle's occupation statistics quantify the occupations in which the residents work. Occupation is a key measure for evaluating Newcastle's socio-economic status and skill base.

**Table 4.6: Occupations, 2006-2011. Source: ID Profile.**

City of Newcastle	2011			2006			Change
Occupation	Number	%	NSW	Number	%	NSW	2006 to 2011
Managers	6,932	9.9	13.3	6,131	9.8	13.6	+801
Professionals	18,061	25.7	22.7	15,053	24.1	21.2	+3,008
Technicians and Trades Workers	9,648	13.7	13.2	9,016	14.4	13.6	+632
Community and Personal Service Workers	7,379	10.5	9.5	6,206	9.9	8.6	+1,173
Clerical and Administrative Workers	9,918	14.1	15.1	9,054	14.5	15.4	+864
Sales Workers	6,911	9.8	9.3	6,516	10.4	9.7	+395
Machinery Operators And Drivers	4,090	5.8	6.4	3,599	5.8	6.4	+491
Labourers	6,312	9.0	8.7	5,973	9.6	9.5	+339
Inadequately described	1,010	1.4	1.8	878	1.4	1.9	+132
Total employed persons aged 15+	70,261	100.0	100.0	62,426	100.0	100.0	+7,835

An analysis of the jobs held by the resident population in City of Newcastle in 2011 shows the three most popular occupations were:

- Professionals (18,061 people or 25.7%)
- Clerical and Administrative Workers (9,918 people or 14.1%)
- Technicians and Trades Workers (9,648 people or 13.7%)

The major differences between the jobs held by the population of Newcastle and New South Wales were:

- A larger percentage of persons employed as Professionals (25.7% compared to 22.7%)
- A larger percentage of persons employed as Community and Personal Service Workers (10.5% compared to 9.5%)
- A smaller percentage of persons employed as Managers (9.9% compared to 13.3%)

The number of employed people in City of Newcastle increased by 7,835 between 2006 and 2011.



### **Box 5. Employment: Implications for the Local Planning Strategy**

The City of Newcastle's employment statistics are an important indicator of socio-economic status. The levels of full or part-time employment, unemployment and labour force participation indicate the strength of the local economy and social characteristics of the population.

Employment status is linked to a number of factors including Age Structure, which influences the number of people in the workforce; the economic base and employment opportunities available in the area and; the education and skill base of the population.

The chapter centres and employment of the Background Paper includes an analysis of the implications of our changing workforce and industries for land use.

#### Method of travel to work

In 2011, there were 2,758 people who caught public transport to work in the City of Newcastle, compared with 51,024 who drove in private vehicles. Analysis of the method of travel to work of the residents in Newcastle in 2011 compared to New South Wales shows that 3.9% used public transport, while 73.0% used a private vehicle, compared with 13.7% and 64.5% respectively in New South Wales.

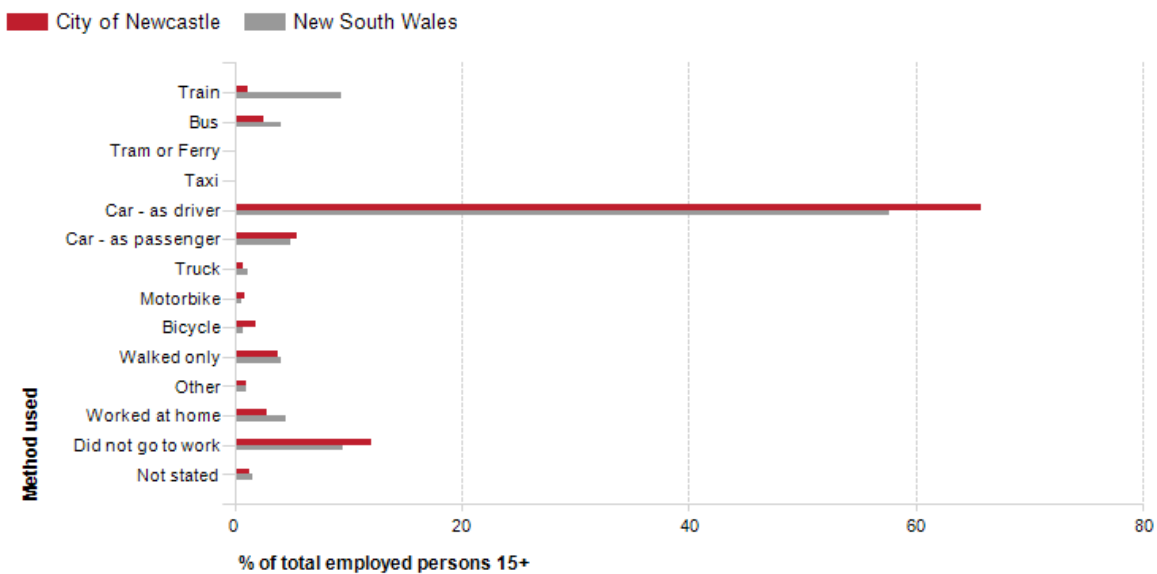
The major differences between the method of travel to work of Newcastle and New South Wales were:

- A larger percentage of persons who travelled by car (as driver) (65.8% compared to 57.7%)
- A larger percentage of persons who did not go to work (12.0% compared to 9.5%)
- A larger percentage of persons who travelled by bicycle (1.8% compared to 0.7%)
- A smaller percentage of persons who travelled by train (1.2% compared to 9.4%)

The largest changes in the method of travel to work by resident population in Newcastle between 2006 and 2011 were for those nominated:

- Car - as driver (+6,795 persons)
- Bus (+270 persons)
- Train (+237 persons)
- Bicycle (+236 persons)

### Mode of travel to work, 2011



#### Box 6. Travel to work: Implications for the Local Planning Strategy

Newcastle is heavily reliant on private car trips. Projecting the growth in the number of persons travelling by car between 2006 and 2011 it is clear that this is not sustainable. Newcastle has an extensive and relatively fixed road network i.e. there is limited opportunities for new roads. Future capacity will rely largely on network improvements. As traffic congestion increases reallocation of existing road space to mass public transport (i.e. buses) and freight over private vehicles may be necessary to ensure the road network remains functional at peak.

A strong hierarchy of centres surrounded by compact neighbourhoods well serviced by public transport is important to a sustainable Newcastle. Low density residential areas that are poorly serviced by public transport will continue to be disadvantaged. Continued access to uncongested roads for freight dependent employment lands such as the Port and associated industries will also be important.

Further implications of transport and access are considered in the transport chapter.

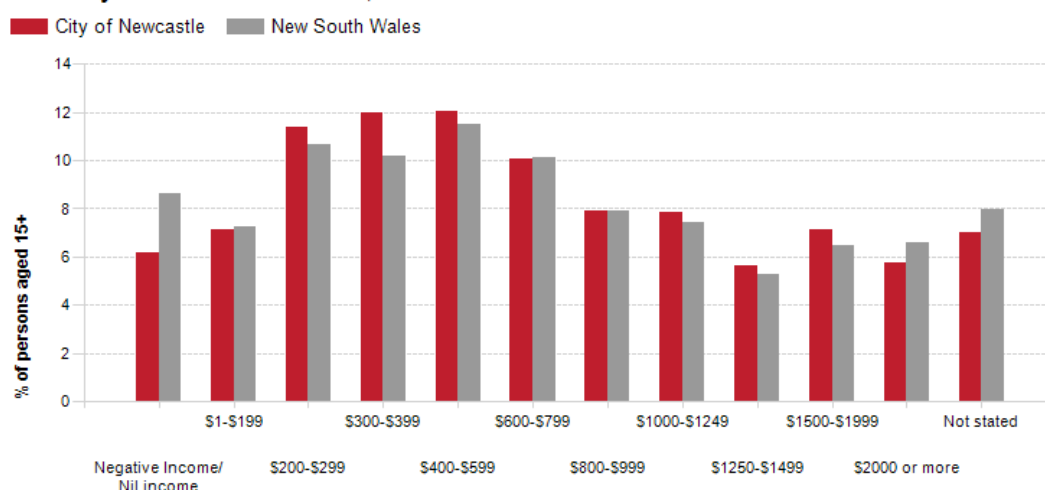
## Income

### Individual income

Analysis of individual income levels in Newcastle in 2011 compared to New South Wales shows that there was a similar proportion of persons earning a high income (those earning \$1,500 per week or more) as well as a similar proportion of low income persons (those earning less than \$400 per week).

Overall, 12.8% of the population earned a high income, and 36.6% earned a low income, compared with 13.1% and 36.7% respectively for New South Wales.

### Weekly individual income, 2011

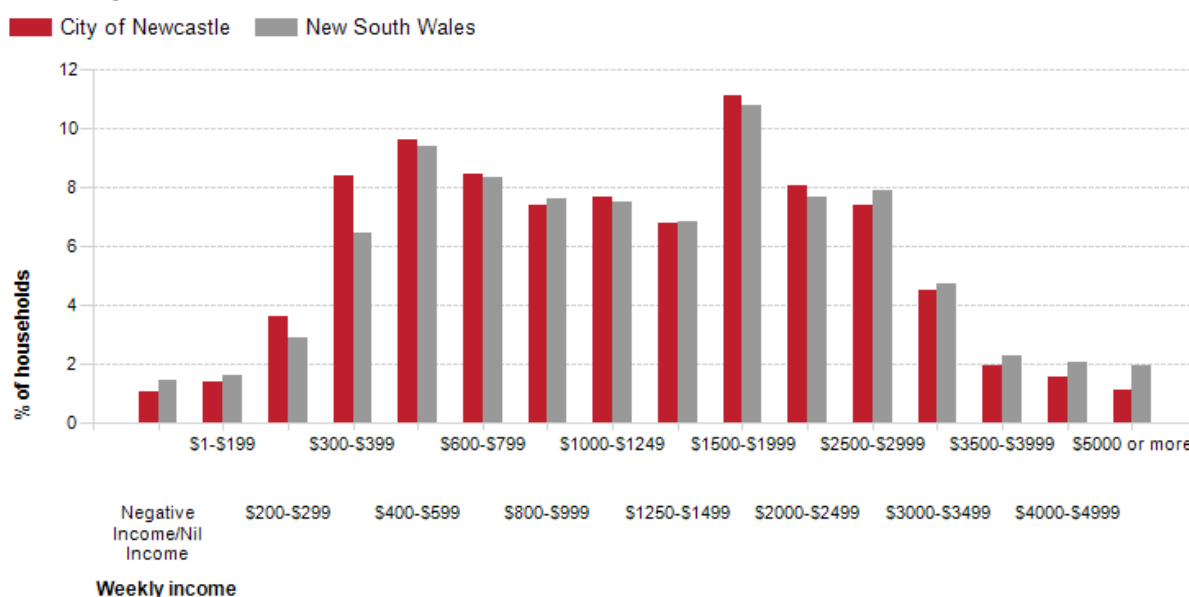


### Household income

Analysis of household income levels in Newcastle in 2011 compared to New South Wales shows that there was a smaller proportion of high income households (those earning \$2,500 per week or more) and a higher proportion of low income households (those earning less than \$600 per week).

Overall, 16.4% of the households earned a high income, and 24.0% were low income households, compared with 18.9% and 21.7% respectively for New South Wales.

## Weekly household income, 2011



### Box 7. Income: Implications for the Local Planning Strategy

Income statistics are an indicator of socio-economic status.

Low income households are particularly vulnerable to housing and living costs. A city that provides a diversity of housing types close to centres or transport will encourage affordable living. The strategy is to provide the framework that promotes housing choice.

## Households

Household and family structure is one of the most important demographic indicators. It reveals the area's residential role and function, era of settlement and provides key insights into the level of demand for services and facilities as most are related to age and household types.

### Household types

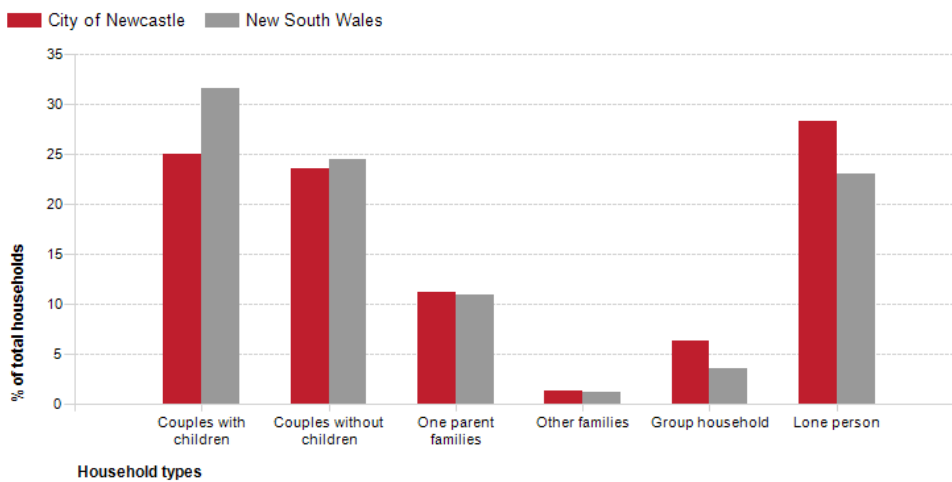
Analysis of the household/family types in Newcastle in 2011 compared to New South Wales shows that there was a lower proportion of couple families with child(ren) as well as a similar proportion of one-parent families. Overall, 25.1% of total families were couple families with child(ren), and 11.2% were one-parent families, compared with 31.7% and 11.0% respectively for New South Wales.

There were a higher proportion of lone person households and a lower proportion of couples without children. Overall, the proportion of lone person households was 28.4% compared to 23.1% in New South Wales while the proportion of couples without children was 23.6% compared to 24.5% in New South Wales.

The largest changes in family/household types in Newcastle between 2006 and 2011 were:

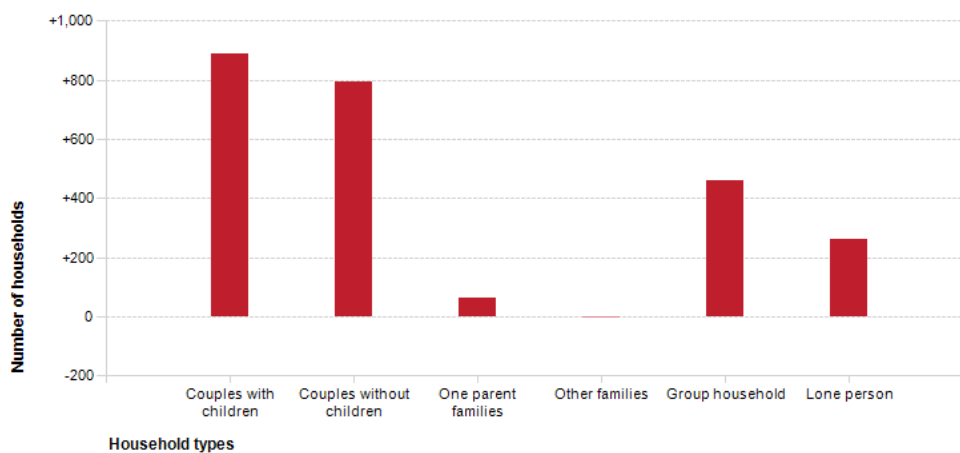
- Couples with children (+888 households)
- Couples without children (+793 households)
- Group household (+462 households)
- Lone person (+261 households)

### Household types, 2011



### Change in household types, 2006 to 2011

City of Newcastle





### Households with children

Overall, 14.2% of total households with children were couple with young children, and 7.7% were couples with older children, compared with 16.8% and 10.3% respectively for New South Wales.

There were a similar proportion of single parent households with young children and a similar proportion of single parent households with older children. Overall, the proportion of single parent households with young children was 4.3% compared to 4.2% in New South Wales while the proportion of single parent households with older children was 5.8% compared to 5.5% in New South Wales.

The largest changes in households with children in this area between 2006 and 2011 were:

- Couples with young children (+799 households)
- Single parents with older children (+319 households)
- Single parents with young children (-249 households)
- Couples with older children (+128 households)

Analysis of the households without children in Newcastle in 2011 compared to New South Wales shows that there was a larger proportion of young couples without children, a smaller proportion of middle-aged couples without children, and a smaller proportion of older couples without children.

In addition, there were a larger proportion of young-person, lone person households, a larger proportion of middle-aged lone person households, and a larger proportion of older lone person households. Between 2006 and 2011, the number of households without children increased by 1,516.

The largest changes in households without children in Newcastle, between 2006 and 2011 were:

- Middle-aged lone persons (+624 persons)
- Young couples without children (+613 persons)
- Group households (+462 persons)
- Young lone persons (-234 persons)

## Household size

Household size in Australia has declined since the 1970s but between 2006 and 2011, the average household size remained stable for the nation as a whole.

Overall there were 29.5% of lone person households, and 20.3% of larger households, compared with 24.2% and 26.7% respectively for New South Wales.

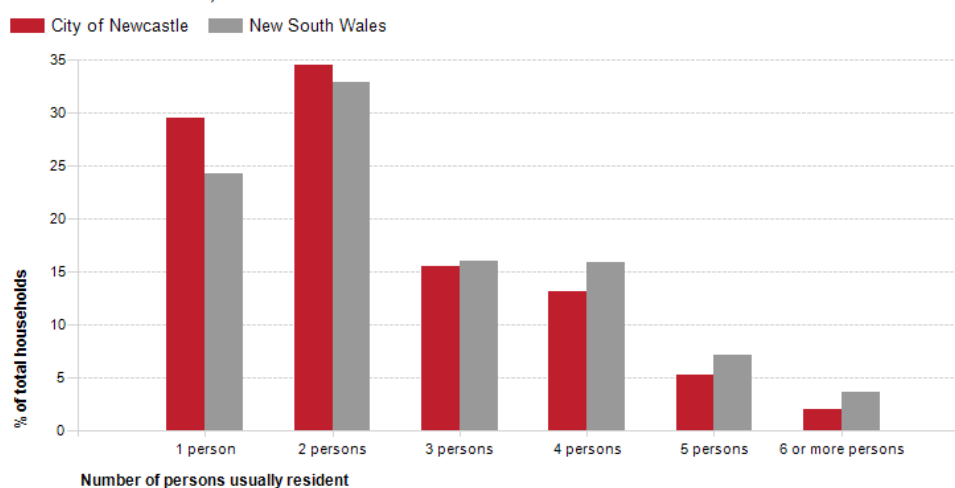
The largest changes in the number of persons usually resident in a household in Newcastle between 2006 and 2011 were:

- 2 persons (+929 households)
- 3 persons (+609 households)
- 4 persons (+345 households)
- 1 person (+251 households)

**Table 4.7: Household size, 2006-2011. Source: ID Profile.**

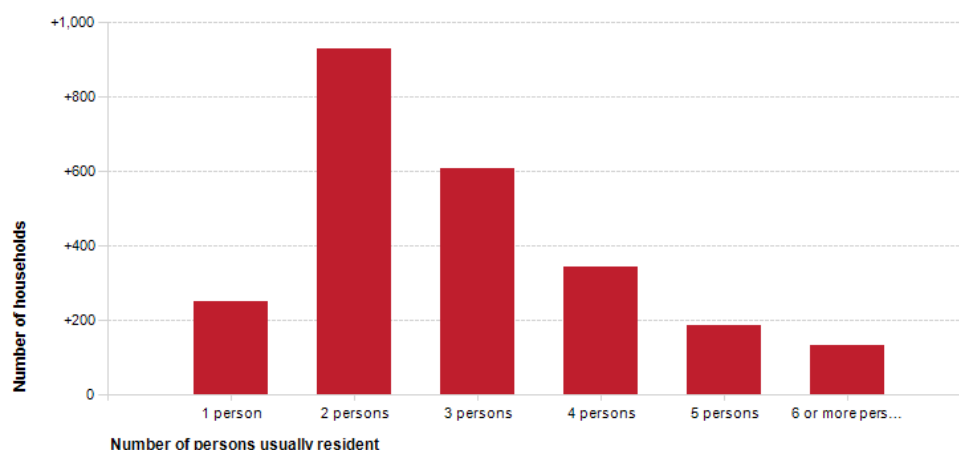
City of Newcastle	2011			2006			Change
Number of usual residents	Number	%	NSW	Number	%	NSW	2006 to 2011
1 person	17,264	29.5	24.2	17,013	30.4	24.2	+251
2 persons	20,210	34.6	33.0	19,281	34.4	33.2	+929
3 persons	9,082	15.5	16.1	8,473	15.1	16.0	+609
4 persons	7,696	13.2	15.9	7,351	13.1	16.0	+345
5 persons	3,057	5.2	7.2	2,872	5.1	7.3	+185
6 or more persons	1,138	1.9	3.7	1,004	1.8	3.5	+134
Total classifiable households	58,447	100.0	100.0	55,994	100.0	100.0	+2,453

## Household size, 2011



### Change in household size, 2006 to 2011

City of Newcastle



#### Box 8. Households: Implications for the Local Planning Strategy

An increasing household size in an area may indicate a lack of affordable housing opportunities for young people, an increase in the birth rate or an increase in family formation in the area. A declining household size may indicate children leaving the area when they leave home, an increase in retirees settling in the area, or an attraction of young singles and couples to the area.

Overall, the City of Newcastle's average household size has remained at around 2.3 persons since at least 2001. However, it is likely that areas within Newcastle will have falling or rising household sizes due to the particular characteristics of that population.

The implications for land use are to ensure that the type and location of housing meets the needs of the existing and future population.

#### Housing tenure

Analysis of the housing tenure of the population of Newcastle in 2011 compared to New South Wales shows that there was a smaller proportion of households who owned their dwelling; a smaller proportion purchasing their dwelling; and a larger proportion who were renters.

Overall, 29.9% of the population owned their dwelling; 30.7% were purchasing, and 33.1% were renting, compared with 31.9%, 31.9% and 29.1% respectively for New South Wales.

The largest changes in housing tenure categories for the households in Newcastle between 2006 and 2011 were:

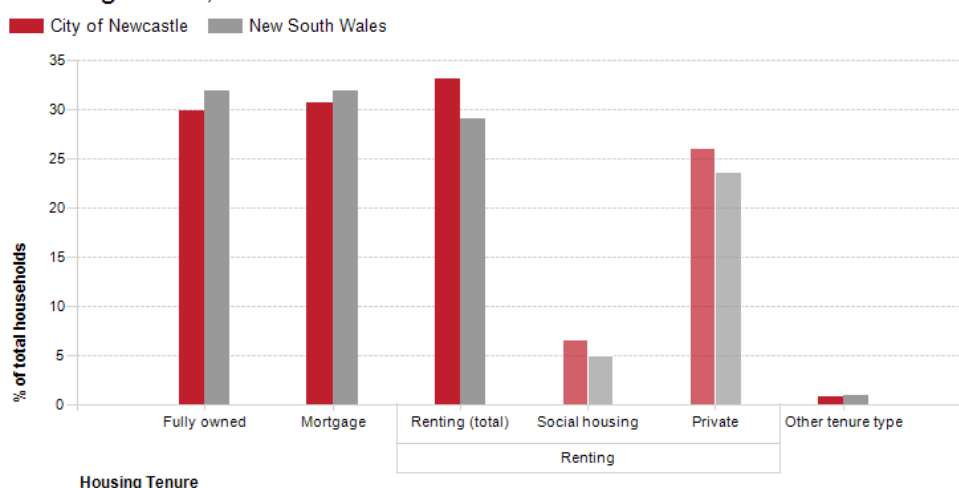
- Mortgage (+2,014 persons)
- Renting - Private (+1,241 persons)
- Fully owned (-660 persons)
- Renting - Social housing (+140 persons)

**‘In Newcastle 61% of households are purchasing or fully own their home.’**

**Table 4.8: Tenure type, 2006-2011. Source: ID Profile.**

City of Newcastle	2011			2006			Change
Tenure type	Number	%	NSW	Number	%	NSW	2006 to 2011
Fully owned	18,185	29.9	31.9	18,845	32.1	33.2	-660
Mortgage	18,682	30.7	31.9	16,668	28.4	30.2	+2,014
Renting	20,170	33.1	29.1	18,841	32.1	28.4	+1,329
Renting - Social housing	3,996	6.6	4.9	3,856	6.6	5.0	+140
Renting - Private	15,851	26.0	23.6	14,610	24.9	22.5	+1,241
Renting - Not stated	323	0.5	0.6	375	0.6	0.8	-52
Other tenure type	427	0.7	0.8	419	0.7	0.8	+8
Not stated	3,422	5.6	6.3	3,981	6.8	7.4	-559
Total households	60,886	100.0	100.0	58,754	100.0	100.0	+2,132

### Housing tenure, 2011



Change in housing tenure, 2006 to 2011

City of Newcastle



**Box 9. Implications for the Local Planning Strategy**

Newcastle's housing tenure data provides insights into its socio-economic status as well as the role it plays in the housing market. For example, a high concentration of private renters may indicate a transient area attractive to young singles and couples, while a concentration of home owners indicates a more settled area with mature families and empty-nester household types. Tenure can also reflect built form (dwelling type), with a significantly higher share of renters in high density housing and a substantially larger proportion of home-owners in separate houses, although this is not always the case.

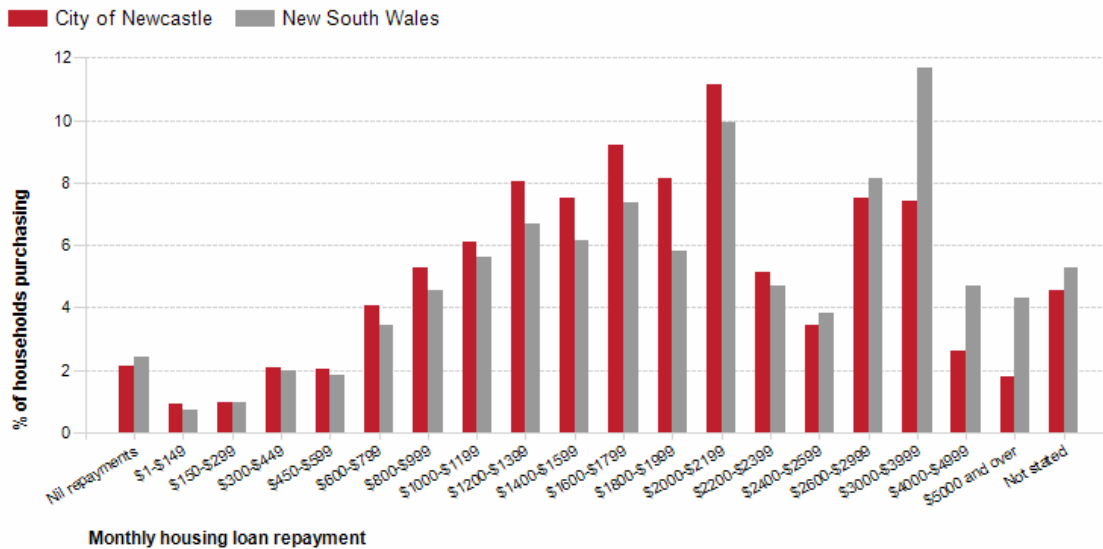
In conjunction with other socio-economic status indicators, tenure data is useful for analysing housing markets, housing affordability and identifying public housing areas.

This has implications for the type of housing provided. The high level of rented homes and the dominance of the 'tertiary education and independence' cohort would support the provision of higher density housing forms.

### Housing loan repayments

Overall, 19.3% of households were paying high mortgage repayments, and 17.5% were paying low repayments, compared with 47.2% and 15.8% respectively in New South Wales.

#### Monthly housing loan repayments, 2011



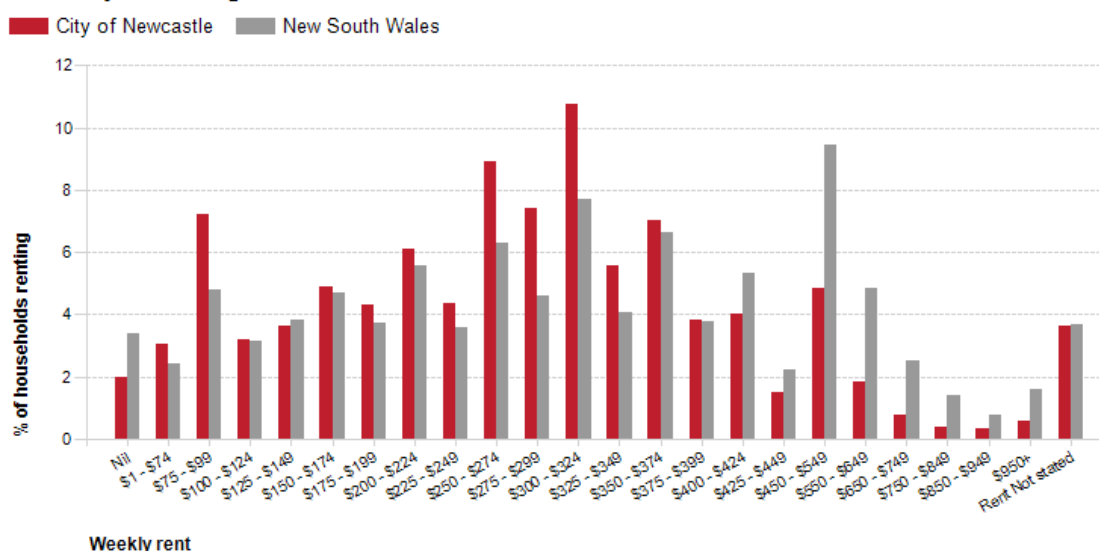
### Housing rental payments

Analysis of the weekly housing rental payments of households in Newcastle compared to New South Wales shows that there was a smaller proportion of households paying high rental payments (\$400 per week or more), and a larger proportion of households with low rental payments (less than \$150 per week).

Overall, 14.2% of households were paying high rental payments, and 19.0% were paying low payments, compared with 28.1% and 17.6% respectively in New South Wales.



## Weekly housing rental, 2011



### Box 10. Implications for the Local Planning Strategy

Mortgage repayments are directly related to house prices in Newcastle, length of occupancy and the level of equity of home owners. When viewed with household income data it may also indicate the level of housing stress households in the community are under. In mortgage belt areas it is expected that households will be paying a higher proportion of their income on housing compared to well-established areas. First home buyer areas are also likely to have larger mortgages than established areas where households move in with equity from elsewhere.

Rental payments can be a better measure of the cost of housing in Newcastle than mortgage repayments because they are not contingent on length of occupancy or equity in the dwelling. High rental payments may indicate desirable areas with mobile populations who prefer to rent, or a housing shortage, or gentrification. Low rental payments may indicate public housing or areas where low income households move by necessity for a lower cost of living.

The chapter Housing and Neighbourhoods includes further assessment of housing stock and development trends.

### Dwelling type

In 2011, there were 47,053 separate houses in the area, 13,951 medium density dwellings, and 4,348 high density dwellings.

**‘In Newcastle 28% of the dwellings are medium or high density, compared to 31% in New South Wales.’**

Analysis of the types of dwellings in Newcastle in 2011 shows that 71.5% of all dwellings were separate houses; 21.2% were medium density dwellings, and 6.6% were high density dwellings, compared with 67.9%, 17.4%, and 13.3% in the New South Wales respectively.

In 2011, a total of 92.3% of the dwellings in Newcastle were occupied on Census night, compared to 90.5% in New South Wales. The proportion of unoccupied dwellings was 7.4%, which is smaller compared to that found in New South Wales (9.2%).

The largest changes in the type of dwellings found in Newcastle between 2006 and 2011 were:

- Separate house (+1,252 dwellings)
- Medium density (+965 dwellings)
- High density (+390 dwellings)

**The total number of dwellings in Newcastle increased by 2,530 between 2006 and 2011.**

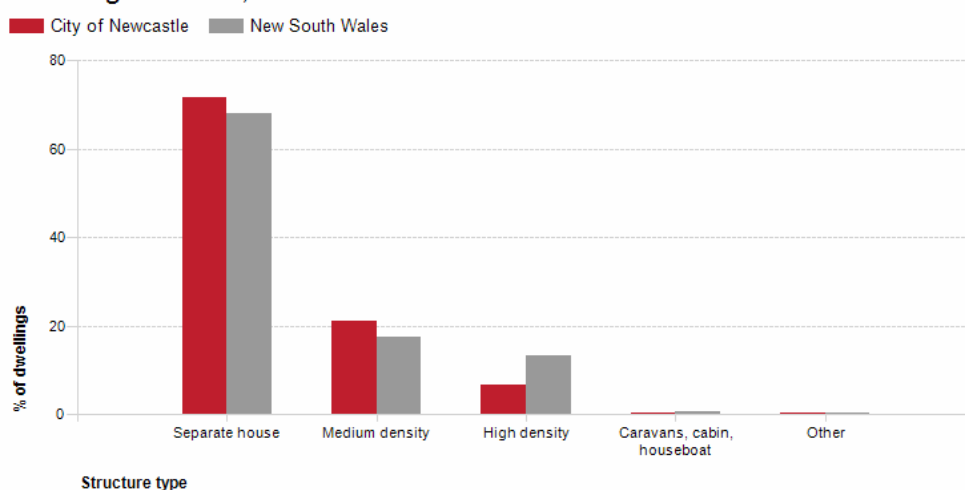
**Table 4.9: Dwelling type, 2006-2011: Source: ID Profile.**

City of Newcastle	2011			2006			Change
Dwelling type	Number	%	NSW	Number	%	NSW	2006 to 2011
Separate house	47,053	71.5	67.9	45,801	72.4	69.1	+1,252
Medium density	13,951	21.2	17.4	12,986	20.5	16.9	+965
High density	4,348	6.6	13.3	3,958	6.3	12.4	+390
Caravans, cabin, houseboat	56	0.1	0.8	105	0.2	0.9	-49
Other	271	0.4	0.4	396	0.6	0.5	-125
Not stated	89	0.1	0.2	28	0.0	0.1	+61
Total Private Dwellings	65,768	100.0	100.0	63,274	100.0	100.0	+2,494

**Table 4.10: Occupancy, 2006-2011. Source: ID Profile.**

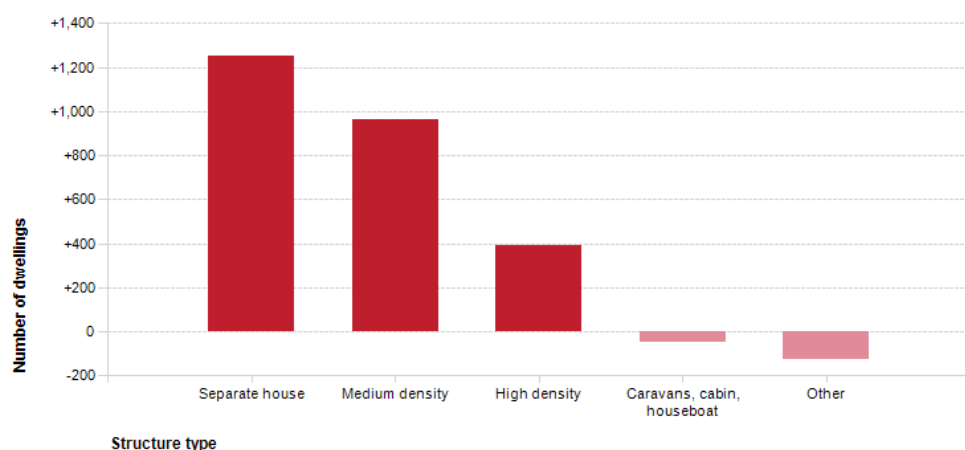
City of Newcastle	2011			2006			Change
Occupancy	Number	%	NSW	Number	%	NSW	2006 to 2011
Occupied private dwellings	60,884	92.3	90.5	58,752	92.7	90.3	+2,132
Unoccupied private dwellings	4,887	7.4	9.2	4,523	7.1	9.4	+364
Non private dwellings	168	0.3	0.2	134	0.2	0.2	+34
Total Dwellings	65,939	100.0	100.0	63,409	100.0	100.0	+2,530

### Dwelling structure, 2011



### Change in dwelling structure, 2006 to 2011

City of Newcastle



### Number of bedrooms per dwelling

Analysis of the number of bedrooms in dwellings in City of Newcastle in 2011 compared to New South Wales shows that there was a higher proportion of dwellings with 1 and 2 bedrooms, and a lower proportion of dwellings with 4 or more bedrooms.

Overall, 32.8% of households were in 1-2 bedroom dwellings, and 18.8% of 4-plus bedroom dwellings, compared with 28.0% and 28.1% for New South Wales respectively.

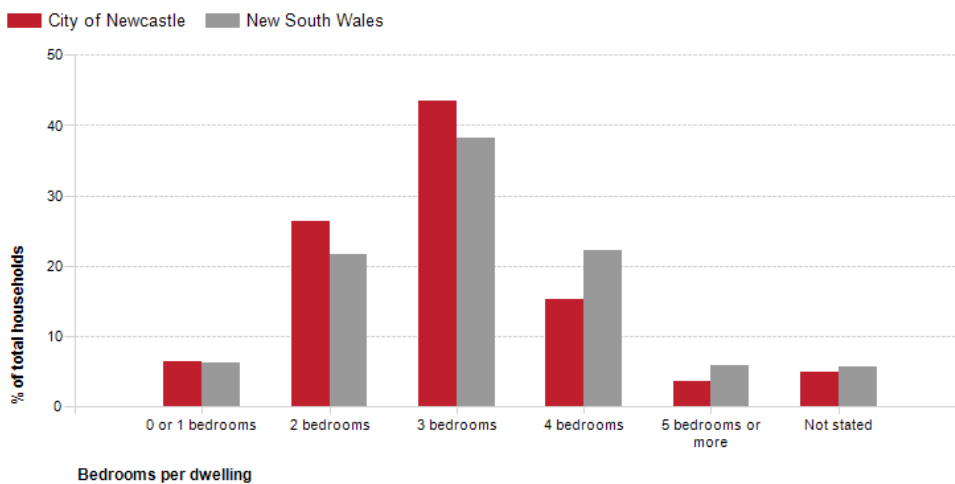
The major differences between the number of bedrooms per dwelling of Newcastle and New South Wales were:

- A larger percentage of 3 bedroom dwellings (43.5% compared to 38.3%)
- A larger percentage of 2 bedroom dwellings (26.3% compared to 21.7%)
- A smaller percentage of 4 bedroom dwellings (15.2% compared to 22.3%)

The largest changes in the number of bedrooms per dwelling in Newcastle between 2006 and 2011 were:

- 4 bedrooms (+1,128 dwellings)
- 3 bedrooms (+695 dwellings)
- 5 bedrooms or more (+445 dwellings)

#### Number of bedrooms per dwelling, 2011



#### Box 11. Dwellings: Implications for the Local Planning Strategy

Dwelling type is an important determinant of Newcastle's residential role and function. A greater concentration of higher density dwellings is likely to attract more young adults and smaller households, often renting. Larger, detached or separate dwellings are more likely to attract families and prospective families.

The residential built form often reflects market opportunities or planning policy, such as building denser forms of housing around public transport nodes or employment centres.

The number of bedrooms in a dwelling is an indicator of the size of dwellings, and when combined with dwelling type information, provides insight into the role Newcastle plays in the housing market. In combination with household type and household size, the number of bedrooms can also indicate issues around housing affordability, overcrowding and other socio-economic factors.

The type of housing being provided needs to meet the needs of the current and the future community. The strategy is to provide a framework that promotes housing diversity.

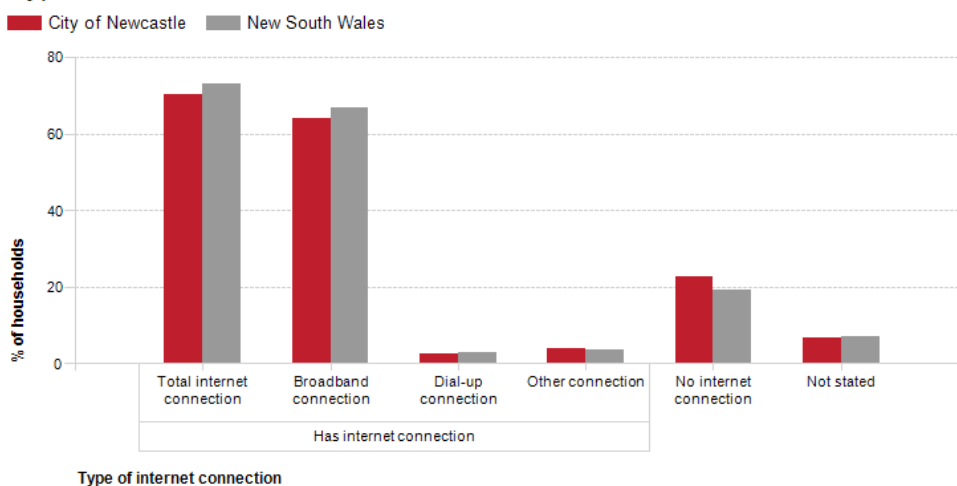
### Internet connection

Analysis of the type of internet connection of households in Newcastle compared to New South Wales shows that there was a higher proportion of households with either no internet connection or a dial up connection, and a lower proportion of households with broadband connectivity.

**‘64% of homes in Newcastle have a broadband internet connection.’**

Between 2006 and 2011 the number of households with an internet connection increased by 11,533.

#### Type of internet connection, 2011



#### Box 12. Internet communications: Implications for the Local Planning Strategy

A fast internet connection is increasingly required for accessing essential information and undertaking domestic and non-domestic business. Households with dial-up or no internet service are being left behind in the 'digital divide' as both government and the private sector are increasingly conducting their business, or aspects of it, on-line.

Newcastle is well serviced by communications infrastructure. The National Broadband Network is expected to be rolled out in Newcastle (excluding some areas such as Stockton) over the next 1-3 years. The NBN may lift Newcastle's residents' broadband access to State average levels.

### Number of cars per household

Analysis of the car ownership of the households in the City of Newcastle in 2011 compared to New South Wales shows that 82.4% of the households owned at least one car, while 11.2% did not, compared with 83.0% and 10.2% respectively in New South Wales.

Of those that owned at least one vehicle, there was a larger proportion who owned just one car; a larger proportion who owned two cars; and a smaller proportion who owned three cars or more.

Overall, 37.5% of the households owned one car; 33.1% owned two cars; and 11.8% owned three cars or more, compared with 36.5%; 32.6% and 13.9% respectively for New South Wales

#### **Box 13. Number of cars per household: Implications for the Local Planning Strategy**

The ability of the population to access services and employment is strongly influenced by access to transport. Car ownership continues to rise in Newcastle with only 11.2% of the 60,882 households without a car. More cars may imply more commuting and therefore more congestion. The Local Planning Strategy must promote an urban form that supports local access to goods and services, promotes public transport use and sustainable transport modes such as walking and cycling.



## Migration

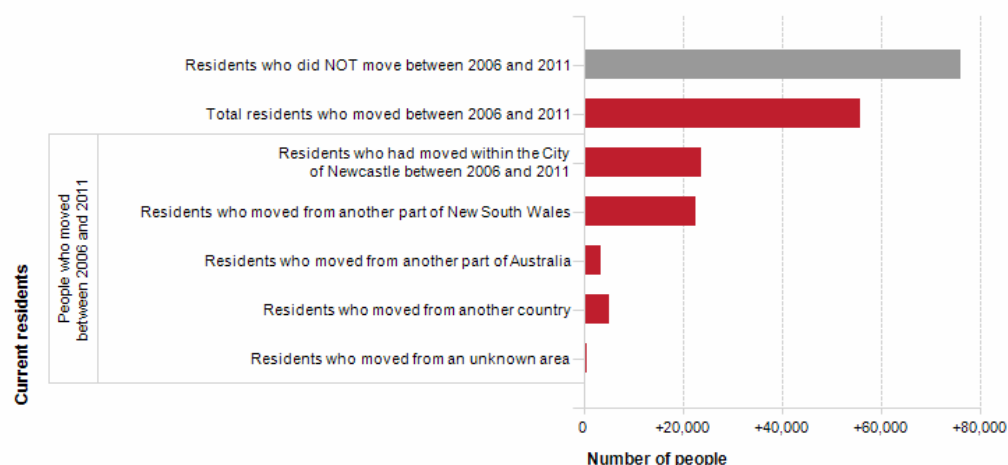
Migration, or residential mobility is a significant component of population change. The movement of people into, and out of an area directly influences the characteristics of the population and the demand for services and facilities. Migration is the most volatile component of population change and can be affected by changing housing and economic opportunities such as housing affordability issues or the mining boom.

There are three main types of migration in Australia, overseas migration, between-state migration, and within-state migration. By far the most common form of migration is within-state, and largely involves moves between neighbouring and existing urban areas where moves are often short.

**Table 4.11: Migration summary, 2006-2011. Source: ID Profile.**

City of Newcastle	Number	Percentage
Residents who did NOT move between 2006 and 2011	76,047	51.2
Total residents who moved between 2006 and 2011	55,942	37.7
Residents who had moved within Newcastle between 2006 and 2011	23,634	15.9
Residents who moved from another part of New South Wales	22,672	15.3
Residents who moved from another part of Australia	3,593	2.4
Residents who moved from another country	5,296	3.6
Residents who moved from an unknown area	665	0.4
Not stated - Didn't state whether or not moved	7,529	5.1
Not applicable - Births between 2006 and 2011	9,013	6.1
Total 2011 usual resident population	148,531	100.0

### Previous residential location of current residents in 2011



**Table 4.12: Migration into and out of Newcastle 2006-2011. Source: ID Profile.**

City of Newcastle	Number
Current residents who moved at least once between 2006 and 2011	55,942
Residents who had moved within Newcastle	23,634
Migration from other parts of New South Wales	22,672
Migration to other parts of New South Wales	18,310
Net Migration from other parts of New South Wales	4,362
Migration from other parts of Australia	3,593
Migration to other parts of Australia	4,599
Net Migration from other parts of Australia	-1,006
Migration from other countries	5,296
Migration to other countries	--
Net Migration from other countries	--

**Table 4.13: Migration between the area and other States/Territories, 2006-2011. Source: ID Profile.**

State / Territory	In migration	Out migration	Net migration
New South Wales	22,672	18,310	4,362
Victoria	840	1,021	-181
Queensland	1,491	1,802	-311
South Australia	226	318	-92
Western Australia	340	518	-178
Tasmania	171	145	26
Northern Territory	228	251	-23
Australian Capital Territory	297	544	-247

**Table 4.14: Top 10 LGAs ranked by net loss to the area, 2006-2011. Source: ID Profile.**

Rank	LGA	In migration	Out migration	Net migration
1	Unincorporated ACT	288	544	-256
2	Maitland (C)	1,711	1,935	-224
3	Lake Macquarie (C)	7,087	7,294	-207
4	Brisbane (C)	394	556	-162
5	Cessnock (C)	528	673	-145
6	Gold Coast (C)	176	299	-123
7	No usual address (NSW)	40	139	-99
8	Sydney (C)	337	432	-95
9	Yarra (C)	25	71	-46
10	Wyndham (C)	19	57	-38

**Table 4.15: Top 10 LGAs ranked by net gain to the area, 2006-2011. Source: ID Profile.**

Rank	LGA	In migration	Out migration	Net migration
1	Port Macquarie-Hastings (A)	583	222	361
2	Greater Taree (C)	567	220	347
3	Tamworth Regional (A)	444	197	247
4	Dubbo (C)	281	73	208
5	Singleton (A)	330	152	178
6	Wyong (A)	493	334	159
7	Gosford (C)	439	286	153
8	Great Lakes (A)	461	315	146
9	Port Stephens (A)	1,713	1,589	124
10	Muswellbrook (A)	200	79	121

### Migration by age

**Table 4.16: Migration by age, 2006-2011. Source: ID Profile.**

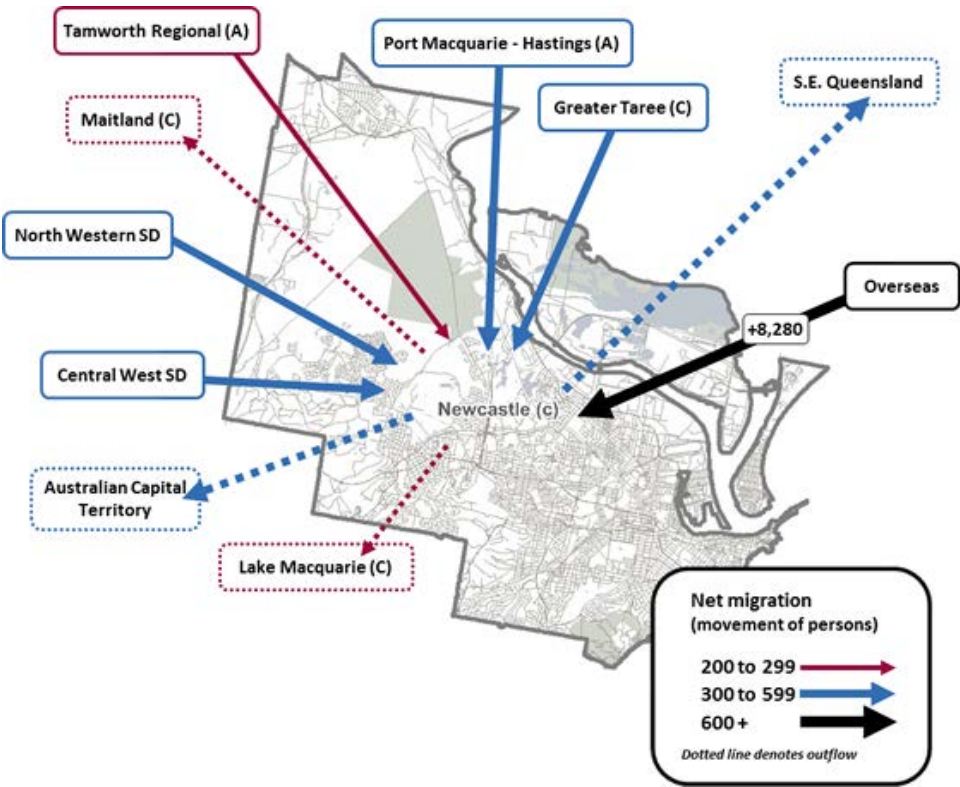
Age Group	In migration	Out migration	Net migration
5 to 11 years	+1,911	-2,231	-320
12 to 17 years	+1,222	-1,203	+19
18 to 24 years	+6,820	-2,803	+4,017
25 to 34 years	+7,020	-7,500	-480
35 to 44 years	+3,742	-3,896	-154
45 to 54 years	+2,373	-2,160	+213
55 to 64 years	+1,568	-1,621	-53
65 years and over	+1,612	-1,495	+117
<b>Total</b>	<b>+26,268</b>	<b>-22,909</b>	<b>+3,359</b>

### **Box 14. Migration: Implications for the Local Planning Strategy**

The level and type of migration in Newcastle can indicate whether the population is sedentary and likely to be in the area for a long time (and perhaps have significant ties to the community), or transient, and likely to move on.

The age structure of people who move into and out of Newcastle is strongly influenced by the residential role and function of the area and influences demand for particular services. The large, relative net migration of 18-24 year olds is mostly likely because of the University and TAFE. This group exerts a significant influence on the City in many ways and will continue to do so as these institutions continue to grow.

Figure 4.2 Historical migration flows, 2006-2011. Source: ID Profile.

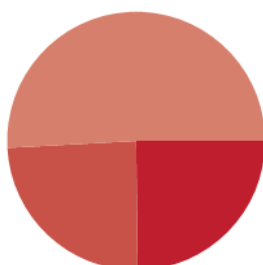


## Workers' place of residence

Journey to work data sheds light on how many workers live locally, how many commute from other areas and which areas they commute from. Some areas attract a large external workforce because they have major employment centres or because local residents have a different set of skills or aspirations than the local jobs require. Understanding where workers reside assists in planning and advocacy for roads and public transport provision. It also helps to clarify economic and employment drivers across areas and assists in understanding the degree to which Newcastle provides local employment.

Residential location of workers, 2011  
City of Newcastle

- Live and work in the same SLA
- Live in the area and work in different SLA
- Work in the area, but live outside

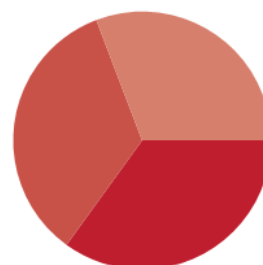


Source: Australian Bureau of Statistics, Census of Population and Housing, 2011 (Usual residence data)



Employment location of residents 2011  
City of Newcastle

- Live and work in the same SLA
- Live in the area and work in different SLA
- Live in the area, but work outside



Source: Australian Bureau of Statistics, Census of Population and Housing, 2011 (Usual residence data)



Where the workers come from?			Where our residents work?		
LGA	Number	%	LGA	Number	%
Newcastle (C) - Inner City	16,332	18.5	Newcastle (C) - Inner City	19,984	28.4
Newcastle (C) - Throsby	16,167	18.3	Newcastle (C) - Throsby	15,203	21.6
Lake Macquarie (C) - North	14,718	16.7	Newcastle (C) - Outer West	8,142	11.6
Newcastle (C) - Outer West	10,830	12.3	Lake Macquarie (C) - North	6,595	9.4
Lake Macquarie (C) - East	8,180	9.3	POW State/Territory undefined (NSW)	3,997	5.7
Maitland (C)	6,645	7.5	Port Stephens (A)	3,399	4.8
Port Stephens (A)	5,310	6.0	Maitland (C)	2,689	3.8
Lake Macquarie (C) - West	3,683	4.2	POW No Fixed Address (NSW)	2,179	3.1
Cessnock (C)	1,896	2.2	Lake Macquarie (C) - East	1,766	2.5
Wyong (A) - North-East	1,146	1.3	POW not stated	1,328	1.9
Wyong (A) - South and West	482	0.5	Lake Macquarie (C) - West	1,022	1.5
Dungog (A)	409	0.5	Cessnock (C)	939	1.3
Gosford (C) - West	366	0.4	Singleton (A)	451	0.6
Great Lakes (A)	320	0.4	Wyong (A) - South and West	185	0.3
Gosford (C) - East	253	0.3	Wyong (A) - North-East	183	0.3
Singleton (A)	164	0.2	Sydney (C) - Inner	148	0.2
No Usual Address (NSW)	82	0.1	Gosford (C) - West	137	0.2
Greater Taree (C)	53	0.1	Muswellbrook (A)	105	0.1

**Box 15. Workers place of residence: Implications for the Local Planning Strategy**

Newcastle has around 50% employment containment. This means that 50% of our population live and work in Newcastle. Therefore 50% of our workforce travel into and out of the LGA each day. Of that, around 14% or 12,575 workers come from LGAs that are serviced by the Hunter Line (Maitland, 6,645) and the Newcastle-Central Coast Line (Lake Macquarie – West, 3,683; Wyong, 1,628; Gosford, 619). In addition 4,216 Newcastle residents travel to those same LGAs for work.

The Lower Hunter Regional Strategy 2006 job targets translate into an additional 22,500 jobs for Newcastle LGA. This is broken down as an additional 5,625 jobs relating to Newcastle's employment (industrial) lands, an additional 3,375 jobs dispersed across Newcastle LGA and an additional 13,100 jobs within Newcastle's strategic centres including an additional 10,000 jobs in the Newcastle City Centre.

The Local Planning Strategy must reinforce the strategic employment centres in areas that are well serviced by public transport.

**SEIFA – Disadvantage Index**

Newcastle's SEIFA Index of Disadvantage measures the relative level of socio-economic disadvantage based on a range of Census characteristics. It is a good place to start to get a general view of the relative level of disadvantage in one area compared to others and is used to advocate for an area based on its level of disadvantage.

The index is derived from attributes that reflect disadvantage such as low income, low educational attainment, high unemployment, and jobs in relatively unskilled occupations. When targeting services to disadvantaged communities, it is important to also look at these underlying characteristics as they can differ markedly between areas with similar SEIFA scores and shed light on the type of disadvantage being experienced.

A higher score on the index means a lower level of disadvantage. A lower score on the index means a higher level of disadvantage. The SEIFA Index generated from the 2011 Census and was released by the ABS in March 2013. This final version of this community profile will be updated with the 2011 index.

**Table 4.17: Index of relative socio-economic disadvantage, 2006-2011. Source: ID Profile.**

Newcastle Areas (and benchmark areas)	2006 index	2011 Index	2006-2011 ↑↓	
Jesmond	870.8	874.3	↑	
Waratah	916.7	928.3	↑	
Beresfield - Tarro	936.3	931.0		↓
Mayfield	910.1	938.4	↑	
Shortland - Sandgate	944.6	939.5		↓
Birmingham Gardens - Callaghan	934.7	940.1	↑	
Hamilton South - Hamilton East	954.7	942.5		↓
Waratah West	943.1	946.1	↑	
Wallsend	947.1	951.3	↑	
Stockton	836.1	951.5	↑	
Mayfield West	929.5	953.1	↑	
Carrington	925.4	953.6	↑	
Mayfield East	921.3	960.4	↑	
Islington	942.7	967.0	↑	
Regional NSW	974.1	968.6		↓ Benchmark
Tighes Hill	932.0	973.5	↑	
Broadmeadow - Hamilton North	966.0	974.8	↑	
Northern Environmental Region	1052.6	981.0		↓
North Lambton	994.7	985.3		↓
Hunter Region SA4	986.2	986.8	↑	Benchmark
Lambton	995.4	987.3		↓
City of Newcastle	983.1	993.9	↑	Benchmark
Hamilton	980.6	994.8	↑	
New South Wales	1003.3	995.8		↓ Benchmark
Australia	1005.2	1002.0		↓ Benchmark
Elmore Vale	1010.4	1002.0		↓
The Junction	990.3	1003.9	↑	
Georgetown	975.2	1005.1	↑	
Bar Beach	977.2	1008.4	↑	
Warabrook	1008.4	1011.1	↑	
Maryland	1016.1	1015.9		↓
Adamstown	983.2	1016.5	↑	
Maryville - Wickham	980.1	1016.8	↑	
New Lambton	1016.9	1025.6	↑	
Cooks Hill	1021.7	1032.0	↑	
Newcastle - Newcastle East - Newcastle West	1020.1	1039.1	↑	
Rankin Park	1067.9	1050.2		↓
Kotara	1045.7	1052.2	↑	
The Hill	1063.1	1060.5		↓
Merewether	1064.8	1066.2		↓
Adamstown Heights	1074.1	1074.3	↑	
Fletcher - Minmi	1085.4	1077.8		↓
Merewether Heights	1120.9	1109.4		↓
New Lambton Heights	1118.8	1125.1	↑	



### **Box 16. SEIFA: Implications for the Local Planning Strategy**

The SEIFA index provides insight into areas of disadvantage so that more targeted investigation can be undertaken to understand the possible causes. Depending on the cause, there may be land use implications. For example, poor transport and therefore poor access to jobs or services may prejudice an area. A well connected City may overcome some social or economic disadvantage.



## Forecasts

Council engaged ID Consultants to prepare forecasts for key demographic statistics. The population forecasts are based on a combination of three statistical models. They include a cohort component model, a housing unit model and a household propensity model. Each of the models has a series of inputs, which when linked to the other models gives the forecast outputs.

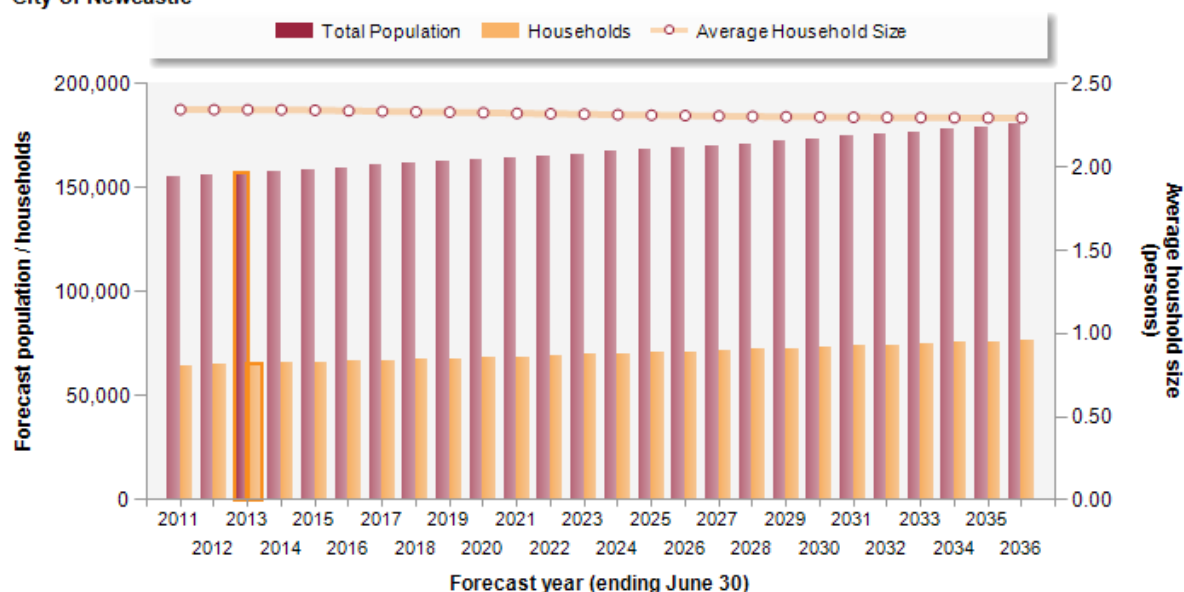
## Population

In 2011, the total population of City of Newcastle was estimated at 154,883 people. It is expected to experience an increase of over 14,300 people to 169,205 by 2021 and 180,643 by 2036. This represents an average annual growth rate of 0.62%.

**Table 4.18: Population forecasts, 2011-2036. Source: ID Forecast.**

City of Newcastle	Forecast year					
	2011	2016	2021	2026	2031	2036
Population	154,883	159,731	164,277	169,205	174,605	180,643
Change in Population (5yrs)		4,848	4,546	4,928	5,400	6,038
Average Annual Change (%)		0.62	0.56	0.59	0.63	0.68
Households	64,424	66,291	68,606	71,088	73,705	76,408
Average Household Size (persons)	2.35	2.34	2.32	2.31	2.3	2.3
Population in non private dwellings	3,681	4,598	4,798	4,923	5,048	5,173
Dwellings	66,575	68,634	71,166	73,838	76,611	79,475
Dwelling occupancy rate	96.77	96.59	96.4	96.28	96.21	96.14

**Forecast population, households and average household size, City of Newcastle**



**Table 4.19: Forecast population change by Suburb - 2011-2036. Source: ID Forecast.**

City of Newcastle Areas	Forecast Year						Change between 2011 and 2036	
	2011	2016	2021	2026	2031	2036	Number	Avg. change (p/a) %
<b>City of Newcastle</b>	<b>154,883</b>	<b>159,731</b>	<b>164,277</b>	<b>169,205</b>	<b>174,605</b>	<b>180,643</b>	<b>25,760</b>	<b>0.62</b>
Adamstown	5,899	6,160	6,401	6,671	6,974	7,266	1,367	0.84
Adamstown Heights	4,338	4,362	4,327	4,325	4,325	4,322	-16	-0.01
Bar Beach - The Junction	2,304	2,320	2,313	2,323	2,341	2,363	59	0.10
Beresfield - Tarro - Northern Environmental Region	5,414	5,444	5,537	5,656	5,775	5,868	454	0.32
Birmingham Gardens - Callaghan	2,963	3,707	3,714	3,732	3,741	3,755	792	0.95
Broadmeadow - Hamilton North	2,722	2,844	2,986	3,159	3,321	3,486	764	0.99
Carrington	1,996	1,960	1,949	1,945	1,936	1,939	-57	-0.12
Cooks Hill	3,670	3,751	3,946	3,920	3,915	3,914	244	0.26
Elmore Vale - Rankin Park	7,001	7,174	7,403	7,706	8,404	9,436	2,435	1.20
Fletcher - Minmi	3,516	5,283	7,007	8,688	9,716	10,962	7,446	4.65
Georgetown - Waratah	6,868	7,144	7,259	7,338	7,428	7,549	681	0.38
Hamilton	4,225	4,343	4,428	4,560	4,679	4,819	594	0.53
Hamilton South - Hamilton East	5,301	5,243	5,241	5,292	5,342	5,366	65	0.05
Islington - Tighes Hill	3,630	3,675	3,662	3,745	3,838	3,865	235	0.25
Jesmond	2,827	3,004	3,037	3,077	3,112	3,151	324	0.43
Kotara	4,146	4,212	4,312	4,377	4,490	4,522	376	0.35
Lambton	5,165	5,198	5,210	5,219	5,247	5,291	126	0.10
Maryland	7,958	7,646	7,457	7,352	7,305	7,312	-646	-0.34
Maryville - Wickham	2,477	2,503	2,577	2,721	2,961	3,207	730	1.04
Mayfield - Mayfield East	11,359	11,439	11,706	12,168	12,730	13,318	1,959	0.64
Mayfield West - Warabrook	4,034	4,091	4,115	4,131	4,145	4,173	139	0.14
Merewether - Merewether Heights	12,564	12,918	13,068	13,136	13,218	13,315	751	0.23
New Lambton - New Lambton Heights	11,118	11,148	11,190	11,272	11,408	11,582	464	0.16
Newcastle - Newcastle East - Newcastle West	3,975	4,138	5,041	5,786	6,476	7,164	3,189	2.38
North Lambton	3,442	3,477	3,529	3,555	3,613	3,682	240	0.27
Shortland - Sandgate	4,159	4,186	4,238	4,280	4,313	4,370	211	0.20
Stockton	4,364	4,347	4,351	4,396	4,436	4,475	111	0.10
The Hill	2,227	2,237	2,248	2,250	2,254	2,268	41	0.07
Wallsend	12,409	12,965	13,185	13,518	14,252	14,988	2,579	0.76
Waratah West	2,812	2,812	2,840	2,907	2,910	2,915	103	0.14

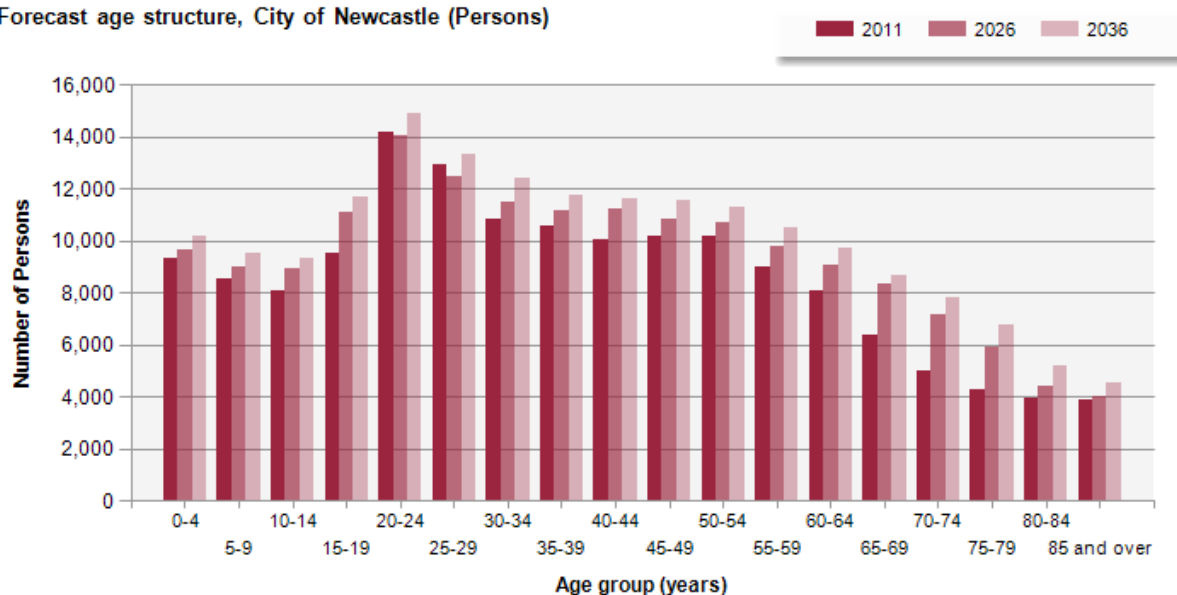
## Age structure

In 2011, the most populous age group in City of Newcastle was 20-24 year olds, with 14,165 persons. In 2021 the most populous forecast age group will continue to be 20-24 year olds, with 14,077 persons.

The number of people aged under 15 is forecast to increase by 1,619 (6.2%), representing a rise in the proportion of the population to 16.3%. The number of people aged over 65 is expected to increase by 6,243 (26.6%), and represent 17.6% of the population by 2021.

The age group which is forecast to have the largest proportional increase (relative to its population size) by 2021 is 70-74 year olds, who are forecast to increase by 42.3% to 7,134 persons.

Forecast age structure, City of Newcastle (Persons)



## Households

In 2011, the dominant household type in City of Newcastle was lone person households, which accounted for 29.5% of all households. The main changes in household type between 2011 and 2021 are forecast to be:

- The largest increase is forecast to be in lone person households, which will increase by 2,755 households, comprising 30.6% of all households, compared to 29.5% in 2011.

**Box 17. Forecasts: Implications for the Local Planning Strategy.**

The forecast predicts a moderate growth for Newcastle's population at about 0.6% p/a. To house this growth, around 12,900 new dwellings will be required to accommodate an additional 11,900 households by 2036. The Local Planning Strategy must address how and where this additional housing will be accommodated. This is a particular challenge in an almost fully urbanised City where land for other urban functions such as industry, employment and recreation will also be required.

Consistent with other places in Australia, our age profile is expected to be weighted to the older age cohorts as the 'baby boomers' move through the profile. Appropriate or adaptable housing in well serviced locations will enable older people to remain in their communities as they age.

The unique 'bulge' in the 20-29 age groups is expected to persist as a result of the University. Students and young people are particularly reliant on affordable housing and good transport. The strategy should promote housing in well-connected locations so that living costs are manageable for all vulnerable groups.

Lone persons households are expected to remain the dominant household configuration. This group is particularly susceptible to social isolation. The strategy should encourage a connected, vibrant City that supports opportunities for social interaction for all its residents.

## **Crime**

Crime statistics provide an important insight into a community. In particular the type of crime and how it compares to State averages. The **NSW Bureau of Crime Statistic and Research** maintains a database of crime statistics.

The 24-month trend data indicate that the incidence of crime is stable or fallen. Those offence types that have risen are:

- Breach bail conditions (+ 59.9%)
- Indecent assault, act of indecency and other sexual offences (+31.4%)

Substantial drops have occurred in the following offence types;

- Possession and/or use of narcotics (-43.2%)
- Criminal intent (-39.2%)
- Transport regulatory offences (-37.0%)
- Robbery without a weapon (-17.4%)
- Assault - non-domestic violence related (-12.6%) Hotspots

The Bureau of Crimes Statistics and Research rank Newcastle against other NSW local government areas. The results are presented in Table 4.20.

**Table 4.20: Major offences rank against other NSW LGAs. Source: NSW Bureau of Crime Statistics and Research.**

Offence	Rank in NSW
Steal from motor vehicle	6 <sup>th</sup>
Motor vehicle theft	7 <sup>th</sup>
Steal from person	8 <sup>th</sup>
Fraud	12 <sup>th</sup>
Robbery without a weapon	17 <sup>th</sup>
Assault – non domestic violence related	17 <sup>th</sup>
Steal from retail store	20 <sup>th</sup>
Break and enter dwelling	20 <sup>th</sup>
Malicious damage to property	24 <sup>th</sup>
Steal from dwelling	43 <sup>rd</sup>
Break and enter non-dwelling	47 <sup>th</sup>
Sexual assault	57 <sup>th</sup>
Assault – domestic violence related	60 <sup>th</sup>

### **Box 18. Crime: Implications for the Strategy**

A well designed, activated and safe urban environment is essential to promote the ongoing stability and reduction of certain crimes across Newcastle. The strategy should reinforce existing centres and transport nodes to promote activity.

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# Local Planning Strategy

## Chapter 5: **Centres and Employment Lands**

## **Chapter 5 Cover**

Title: Futurised

The front cover was painted by Maya Johnson aged 8 as part of the community consultation undertaken for the Newcastle 2030 Community Strategic Plan in 2009. The brief was to *'express in painting the Newcastle the participant would like to see in 20 years time.'*

## What are centres and employment lands?

Employment lands are collectively those lands that are predominantly used for commercial or industrial activities resulting in employment. Employment lands include all areas that are zoned for industrial and business purposes and some special use zones.

Centres are often treated separately as they have a more holistic function other than employment. They provide for the retail, entertainment, recreational, community and social needs of the community and may also have a residential component. Centres are generally zoned B1, B2 and B3 and some SP zones such as the University of Newcastle and John Hunter Hospital.

Centres and employment lands are incredibly important to the function of a city.

Not only are they necessary for our own employment and the services that we rely on each day, but they also form part of the identity of a city, an area or a neighbourhood.



Council commissioned Hill PDA to prepare an Employment Lands Strategy in 2010. The strategy examines all land in the Newcastle local government area designated for industrial uses, retail and commercial office uses as well as areas that generate employment through special uses such as health and education. The strategy provides assistance in understanding the supply and demand of employment generating uses in Newcastle and provides guidance on how to promote economic growth to meet the needs of the growing population. This paper is based on the research and findings of the Employment Lands Strategy (which was updated in 2012 to include the 2011 census data). The strategy is provided as a separate document and is available on Council's website.

The forecast growth for Newcastle will generate a demand in the order of +594,000m<sup>2</sup> of commercial floor space (retail and office) and around +350,000m<sup>2</sup> for special purpose uses over the next two decades to 2031. Over the same period, approximately 57Ha of land will



be required for industrial purposes. However demand for industrial land will vary across Newcastle and over time.

In a fully urbanised city like Newcastle, providing additional land for centres and employment is challenging as this often means competition with another land use like housing. Resolution of these conflicts can be achieved by providing opportunities for mixed use development and by encouraging higher density development of land in appropriate locations.

Existing centres and employment lands should be protected from inappropriate residential development. Equally any lateral expansion of centres and employment lands into residential land must demonstrate how housing targets are also to be achieved.

### *What is the purpose of this working paper?*

The purpose of this chapter is:

- To present the key results of the Newcastle Employment Lands Strategy prepared by HILL PDA
- To review existing land supply for business and industrial purposes to ensure that projected growth can be accommodated
- To review development controls to ensure that these accommodate growth of the centres
- To review the LEP objectives for each of the business zones to ensure they are contemporary and relevant
- To review what land uses fall into neighbourhood, local, commercial core, business development and mixed use zones
- To review the centres hierarchy
- To identify potential changes to some business and industrial land zones that are residential (or otherwise) in use and are not required for employment purposes

# 1. Population and Employment Growth

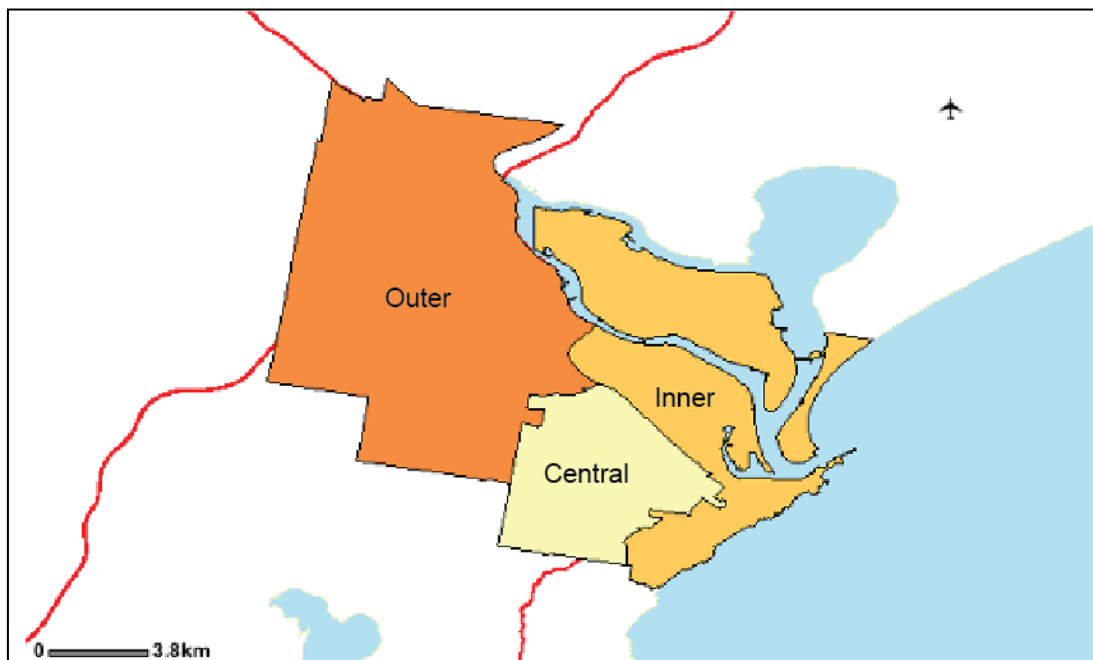
## 2011 Census

In 2011 the Australian Bureau of Statistics (ABS) undertook a census of the Australian population. The previous chapter History and Community Profile includes a comprehensive community profile.

The following statistics are relevant to centres and employment lands and have been derived from both the ABS and the Bureau of Transport Statistics (BTS). Some of the statistics are presented in three precincts (Figure 5.1). These are defined as:

1. Inner precinct – which includes the suburbs of Carrington, Newcastle, Kooragang, Maryville, Mayfield, Tighes Hill, Merewether Warabrook and Wickham.
2. Central precinct – including Adamstown, Adamstown Heights, Broadmeadow, Georgetown, Hamilton, Hamilton North, Islington, Kotara, Lambton, New Lambton and Waratah.
3. Outer precinct – including Beresfield, Hexham, Maryland, Sandgate, Wallsend and Jesmond.

**Figure 5.1: Inner, outer and central precincts.**



## Existing Population and Forecast Growth

**Table 5.1: Predicted population change in Newcastle LGA and by precinct 1996-2031.**

Precinct	1996	2006 (ABS)	2011 (ABS)	2011 (BTS)	2016 (BTS)	2021 (BTS)	2026 (BTS)	2031 (BTS)	P/annum growth 06-11 (ABS)	P/annum growth 11-31 (BTS)
Inner	46,200	48,000	50,200	53,700	55,700	57,200	58,700	60,200	0.90%	0.57%
Central	52,100	51,500	53,700	56,000	57,200	58,000	58,800	59,600	0.84%	0.31%
Outer	39,000	42,200	44,600	47,500	20,200	52,400	54,300	55,900	1.11%	0.82%
LGA	137,300	141,700	148,500	157,200	163,100	167,600	171,800	175,700	0.94%	0.56%

**Table 5.2: Net population change Newcastle LGA 2006-2031.**

	Past Growth	Short Term	Medium Term	Long Term	Proportional Change
	2006-2011	2011-2016	2011-2021 (BTS)	2011-2031(BTS)	2011-2031(BTS)
Inner	2,200	2,000	3,500	6,500	12.10%
Central	2,200	1,200	2,000	3,600	6.43%
Outer	2,400	2,700	4,900	8,400	17.66%
LGA	6,800	5,900	10,400	18,500	11.77%

Over the study period, the greatest average annual rate of growth (0.82%) and actual growth (+8,400 persons) is forecast to occur within the less densely developed Outer Precinct of Newcastle LGA. Notable actual growth (+6,500 persons) is also forecast to occur within the Inner Precinct in keeping with Local and State Government objectives to increase densities within Inner locations close to services and jobs. More modest growth is forecast to occur in the established Central Precinct with an average annual growth rate of 0.31% and actual net growth of 3,600 residents.

## Industries

As of 2011, 70,256 Newcastle residents were employed. The top six industries in Newcastle as of 2011 were:

1. Health care and social assistance – employing 11,200 residents or 16% of all employed residents;
2. Retail trade – employing over to 7,300 residents or 10% of all employed residents;
3. Education and training– employing over 6,600 residents or 9% of all employed residents;

4. Manufacturing – employing over to 6,400 residents or 9% of all employed residents;
5. Accommodation and food services – employing over to 5,400 residents or 8% of all employed residents; and
6. Professional, scientific and technical services – generating close to 5,200 jobs or 7% of all Newcastle LGA's employed residents.

There is a prevalence of the knowledge based sector, with a large proportion of residents employed in industries such as health care and social assistance, education and training and professional, scientific and technical services. While manufacturing has been a declining industry, it still remains a major employer within the Lower Hunter Region and employs 9% of Newcastle's workforce.

**Table 5. 3: Employment by Industry for Newcastle LGA's Residents 2011.**

Industry	2011	% of Total
Health care and social assistance	11,205	16%
Retail trade	7,340	10%
Education and training	6,638	9%
Manufacturing	6,461	9%
Accommodation and food services	5,454	8%
Professional, scientific and technical services	5,216	7%
Public administration and safety	4,816	7%
Construction	4,630	7%
Transport, postal and warehousing	2,849	4%
Other services	2,569	4%
Financial and insurance services	2,358	3%
Administrative and support services	2,078	3%
Wholesale trade	2,002	3%
Inadequately described/not stated	1,267	2%
Electricity, gas, water and waste services	1,151	2%
Mining	1,125	2%
Rental, hiring and real estate services	1,073	2%
Arts and recreation services	961	1%
Information media and telecommunications	876	1%
Agriculture, forestry and fishing	187	0%
<b>Total</b>	<b>70,256</b>	<b>100%</b>

Source: ABS 2011 Census Data.



## Location quotients

A location quotient shows the relative proportion of jobs in one defined area in comparison to another, in this case the Lower Hunter Region. It is a tool that helps highlight industries that are under represented or perhaps in need and it shows industries that are excelling within the LGA or that the LGA specialises in.

Where a location quotient is lower than one, the area being examined has a lower proportional split of jobs in the applicable industry than the comparison area. Where the quotient is equal to one, it is comparative, and where it exceeds one there exists a higher proportion of jobs in that industry.

**Table 5.4: Newcastle LGA Location Quotient to Lower Hunter Region 2006.**

Industry	Location Quotient
Beverage and Tobacco Product Manufacturing	0.04
Mining	0.24
Wood Product Manufacturing	0.41
Machinery and Equipment Manufacturing	0.57
Non-Metallic Mineral Product Manufacturing	0.59
Polymer Product and Rubber Product Manufacturing	0.66
Agriculture, Forestry and Fishing	0.73
Textile, Leather, Clothing and Footwear Manufacturing	0.75
Retail Trade	0.77
Furniture and Other Manufacturing	0.77
Construction	0.80
Food Product Manufacturing	0.84
Accommodation and Food Services	0.85
Other Services	0.86
Rental, Hiring and Real Estate Services	0.95
Arts and Recreation Services	0.96
Unclassified	0.97
Fabricated Metal Product Manufacturing	0.97
Public Administration and Safety	0.98
Primary Metal and Metal Product Manufacturing	0.99
Administrative and Support Services	1.02
Education and Training	1.05
Wholesale Trade	1.15
Transport, Postal and Warehousing	1.16
Pulp Paper and Converted Paper Product Manufacturing	1.17

Industry	Location Quotient
Health Care and Social Assistance	1.26
Basic Chemical and Chemical Product Manufacturing	1.27
Professional, Scientific and Technical Services	1.33
Transport Equipment Manufacturing	1.35
Printing, including the Reproduction of Recorded Media	1.35
Financial and Insurance Services	1.36
Petroleum and Coal Product Manufacturing	1.37
Electricity, Gas, Water and Waste Services	1.45
Information Media and Telecommunications	1.55

Source ABS Census 2006, Hill PDA 2013.

As of 2006 the Newcastle LGA, when compared to the Lower Hunter Region had:

- a very low representation of jobs in Beverage and Tobacco Product Manufacturing, Mining, Wood Product Manufacturing as well as Machinery and Equipment Manufacturing when compared to the Lower Hunter Region.
- a greater proportion of jobs in Information Media and Telecommunications, Electricity, Gas, Water and Waste Services, Petroleum and Coal Product Manufacturing as well as Financial and Insurance Services than the Lower Hunter Region. It also had a comparatively greater share of jobs generated in Health Care and Social Assistance, Pulp Paper and Converted Paper Product Manufacturing as well as Professional, Scientific and Technical Services.

## Industry sectors of employment

**Table 5.5: Industry sectors of employment. Source: Census 2011.**

City of Newcastle	2011			2006			Change
Industry sector	Number	%	NSW	Number	%	NSW	2006 to 2011
Agriculture, Forestry and Fishing	181	0.3	2.2	302	0.5	2.7	-121
Mining	1,125	1.6	1.0	599	1.0	0.7	+526
Manufacturing	6,461	9.2	8.4	6,111	9.8	9.6	+350
Electricity, Gas, Water and Waste Services	1,153	1.6	1.1	907	1.5	1.0	+246
Construction	4,629	6.6	7.3	4,121	6.6	7.3	+508
Retail Trade	7,337	10.4	10.3	7,093	11.4	11.1	+244
Wholesale trade	2,004	2.9	4.4	2,039	3.3	4.7	-35
Accommodation and Food Services	5,457	7.8	6.7	4,752	7.6	6.5	+705
Transport, Postal and Warehousing	2,851	4.1	4.9	2,519	4.0	5.0	+332
Information Media and Telecommunications	878	1.2	2.3	939	1.5	2.4	-61
Financial and Insurance Services	2,359	3.4	5.0	2,137	3.4	5.0	+222

City of Newcastle	2011			2006			Change
Industry sector	Number	%	NSW	Number	%	NSW	2006 to 2011
Rental, Hiring and Real Estate Services	1,076	1.5	1.6	1,074	1.7	1.7	+2
Professional, Science and Technical Services	5,219	7.4	7.9	4,336	6.9	7.3	+883
Administrative and Support Services	2,076	3.0	3.3	1,715	2.7	3.1	+361
Public Administration and Safety	4,818	6.9	6.1	4,279	6.9	6.0	+539
Education and Training	6,638	9.4	7.9	5,771	9.2	7.6	+867
Health Care and Social Assistance	11,204	15.9	11.6	9,386	15.0	10.5	+1,818
Arts and Recreation Services	962	1.4	1.5	795	1.3	1.4	+167
Other Services	2,567	3.7	3.7	2,271	3.6	3.8	+296
Inadequately described or not stated	1,268	1.8	2.5	1,280	2.1	2.7	-12
Total employed persons aged 15+	70,263	100.0	100.0	62,426	100.0	100.0	+7,837

An analysis of the jobs held by the resident population in City of Newcastle in 2011 shows the three most popular industry sectors were:

- Health care and social assistance (11,204 people or 15.9%)
- Retail trade (7,337 people or 10.4%)
- Education and training (6,638 people or 9.4%).

In combination, these three industries employed 25,179 people in total or 35.8% of the employed resident population. In comparison, New South Wales employed 11.6% in health care and social assistance; 10.3% in retail trade; and 7.9% in education and training. The major differences between the jobs held by the population of Newcastle and New South Wales were:

- A larger percentage of persons employed in health care and social assistance (15.9% compared to 11.6%)
- A larger percentage of persons employed in education and training (9.4% compared to 7.9%)
- A larger percentage of persons employed in accommodation and food services (7.8% compared to 6.7%)
- A smaller percentage of persons employed in agriculture, forestry and fishing (0.3% compared to 2.2%).

The number of employed people in City of Newcastle increased by 7,837 between 2006 and 2011. The largest changes in the jobs held by the resident population between 2006 and 2011 in Newcastle were for those employed in:

- Health care and social assistance (+1,818 persons)
- Professional, scientific and technical services (+883 persons)
- Education and training (+867 persons)
- Accommodation and food services (+705 persons)

## Occupations

Newcastle's occupation statistics quantify the occupations in which the residents work. Occupation is a key measure for evaluating Newcastle's socio-economic status and skill base.

**Table 5.6: Occupations.**

City of Newcastle	2011			2006			Change
Occupation	Number	%	NSW	Number	%	NSW	2006 to 2011
Managers	6,932	9.9	13.3	6,131	9.8	13.6	+801
Professionals	18,061	25.7	22.7	15,053	24.1	21.2	+3,008
Technicians and Trades Workers	9,648	13.7	13.2	9,016	14.4	13.6	+632
Community and Personal Service Workers	7,379	10.5	9.5	6,206	9.9	8.6	+1,173
Clerical and Administrative Workers	9,918	14.1	15.1	9,054	14.5	15.4	+864
Sales Workers	6,911	9.8	9.3	6,516	10.4	9.7	+395
Machinery Operators And Drivers	4,090	5.8	6.4	3,599	5.8	6.4	+491
Labourers	6,312	9.0	8.7	5,973	9.6	9.5	+339
Inadequately described	1,010	1.4	1.8	878	1.4	1.9	+132
Total employed persons aged 15+	70,261	100.0	100.0	62,426	100.0	100.0	+7,835

Source: Census 2011.

An analysis of the jobs held by the resident population in City of Newcastle in 2011 shows the three most popular occupations were:

- Professionals (18,061 people or 25.7%)
- Clerical and administrative workers (9,918 people or 14.1%)
- Technicians and trades workers (9,648 people or 13.7%)

In combination these three occupations accounted for 37,627 people in total or 53.6% of the employed resident population. In comparison, New South Wales employed 22.7% in professionals; 15.1% in clerical and administrative workers; and 13.2% in technicians and trades workers. The major differences between the jobs held by the population of Newcastle and New South Wales were:

- A larger percentage of persons employed as professionals (25.7% compared to 22.7%)
- A larger percentage of persons employed as community and personal service workers (10.5% compared to 9.5%)
- A smaller percentage of persons employed as managers (9.9% compared to 13.3%).

The number of employed people in City of Newcastle increased by 7,835 between 2006 and 2011. The largest changes in the occupations of residents between 2006 and 2011 in Newcastle were for those employed as:

- Professionals (+3,008 persons)
- Community and personal service workers (+1,173 persons)
- Clerical and administrative workers (+864 persons)
- Managers (+801 persons).

## Participation

Based on a labour force of 74,550 people and a population of 148,535, as of 2011 Newcastle LGA had an overall workforce participation rate of 61%.

**Table 5.7: Changes in Labour Force Status 2001-2011.**

	2001			2006			2011		
	LGA	LHR	NSW	LGA	LHR	NSW	LGA	NLMR <sup>*</sup>	NSW
% Full-time employment	54%	54%	61%	56%	56%	61%	58%	57%	60%
% Part time employment	33%	33%	29%	30%	30%	27%	31%	31%	28%
% Unemployment	11%	10%	7%	7%	7%	7%	6%	6%	6%
% Youth unemployment (15-24 yrs) <sup>†</sup>	20%	19%	13%	14%	14%	12%	8%	8%	7%

<sup>\*</sup> The 2011 census does not have the SD of Newcastle (Lower Hunter Region) so Newcastle and Lake Macquarie SA4 level was used.

<sup>†</sup> Unemployed age 15-24 as a percentage of workforce aged 15-24.

## Where do Newcastle's workers come from?

Newcastle has around 50% employment containment. This means that 50% of the population live and work in Newcastle. Therefore 50% of our workforce travel into and out of the LGA each day. Of that, around 14% or 12,575 or workers come from LGA's that are serviced by the Hunter rail line (Maitland, 6,645) and the Newcastle-Central Coast rail line (Lake Macquarie – West, 3,683; Wyong, 1,628; Gosford, 619).

**Table 5.8: Where do workers in Newcastle come from?**

Where the workers come from?		
LGA	Number	%
Newcastle (C) - Inner City	16,332	18.5
Newcastle (C) - Throsby	16,167	18.3
Lake Macquarie (C) - North	14,718	16.7
Newcastle (C) - Outer West	10,830	12.3
Lake Macquarie (C) - East	8,180	9.3
Maitland (C)	6,645	7.5
Port Stephens (A)	5,310	6.0
Lake Macquarie (C) - West	3,683	4.2
Cessnock (C)	1,896	2.2
Wyong (A) - North-East	1,146	1.3
Wyong (A) - South and West	482	0.5
Dungog (A)	409	0.5
Gosford (C) - West	366	0.4
Great Lakes (A)	320	0.4
Gosford (C) - East	253	0.3
Singleton (A)	164	0.2
No Usual Address (NSW)	82	0.1
Greater Taree (C)	53	0.1

Source: ABS Census 2011.

By 2031 it is estimated that the residents of Newcastle will generate demand for over 85,826 full or part time jobs. Should existing job containment levels be retained at 50% this would result in the need for 42,913 residents to leave the LGA for work by 2031. Should the containment rate be improved by 5% to 55%, the number travelling could be reduced to 38,622 people.

## Where do the residents of Newcastle work?

In 2011 approximately 50% of Newcastle residents travel outside the LGA for work.

**Table 5.9: Where do Newcastle residents work?**

Where our residents work?		
LGA	Number	%
Newcastle (C) - Inner City	19,984	28.4
Newcastle (C) - Throsby	15,203	21.6
Newcastle (C) - Outer West	8,142	11.6
Lake Macquarie (C) - North	6,595	9.4
POW undefined (NSW)	3,997	5.7
Port Stephens (A)	3,399	4.8
Maitland (C)	2,689	3.8
POW No Fixed Address (NSW)	2,179	3.1
Lake Macquarie (C) - East	1,766	2.5
POW not stated	1,328	1.9
Lake Macquarie (C) - West	1,022	1.5
Cessnock (C)	939	1.3
Singleton (A)	451	0.6
Wyong (A) - South and West	185	0.3
Wyong (A) - North-East	183	0.3
Sydney (C) - Inner	148	0.2
Gosford (C) - West	137	0.2
Muswellbrook (A)	105	0.1

Source: ABS Census 2011.

## Method of travel to work

In 2011, there were 2,758 people who caught public transport to work (train, bus, tram or ferry) in City of Newcastle, compared with 51,024 who drove in private vehicles (car – as driver, car – as passenger, motorbike, or truck).

Analysis of the method of travel to work of the residents in Newcastle in 2011 compared to New South Wales shows that 3.9% used public transport, while 73.0% used a private vehicle, compared with 13.7% and 64.5% respectively in New South Wales.



The major differences between the method of travel to work of Newcastle and New South Wales were:

- A larger percentage of persons who travelled by car (as driver) (65.8% compared to 57.7%)
- A larger percentage of persons who did not go to work (12.0% compared to 9.5%)
- A larger percentage of persons who travelled by bicycle (1.8% compared to 0.7%)
- A smaller percentage of persons who travelled by train (1.2% compared to 9.4%).

The largest changes in the method of travel to work by resident population in Newcastle between 2006 and 2011 were for those nominated:

- Car - as driver (+6,795 persons)
- Bus (+270 persons)
- Train (+237 persons)
- Bicycle (+236 persons)

### Changes in Labour force

According to BTS's population projections, from 2011 to 2031 the population of Newcastle LGA is expected to grow by 18,500 residents to 175,700. Based on the current average labour force participation rate for Newcastle LGA (61%), this growth would result in demand for an additional 11,285 jobs from the resident labour force by 2031.

The three precincts have varying characteristics with respect to labour force participation. Moreover population growth is not evenly distributed, with the greatest population growth forecast to occur within the Outer Precinct (18%). It therefore follows that a more accurate approach would be to apply existing rates of employment participation by Precinct to forecast the growth in demand for employment.

**Table 5.10: Forecast labour force 2011-2031 by precinct.**

Precinct	Population 2011	Labour Force Participation Rate 2011	Forecast Population Increase 2011-2031	Additional Jobs to 2031
Inner	53,700	62%	6,500	4,030
Central	56,000	61%	3,600	2,196
Outer	47,500	58%	8,400	4,872
Newcastle LGA	157,200 <sup>‡</sup>	61%	18,500	11,285

Source: Newcastle Employment Lands Strategy 2013, Hill PDA.

## 2. Statutory and Policy Context

The following provides a summary of the statutory and policy context that applies to centres and employment lands.

### Newcastle Urban Renewal Strategy 2014

The Department of Planning and Environment finalised the Newcastle Urban Renewal Strategy 2014 for the Newcastle City Centre. The strategy includes a range of initiatives and an implementation plan to help drive urban renewal and improve links between the city centre and its waterfront.

The strategy informed amendments to the Newcastle Local Environmental Plan to change zones and to amend height and floor space ratio controls. A new development control plan to implement the strategy was also prepared by the Department for the City Centre.

The strategy has major implications for the future of Newcastle's City Centre. A new city centre is proposed at Newcastle West.

### Lower Hunter Regional Strategy 2006

The Lower Hunter Regional Strategy (LHRS) 2006 describes the Lower Hunter economy as:

“a strong mining and industrial manufacturing heritage upon which it is building an increasing diverse economic base, skilled workforce and nationally significant economic infrastructure, including the world's largest coal exporting port.”

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<sup>‡</sup> These figures are based on BTS projections. These differ from the ABS projections used elsewhere in this working paper.

The LHRS lists the following economic challenges for the Region:

- To maximise the economic opportunities associated with the Region’s competitive advantages, in particular its economic infrastructure and specialised centres
- To ensure sufficient employment lands are available in appropriate locations, including within centres and as traditional industrial land, to provide sufficient capacity to accommodate growth in existing and emerging industries and businesses
- To maintain or improve the employment self sufficiency of the region
- Ensure activity within the Lower Hunter complements rather than competes with the economies and communities of adjoining regions.

To address these, the LHRS proposes to:

- Promote Newcastle as the regional city of the Lower Hunter, supported by a hierarchy of major regional centres at Charlestown, Cessnock, Maitland and Raymond Terrace, emerging regional centres at Morisset and Glendale-Cardiff as well as specialised centres and lower order centres.
- Boost the economic and housing capacity of key centres by refocussing a higher proportion of new housing in these centres.
- Provide capacity with employment zones, major centres and strategic centres up to 85% of the anticipated 66,000 job required by 2031.

The LHRS is currently subject to review.

## Newcastle Community Strategic Plan 2030

The Community Strategic Plan sets a clear community direction for the Newcastle's centres and its economy.

**Table 5.11: Extract from the Community Strategic Plan 2030 identifying those strategic directions and objectives that are relevant to centres.**

Our Strategic Directions for Newcastle	Our Objectives
<b>Vibrant and Activated Public Places</b>  A city of great public places and neighbourhoods promoting people's health and happiness and wellbeing.	<ul style="list-style-type: none"> <li>Public places that provide for diverse activity and strengthen our social connections</li> <li>Culture, heritage and place are values , shared and celebrated</li> <li>Safe and activated places that are used by people day and night</li> </ul>
<b>Liveable and Distinct Built Environment</b>  An attractive city that is built around people and reflects our sense of identity.	<ul style="list-style-type: none"> <li>A built environment that maintains and enhances our sense of identity</li> <li>Mixed use urban villages supported by integrated transport networks</li> </ul>
<b>Smart and Innovative City</b>  A leader in smart innovations with a healthy, diverse and resilient economy.	<ul style="list-style-type: none"> <li>A vibrant diverse and resilient green economy built on education's excellence and research</li> <li>A culture that supports and encourages innovations and creativity at all levels</li> <li>A thriving city that attracts people to live, work, invest and visit</li> </ul>

## Newcastle Urban Strategy

The Newcastle Urban Strategy was updated in 2009. The NUS provides the following direction for centres;

1. Support transit oriented development
2. Reinforce Newcastle City Centre as the Regional Centre
3. Maintain a hierarchy of employment and activity centres
4. Improved access to and integration of out-of-centre locations (John Hunter Hospital, Kooragang Island, Port Newcastle, Newcastle University and industrial sites).

Chapter 2 Background and Legislative Context aligned the NUS principles with those from Council's Community Strategic Plan 2030.

## Newcastle Local Environmental Plan 2012

The [Standard Instrument \(Local Environmental Plans\) Order 2006](#) provides for seven business zones and four industrial zones. The [Newcastle Local Environmental Plan 2012](#) applies five of those business zones and three industrial zones.

**Table 5.12: Business and industrial land zones of the Standard Instrument (Local Environmental Plans) Order 2006.**

Business Zones		Industrial Zones	
B1	Neighbourhood centre	IN1	General industry
B2	Local centre	IN2	Light industry
B3	Commercial core	IN3	Heavy industry
B4	Mixed use	IN4	Working waterfront
B5	Business development		
B6	Enterprise corridor		Note: The B6, B7 and IN4 land use zones are not used in the Newcastle Local Environmental Plan 2012.
B7	Business park		

## Draft Centres Policy (April 2009)

The Department of Planning released its [Draft Centres Policy - Planning for Retail and Commercial Development](#) in April 2009. Despite the policy never being adopted it remains the State Government's policy benchmark for centres in NSW.

The aim of the policy is “to create a network of vital and vibrant centres that cater for the needs of business, and are places where individuals and families want to live, work and shop.”

The policy contains six principles:

Draft Centres Policy - Planning for Retail and Commercial Development (April 2009)	
Principle 1	Retail and commercial activity should be located in centres to ensure the most efficient use of transport and other infrastructure, proximity to labour markets, and to improve the amenity and liveability of those centres.
Principle 2	The planning system should be flexible enough to enable centres to grow, and new centres to form.
Principle 3	The market is best placed to determine the need for retail and commercial development. The role of the planning system is to regulate the location and scale of development to accommodate market demand.
Principle 4	The planning system should ensure that the supply of available floorspace always accommodates the market demand, to help facilitate new entrants into the market and promote competition.
Principle 5	The planning system should support a wide range of retail and commercial premises in all centres and should contribute to ensuring a competitive retail and commercial market.
Principle 6	Retail and commercial development should be well designed to ensure it contributes to the amenity, accessibility, urban context and sustainability of centres

The draft policy provides guidance on identifying land for retail and commercial development.

### 3. Existing studies and research

There has been a substantial body of research undertaken over the last decade in relation to Newcastle's centres and employment lands.

#### Newcastle Employment Lands Strategy 2013

Council commissioned Hill PDA to prepare an employment lands strategy for Newcastle. The Newcastle Employment Lands Strategy (NELS) is a technical report that uses population and economic data to construct a retail expenditure model and an employment lands demand and assessment model. These models are then used to assess the current supply of commercial and industrial lands and provide predictions for future demand based on growth projections and economic and social drivers. The NELS includes strategies to accommodate the predicted growth to 2031. The NELS has informed much of this chapter.

#### Review of Industrial Employment Lands in the Throsby Area (2010)

The Review of Industrial and Employment Lands in the Throsby Area was prepared by the Department of Planning and Environment to inform land use zones for the Newcastle Local Environmental Plan 2012. The review covers employment land in the suburbs of Carrington, Islington, Maryville, Tighes Hill and Wickham – collectively referred to as the Throsby Employment Lands.

The report responds to development pressure to rezone employment land to permit residential development in order to remove historical land use conflicts.

The report describes the Throsby employment lands as having strategic importance to support port related, as well as, other types of emerging industries that have synergies with the Newcastle City Centre. It concludes that there is insufficient planning justification at this time to rezone employment lands to permit residential development in the Newcastle inner suburbs.

This report can be viewed on the Department of Planning and Environment's [website](#).



## **Commercial Centres Analysis 2010**

In 2006 the State Government introduced the Standard Instrument (Local Environmental Plans) Order to make Local Government LEPs consistent across NSW. An audit of commercial centres was undertaken that fed into the Commercial Centres Analysis 2010 that informed zone conversions between the Newcastle LEP 2003 and the new standard instrument format.

## **Commercial Centres Audit Report (2009)**

The Commercial Centres Audit Report (CCAR) was the first iteration of an internal document to review Newcastle's commercial centres leading up to the conversion of the Newcastle LEP 2003 to new standard template.

The audit included estimations of commercial floorspace, breakdown of commercial and retail and estimated vacant commercial space across all centres.

The audit found that Newcastle City Centre had the greatest single share of commercial zoned land in the LGA. However, Newcastle's existing district centres (Kotara, The Junction, Hamilton, Mayfield, Wallsend, Jesmond, Waratah K-Mart, Broadmeadow) provided over 48% of all land zoned commercial.

## **Newcastle Industrial Lands Analysis 2005 and 2009 (review)**

In 2009, Wakefield Planning provided an update to the Newcastle Industrial Lands Analysis undertaken by SGS Economics in 2005. The update provided a revised forecast about Newcastle's future industrial land demands, taking into consideration employment trends (as of 2009), to determine appropriate industrial zone boundaries as part of the proposed Newcastle Comprehensive LEP.

At the time of the study, the total amount of industrial land in Newcastle LGA was estimated at 2,598ha of which 1,566ha is subject to the SEPP (Major Development) 2005. It was estimated that of this, 936ha was vacant (543ha within the SEPP boundary).

## **Floorspace and Employment Survey 2001**

Council undertook the Newcastle City Centre Floor Space and Employment Survey in 2001. The survey was voluntary and limited to six of the city centre precincts. The survey is a 'snapshot' of all floorspace in the study area.

An update has not been undertaken to date.

## **Economic Development Strategy**

Council is working to produce an Economic Development Strategy.

## 4. Economic trends and drivers

The current global economy is in the midst of a major correction phase. The global financial crisis (GFC) and its impact on consumption and world production dominate the current economic climate in western economies. This is currently a major factor influencing business decisions and it is therefore essential to consider the longer term future trends when preparing strategies to support sustainable growth.

As a major port city reliant on international trade as a key driver of its economy, the GFC has had direct implications for Newcastle. Furthermore, with the reduced level of business confidence associated with the GFC, growth of new businesses that are needed to replace the declining manufacturing sector is likely to be slow.

The Hunter Region's economy has diversified in recent years, building upon traditional strengths to introduce new industries and expand existing industries to form a broader based economy that is much more resilient to external factors.

The following economic statistics demonstrate the health of the Hunter Region's economy.

- The Hunter region accounts for more than 32% of the State's exports including coal, mining services, products and equipment, as well as fresh and processed food and wine.
- Coal is a \$6 billion a year industry in the region, with 86 million tonnes exported annually comprising about 90 per cent of the region's total exports.
- About \$8 billion in trade goes through the Port of Newcastle a year.
- The Hunter is one of Australia's top wine-growing areas, producing 31 million litres of wine annually valued at more than \$230 million.
- Power stations in the region generate 80 per cent of the state's electricity and it is home to the largest solar station in the southern hemisphere.
- The nation's equine capital of Scone is home to some of the world's top breeding stallions and more than \$335 million is invested in the region's stud farms and horses.

The Hunter Region is supported by the presence of a major port and regional airport.

## *Retail Trends and Drivers*

Over the past three decades significant changes have occurred in the retail industry such as the introduction of new technologies, increased female participation in the workplace and changing consumer preferences. These changes have placed increased pressure on many existing retail centres to either adapt or lose market share.

In the 1980s, Australian retail floor space totalled approximately 1.8m<sup>2</sup> per person which was roughly divided into equal components of regional, district and neighbourhood/local centres. Today we have around 2.1m<sup>2</sup> per capita due to increasing affluence and consumerism.

Key trends relevant to retail demand in Newcastle LGA are diverse. They include the deregulation of shopping hours, the development of large supermarkets that operate 24/7, the development and expansion of out-of-centre or stand alone retailing complexes such as the Westfield at Kotara and the adjacent homemaker centre, the development of discount department stores (such as Big W, Kmart and Target), a diversification in the retail experience and emergence of internet shopping.

More and more we are witnessing shifts in trading patterns in a number of areas. In competing for consumer dollars some centres are winning and others are losing. The trends can be summarised as follows:

- Regional and super-regional centres (such as Charlestown and Kotara) are expanding and taking trade away from district centres and even some neighbourhood centres. These regional centres are capturing a larger proportion of trade by increasing their retail offer and providing a range of activities including entertainment, comparative goods shopping and convenience shopping with larger supermarkets.
- Convenience centres on major roads are taking trade away from the traditional neighbourhood centres that are based around public transport nodes. This is evident with some traditional retail centres that have experienced rising vacancies and the introduction of “low rental” tenants without fitout costs to fill the vacancies.
- Bulky goods retailers on the fringe of large shopping centres and in industrial areas are taking trade in bulky goods away from the traditional retail centres. In 1990-91 40% of department stores’ turnover was in bulky goods commodities (furniture, floor coverings, electrical appliances, hardware, homeware, sports and camping goods, soft furnishings). This figure fell to 25% by 1998-99 and is probably less than 20% today. The large national department stores are also continuing to lose trade to the rise of discount department stores.

- Older style centres typically located at train stations have lost market share. This is particularly the case with centres where access and parking is difficult and where there is a poor retail mix and lack of major tenants by contemporary standards. Examples of where this has/is occurring in Newcastle include Waratah and Adamstown rail stations.
- Some traditional centres have become successful through the reinvention of their role/theming, marketing and improvement programs – in some cases developing into an ‘eat street’ theme or ethnic theme. Examples of where this has/is occurring in Newcastle LGA include Darby Street, Cooks Hill and Beaumont Street, Hamilton.

### Emerging Retailers and Formats

New supermarkets such as ALDI and Supabarn are competing with the existing major supermarkets, Coles, IGA and Woolworths. Both Coles and Woolworths have hardware chains that are now competing although in 2013 there remains only a single Masters Hardware store in the Lower Hunter at Rutherford. US discount retail giant Costco has commenced opening stores in Australia. Costco’s first warehouse in Australia opened in August 2009 in the Docklands in Melbourne. In 2011 it opened stores in Auburn in Sydney’s west and Canberra. It currently has plans to open in Ringwood, Victoria and Crossroads, NSW. The arrival of Costco is likely to intensify competition between Coles and Woolworths.

### Internet shopping

A growing proportion of Australians are using the internet to purchase products. However, the growth in internet shopping has not been as dramatic as predicted by some futurists in the early 1990’s. In 2012 internet shopping accounted for around 6% of total retail sales.

**Box 1. Implications for the Strategy**

Traditional centres of shopping and retail are being impacted by a range of external factors including changes to the way we as consumers shop, expanding stand alone centres and changes to retail formats. There is pressure to provide land outside traditional centres to support larger format retailers.

In order to maintain our centres hierarchy it will be important for the strategy to reinforce the centres hierarchy and protect industrial lands from inappropriate development.

Any out-of-centre development or expansion of a commercial zone should be supported by an Economic Impact Assessment and Sequential Impact Assessment \* and also assess the impact on delivery of housing.

*\*Sequential impact assessment refers to the sequential approach outlined in the Department of Planning's draft Centres Policy to demonstrate whether there are suitable within centre or edge of centre sites for bulky goods development and whether there is a demonstrated net community benefit in establishing new sites.*

## **Commercial Trends and Drivers**

Traditionally commercial office space has been located within centres where it could cluster with a centre's retail, civic and community facilities. Newcastle City Centre (incorporating Honeysuckle) remains the main location within the LGA for commercial and professional businesses comprising some 24.8ha of commercial floorspace and accommodating businesses such as legal advisors, consultants (GHD and Price Waterhouse Coopers), financial institutions and Government Departments (Hunter Water Corporation and Health Administration Corporation).

## **Emergence of Business Parks**

With the decline of the office market in the 1970s in Australia and changes in business composition and technology, over the last decade and a half there has however been a significant shift in the location of office-based activities. This shift has been towards business park developments and industrial zones. Business parks have become a successful alternative location for commercial and industrial businesses to traditional centres.

## Continued demand for commercial offices

Deindustrialisation is a trend that is continuing to result in the decline of industrial jobs. This trend is a global trend owing to the greater efficiencies of technology and mechanisation. Conversely, the increasing affluence of the population and growth of the knowledge and ideas based economy is expected to strengthen demand for commercial floor space especially in key locations, close to tertiary education and transport links.

## Sustainable Communities

With rising fuel prices and the introduction of mandatory energy efficiency disclosure for large commercial buildings (>2,000m<sup>2</sup>) by the Federal Government in the second half of 2010, sustainability will become an increasingly important driver of price and demand.

Sustainability is already a key driver, with the Jones Lang LaSalle survey (2009) finding that whilst only 37% of corporate occupiers were willing to pay rental premiums of between 1-10% for sustainable floor space but almost 90% considered green building certification when selecting premises.

## Work life balance / lifestyle choices

Workplaces that enable workers to conveniently combine paid work, leisure and family responsibilities are becoming increasingly attractive. Business parks and large scale city centre/edge of city centre developments such as Honeysuckle have generally endeavoured to emulate these features to some degree but often do not provide the diversity and mix of uses to compete with a vibrant city centre location.

Child care is another critical factor which attracts a wider range of employees to consider a work location and business parks often provide higher quality provision to ensure competitiveness, a factor which city centre locations may lack.



**Box 2. Implications for the Strategy**

Land uses within land use zones should accommodate a diversity of uses.

The need for offices to be conveniently located within a vibrant mix of uses will become increasingly important to office workers and their employers. As such, work places that enable workers to conveniently combine paid work, leisure and family responsibilities, are likely to be attractive to employers and workers alike. City centre locations should offer improved access to high quality retail shops and services as an added benefit which is often limited in business park locations. These should include a wide range of health, legal, banking and government related outlets, as well as consumer outlets.

***Tourism trends and drivers***

Understanding the tourism market and the level of tourist visitation to Newcastle LGA, together with an appreciation of tourism trends helps identify strategies and opportunities to build the relationship between culture and tourism.

According to Destination NSW data, 962,000 domestic overnight tourists and 2,504,000 domestic day tourists travel to Newcastle annually (based on a four year average to September 2011). This represents a notable actual increase in visitors (903,000 and 1,959,000 respectively) from the number recorded between 2003 and 2007.

The average stay for domestic overnight tourists was 2.5 nights as of 2011 which was notably lower than the state average of 3.4 nights yet the average spend per night in Newcastle LGA (\$156) had increased since 2007 so that it is now in line with the NSW average. These changes appear to reflect Newcastle's growing popularity and value as a tourist destination with improved opportunities to capture tourist expenditure.

With respect to travel, Newcastle receives approximately 86,000 international overnight visitors annually, who stay an average of 16.8 nights and spend \$74 a night (compared to a NSW average of 22.5 nights and \$99).

With respect to tourist accommodation, as of 2011 Newcastle provided 23 establishments with over 15 rooms. These establishments had an average occupancy rate of 68.8%. This is well above the Hunter (59.1%) and NSW (65.9%) averages. The LGA has one caravan park and three visitor hostels.

**Box 3. Implications for the Strategy**

Centres are important for tourism as they create an environment within which people experience and identify a city. A vibrant, attractive city will encourage tourism.

***Industrial trends and drivers***

The demand for industrial floor space is being influenced by trends such as the globalisation of trade and the wider use of information technology. The global economy today consists of sophisticated linkages between businesses, which are designed to enable the efficient sharing of information and the delivery of goods through a global supply chain. This supply chain, once thought of as the flow of goods through production to the end user, can now be seen as an alignment of firms that design, develop, market and produce goods and services, and deliver them to the customer when needed.

Industrial floor space used primarily for business related storage is in decline, whereas space built for the transferral of goods is increasing. This 'high throughput distribution' space is essentially designed to facilitate the rapid movement of goods through the supply chain. In essence, businesses with low inventory turnover are gravitating to inexpensive land and low cost buildings. There is some potential for Newcastle LGA to attract such industries with land generally being more affordable than Metropolitan Sydney however, there is likely to be competition from nearby LGAs that offer even more affordable land.

In contrast, businesses that have high inventory turnover and high value products, and typically provide value added functions (including product customisation, packaging and customs) are more prepared to pay a premium for excellent access to a large customer base and proximity in time and space to roads, ports and airports. These industries could be suited to those parts of Newcastle LGA that are close to the Pacific Highway and the Port (such as Kooragang Island) or the purpose built industrial business parks such as Steel River, Warabrook, Freeway and Holmwood.

As a result of the industrial trends described above, over the past two decades, the development of industrial land and floorspace in NSW has generally occurred at a rate slower than employment growth. This however, has varied considerably between specific sectors of activity. In manufacturing and wholesale trade, employment growth has with only a few exceptions either declined or remained stagnant. Contrasting this pattern has been the performance of transport and storage, which has shown strong growth.

In essence this economic trend may be summarised by the fact that traditional manufacturing is changing and becoming more efficient in its processes as a result of the use of new technologies and equipment. These greater efficiencies in many cases have not resulted in a decline in output but rather a reduction in the number of staff required.

This can be no more clearly reflected in the Hunter Region by the fact that between 1991 and 2002 the number of manufacturing establishments trebled, but total employment only increased by 7%. Total wages and salaries increased by a modest 7% and the value of manufacturing income rose by 18% (each valued in current dollars).

### ***Main Employment Generating Areas***

Newcastle has several major employment generating areas.

#### Newcastle City Centre

- 18,217 jobs as of 2006 or 19% of all jobs generated within Newcastle LGA.
- Main employment generating industry is public administration and safety (3,039 jobs) reflecting the location of the Council's offices as well as Hunter Water Corporation, Australian Tax Office and Telstra.
- The second major employment industries were administrative and support services (2,410 jobs representing 13% of all jobs) followed by financial, hiring and real estate services (2,310 also representing 13% of all jobs).
- Other prominent industries included accommodation and food services (1,682 jobs or 9% of jobs) and retail trade (1,395 jobs or 8% of jobs).

#### The John Hunter and Newcastle Private Hospital

- These hospitals generated in the order of 5,300 jobs (in 2006) representing over 5% of all jobs generated in the LGA.
- The vast majority of these jobs were in the health care and social assistance industry category (4,967 or 94%).

### Beresfield Industrial Area

- Generated over 3,726 jobs as of 2006.
- The largest single employment generating industry was agriculture, forestry and fishing. This industry generated 553 or 15% of all jobs in the Precinct.
- The food product manufacturing was another major employment generating industry providing over 533 jobs or 14% of employment.
- Wholesale trade was another key employment generator with over 422 jobs (11% of all jobs in the travel zone).
- The predominance of these uses in this location is indicative of the area's proximity to major highway routes within and in/out of Newcastle LGA and their connectivity to other LGAs such as Maitland, Lake Macquarie and Port Stephens.

#### **Box 4. Implications for the Strategy**

Newcastle's main employment generating areas will need to be supported to ensure their continued contribution to the city economy.

The Newcastle Urban Renewal Strategy (DPE, 2014) has been prepared for the city centre and proposes to relocate the CBD to Newcastle West. The target of 10,000 new jobs will reinforce the city centres' employment role. Transport into, out of and around the city centre will be an important issue.

Beresfield employment node enjoys significant logistic advantage over other areas of the LGA with access to the M1, New England Highway and two train lines. This logistic advantage should be recognised and development of warehousing and distribution should be investigated for this area.

The John Hunter and Mater-Calvary hospitals, Hunter Medical Research Institute and the University of Newcastle are unique employment areas that continue to exert significant influence on future employment in Newcastle. Each of these specialised centres are generally poorly serviced by public transport and isolated from other centres. Improving public transport access and encouraging greater diversity of uses in the centres to provide the day to day needs of its work force will be a challenge for the future.

## 5. Centres – B1, B2 and B3 Zones

Centres are extremely important to the function of a city. They provide for the shopping, business, employment, entertainment, social and community needs of the resident population and visitors.

Centres exist in a hierarchy where lower order centres provide daily needs to a neighbourhood and higher order centres provide a greater number of services to a greater number of people. A regional centre such as Newcastle City Centre provides a range of high end functions to the Lower Hunter Region.

Centres are important to the identity of a city or a suburb or neighbourhood. They provide a physical form that helps differentiate one neighbourhood over another. If the built form and streetscape are appealing it may help contribute to the vitality of the centre. Centres are dynamic where popularity and function are subject to change over time.

Policy can reinforce a centre by encouraging diverse appropriate uses, a good built form and discouraging out-of-centre development.

The LHRS and the Newcastle Urban Strategy use different terms to describe the hierarchy. Neither aligns simply to the Local Environmental Plan that provides a three tier hierarchy based on the following: B1 Neighbourhood Centre, B2 Local Centre and B3 Commercial Core. This variation of terms between the strategies is a source of confusion.

### Box 5. Implications for the Strategy

To provide a clearer relationship between the LPS and the LEP, the LPS will use the following hierarchy:

- B1 Neighbourhood Centres
- B2 Local Centres (Minor)
- B2 Local Centres (Major)
- B3 Commercial Core

Floor space ratios and height controls will be used to differentiate between major and minor local centres. Major local centres are: Kotara, Hamilton, Mayfield, Jesmond, The Junction, Wallsend, Waratah K-Mart and Broadmeadow. These are referred to as 'district centres' in the current Newcastle Urban Strategy. Major local centres will be supported by higher FSRs and heights. More detail is provided in the 'Centres Hierarchy' section later in this chapter.

Table 5.13 provides a breakdown of floorspace by centre and centre type. The table shows that Newcastle City Centre has the greatest single share of commercial zoned land in the LGA. However, the existing local centres (major) provide over 48% of all land zoned commercial.

The future of Newcastle's centres is closely tied to demographic changes and also to trends and drivers in retail and commercial markets.

**Table 5.13: Commercial/Retail Building Footprints in Newcastle LGA (2010).**

Location		Proportion of Commercial/Retail (m <sup>2</sup> )	Subtotal	% Vacant
Newcastle Regional Centre	Commercial Office	336,036		n/a
	Retail	128,052	464,088	n/a
Local Centres (major)	Kotara	72496		0.00%
	Hamilton	38552		3.86%
	Mayfield	36885		16.36%
	Jesmond	25089		0.00%
	The Junction	19748		0.00%
	Wallsend	23,551		30.57%
	Waratah K-Mart	13,845		0.00%
	Broadmeadow	13,472	243,638	13.98%
Other Centres		123,310	123,310	n/a
Total		831,036		

Source: Newcastle Commercial Centres Audit, January 2010

## Existing supply of commercial zoned land

The following table presents the existing area of business zones in Newcastle's suburbs.

**Table 5.14: Existing land zoned commercial in Newcastle LGA.**

Centre type	Centre	Zone	Area (m <sup>2</sup> )
Newcastle Regional Centre	Newcastle City Centre	B3 Commercial Core	306,395
	Newcastle City Centre	B4 Mixed Use	1,071,263
	Cooks Hill	B2 Local Centre	29,610
	Cooks Hill	B4 Mixed Use	63,050
Local Centres	Kotara	B2 Local Centre	211,386
	Kotara	B5 Business Development	178,100
	Beresfield	B2 Local Centre	56,790
	Wallsend	B2 Local Centre	193,700
	Elernmore Vale	B2 Local Centre	26,100
	Lambton	B2 Local Centre	36,260
	Lambton	B5 Business Development	120,730
	Adamstown	B2 Local Centre	24,000
	Adamstown	B4 Mixed Use	59,290
	Broadmeadow	B2 Local Centre	52,700
	Broadmeadow	B4 Mixed Use	61,820
	Broadmeadow	B5 Business Development	220,500
	Georgetown	B2 Local Centre	17,890
	Waratah (Kmart)	B2 Local Centre	36,740
	Waratah (Station St)	B2 Local Centre	57,715
	Warabrook	B2 Local Centre	34,980
	Mayfield	B2 Local Centre	110,942
	Mayfield	B4 Mixed Use	53,610
	Hamilton	B2 Local Centre	134,000
	Hamilton	B4 Mixed Use	168,500
	Carrington	B2 Local Centre	32,920
	The Junction	B2 Local Centre	43,820
	Fletcher	B2 Local Centre	42,730
	Maryland	B2 Local Centre	13,920
	Jesmond	B2 Local Centre	86,890
	Stockton	B2 Local Centre	34,370
Neighbourhood Centres		B1 Neighbourhood Centre	153,932
Total			3,639,162



## Demand for Retail Floorspace

Demand for retail floorspace is largely dependent upon household expenditure. Household expenditure is in turn dependent upon the number of households and the socio-demographic characteristics of those households. Most notably, there is a strong correlation between expenditure, household type and household income levels. The NELS calculates existing demand for retail floorspace by retail type.

## Existing household expenditure and demand for retail floorspace

Table 5.15 estimates the level of retail expenditure generated by Newcastle's resident households as of 2011. This table assumes that Newcastle LGA is a closed economy, that is, no household retail expenditure escapes from the LGA or is drawn into it from other LGAs.

Table 5.15 shows that as of 2011, \$2,115 million was generated in retail expenditure by the residents of Newcastle LGA. The largest category of household expenditure (\$643.9m or 30%) related to supermarkets and grocery stores.

**Table 5.15: Table 34 - Expenditure (\$m) by Store Type 2011 for Newcastle LGA.**

Year	2011 (\$m)
<i>Estimated Population</i>	<i>157,169</i>
Supermarkets and Grocery Stores	643.9
Specialty Food Stores	222.5
Fast-Food Stores	108.1
Restaurants, Hotels and Clubs*	138.4
Department Stores	188.5
Clothing Stores	115.2
Bulky Goods Stores	320.8
Other Personal and Household Goods Retailing	324.0
Selected Personal Services**	53.9
<b>Total Retailing</b>	<b>2,115.4</b>

Source: Hill PDA, ABS Household Expenditure Survey 1998-99 and Marketinfo 2009

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

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

Using the data in the table above and cross tabulating it with anticipated retail turnover rates, the NELS translated retail expenditure into demand for retail floorspace. Table 5.16 shows the results of this analysis by retail store type. It shows that as of 2011, the residents of Newcastle generated sufficient demand for over 404,000m<sup>2</sup> of retail floorspace.

**Table 5.16: Demand for Retail Floorspace (m2) by Store Type 2011 for Newcastle LGA.**

Year	Target Rate (\$/m <sup>2</sup> )	2011
<i>Estimated Population</i>		<i>157,169</i>
Supermarkets and Grocery Stores	9,500	67,779
Specialty Food Stores	7,500	29,670
Fast-Food Stores	7,500	14,412
Restaurants, Hotels and Clubs	4,000	34,609
Department Stores	3,500	53,857
Clothing Stores	5,000	23,042
Bulky Goods Stores	3,300	97,215
Other Personal and Household Goods	5,000	64,802
Selected Personal Services	2,800	19,250
<b>Total Retailing</b>	<b>(Av) 5,228</b>	<b>404,635m<sup>2</sup></b>

Source: Hill PDA, ABS Household Expenditure Survey 1998-99 and Marketinfo 2009

## Growth in Household Expenditure and Demand for Retail Floorspace

Based on the BTS forecasts for population growth, by 2031 it is possible to determine the likely increase in demand generated for retail floorspace by households using Hill PDA's Retail Expenditure Model.

The model not only calculates what the cumulative household expenditure will be by 2031, but also what type of store this expenditure might be spent in. This is particularly useful for land use planning as store types such as supermarkets, personal services and speciality foods that are frequented daily/weekly or fortnightly by shoppers need to be locally based, whilst retail types such as bulky goods and department stores (that are frequented less often by shoppers) can be located further away.

**Table 5.17: Growth in Household Demand for Retail Floorspace: Newcastle LGA 2011 – 2031.**

Growth in household demand for retail floorspace – Newcastle – 2011-2031						
Year	Target Rate	2011	2016	2021	2031	Net Change 11-31
Supermarkets and Grocery Stores	9,500	67,779	74,640	81,404	96,185	+ 28,406
Specialty Food Stores	7,500	29,670	32,673	35,634	42,104	+ 12,435
Fast-Food Stores	7,500	14,412	15,870	17,309	20,451	+ 6,040
Restaurants, Hotels and Clubs	4,000	34,609	38,112	41,566	49,114	+ 14,505
Department Stores	3,500	53,857	59,308	64,683	76,428	+ 22,571
Clothing Stores	5,000	23,042	25,374	27,674	32,698	+ 9,657
Bulky Goods Stores	3,300	97,215	107,055	116,758	137,957	+ 40,743
Other Personal and Household Goods	5,000	64,802	71,362	77,829	91,961	+ 27,159
Selected Personal Services	2,800	19,250	21,199	23,120	27,318	+ 8,068
<b>Total Retailing</b>	<b>5,228</b>	<b>404,635</b>	<b>445,593</b>	<b>485,978</b>	<b>574,217</b>	<b>+ 169,582</b>

Sources: ABS Retail Survey 1998-99 (escalated to 2009 dollars), JHD Retail Averages, Hill PDA and various consultancy studies.

Table 5.17 shows that by 2030 Newcastle will experience a growth in demand for 169,582m<sup>2</sup> of retail floorspace or a 42% increase on the level of demand estimated as of 2011. This means that by 2031, based on resident households alone, there will be demand for over 570,000m<sup>2</sup> of retail space.

Close to 37% of the net increase in demand for retail floorspace is forecast to occur in the inner precinct. This increase is anticipated to translate into demand in the inner precinct for an additional 62,253m<sup>2</sup> of retail space or a 42% increase on existing supply.

To 2031 over 30% of all growth in demand for retail floorspace in Newcastle will relate to the central precinct. This will translate into demand for an additional 51,140m<sup>2</sup> of floorspace or a 35% increase on existing supply.

The outer precinct will account for the remaining 33% of retail demand generated across the LGA by 2031. This will translate into demand for an additional 55,315m<sup>2</sup> of floorspace or a 33% increase on existing demand.

### **Additional expenditure**

Whilst the majority of retail demand generated within Newcastle LGA will be generated by households, a proportion of retail expenditure will also be generated by tourism, employees and visitors.

The NELS estimates that:

- Employees entering from other LGAs contribute in the order of \$38M in retail expenditure increasing demand for approximately 5,800m<sup>2</sup> of retail floorspace across Newcastle.
- Tourism within Newcastle, on a per annum basis could account for an additional \$240M of drink and food related expenditure; \$240M of accommodation expenditure and \$73M of shopping expenditure. This corresponds to an increase in demand for approximately 46,600m<sup>2</sup> of retail floorspace.

### Household expenditure gain and escape

In addition to the gain and loss of tourism and employment related expenditure from an area, expenditure generated by households may be lost and gained across LGA boundaries. This exchange of expenditure is generally a result of competing centres drawing household trade to, or from, Newcastle.

The NELS model makes the following assumptions over the study period (to 2031):

- That the majority of food related expenditure will remain within the general locality of households;
- Some trade will be drawn to the Kotara centre from Lake Macquarie and in turn trade will be drawn from Newcastle to Charlestown centre. Owing to the scale and proximity of these centres this trade will generally equal itself out;
- The outer precinct will experience a net loss of household expenditure (approximately 15%) on account of the strength of retail offer in Glendale;
- Newcastle will continue to experience a net gain in employment related expenditure;
- Newcastle will continue to experience a net gain in tourism related expenditure; and
- Newcastle will experience a net gain in household related expenditure on account of the draw of trade from Maitland LGA (8% of household retail expenditure), Cessnock LGA (8%) and Port Stephens LGA (15%).

### Total retail expenditure forecast 2011-2031

Based on the assumptions provided above, the NELS estimates that as of 2011 there was net demand for 415,000m<sup>2</sup> of retail floorspace in Newcastle LGA. By 2031, as a result of population growth and the other factors outlined above, the NELS estimates that there will be demand for 598,000m<sup>2</sup> of retail floorspace. This represents a net increase of 182,300m<sup>2</sup> or a 43% increase on existing demand.

**Table 5.18: Total Retail Expenditure Forecast for Newcastle LGA 2011 - 2031 (\$m2009).**

Total Retail Expenditure Forecast for Newcastle LGA 2011 - 2031					
Expenditure Source	2011	2016	2021	2031	Net Change 11-31
Total Household Expenditure	2,115	2,329	2,541	3,002	+ 887
Tourism Out	-127	-140	-152	-180	-53
Tourism In	219	243	262	304	+ 85
Net Workers	47	49	53	58	+ 11
Household Exp Capture	267.0	312.0	355.0	448.0	+ 181
Household Exp Loss	-89	-99	-110	-132	-44
Total Expenditure \$m	2,433	2,695	2,949	3,499	+ 1,067
Total Floorspace	415,863	460,683	504,034	598,174	+ 182,311

Sources: ABS Retail Survey 1998-99 (escalated to 2009 dollars), JHD Retail Averages, Hill PDA and various consultancy studies

## Meeting demand for commercial and retail floorspace

The NELS estimates that 247,544m<sup>2</sup> of additional floorspace<sup>§</sup> for commercial and retail will be required by 2016 to accommodate forecast demand for commercial and retail floorspace. By 2031 the net increase in demand is forecast to be closer to 594,102m<sup>2</sup> of floorspace.

## Commercial uses

Commercial office uses constitute close to 40% (+183,000m<sup>2</sup>)<sup>\*\*</sup> of the required floorspace. Commercial categories underpinning this growth include;

- Finance and insurance services,
- Rental hiring and real estate services,
- Public administration and safety,
- Professional, scientific and technical services, and
- Administration and support services.

<sup>§</sup> Additional floor space includes vacant floorspace identified in the 2010 Commercial Centres Audit.

<sup>\*\*</sup> Assuming that 20% of demand for floorspace in the Professional, Scientific and Technical Services Category and Administration and Support Services Category is occupied as ancillary floorspace to uses in employment lands, otherwise the figure is +228,600m<sup>2</sup>.

Significant opportunities to address this demand exist in Newcastle City Centre, particularly with the ongoing development of areas such as Hunter Street, Honeysuckle and Cottage Creek (See Figure 5.2). It is estimated that the development potential for the mixed commercial uses in Cottage Creek alone is in the order of 125,000m<sup>2</sup>. Outside of the city centre 27,000m<sup>2</sup> of existing commercial and retail floorspace was vacant (as at 2010).

**Figure 5.2: The Cottage Creek Precinct and Honeysuckle Precinct in the Honeysuckle Project area**



Source: Hunter Development Corporation

If this development potential is taken-up there remains an additional 58,000m<sup>2</sup> of office and commercial floorspace that needs to be provided in other city centre locations and Newcastle's local centres.

Outside the city centre, the Commercial Centres Audit 2010 found that the highest concentration of commercial office floorspace was provided in major local centres such as Broadmeadow (31%), Hamilton (20%), the Junction (21%) and Mayfield (13%). As a general rule it may be expected that a local centre would provide around one third of its floorspace as commercial uses. On this basis, with the exception of Broadmeadow, the provision of commercial uses outside of the city centre appears to be low.

#### **Box 6. Implications for the Strategy**

The NELS suggests that Newcastle's local centres and the range of employment opportunities they provide would be enhanced through the provision of additional commercial office space.



## Special uses (including Education and Training, Health Care and Social Assistance, Arts and Recreation Services)

It is estimated that by 2031, there will be a net increase in demand for over 350,000m<sup>2</sup> of floorspace in the special uses category. Analysis shows that the largest category of growth with respect to floorspace relates to health care and social assistance (228,000m<sup>2</sup>) followed by education and training (111,000m<sup>2</sup>).

These special uses mostly occur in three clusters – the John Hunter Hospital, the University of Newcastle and Newcastle City Centre. Predicted growth in these clusters indicates the following additional special uses floorspace requirements to 2031:

Cluster	Additional floorspace to 2031
John Hunter Hospital	67,000m <sup>2</sup>
University of Newcastle	32,000m <sup>2</sup>
Newcastle City Centre	65,890m <sup>2</sup>
Hunter Institute of Technology	32,465m <sup>2</sup>
Mater Hospital	30,000m <sup>2</sup>
Stockton Centre	30,000m <sup>2</sup>

### Box 7. Implications for the Strategy

As a fully urbanised LGA any future outward growth of centres means competition with another land use, usually residential. The needs of competing land uses should be carefully considered and balanced. There are several ways to do this.

The B4 mixed use zone permits shop top housing<sup>††</sup> which would allow the provision of additional commercial or retail floor space with dwellings above. This zone permits a range of other uses that do not require the provision of housing. Therefore there is a risk that land could be used solely for commercial purposes.

<sup>††</sup> Shop top housing means one or more dwellings located above ground floor retail premises or business premises.

An alternative could be to permit shop top housing in the R3 medium density residential zone. Once again, the range of permitted uses in this zone could mean that the additional floorspace requirements of either land use may not be achieved. It could also introduce land use conflict between uses.

A DCP could provide guidance on these options.

A principle that could be adopted as part of the Strategy is:

- An application to laterally expand business zones into adjoining residential areas must demonstrate the need for the additional commercial space and how residential supply will be affected. Alternatively how residential targets are to be accommodated in the business zone.

## ***Requirements for Centres***

The ‘key physical’ and ‘non physical’ infrastructure and technological requirements for Newcastle’s centres have been identified as:

1. Essential services – the provision of infrastructure such as water and electricity;
2. Access infrastructure – accessibility by path, road and transport and the provision of car parking;
3. Suitable and available sites – the availability of retail and commercial sites of a suitable scale;
4. Communications infrastructure – the provision of high speed internet connections;
5. Workforce availability and suitability.

## ***Centres Hierarchy***

A hierarchy of business and commercial centres is essential to ensure that the majority of residents have good access to goods and services to meet their daily, regular or occasional needs. A hierarchy is also important to ensure that centres remain viable by directing growth to higher order centres. The Newcastle LEP provides a 3-level centre hierarchy; that is Neighbourhood Centre, Local Centre and Commercial Core zone.

At the small scale, B1 Neighbourhood Centre zones provide a range of small-scale retail, business and community services that serve the needs of people who live or work in the surrounding neighbourhood.

B2 Local Centres such as Hamilton, The Junction and Wallsend provide for a greater range of services to a greater number of people and are usually defined by the presence of a large supermarket or other retail anchor.

The B3 Commercial Core zone is applied to several areas of the Newcastle City Centre. The role of the commercial core is to provide a wide range of retail, business, office, entertainment, community and other suitable land uses that serve the needs of the local and regional community in a centralised location.

There is no standard way to designate a particular centre by an accepted empirical means such as floor space threshold, number of shops or scale and diversity of services available. However, the NLEP 2012 provides objectives for each of the zones that provide direction. The objectives are based on:

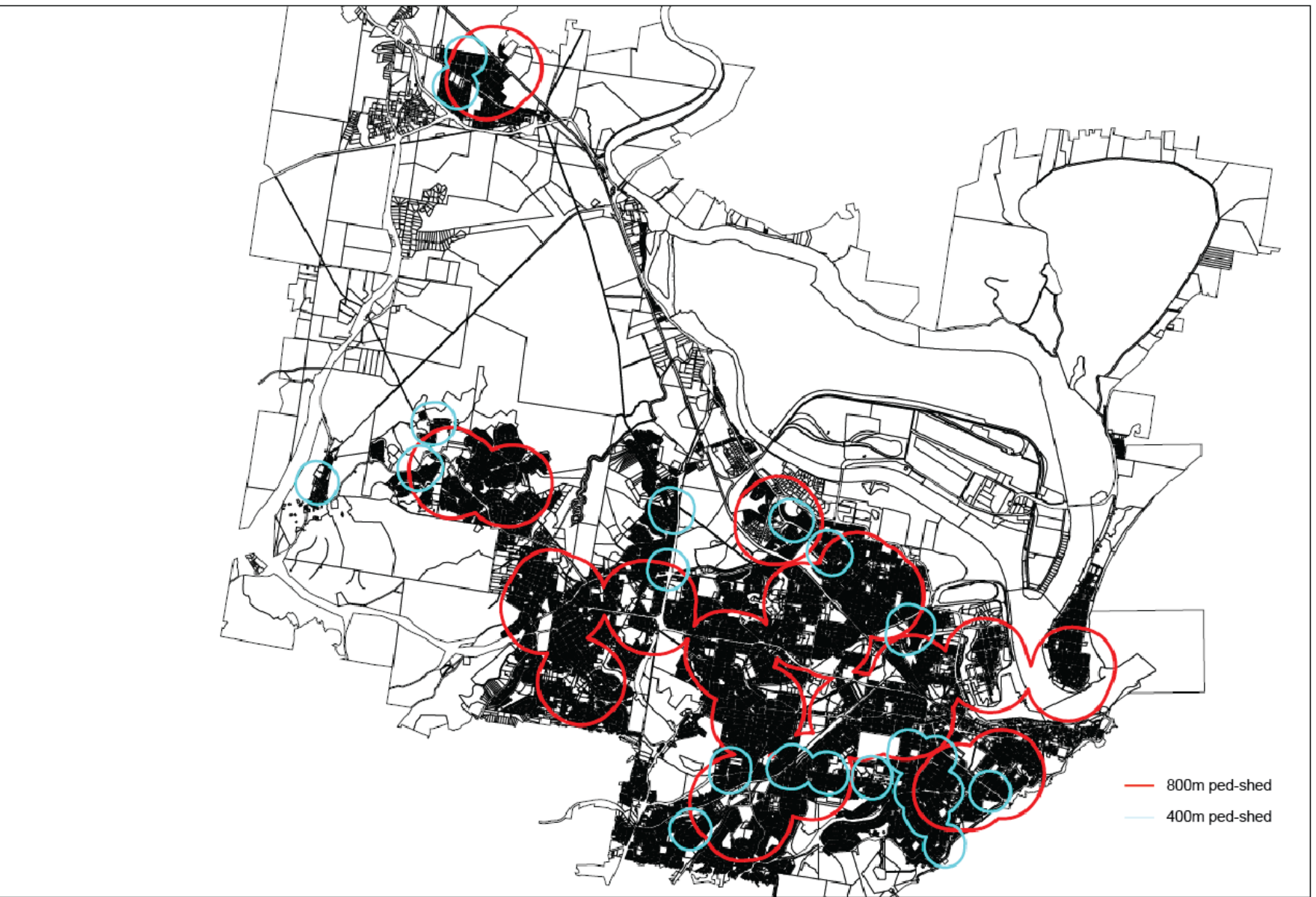
1. The retail, business, entertainment and community use function of the centre
2. The centre's relationship to other centres in the hierarchy
3. The centre's residential function and employment function (B2, B3 only)
4. The quality of public transport (B2, B3 only) and
5. Views (B3 only).

Table 5.20 (at the end of this section) provides an assessment of each centre against the LEP objectives for the business zones.

Pedestrian catchments or '*ped-sheds*' can be used to help define a centre hierarchy. It can also be used to identify areas that lack access to a centre. A neighbourhood centre should support a ped-shed of at least 400m radius which approximately equates to a 5-minute walk. A local centre that offers a larger number of opportunities should support a ped-shed of around 800m (10 minute walk).

The residents of Newcastle are generally well serviced by its neighbourhood and district centres. However, Figure 5.3 illustrates several areas that are outside ped-sheds for either a neighbourhood centre or a local centre. These are Waratah West, the southern end of Elmore Vale, north Stockton, Kotara South and Shortland.

Figure 5.3: Pedsheds and centres



**Box 8. Implications for the Strategy**

New neighbourhood centres may be considered in Waratah West, the southern end of Elmore Vale, north Stockton, Kotara South and Shortland where located within 400m of the un-serviced residential areas in these locations.

**LPS Centres Hierarchy**

It is proposed to apply the following hierarchy to Newcastle's centres:

- B1 Neighbourhood Centres
- B2 Local Centres (Minor)
- B2 Local Centres (Major)
- B3 Commercial Core

The following descriptions of the zones were provided by the Department of Planning and Infrastructure to assist with the new LEPs.

**B1 Neighbourhood Centres**

The zone is for neighbourhood centres that include small-scale convenience retail premises ('neighbourhood shops'), 'business premises,' 'medical centres' and community uses that serve the day-to-day needs of residents in easy walking distance. 'Shop top housing' is permitted in the zone, and other mixed use development may be considered appropriate. This zone should not be used for single 'neighbourhood shops,' as these can generally be permitted within the residential zones. In areas where there is increasing housing density and demand for local retail and business services, a B2 or B4 zone should be considered instead of a B1 zone to cater for expansion.

**B2 Local Centres**

This zone is generally intended for centres that provide a range of commercial, civic, cultural and residential uses that typically service a wider catchment than a neighbourhood centre. This zone provides for residential accommodation in the form of 'shop top housing,' and other uses such as 'educational establishments,' 'entertainment facilities,' 'function centres,' 'information and education facilities,' 'office premises,' and 'tourist and visitor accommodation'. Such a mix of uses will increase walking, cycling and public transport options for more people by making more activities available in one location. It is expected that this will be the most appropriate zone for most local and town centres across NSW.

The LPS is making a further distinction in the B2 zone for “major” local centres and “minor” local centres. Major local centres have a higher FSR and building height and refer to the nominated district centres in the Newcastle Urban Strategy of: Broadmeadow, Hamilton, Jesmond, Kotara, Mayfield, The Junction, Wallsend and Waratah(Kmart).

Minor local centres refer to centres that serve a larger area than neighbourhood centres do but are smaller than the district centres. Minor local centres include: Adamstown, Beresfield, Carrington, Elmore Vale, Fletcher, Georgetown, Lambton, Maryland, Stockton and Warabrook.

### B3 Commercial Core

This zone is for major centres that provide a wide range of uses including large-scale retail, office, businesses, entertainment and community uses directly linked to major transport routes. These centres are intended to meet the needs of a wider region, as well as, those of the local community. The zone should be applied in major metropolitan or regional centres only where the focus is on the provision of employment and services. In some areas inclusion of higher density residential accommodation that would activate the area outside of working hours, may be appropriate depending on the scale, role and location of the commercial core.

Land which is zoned Commercial Core might be surrounded by other business zones such as Mixed Use (zone B4) or Business Development (zone B5) where a variety of supporting uses provide a transition from the major centre to residential areas.

The B3 zone is only used in the Newcastle City Centre.

The LPS will provide guidance to the hierarchy of land use zones in the local environmental plan.

**Table 5.19: Relationship between LPS centres hierarchy and LEP land use zones.**

LPS Hierarchy	LEP Zone	Floor Space Ratios	Heights of Building
Neighbourhood Centre	B1 Neighbourhood Centre	Low	Low
Local Centre (Minor)	B2 Local Centre	Low-Moderate	Low-Moderate
Local Centre (Major)	B2 Local Centre	Moderate-High	Moderate-High
Commercial Core	B3 Commercial Core	High	High

To help determine hierarchy an analysis of each centre against the LEP business zone objectives has been undertaken (refer to Table 5.20 at the end of this section). These objectives refer to centre qualities under the following categories:

- Retail, business, entertainment, community uses
- Centres hierarchy
- Residential
- Employment
- Public transport
- Views.

### ***Accommodating growth in centres***

Table 5.21 (at the end of this section) summarises the NELS recommendations for accommodating growth in Newcastle's centres. Additional floor space is directed to the city centre and to major local centres. This is generally consistent with the centres hierarchy established by the LHRS and the Newcastle Urban Strategy.

Growth in the order of that identified in the NELS and Table 5.21 can be accommodated within the existing zone footprint and facilitated by appropriate height and FSR controls.

### **Waratah Kmart – Station Street – Georgetown**

The NELS suggests that an additional 10,100m<sup>2</sup> of floorspace is required to 2031 around Waratah. Within 500m of the Waratah – Kmart site there are two additional B2 Local Centre zones – Georgetown and Waratah – Station Street. Together these three centres are 112,345m<sup>2</sup> in area.

In order to accommodate predicted growth demands and to achieve the objectives for centres it is important that these three areas be considered together. It may be preferable to have a more consolidated B2 Local Centre in the area that is the focus of future additional floorspace.



**Box 9. Implications for the Strategy**

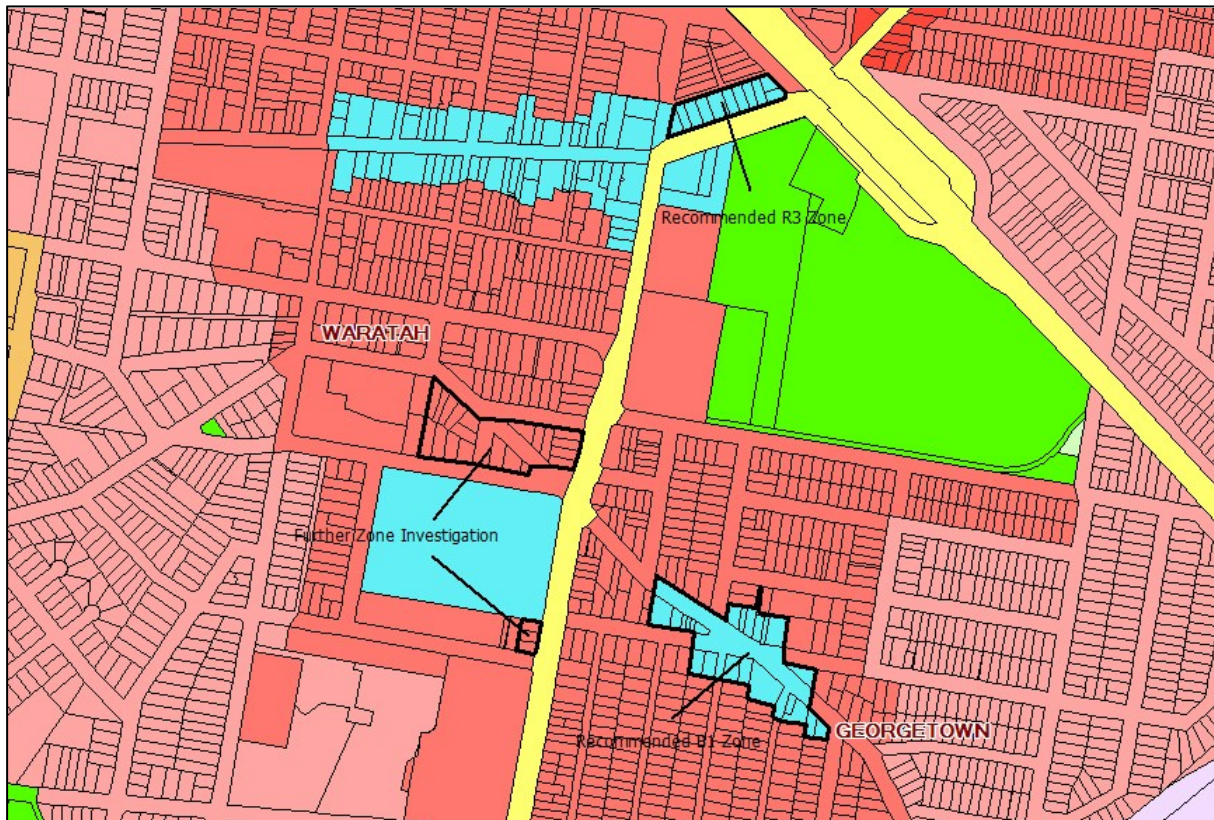
Consider rezoning land (currently zoned B2 Local Centre) along Georgetown Road to B1 Neighbourhood Centre to reflect the revised centres hierarchy. See Figure 5.4.

**Box 10. Implications for the Strategy**

Consider rezoning land (currently B2 Local Centre) between Turton Road and Platt Street to R3 Medium Density Residential given its proximity to Waratah Station and likely future use (see Figure 5.4).

Investigate the zoning of land (currently R3 Medium Density Residential) in proximity to Waratah K-mart to accommodate future growth (see Figure 5.4). Consider B2 Local Centre zone.

Figure 5.4: Possible consideration for future land use in Waratah.



## Wallsend

The NELS predicts significant growth for Wallsend. It estimates that an additional 14,600m<sup>2</sup> of floorspace will be required to 2031 (9,000m<sup>2</sup> Retail, 5000m<sup>2</sup> Commercial Office, 600m<sup>2</sup> Special Uses). The existing Wallsend town centre is significantly constrained by flooding.

### Box 11. Implications for the Strategy

A key challenge of the strategy will be to accommodate the predicted growth in Wallsend in a manner that does not expose the community to greater flood risk.

Flooding and other hazards is discussed in the Hazards chapter.

## Darby Street Local Centre

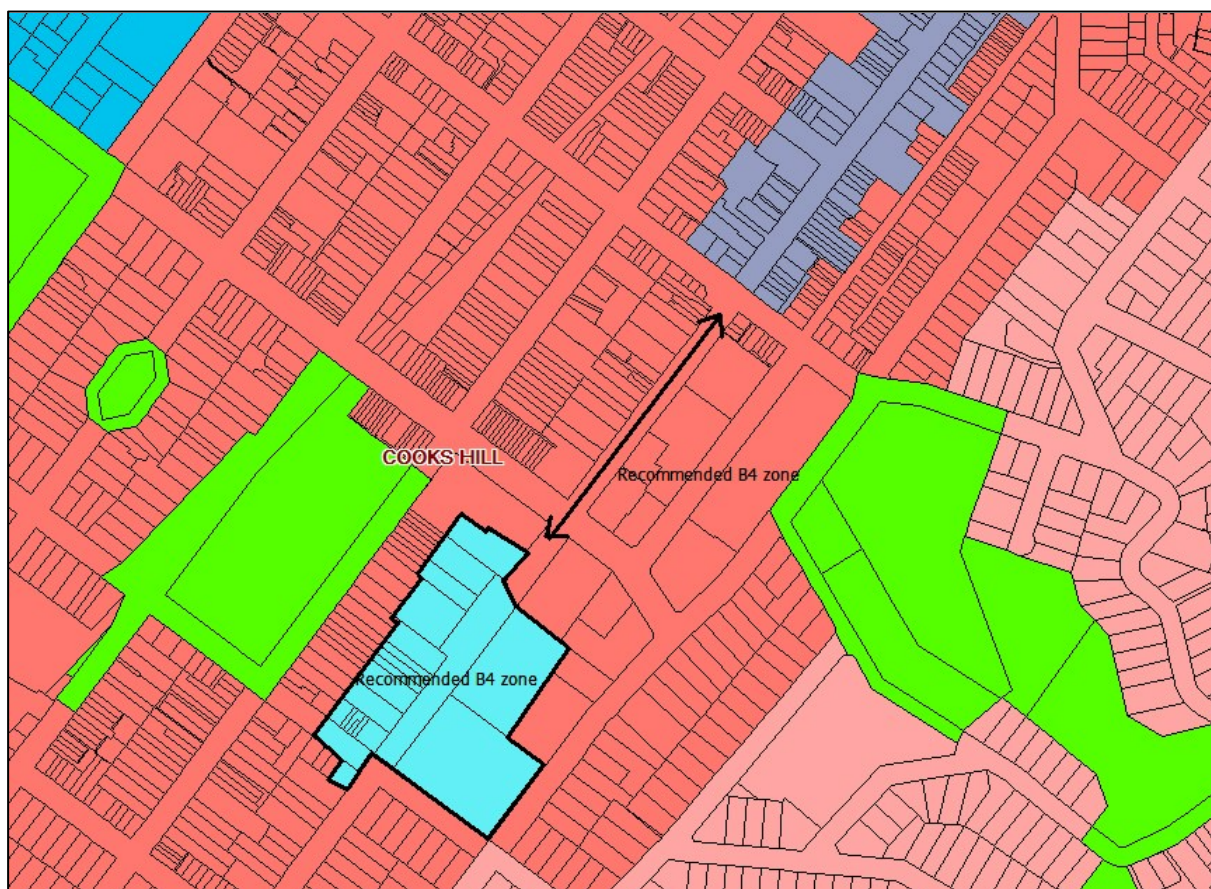
Darby Street from Hunter Street to Bull Street is zoned B4 Mixed Use. Between Parry and Bull Streets, Darby Street is zoned R3 Medium Density Residential. Between Parry to Tooke Street is 3ha area of B2 Local Centre. The uses in the B2 centre are commercial in nature but as a centre it does not meet the objectives of the B2 zone. The area of R3 Medium

Density Residential along Darby Street, although predominately residential, contains a mix of uses.

#### Box 12. Implications for the Strategy

Consider rezoning land (currently R3 Medium Density Residential) between Bull and Tooke Streets in Cooks Hill to B4 Mixed Use (see Figure 5.5).

Figure 5.5: Potential mixed uses zones in Darby Street





## New Lambton and John Hunter Hospital

New Lambton is currently zoned B2 Local Centre. However, the predicted growth of special uses in the John Hunter Hospital and the Hunter Medical Research Institute precinct means that New Lambton is likely to provide a greater role in meeting the needs of workers and visitors to the medical precinct including visitor accommodation.

### Box 13. Implications for the Strategy

Investigate the role of New Lambton in the growth of the John Hunter Hospital medical precinct. This could mean designating New Lambton as a Local Centre (Major) and investigating adequate surrounding densities and diverse housing forms to support growth.

## Tighes Hill

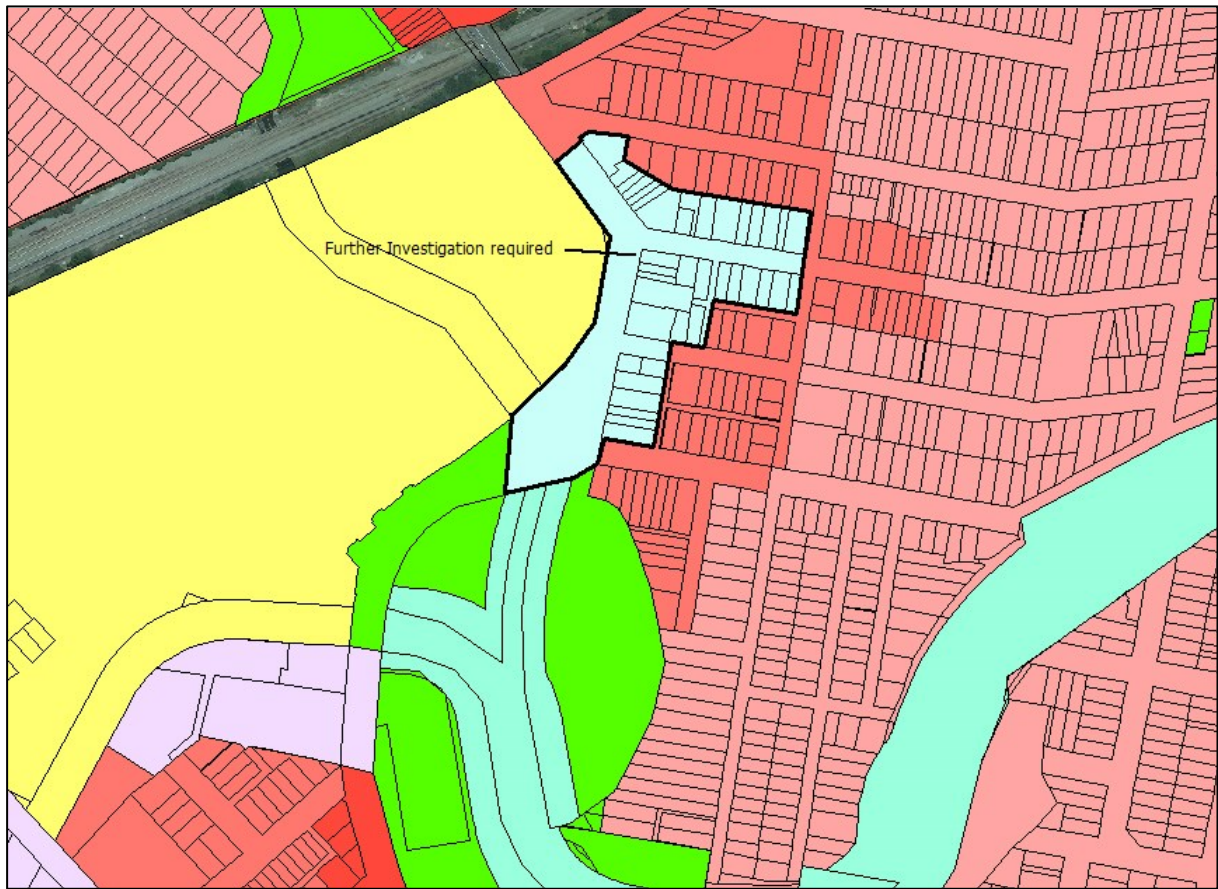
Tighes Hill commercial area is currently zoned B1 Neighbourhood Centre (see Figure 5.6). It is within the Islington-Mayfield renewal corridor and the present uses do not specifically meet the daily needs of the surrounding neighbourhood. It is close to the Tighes Hill TAFE campus and enjoys some aesthetic quality as it overlooks the TAFE playing fields. The centre is not exceptionally different to the rest of the renewal corridor and the current LEP controls do not offer any land use or built form advantage.

### Box 14. Implications for the Strategy

Review the zone and landuse controls within this centre to determine whether a greater scale of shop top housing is appropriate. Tighes Hill is the southern gateway into the renewal corridor. Ways to encourage a good built form and an activated Maitland Road streetscape should be considered in any review.

Consider the appropriate level in the centres hierarchy for the Tighes Hill commercial centre.

Figure 5.6: Tighes Hill commercial centre



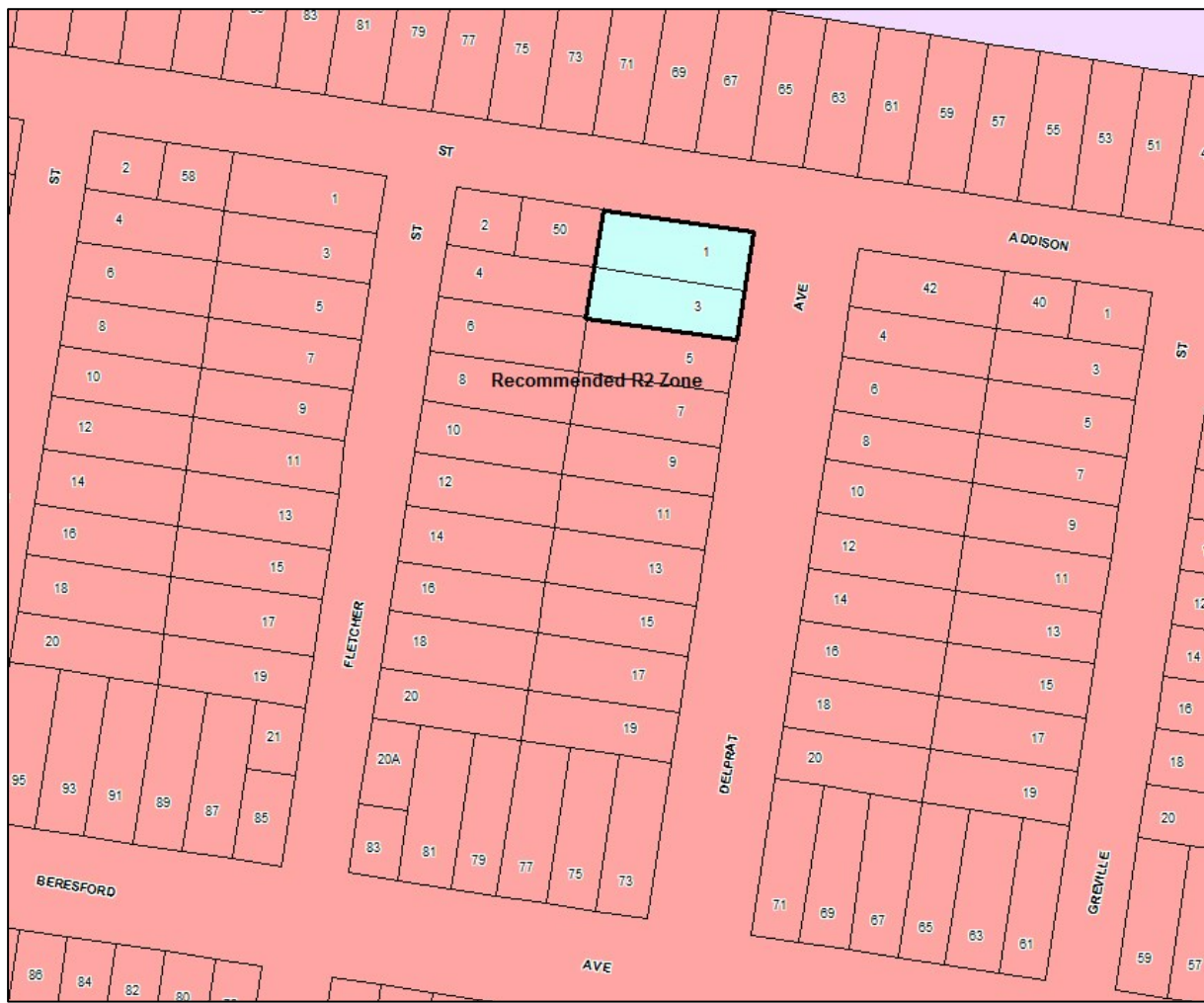
### Proposed zoning investigations

The Local Planning Strategy is an opportunity to “tidy up” a number of sites/areas that are zoned for business purposes that today may be more suitably zoned for residential or other purposes.

Beresfield (1 and 3 Delprat Avenue)

Numbers 1 and 3 Delprat Avenue (see Figure 5.7) are currently zoned B1 Neighbourhood Centre. The site is used for residential purposes. The area is within 800m of the B2 Local Centre and therefore has good access to services and transport. The zoning of this site should be investigated for residential use.

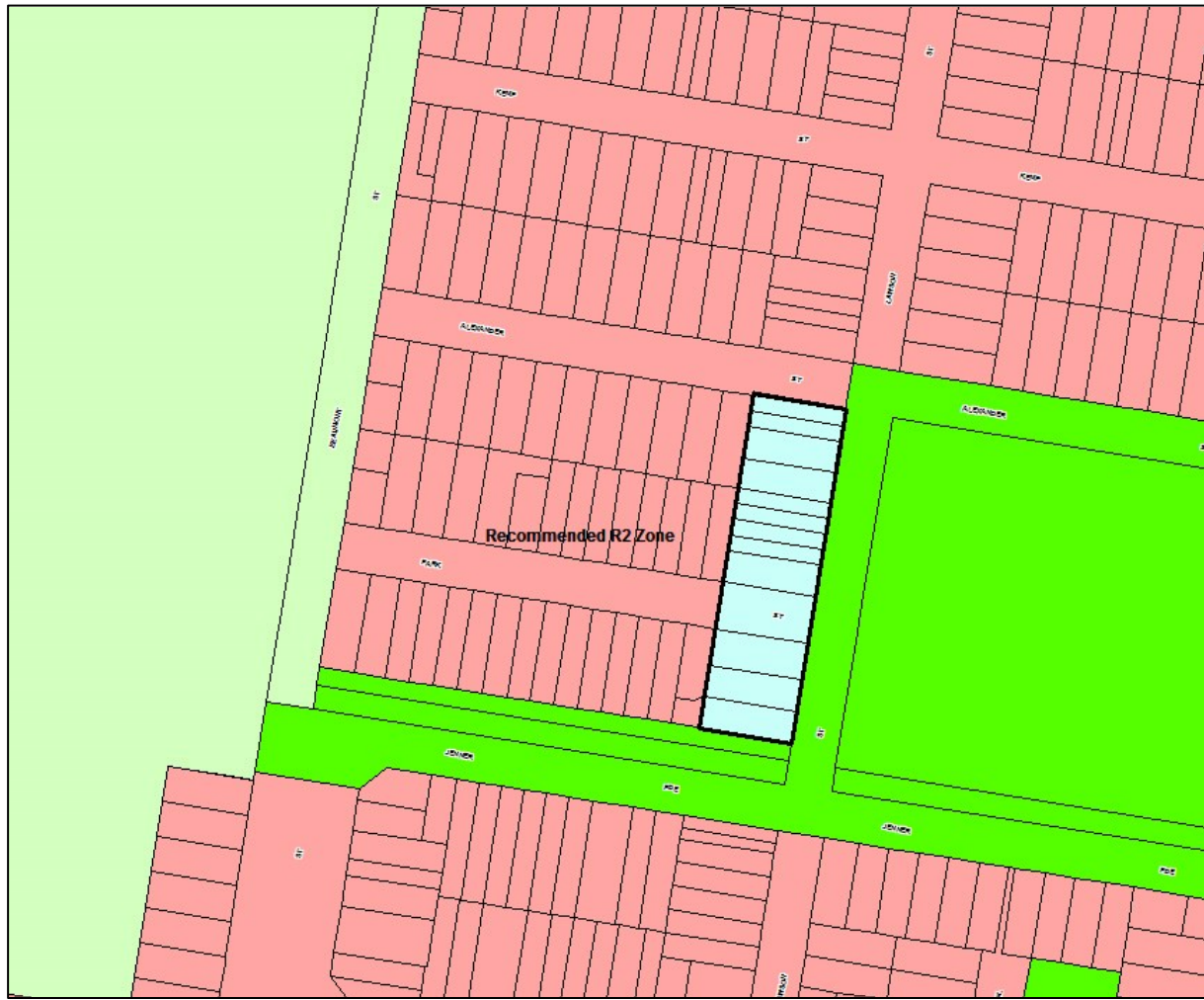
**Figure 5.7: Numbers 1 and 3 Delprat Avenue, Beresfield**



### Hamilton South (180 – 202 Lawson Street)

This B1 Neighbourhood Centre zone contains all housing apart from 186 Lawson Street that has a commercial use (see Figure 5.8). The zoning of this strip should be investigated for residential use, noting that neighbourhood shops are permissible in residential zones.

**Figure 5.8: Lawson Street, Hamilton South**



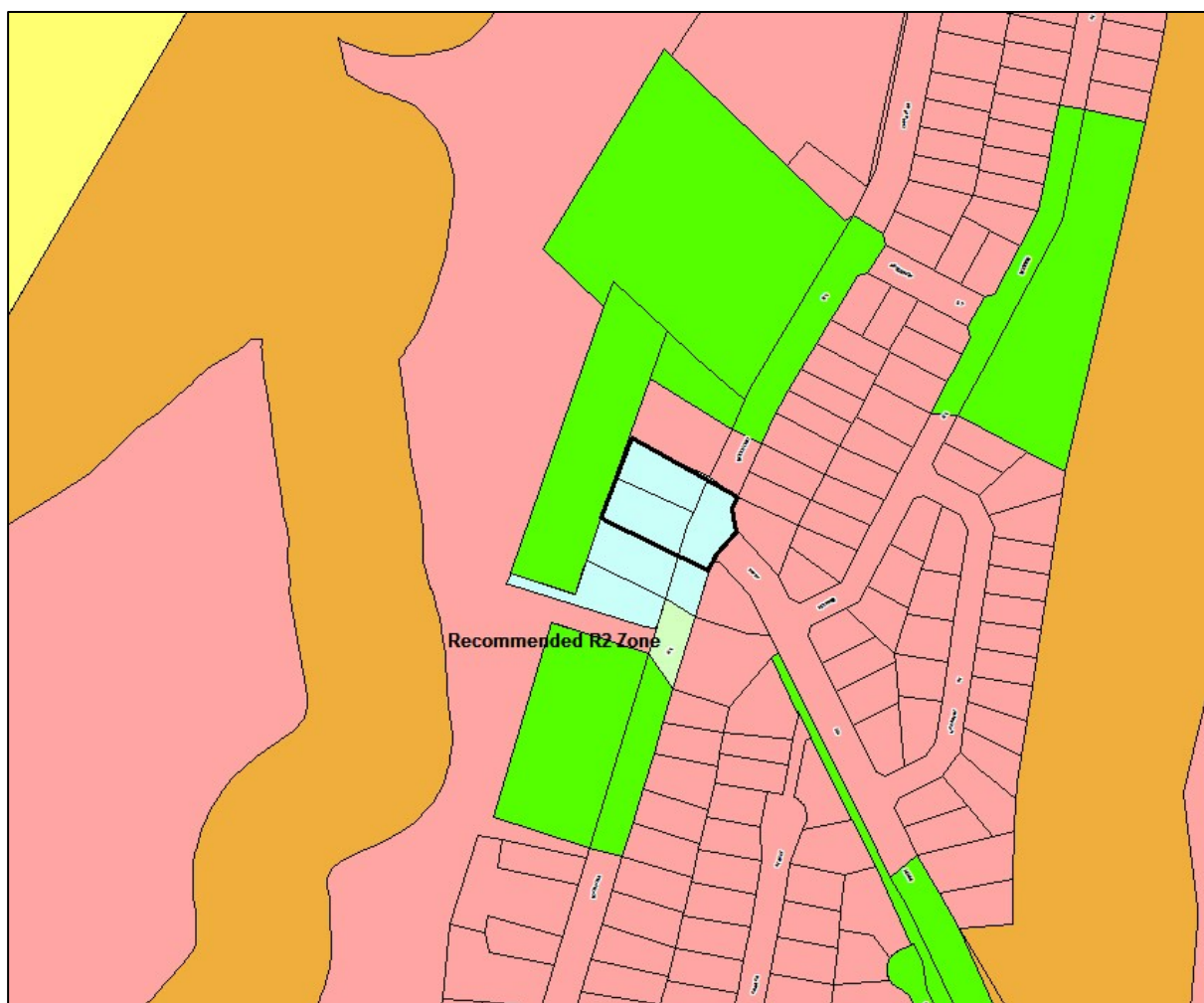


## Minmi

The B1 Neighbourhood Centre zone on Woodford Street in Minmi spans four lots (see Figure 5.9). Two of these lots (nos. 90 and 92) are residential. No 94 contains the Minmi General Store and the adjoining lot to the south is vacant. The recent rezoning of the western corridor (in part) includes an additional Neighbourhood Centre and a Local Centre in the area.

The strategy should investigate rezoning 90-92 Woodford Street to R2 Low Density Residential to reflect the current and likely future use on these sites.

**Figure 5.9: Nos. 90-92 Woodford Street, Minmi**



**Box 15. Implications for the Strategy**

The strategy is an opportunity to ‘tidy up’ some of the historical land use zones that no longer reflect the existing or likely future use and are no longer required for commercial purposes. This chapter has identified these for further investigation.

**Kotara**

Westfield Kotara is Newcastle’s only stand-alone shopping centre. The NELS acknowledges Kotara’s subregional role. The NELS supports growth and diversification of Kotara subject to the provision of adequate public transport services and improvements to the road network without adverse impact to surrounding centres or existing higher order centres (i.e. Newcastle City Centre).

**Box 16. Implications for the Strategy**

Investigate options to encourage greater public transport usage and pedestrian links in and around Kotara Westfield.

**Renewal corridors**

The LHRS identifies three renewal corridors in Newcastle: Hamilton-Islington (Tudor Street), Mayfield – Islington (Maitland Road) and Broadmeadow - Adamstown (Brunker Road). Renewal corridors are areas located around high frequency transport networks and close to centres. These corridors have been identified as having opportunities for economic and/or housing renewal and intensification.

The corridors provide important links between centres and support centres rather than being centres in themselves.

**Box 17. Implications for the Strategy**

The strategy should reinforce the role of the renewal corridors.

**Table 5.20: Assessment of each centre against the Local Environmental Plan objectives for business zone.**

	LEP Objectives	Newcastle East	Newcastle (Civic)	Newcastle West	Wallsend	Hamilton	The Junction	Mayfield	Jesmond	Adamstown	Waratah Kmart	Kotara	Cooks Hill	Beresfield / Tarro	Minimi (Blue Gum Hills)	Stockton	Broadmeadow	New Lambton	Lambton	Islington	Elmore Vale	Carrington	Waratah (Station Street)	Maryland	Merewether	Merewether (City Road)	Kotara East (Orchardtown)	Shortland	Mayfield West	Merewether (Glebe)	Tighes Hill	Warabrook	Fletcher (Britannia Bld)	Fletcher (Maryland Drv)	Cooks Hill (Darby Street)	Kotara (Joslin Street)	Merewether (Beach)	Hamilton South	Bar Beach	Hamilton East	Birmingham Gardens		
Retail, business, entertainment, community uses	To provide a wide range of retail, business, office, entertainment, community and other suitable land uses that serve the needs of the local and wider community.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓																						✓									
	To provide a range of retail, business, entertainment and community uses that serve the needs of people who live in, work in and visit the local area.												✓	✓	✓	✓	✓	✓	✓	✓	✓			✓							✓												
	To provide a range of small-scale retail, business and community uses that serve the needs of people who live or work in the surrounding neighbourhood.																					✓	✓		✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	
Centres Hierarchy	To strengthen the role of the Newcastle City Centre as the regional business, retail and cultural centre of the Hunter region.	✓	✓	✓																																							
	To maintain the hierarchy of urban centres throughout the City of Newcastle and not prejudice the viability of the Newcastle City Centre.				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓								✓		✓									
	To maintain the hierarchy of urban centres throughout the City of Newcastle and not prejudice the viability of centres within Zone B2 Local Centre or Zone B3 Commercial Core.																					✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓	-	-	-	-		

	LEP Objectives	Newcastle East	Newcastle (Civic)	Newcastle West	Wallsend	Hamilton	The Junction	Mayfield	Jesmond	Adamstown	Waratah Kmart	Kotara	Cooks Hill	Beresfield / Tarro	Minimi (Blue Gum Hills)	Stockton	Broadmeadow	New Lambton	Lambton	Islington	Elmore Vale	Carrington	Waratah (Station Street)	Maryland	Merewether	Merewether (City Road)	Kotara East (Orchardtown)	Shortland	Mayfield West	Merewether (Glebe)	Tighes Hill	Warabrook	Fletcher (Britannia Bld)	Fletcher (Maryland Drv)	Cooks Hill (Darby Street)	Kotara (Joslin Street)	Merewether (Beach)	Hamilton South	Bar Beach	Hamilton East	Birmingham Gardens		
Residential	To provide for residential development that contributes to the vitality of the Newcastle City Centre, where provided within a mixed use development.	✓					✓	✓		✓			✓								✓																						
	To provide for residential development that maintains active retail frontages in order to contribute to a safe, attractive, friendly, accessible and efficient pedestrian environment.				✓	✓			✓					✓	-	✓	✓	✓	✓			✓							✓					✓									
Employment	To encourage employment opportunities in accessible locations.				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Public Transport	To maximise public transport patronage and encourage walking and cycling.				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Views	To provide for the retention and creation of view corridors.																																										

Table 5.21: Accommodating growth of centres.



Denotes zone investigation

Centre	Existing Commercial / retail Floorspace	Additional Commercial / retail Floorspace	Employment Target	Desired Future Character	Proposed LPS Designation	Existing zone	Future zone
Newcastle City Centre	248,000m <sup>2</sup> Office 112,000m <sup>2</sup> Retail	53,000m <sup>2</sup> Office 28,000m <sup>2</sup> Retail		Regional commercial and retail hub Regional administrative centre Major shopping centre Cultural and entertainment centre Focus of business services Tourist and accommodation centre			
Honeysuckle and Cottage Creek	104,100m <sup>2</sup> Office/Retail	125,000m <sup>2</sup> Office/Retail	10,000 jobs		Commercial Core	B4 Mixed Use B3 Commercial Core	B4 Mixed Use B3 Commercial Core
Adamstown	9595m <sup>2</sup>	5,000m <sup>2</sup> Retail 2,500m <sup>2</sup> Commercial office <u>6,00m<sup>2</sup> Special Uses</u> <b>8,300m<sup>2</sup> TOTAL</b>	179 jobs	As part of the urban renewal corridor Adamstown has the potential to grow to a Town Centre serving surrounding residential areas.	Local Centre (Major)	B1 Neighbourhood Centre B2 Local Centre B4 Mixed Use	B1 Neighbourhood Centre B2 Local Centre B4 Mixed Use  Potential to consider some land within or adjacent to the Adamstown Centre to be zoned B5 subject to a demonstration that residential targets for Adamstown will be achieved.

Centre	Existing Commercial / retail Floorspace	Additional Commercial / retail Floorspace	Employment Target	Desired Future Character	Proposed LPS Designation	Existing zone	Future zone
Bar Beach	-	-	-		Neighbourhood Centre	B1 Neighbourhood Centre	B1 Neighbourhood Centre
Beresfield/Tarro	41,220m <sup>2</sup>		-	To provide a range of retail, business, entertainment and community uses that serve the needs of people who live in, work in and visit the local area.	Local Centre (Major)	B2 Local Centre	B2 Local Centre
Beresfield (Delprat Street)	NIL	-	-	Low density residential.	Low density residential	B1 Neighbourhood Centre	Potential for R2 Low Density Residential
Beresfield (Lenox Street)	NIL				Neighbourhood Centre	B1 Neighbourhood Centre	B1 Neighbourhood Centre
Birmingham Gardens				Neighbourhood Centre	Neighbourhood Centre	B1 Neighbourhood Centre	B1 Neighbourhood Centre
Broadmeadow	22,738m <sup>2</sup>	-	-	To provide a range of retail, business, entertainment and community uses that serve the needs of people who live in, work in and visit the local area.	Local Centre (Major)	B2 Local Centre B4 Mixed Use	B2 Local Centre B4 Mixed Use  Potential to consider some land within or adjacent to the Broadmeadow Centre to be zoned B5 subject to demonstration that residential targets will be achieved.
Carrington	-	-	-	To provide a range of small-scale retail, business and community uses that serve the needs of people who live or work in the surrounding neighbourhood.	Local Centre (Minor)	B2 Local centre	B2 Local centre.

Centre	Existing Commercial / retail Floorspace	Additional Commercial / retail Floorspace	Employment Target	Desired Future Character	Proposed LPS Designation	Existing zone	Future zone
Cooks Hill				Entertainment and residential centre providing lively restaurant district to local residents and wider LGA residents.	-	B2 Local Centre B4 Mixed Use	Potential for B4 Mixed Use
Elmore Vale	3878m <sup>2</sup>			A local centre which provides a range of convenient retail and commercial services to the local community.	Local Centre (Minor)	B2 Local Centre	B2 Local Centre
Fletcher (Maryland Drive)	-	-	-	A local centre that provides a range of retail, business and community uses which serve the retail convenience needs of the local community and minimises the need to travel.	Local Centre (Minor)	B2 Local Centre	B2 Local Centre
Fletcher (Kurraka Drive / Tibin Drive)	-	-	-	-	Neighbourhood Centre	B1 Neighbourhood Centre	B1 Neighbourhood Centre
Fletcher (Britannia Boulevard)	-	-	-	-	Neighbourhood Centre	B1 Neighbourhood Centre	B1 Neighbourhood Centre
Georgetown	-	-	-	To provide a range of small-scale retail, business and community uses that serve the needs of people who live or work in the surrounding neighbourhood.	Neighbourhood Centre	B2 Local Centre	Potential for B1 Neighbourhood Centre
Hamilton	38,552m <sup>2</sup>	8000m <sup>2</sup> Retail 5,000m <sup>2</sup> Commercial Office <u>600m<sup>2</sup> Special uses</u> <b>13,600m<sup>2</sup> TOTAL</b>	308 jobs	A town centre providing goods and services to the local residential and employment population.	Local Centre (Major)	B2 Local Centre B4 Mixed Use	B2 Local Centre B4 Mixed Use



Centre	Existing Commercial / retail Floorspace	Additional Commercial / retail Floorspace	Employment Target	Desired Future Character	Proposed LPS Designation	Existing zone	Future zone
Hamilton South	-	-	-	-	N/a	B1 Neighbourhood Centre	Potential for Residential zoning
Islington	-	-	-	A vibrant local centre providing a range of uses in a transport orienting location.	Local Centre (Major)	B2 Local Centre B4 Mixed Use	B2 Local Centre B4 Mixed Use
Jesmond	25,089m <sup>2</sup>	7,000m <sup>2</sup> Retail; 2,500m <sup>2</sup> Office <u>600m<sup>2</sup> Special Uses</u> <b>+10,100m<sup>2</sup> TOTAL</b>	216	Enlarged town centre providing a mix of functions with improved services for, and pedestrian connectivity to, University of Newcastle.	Local Centre (Major)	B2 Local Centre	B2 Local Centre
Kotara	72,496m <sup>2</sup>	12,000m <sup>2</sup> Retail 5,000m <sup>2</sup> Office <u>5,000m<sup>2</sup> Special Uses</u> <b>+22,000m<sup>2</sup> TOTAL</b>	1,400	Kotara should provide a greater diversity of uses including office space, small government offices, facilities and entertainment. The centres growth should only be encouraged subject to providing of adequate public transport services and improvements to the road network without adverse impact to surrounding centres or existing higher order centres i.e. City Centre.	Local Centre (Major)	B2 Local Centre B5 Business Development	B2 Local Centre B5 Business Development
Kotara (Joslin Street)					Neighbourhood Centre	B1 Neighbourhood Centre	B1 Neighbourhood Centre
Lambton	-	-	-	A local centre that provides a range of retail, business and community uses which serve	Local Centre (Minor)	B2 Local Centre	B2 Local Centre

Centre	Existing Commercial / retail Floorspace	Additional Commercial / retail Floorspace	Employment Target	Desired Future Character	Proposed LPS Designation	Existing zone	Future zone
				the retail convenience needs of the local community and minimises the need to travel.			
Maryland				A local centre that provides a range of retail, business and community uses which serve the retail convenience needs of the local community and minimises the need to travel.	Local Centre (Minor)	B2 Local Centre	B2 Local Centre
Mayfield	36,885m <sup>2</sup>	7,000m <sup>2</sup> Retail; 2,500m <sup>2</sup> Office <u>600m<sup>2</sup> Special Uses</u> <b>+10,100m<sup>2</sup> TOTAL</b>	216	A Town Centre with strong retail attraction combining traditional retail with modern outlets.	Local Centre (Major)	B2 Local Centre B4 Mixed Use	B2 Local Centre B4 Mixed Use
Merewether (Beach)	-	-	-		Neighbourhood Centre	B1 Neighbourhood Centre	B1 Neighbourhood Centre
Merewether (City Road)	-	-	-		Neighbourhood Centre	B1 Neighbourhood Centre	B1 Neighbourhood Centre
Merewether (Glebe Road)	-	-	-		Neighbourhood Centre	B1 Neighbourhood Centre	B1 Neighbourhood Centre
Merewether (Llewellyn Street)	-	-	-		Neighbourhood Centre	B1 Neighbourhood Centre	B1 Neighbourhood Centre
Minmi (Woodford Street)				A reduced commercial footprint will better reflect what exists on the ground.	Neighbourhood Centre and residential	B1 Neighbourhood Centre	Potential for B1 Neighbourhood Centre (reduced footprint) and R2 Low density residential.
Minimi (Minmi Road)				(New centre)		B1 Neighbourhood Centre	Bi Neighbourhood Centre
Minimi (Blue Gum Hills)				(New centre)		B2 Local Centre	B2 Local Centre
New Lambton	-	-	-	A local centre providing a	Local Centre	B2 Local Centre	B2 Local Centre

Centre	Existing Commercial / retail Floorspace	Additional Commercial / retail Floorspace	Employment Target	Desired Future Character	Proposed LPS Designation	Existing zone	Future zone
				range of retail, business and commercial services to support the needs of the local residents in addition to the workers and visitors to the John Hunter Hospital. A higher order role for New Lambton may be justified to support growth of the JHH medical precinct.	(minor)		(major) adjustments to floor space ratio and building height
New Lambton (Orchardtown Road)					Neighbourhood Centre	B1 Neighbourhood Centre	B1 Neighbourhood Centre
Shortland						B1 Neighbourhood Centre	B1 Neighbourhood Centre
Stockton	-	-	-	A local centre that provides a range of retail, business and community uses which serve the retail convenience needs of the local community and minimises the need to travel.	Local Centre (Minor)	B2 Local Centre	B2 Local Centre
Tighes Hill						B1 Neighbourhood Centre	Potential for B2 or B4 Mixed Use (with active street LEP clause)
The Junction	19,748m <sup>2</sup>	7,000m <sup>2</sup> Retail; 2,500m <sup>2</sup> Office <u>600m<sup>2</sup> Special Uses</u> <b>+10,100m<sup>2</sup> TOTAL</b>	260 jobs	Town Centre with office uses that play a complimentary role to City Centre functions.	Local Centre (Major)	B2 Local Centre	B2 Local Centre
Wallsend	23,551m <sup>2</sup>	9,000m <sup>2</sup> Retail 5000m <sup>2</sup> Commercial Office <u>600m<sup>2</sup> Special Uses</u> <b>14,600m<sup>2</sup> TOTAL</b>	326 jobs	A thriving town centre that serve the Wallsend District and Blue Gum Hills Corridor.	Local Centre (Major)	B2 Local Centre	B2 Local Centre

Centre	Existing Commercial / retail Floorspace	Additional Commercial / retail Floorspace	Employment Target	Desired Future Character	Proposed LPS Designation	Existing zone	Future zone
Waratah (Kmart)	13,845m <sup>2</sup>	7,000m <sup>2</sup> Retail 2,500m <sup>2</sup> Office <u>600m<sup>2</sup> Special Uses</u> <b>+10,100m<sup>2</sup> TOTAL</b>	216 jobs	A town centre integrates with the Station Street commercial zone and the Waratah Station and services the needs of the broader residential and working population.	Local Centre (Major)	B2 Local Centre	B2 Local Centre
Waratah (Station Street)						B2 Local Centre	B2 Local Centre
Warabrook	-	-	-	A local centre that provides a range of retail, business and community uses which serve the retail convenience needs of the local community and minimises the need to travel.	Local Centre	B2 Local Centre	B2 Local Centre

## Other Business Zones

There are two, non-hierarchical business zones used in the Newcastle LEP: B4 Mixed Use and B5 Business Development.

### B4 Mixed Use

The objectives of the B4 Mixed Use zone are:

- To provide a mixture of compatible land uses.
- To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling.
- To support nearby or adjacent commercial centres without adversely impacting on the viability of those centres.

#### Box 18. Implications for the Strategy

The Strategy should provide guidance for the application of the mixed use zone.

### B5 Business Development

The objectives of the B5 Business Development zone are:

- To enable a mix of business and warehouse uses, and bulky goods premises that require a large floor area, in locations that are close to, and that support the viability of, centres.
- To accommodate a wide range of employment generating uses and associated support facilities including light industrial, transport and storage activities.

## Land uses

The centres' zonings: B1, B2, B3, B4 and B5 permit a generous range of land uses. A list of permitted and prohibited uses is available at [www.legislation.nsw.gov.au](http://www.legislation.nsw.gov.au). The following table (Table 5.22) is a list of the centre zones and ONLY those land uses that differ between each zone. The purpose of the table is to interrogate those differences to ensure that they remain valid particularly in terms of the centres hierarchy. The uses highlighted are considered to warrant further investigation.

Table 5.22: Centres Land Uses.

	B1 Neighbourhood Centre	B2 Local Centre	B3 Commercial Core	B4 Mixed Use	B5 Business Development
Residential accommodation ( <i>parent</i> )	X	X	X	C	X
Attached dwellings	X	X	X	C	X
Boarding houses	C	C	X	C	X
Dwelling houses	C	C	X	X	X
Group homes	X	X	X	A	X
Hostels	X	C	X	C	X
Multi unit dwellings	X	X	X	C	X
Residential Flat building	X	X	C	C	X
Rural workers dwellings	X	X	X	C	X
Seniors housing	X	X	C	C	X
Shop top housing	C	C	C	C	X
Home based childcare	C	C	X	C	X
Home business	C	C	X	C	X
Home occupation (sex services)	X	C	X	C	X
Tourist and visitor accommodation	C	C	C	C	X
Bulky goods premises	X	C	C	C	C
Pubs	C	C	C	C	X
Restaurants and cafes	C	C	C	C	X
Road side stalls	C	C	C	C	X
Rural supplies	X	C	C	C	C
Timber yards	X	C	C	C	C
Entertainment facilities	C	C	C	C	X
Function centre	C	C	C	C	X
Amusement centres	C	C	X	C	C
Highway services centres	X	X	X	C	X
Industrial retail outlets	X	C	X	C	C
Registered clubs	C	C	C	C	X
Restricted premises	X	C	C	C	C
Service Stations	C	C	X	C	C
Sex services premises	X	C	C	C	C
Veterinary hospitals	C	C	X	C	C
Wholesale supplies	X	X	X	C	C
Industries ( <i>parent</i> )	X	X	X	C	X
Light industries	C	C	X	C	C
Home industry	X	C	X	C	C
General Industry	X	X	X	C	X
Boat building and repair facilities	X	X	X	C	X
Vehicle body repairs workshop	X	X	X	X	C
Vehicle repair stations	C	C	X	C	C
Storage premises	X	C	X	C	X
Self storage units	X	C	X	C	C

	B1 Neighbourhood Centre	B2 Local Centre	B3 Commercial Core	B4 Mixed Use	B5 Business Development
Depots	X	X	X	C	C
Warehouse or distribution centres	X	X	X	C	C
Sewerage systems	X	X	X	C	X
Waste or resource management facilities	X	X	X	C	X
Waste or resource transfer stations	X	X	X	C	I
Passenger transport facilities	X	C	C	C	C
Port facilities	X	X	C	-	X
Transport depots	X	X	C	C	X
Health services facilities	C	I	I	I	I
Hospitals	C	I	I	I	I
Health consulting rooms	C	I	I	I	I
Corrections centres	X	X	X	-	C
Industrial training facilities	X	X	X	C	X
Places of public worship	C	C	C	C	X
Research stations	X	X	X	C	X
Boat launching ramps	X	X	C	C	X
Boat sheds	X	X	X	C	X
Charter and tourism boating facilities	X	X	C	C	X
Environmental facilities	C	C	C	C	X
Jetties	X	X	C	C	X
Marinas	X	X	C	C	X
Mooring	X	X	C	C	X
Mooring pens	X	X	X	C	X
Recreation facilities (major)	X	C	X	C	X
Recreation facilities (outdoor)	X	X	X	C	C
Water recreation structures	X	C	C	C	X
Crematorium	X	X	X	C	C
Environmental protection works	O	O	O	O	O
Exhibition homes	C	C	X	C	X
Mortuaries	X	C	C	C	C



**Box 19. Implications for the strategy**

The following land uses should be addressed as an action of the strategy:

- Rural workers dwellings are proposed for removal from the B4 zone.
- Hospitals are proposed to be removed from the B1 zone being inconsistent with the small scale nature of development in the B1 zone.
- Crematoriums in B4 are not consistent with the mixed use nature of that zone, therefore this is proposed to be removed.
- Dwelling houses (other than shop top housing) may not be appropriate in the B1 and B2 zone and their permissibility in these zones should be reviewed in the strategy. Likewise consider whether exhibition homes would be appropriate.
- Industrial retail outlet within the B2 Local Centre zone is not appropriate given restriction on industries within this zone.
- The B5 Business Development Zone may be able to support restaurants and cafes.
- Storage premises are considered an appropriate use within the B5 Business Development zone.
- Correction centres are not desirable within the B5 zone.
- Home industries are not appropriate in the B5 zone given restriction on both industry and residential within this zone.
- Consider if general industry within the B4 Mixed Use zone is appropriate as light industries more compatible with mixed use nature.
- Vehicle body repair workshops may not be compatible with the B5 Business Development zone.
- A correction centre is considered incompatible with the B5 Business Development zone.
- Consider allowing place of public worship within the B5 Business Development zone.

**Bulky goods retail**

The NELS makes specific recommendations for bulky goods retail.

The households of Newcastle LGA presently generate demand for close to 92,000m<sup>2</sup> of bulky goods floorspace. By 2031 the NELS forecasts that there will be a net increase in demand for 29,000m<sup>2</sup> of this type of floorspace. Whilst all of the growth in demand for bulky goods floorspace does not need to be located within Newcastle, it is desirable to accommodate an increase as the provision of this type of floorspace generates employment,

reduces the need for residents to travel and also captures expenditure from other LGAs to the benefit of business in Newcastle.

The challenges of bulky goods stores relate to traffic generation and urban design as they are strong generators of travel by private vehicle and are often designed as large boxes with limited streetscape appeal and street level activity.

With bulky goods now making up more than 20% of all retail floorspace in NSW it is essential to recognise its position in the retail hierarchy and its impact on traditional retail centres. It is recommended that all future planning of bulky goods outlets is considered as part of the established retail hierarchy and that any new location only be considered on the basis that it will support rather than detract from that hierarchy. It will be important for future bulky goods premises to complement rather than detract from the functions and special qualities of Newcastle's main centres.

Bulky goods clusters can be vertically stacked. Successful examples have been built in Fortitude Valley in Brisbane and Rhodes Homemaker in Sydney. In a fully urbanised city like Newcastle this style of development should be investigated as the continued lateral expansion of one land use may not be able to be accommodated unless it is at the expense of another land use. Any expansion of a centre or a B5 zone to accommodate bulky goods premises must be supported by an economic impact assessment and demonstrate how residential targets will be maintained.

#### **Box 20. Implications for the Strategy**

- Bulky goods uses are to be provided within existing centres.
- Investigate the potential of the vertically stacked buildings as an alternative to lateral expansion of bulky goods development where expansion would erode an adjoining residential or industrial zone.
- In some cases it may be appropriate for bulky goods clusters to form centres within the hierarchy in their own right. However, any proposal for a new bulky goods cluster must be subject to a thorough sequential test and economic impact assessment and demonstrate how residential targets will be achieved where land is proposed to be rezoned from residential.

## Recommended Principles for Centres

The NELS includes a number of planning principles that are recommended for consideration when strategically planning for, or assessing the development proposals associated with Newcastle's centres. These principles are summarised below.

NELS Recommendation	Implications for the Local Planning Strategy
<b>Retail (General)</b>	
The development of all retail premises should be encouraged and / or focused within or adjacent to existing or planned neighbourhood, local and town centres.	<p>An application to rezone land to facilitate the expansion of retail or commercial development into an adjoining residential zone must not undermine the housing potential of that area.</p> <p>An application to rezone land must demonstrate how residential development will be accommodated in the expanded zone.</p>
The integrity and viability of existing neighbourhood and local centres should be protected and enhanced by working with applicants to implement appropriate development proposals. For local centres in particular, improvements should be encouraged through the implementation of programs (such as main street programs, place making, festivals and events) that enhance their convenience, retail offer, accessibility, visual character and vitality.	<ul style="list-style-type: none"> <li>• The strategy should consider whether the DCP could be used as a mechanism to improve built form outcomes in business zones.</li> <li>• The strategy should consider introducing active street front clause in LEP.</li> </ul>
Encourage a diversity of uses in neighbourhood and local centres to maintain economic activity and extend hours of use. Successful centres provide a diversity of cultural, community and educational services together with business and retail activities that appeal to a range of customers including the 'time poor' worker.	The existing LEP permits a diverse range of uses.
Maximise the accessibility and convenience of public transport services to and within neighbourhood and local centres. Plan for transport infrastructure and management that prioritises pedestrian movement and public transport access thereby reducing the use of private vehicles and road related congestion.	The strategy should continue to encourage development in areas that have good public transport accessibility and access to local centres.
Support the extension or development of smaller supermarkets on appropriate sites within neighbourhood centres and larger supermarkets within local centres to provide a range of convenient retail options enhance competition and support their economic viability. Due consideration should be given in the assessment of the suitability (with respect to scale and range of goods / services) of the potential impact of more significant retailers or potential anchor stores (particularly in lower order centres) to other centres in the locality	<p>The development of all commercial and retail premises should occur at appropriate scales within or adjacent to existing or planned neighbourhood, local and town centres.</p> <p>Out-of-centre retail development should be subject to rigorous assessment to ensure there are no adverse impacts on Newcastle's existing centres.</p>
Ensure that development applications for retail facilities with the potential for adverse economic impacts are submitted with appropriate economic impact assessments for review by	An application to rezone land to facilitate the expansion of retail or commercial development must be accompanied by an Economic Impact Assessment (EIA) and Sequential Test

NELS Recommendation	Implications for the Local Planning Strategy
Council and other relevant planning authorities.	Analysis <sup>7</sup> .
Support the development of retail through the zoning of suitable land within and adjacent to neighbourhood and local centres. Proactively identify and monitor sites suitable for large scale retail and commercial development particularly within local centres.	The LPS is reviewed about every 5 years.
<b>Principles for Newcastle City Centre</b>	
Promote the active marketing of Newcastle City Centre's commercial core to attract businesses to the LGA that will generate employment and support the regional economy.	The State Government has recently released the Newcastle Urban Renewal Strategy and made subsequent changes to the Newcastle LEP. The City of Newcastle will participate in the delivery of the strategy however the principle agency is the State Government.
Prioritise Newcastle City Centre as the primary location for commercial office, entertainment and community floorspace that serves not only Newcastle LGA, but the wider Lower Hunter Region.	Newcastle City Centre is acknowledged as the Lower Hunter's Regional Centre.
Ensure a range of retail goods food and drink premises are provided within Newcastle City Centre to enhance its appeal as a place to visit and work.	The Newcastle City Centre is zoned B3 Commercial Core and B4 Mixed Use. These zonings permit a diverse range of land uses.
<b>Retail (Bulky Goods Retail)</b>	
Recognise the regional demand for bulky goods retailing. The development of bulky goods should be primarily located within or surrounding existing commercial centres to help ensure a centres vitality and viability as well as the creation of sustainable form of development that will not 'crowd out' industrial users from industrial land.	Bulky goods shall be accommodated within existing business zones. If an application to rezone land for bulky goods adjacent to a centre the application must be accompanied by an Economic Impact Assessment (EIA) and Sequential Test Analysis and demonstrate that the delivery of housing targets for the suburb will not be undermined .
New bulky goods development (or the expansion of existing premises) that is not located within a town centre must be supported by an Economic Impact Assessment (EIA) and Sequential Test Analysis that looks at the impact on a local and regional basis with the intention of protecting the existing centre hierarchy.	An application to rezone land to B5 Business Development must be accompanied by an Economic Impact Assessment (EIA) and Sequential Test Analysis that looks at the impact on a local and regional basis with the intention of protecting the existing centre hierarchy.

<sup>7</sup> Sequential test analysis is described in the NSW Draft Centres Policy 2009

[www.planning.nsw.gov.au/asp/pdf/draftcentrespolicy\\_apr09.pdf](http://www.planning.nsw.gov.au/asp/pdf/draftcentrespolicy_apr09.pdf)

## 6. Industrial lands

Industrial lands include all areas zoned IN1 General Industrial, IN2 Light Industrial and IN3 Heavy Industrial by the Newcastle LEP 2012 and are zoned SP1 Special Activities under the State Environmental Planning Policy (Three Ports) 2013.

Newcastle's industrial lands are located across 26 of Newcastle's suburbs, however, the main areas are located in the vicinity of the port.

### *Strategic industrial lands*

#### Port of Newcastle

The Port of Newcastle is important to both the State and Regional economy. It has been identified as a State significant site under State Environmental Planning Policy (Three Ports) 2013. The future role of the Port is linked to global and regional economic trends.

The Newcastle Port Corporation predicts that in the period to 2025 coal exported through the Port will peak at 270 million tonnes per annum and that this demand will continue past 2025. In addition to coal, the Port also handles a diverse range of cargoes. Some of these cargoes service the coal export trade (e.g. fuels, machinery, ammonium nitrate). This means that the demand for these cargoes is linked to the demand for coal. Some import cargoes service the expanding population of the region, such as cement and steel. Some cargoes are necessary to supply industry in the Hunter Region, such as the aluminium industry, where the Port handles both the input raw materials and the exported product.

The Port of Newcastle has recently taken over the port through a 99 year lease. As part of the lease agreement the Port of Newcastle has prepared a Port Development Plan 2015 - 2020 for the Port. This plan sets out the Port of Newcastle's development objectives over the forthcoming period. Kooragang, Mayfield and Carrington all contain industrial clusters that are associated with the Port.

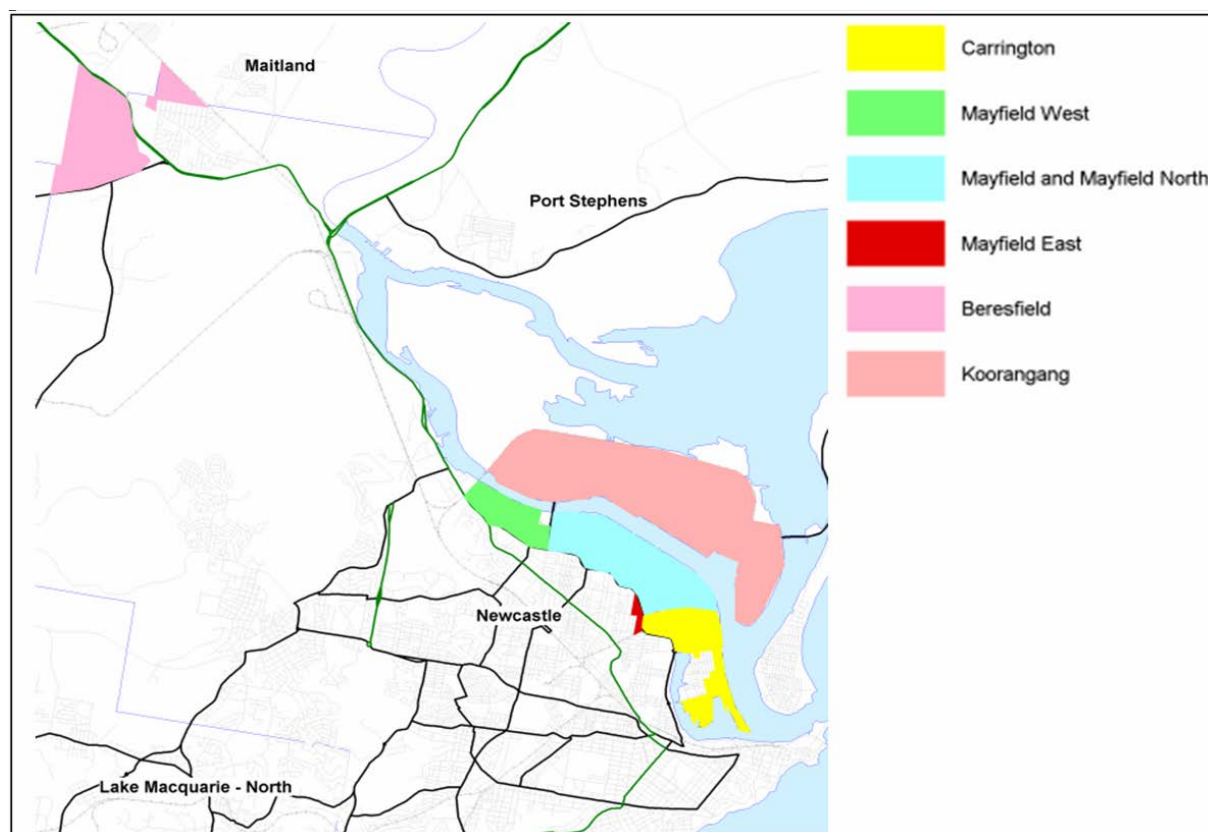
#### **Box 21. Implications for the Strategy**

The Port of Newcastle has prepared a Port Development Plan 2015 - 2020 which sets the development objectives for the future of the port.

The main industrial clusters within Newcastle LGA are shown in Figure 5.10 and have been identified as:

- The Kooragang Industrial Area;
- The Mayfield Industrial Area;
- The Beresfield Industrial Area; and
- The Carrington Industrial Area.

**Figure 5.10: Strategic Port Lands.**



## Kooragang Island

Kooragang Island comprises 975ha of SP1 Special Activities zoned land. It is located on the northern bank of the Hunter River. In addition to the Port related facilities at Mayfield and Carrington, Kooragang Island accommodates infrastructure and material storage to support Newcastle's deep water port. Kooragang Island is within the SEPP (Three Ports) 2013 boundary. Development is administered under that SEPP.

## Mayfield Industrial Area

Mayfield North is the largest industrial precinct within the Mayfield Industrial Area and zoned SP1 Special Activities. Other precincts consist of generally smaller allotments spread across Mayfield East, Mayfield West and Mayfield.

A large proportion of the Mayfield and Mayfield North Precinct is comprised of the former BHP site (151ha). This area has been proposed for the site of the Intertrade Industrial Park to be development by the Hunter Development Corporation (HDC).

The Mayfield West Industrial Area (Steel River) is located along Industrial Drive and Tourle Street. It is predominantly zoned IN1 General Industrial, with smaller portions zoned IN2 Light Industrial and SP1 Special Activities. Together the total industrial zoned area is 123ha.

Industrial land in the Mayfield East area includes an 8ha allotment zoned IN2 Light Industrial, situated on Industrial Drive. It is a more modest area located adjacent to residential uses and is predominantly used for manufacturing purposes.

## Beresfield Industrial Area

Beresfield Industrial Area is located on the Pacific Highway and Weakleys Drive and consists of 288ha of IN2 Light Industrial zoned land. The southern half of the industrial area has been rapidly developed over the past five years, accommodating a variety of industrial uses.

In 2008 the DPI approved the preparation of a concept plan for the construction of an 85ha Industrial Business Park. According to the project application it has the potential to provide an additional 1300 to 1500 jobs. ALDI Foods Pty Ltd has also had a project application approved by DPI for the construction of a warehouse and distribution facility on 15(ha) of land within the Freeway North Business Park. The project has a total building area of 56,079m<sup>2</sup> and is expected to generate an additional 300 jobs during operation.

## Carrington Industrial Area

Carrington Industrial Area is located in proximity to the Newcastle City Centre. It is predominantly comprised of SP1 Special Activities zoned land in addition to a smaller proportion of IN2 Light Industrial land. Carrington provides a number of multi purpose berths which are serviced by heavy freight rail and loading facilities.



## ***Requirements for Industrial Lands***

The ‘key physical’ and ‘non physical’ infrastructure and technological requirements for industrial lands for Newcastle have been identified as:

1. Essential services – the provision of infrastructure such as water and wastewater services, sewerage and electricity;
2. Transport infrastructure – the provision of road and rail networks;
3. Port infrastructure – access to a port with adequate capacity and associated land;
4. Support services – the provision of community infrastructure such as retail, child care and health facilities;
5. Suitable and available sites – the provision of sites at an adequate scale with limited environmental constraints;
6. Local workforce – the availability of a suitably skilled, local labour force is another key resource for local industry.
7. Technological and communication infrastructure – the provision of high speed internet connections; and
8. Agglomeration – suitable areas that can accommodate the growth of clusters.

## ***Meeting demand for industrial lands***

The Newcastle Industrial Lands Analysis 2005 was reviewed in 2009 (NILA Review 2009). The review analysed current development applications and undertook a ‘windscreen survey’ to update the availability of industrial lands. The Newcastle Employment Lands Strategy 2013 has used the NILA 2009 Review as the baseline for its projections. In summary, the NILA review found that:

- Newcastle LGA has 2,598ha of industrial land.
- Approximately 1,566ha of Newcastle’s industrial land (60%) is land within the SEPP (Major Development) 2005 boundary.
- There was 936ha of vacant land within the LGA representing 39% of all industrial land. Approximately 543ha (58%) of this was within the SEPP (Major Development 2005 – Three Ports boundary).
- The average take up of industrial land had been far more significant between 2005 and 2009 than anticipated: 17.1ha per annum compared to the forecast 4.8ha per annum.

- Between 2004 and 2009, the estimated quantum of vacant land comparative to supply decreased from 46% to 35% indicating strong growth in demand for industrial land.

The largest actual growth in demand for floor space is forecast to occur in the 'transport, postal and warehousing' category in keeping with broader NSW trends relating the growth of this industry and the demand for intermodal uses for transport and temporarily storing goods.

Demand for industrial lands with good separation and buffering from more sensitive uses (i.e. residential) will also result from the growth in demand for basic bulk liquid, transport equipment, machinery and other manufacturing types. The growth of many of these uses may be able to capitalise to some extent on the floorspace/sites becoming available as a result of a decline in industries such as primary metal and fabricated metal manufacturing.

To 2031 there will be a net increase in demand for 57ha of industrial land. However, these will not be evenly distributed across Newcastle. The following provides further explanation of where demand for industrial land is likely to occur.

### The Inner Precinct

Within the Inner Precinct (that includes the Port – refer to Figure 5.1 for precinct map) there is forecast demand for 76ha of land to 2031. The majority of this demand (59ha) is forecast to occur over the next 10 years. At present there is approximately 100ha of land available in the SEPP (Three Ports) 2013 and Steel River Industrial Areas with a further 55ha zoned IN2 Light Industrial located in and around Carrington and Throsby. From these figures it appears that there is just over double the amount of vacant land presently available to accommodate anticipated demand. However, 15ha relates to the Carrington and Walsh Point areas which are designated as State Significant Port Lands. As a result, any future uses must be port related limiting the potential for new businesses. A further 85ha relates to the Steel River Industrial Area. However, the NILA 2005 estimated that only 11ha or 12% of the vacant land within Steel River was available for development (because areas were encumbered by constraints such as contamination at greater than 2m depth) thereby further limiting the potential of some industrial uses. The NILA also identified that the requirement for land to be retained in Steel River as leasehold could also reduce its attraction to the broader market. Therefore until such time as the Mayfield North development site is available for occupation the potential range and choice of lands available for existing businesses or the growth of the Port in the Inner Precinct may be limited.

For these reasons it is important to protect existing industrial lands in the Inner Precinct.

Another important factor is the existing infrastructure within the Inner Precinct that has been built to service industrial uses. The existing infrastructure may be a cost benefit for businesses seeking to come to the area or existing businesses looking to expand and accordingly, it would be a wasted opportunity to rezone these areas to alternative uses. Furthermore discussions with stakeholders have identified the importance of retaining many of the industrial zones within the Inner Precinct, particularly those that border Industrial Drive as they create important buffers and transitions to more sensitive uses i.e. residential. These buffers enable the effective operation and function of general industrial uses.

#### **Box 22. Implications for the Strategy**

The existing industrial land should be adequate to meet industrial growth in the inner precinct to 2031. To ensure sufficient industrial land to meet future demand is retained, rezoning industrial land for other purposes in the inner precinct should not be supported.

### **The Central Precinct**

The NELS forecasts that demand for industrial land will decline in the Central and Outer Precincts over the study period by -8ha and -11ha respectively. This decline represents an overall decline of 4% and 6% on existing occupied land and is therefore not considered substantial.

The decline is in part a reflection of the ongoing rationalisation of the manufacturing industry globally and the greater use of technology to produce goods rather than labour. This is an important matter for consideration when basing assessments for demand for site area on employment generation. This is because an industry may reduce the number of workers it employs yet it may not equally reduce the amount of land it requires.

The forecast decline of industry within the Central Precinct may also be a result of the predominance of smaller lots within existing zones reducing their appeal to larger organisations. Industrial areas within the Central Precinct may be less desirable to more general industrial uses owing to the need to travel through populated urban areas and along less direct/more congested traffic routes than areas on the outskirts of the LGA or benefiting from Industrial Drive.

Whilst it may be argued that land should be rezoned from industrial uses in the Central Precinct (as there is a forecast decline in demand) it is important to note that the decline will not be consistent over the study period. It is anticipated that following a decline in demand

for land between 2006 and 2016, there will be growth in demand for industrial floorspace in the Central Precinct between 2016 and 2021. Accordingly, any potential rezoning should consider the longer term implications of change and future demand.

The changing nature of industrial demand can be exemplified by a comparison of the 2004 NILA data with the survey analysis provided by the NILA Review 2009. As of 2004 it was found that the Central Precinct had 25ha of land categorised as vacant representing 20% of all industrial land in the Precinct. Over half of the vacant land (13.5ha or 54%) was located in Hamilton North. The NILA Review 2009 found, however, that the proportion of vacant land had subsequently reduced to 7.4ha across the Precinct or 5% of all employment lands. 6.9ha of this vacant land was located in the Hamilton North and Islington employment areas alone.

The relatively low proportion of vacant employment lands within the Central Precinct indicates the high demand for their use to support the needs of a Regional City. Over the study period employment lands within the Central Precinct are likely to play an increasingly important role as locations for urban support uses such as car repairs and trades as the population of the LGA continues to grow and the availability of industrial land in the Inner Precinct becomes tighter pushing these smaller uses towards the Central Precinct. Furthermore it is also important to consider the need to maintain a surplus of industrial land in an area as a price moderator and to ensure a range of choices for prospective businesses within an area.

Notwithstanding the above, over the long term as demand for employment lands in their current form is forecast to decline again, in some locations it may be considered appropriate to facilitate a wider range of uses in some industrial areas in the Central Precinct (particularly those located within close proximity to centres or isolated from clusters of other uses). This may be achieved through the use of zones such as the B5 Business Development Zone. In this way a wide range of employment generating uses may make efficient use of any redundant land and potentially generate additional employment and investment opportunities without prejudicing the operation of any remaining industrial uses.

**Box 23. Implications for the Strategy**

Existing industrial land in the central precinct should be maintained to meet industrial growth to 2021. Beyond 2021, demand is expected to decline and therefore opportunities to rezone industrial land for alternate uses may be available. However, in the short-term all existing industrial land in this precinct should be protected.

**Outer Precinct**

As of 2004 the Outer Precinct had 138ha of vacant land. A large portion of this area related to the Beresfield employment area (64%) whilst 9% related to land at Wallsend and 24% related to land in Hexham. The remaining share (3%) related to the Sandgate Industrial Area.

As outlined above, the majority of vacant land in the Outer Precinct relates to the Beresfield employment area. This area is presently being developed and serviced and accordingly still has a reasonable amount of vacant land to be taken up. The Beresfield employment area may be considered an important future resource for Newcastle LGA. The area's location at the junction of the Sydney Newcastle Freeway and the New England Highway provides excellent opportunities for storage and transportation components of businesses seeking sites with excellent highway access. This employment area has already attracted the distribution arms of major supermarkets for this reason.

The Beresfield employment area also benefits from being Newcastle's only greenfield industrial area and therefore appeals to the sector of the market not attracted to Newcastle's brownfield\* employment lands. The greenfield nature of the land is attractive to businesses as it allows for the development of purpose built buildings at a lower cost than on brownfield sites. Upon operation it may also reduce the need to travel through congested urban areas.

*\*Brownfield means unused land that was previously used for industrial or commercial purposes.*

The Beresfield employment area will contribute to the mix of employment areas in Newcastle. It will also enhance Newcastle's ability to compete with the lower cost and attraction of developing in some of the newer greenfield employment areas identified in Maitland, Port Stephens and Cessnock LGAs. The area zoned for industrial purposes should therefore be protected.

Both the Beresfield employment area and Hexham have good access to the Region's broader road network and the Port and have a reasonable component of vacant land for

development. For these reasons it is recommended that both the Hexham and Beresfield industrial areas are safeguarded in their entirety for this potential use. These sites combined accounted for 86% of vacant land within the Outer Precinct of Newcastle as of 2004 and again in 2009. Accordingly, the only remaining area in the Outer Precinct with existing scope for growth and change is Sandgate with 26ha or 25% of land available for development as of 2009. In this regard it should also be noted that the NSW Department of Planning and Environment has recently rezoned approximately 183 hectares of land at Black Hills owned by Coal & Allied for use as employment lands.

Lastly in relation to the industrial land in the outer precinct, the route alignment for the Pacific Highway may create additional opportunities for prospective employment lands with good access to the Highway. It is recommended that these opportunities be investigated further with respect to their locational, environmental and business suitability at a time that aligns with the implementation of the upgrade plan and/or review of Council's LEP 2012.

#### **Box 24. Implications for the Strategy**

The existing industrial land at Beresfield and Hexham should be protected in their entirety to ensure that there remains adequate land to meet predicted industrial growth in the area. The exceptional logistical advantage of the Beresfield employment area means that this area is likely to continue to attract warehousing and distribution uses.

The M1 to Raymond Terrace project will result in a parcel of land between the new alignment and the existing alignment. The NELS supports investigation of this parcel for future industrial uses.

## Land uses

Industrial lands are vitally important to a city but are susceptible to being undermined because of inappropriate land use decisions. Key risks to industrial land are approval of non-compatible land uses within or adjacent to industrial zoned land or non-industrial use being approved within the industrial area itself. Industrial land is appealing to many businesses due to its relatively cheaper price and larger lots able to accommodate uses that require larger buildings such as bulky goods or indoor sports. Many of these uses are better located in centres where there is better access.

Often industrial areas have poor access to commercial or retail services and facilities that provide for the daily needs of workers, for example, banking, medical facilities and child care. This means that many workers have to leave an industrial area to undertake these tasks. Providing a mix of compatible uses that does not undermine the industrial activities and provides for the needs of the workforce is a key challenge of any land use strategy. However the priority of any industrial zone must be to protect industrial uses.

A list of permitted and prohibited uses is provided in the Newcastle LEP 2012 and is available at [www.legislation.nsw.gov.au](http://www.legislation.nsw.gov.au).

### Box 24. Implications for the strategy

The following land uses should be reviewed against the objectives of the zone to determine if they are appropriate:

- General industry in the IN2 Light Industrial zone
- Storage premises in the IN1 General Industrial zone
- Childcare centres in the IN1 General Industrial zone
- Respite day care centres in the IN1 General Industrial
- Community facilities in the IN1 General Industrial and IN2 Light Industrial zones
- Places of public worship in the IN1 General Industrial and IN2 Light Industrial zones
- Recreation facilities (indoor) in the IN1 General Industrial, IN2 Light Industrial and IN3 Heavy Industrial zones
- Recreation facilities (major) in the IN1 General Industrial and IN2 Light Industrial zones.
- Home industries within industrial zones.



## *Recommended principles for industrial lands*

The following provides key land use principles to be applied to Newcastle's industrial lands. The principles are aimed at promoting consistency and providing a clear future direction for land use planning within Newcastle LGA.

<b>NELS Recommendation</b>	<b>Implications for the Local Planning Strategy</b>
Retain a range of employment generating lands to meet the varying needs of the LGA and the Lower Hunter Region i.e. low grade industrial land to provide urban support services (panel beaters, car repairs etc), general industrial land to provide scope for light manufacturing and heavier industries (i.e. Mayfield) State Significant employment lands that facilitate the transfer and transportation of goods (the Port and associated land).	<p>To maintain existing industrial land for future industrial uses.</p> <p>To protect existing industrial land from inappropriate land uses within and adjacent to the industrial zones.</p> <p>To consider mechanisms to 'alert' new residents in noise affected areas such as Honeysuckle that the area experiences noise from industrial activities.</p>
Preserve employment zoned land that can accommodate relatively large floor plates (larger sized lots) that are well serviced or connected to main road networks and rail (i.e. Steel River, Onesteel, Mayfield West, Kooragang Island, Beresfield and Hexham).	To protect existing industrial lands.
Encourage the clustering of employment generating uses so that they can share resources and services and attract new businesses to Newcastle. Investigate existing clusters of industry in Newcastle further and build on this by actively promoting their presence and the merits of agglomeration.	To protect existing industrial lands.
Industrial buildings should be designed so that they are efficiently sited and adopt sound ecological principles to minimise energy consumed for heating and cooling and waste generation. Businesses should be encouraged to maximise recycling and the use of energy renewal technologies (photovoltaic cells, solar water and natural ventilation), cross ventilation and roof and wall insulation.	These issues are currently addressed by Council's Development Control Plan.
Seek to maintain an excess or oversupply of industrial land within the LGA as a moderator of industrial land / property value and to safeguard for the potential growth of the Port or population changes. An oversupply of industrial space keeps land values low and affordable for businesses.	To protect existing industrial lands.
Develop buffer zones of low impact industrial uses (e.g. storage, parking, and landscaped areas) around land zoned industrial to minimise its impact to neighbouring residential or other sensitive uses.	<p>Consider zonings around industrial land.</p> <p>To consider mechanisms to 'alert' new residents in noise affected areas such as Honeysuckle that the area experiences noise from industrial activities.</p> <p>To restrict sensitive uses such as childcare centres to IN2 Light Industrial areas.</p> <p>To maintain the DCP controls to minimise impact on sensitive land uses.</p>

NELS Recommendation	Implications for the Local Planning Strategy
Do not permit bulky goods retailing in industrial zones. Allow retailing in industrial areas only where it is ancillary to industrial uses.	Bulky goods retail is not permitted in industrial zones.
Restrict the proportion of office space permitted within industrial areas to space that is ancillary to the operation of a business (i.e. less than 20% of GFA).	Consider a subclause to Clause 5.4 of the NLEP2012 to specify requirements for ancillary offices in industrial development.
Promote the growth of new employment areas such as Beresfield as a prestigious location for businesses through additional infrastructure provision (i.e. retail, childcare, and transport facilities) active marketing and promotional campaigns to target desirable major tenants.	To review land uses to ensure that supporting land uses are permitted but do not undermine the industrial activities in this location.
The provision of retail should be minimised within industrial zones and only permitted where it is ancillary to a use and directly serves the daily needs of the associated work force.	Clause 5.4 (4) of NLEP 2012 already applies maximum floor areas for industrial retail outlets.

## Residential – Employment lands interfaces

A key recommendation of the NELS is to protect industrial lands to ensure supply meets future demand. Industrial land is particularly vulnerable to a range of threats that can curtail or undermine industrial use. One of the key risks to ongoing viability of industrial land is conflict with sensitive land uses like residential. In Newcastle, areas of conflict exist around Carrington, Maryville, Mayfield, Stockton and Honeysuckle.

### Maryville

The NELS specifically addresses the land use conflict around Maryville and considers a number of land use planning options. The recommendation states “...we [Hill PDA] do not consider it appropriate to rezone either part or the entire existing IN2 Light Industrial zone in Maryville to residential. The question thus becomes how to best address interface issues and minimise potential disturbances.”

The following options for managing the interface are provided in the report:

1. Configuring the road network so that access ways and crossovers facilitate the movement of industry related traffic directly to/from Hannell Street without the need to pass through or via residential streets;

2. Encouraging existing industry to expand/consolidate land so that sites cover the full block by extending to roadways such as Harrison Street, Downie Street and McMichael Street. This would result in less direct interface between residential and industrial properties providing a carriageway as some buffer/relief; and
3. Limit the extent to which existing dwellings may develop or expand thereby minimising the potential size of households and their occupants.

#### **Box 25. Implications for the Strategy**

Consider ways to address interface issues.

#### Newcastle City Centre

Strategic planning policy affecting Newcastle consistently advocates for the provision of higher density residential uses in appropriate locations within Newcastle City Centre. Socially the inclusion of residential uses within a city centre is positive as it increases the level of activity and vitality across the day, evening and weekend periods. However, the need to protect the amenity of residents within centres has the potential to hinder the extent and hours of operation of some businesses. This conflict can arise from night time trading (patrons leaving a venue and creating street noise), the smell of cooking (from restaurants and cafes) and the delivery of goods early in the morning (vehicles reversing or parking in the street). These conflicts can lead to complaints and the need to restrict business operations thereby having potential cost implications.

There are a number of potential solutions to the challenge including:

1. The restriction of hours of operation;
2. Staggered closing hours for bars and nightclubs to reduce the severity of noise at any given time;
3. The restriction of deliveries and servicing to morning/day time periods;
4. The use of s149 Certificates to highlight potential impacts to properties located within a nominated proximity of the centre; and
5. The designation of an area suitable for non-residential uses only.

Whilst the first three options above are frequently used to minimise impacts to amenity, they can also hinder the success of businesses, add to their costs or reduce the attraction for the customer. The first three options above also minimise rather than completely eliminate potential conflicts. The NELS advocates the use of the B4 Mixed use zone in areas encircling the area zoned B3 Commercial core. However, this does not entirely address the issue as mixed use allows for a variety of uses in an area and therefore the risk of conflict remains.

#### **Box 26. Implications for the Strategy**

The Strategy could consider:

- The use of s149 Planning Certificate clause for all properties in mixed use zoned areas stating that the site may be affected by noise caused by urban activities.
- The drafting of a DCP element for development in mixed use areas to minimise potential conflict.

#### **The Port of Newcastle**

The development of Honeysuckle as a mixed use residential and entertainment precinct has created a conflict with the Port of Newcastle. The port is vital infrastructure for Newcastle and the State and Hunter Region economies and must be protected. Intensifying development along the harbour risks increasing the exposure of more people to noise from the operation of the port.

#### **Box 27. Implications for the Strategy**

The Strategy could consider the use of a s149 Planning Certificate notification on all properties affected stating that the site may be affected by noise caused by port operations.

## 7. Centres and Employment Lands and Transport

Transport is absolutely critical to well functioning centres and employment lands. It is important for freight and servicing.

Without reform, road congestion could cost the national economy \$20 billion by 2020 - up from \$9.4 billion in 2005<sup>8</sup>.

Transport is also important for access to the labour force.

Transport will be dealt with in a future working paper that specifically discusses land use and transport.

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<sup>8</sup> BTRE (Bureau of Transport and Regional Economics) 2007, Estimating Urban Traffic and Congestion Cost Trends for Australian Cities, Working Paper 71, BTRE, Canberra.

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# Local Planning Strategy

## Chapter 6: **Housing and Neighbourhoods**



## **Chapter 6 Cover**

Title: Funky Town

The front cover was painted by Karissa Hicks, aged 9 as part of the community consultation undertaken for the Newcastle 2030 Community Strategic Plan. The brief was to *'express in painting the Newcastle the participant would like to see in 20 years time.'*

## What is the purpose of this chapter?

The purpose of this chapter is to discuss Newcastle's current housing situation and identify future housing requirements by reviewing demographic trends and forecasts. The chapter includes discussion on housing diversity (choice, type, size, tenure), adaptability and affordability. Information on housing needs and the Newcastle housing market has been provided by Housing NSW (Family and Community Services).

The chapter is supported by contemporary literature on Australian housing, data on development application approvals, housing trends, statistics and forecasts.

The chapter identifies housing implications for the Local Planning Strategy. These will become the basis for discussion on land use initiatives to support housing delivery that meet the needs of the current and future Newcastle community.

There are currently 65,768 dwellings in the City of Newcastle. Population and housing forecasts recently prepared by demography consultants, ID, predict an additional 12,900 dwellings to accommodate an additional 23,983 residents by 2036.

A large majority of Newcastle's homes are single dwellings with medium to higher density housing fast growing. It is expected that more diverse and adaptable housing will be needed into the future to accommodate a range of household sizes and 'aging in place'. Housing should be well serviced by infrastructure to encourage social cohesion and support the local economy, including high public transport usage.

# 1. Housing

## *Housing trends in Newcastle*

### Housing diversity

Housing diversity refers to the range of dwelling types, sizes and locations that are available within a defined area. More diversity means greater housing choice for a range of households. This may create more affordable housing options. Housing forms or types include single dwellings, dual occupancies, secondary dwellings, multi dwelling houses, residential flat buildings, shop top housing, seniors housing, boarding houses and other buildings that solely house people.

An analysis of Newcastle's current housing stock has been undertaken:

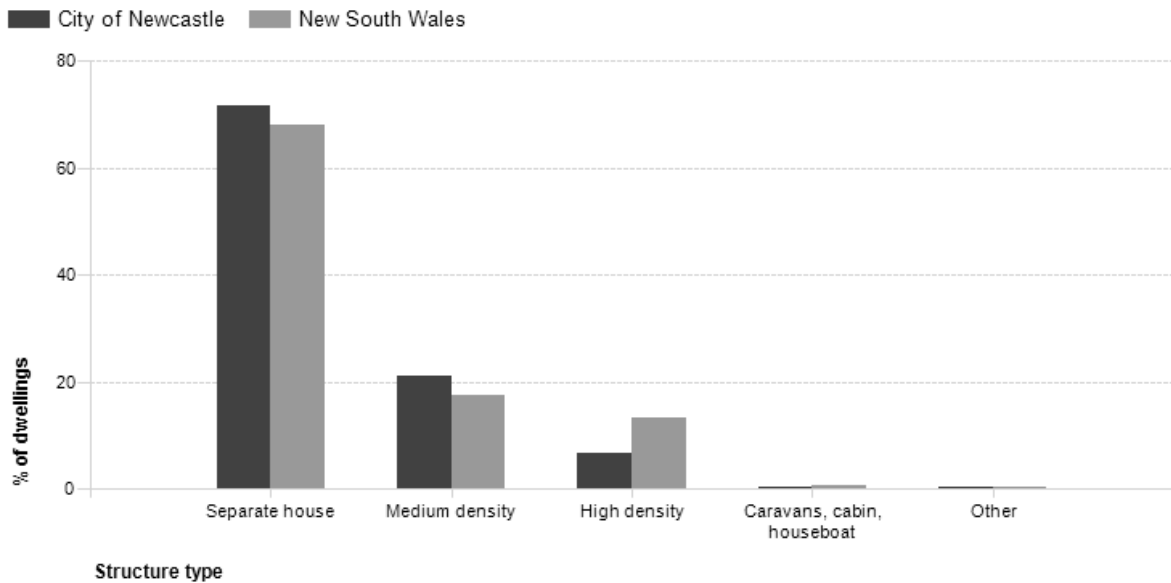
- The City of Newcastle experienced a growth in dwellings by approximately 2,530 (4%) between 2006 and 2011. According to the Australian Bureau of Statistics (ABS), the total estimated number of (private and public) dwellings within the Local Government Area in 2011 was 65,939.
- In 2011, single dwellings were the most popular dwelling type equating to 71.5% of all private dwellings. The number of single private dwellings from 2006 to 2011 increased by 1,252 (3%).
- While single dwellings accounted for the largest proportion of all housing forms from 2006 to 2011, medium and high density (private) housing grew faster. Medium density housing grew by a total of 965 (7.5%) making high density housing the fastest growing category of all housing types with an increase in total dwellings by 390 (10%).

**Table 6.1: Private dwellings by type, The City of Newcastle. Source: Australian Bureau of Statistics (ABS) Census 2011.**

Dwelling type	Number	%
Separate house	47,053	71.5
Medium density	13,951	21.2
High density	4,348	6.6
Other	416	0.6
<b>Total (Private dwellings)</b>	<b>65,768</b>	<b>100.0</b>

Note: In 2011, there were 168 non-private dwellings in the City of Newcastle. Non-private dwellings grew by 25% since 2006.

## Dwelling structure, 2011

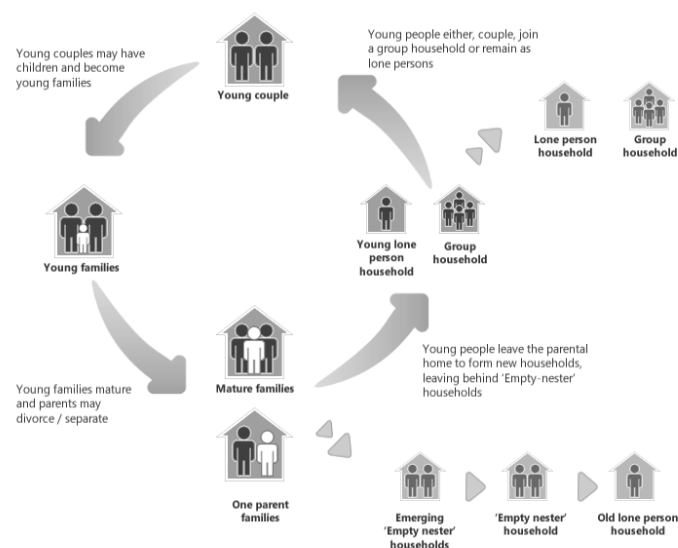


Source: Australian Bureau of Statistics, Census of Population and Housing, 2011 (Enumerated data)  
Compiled and presented in profile.id by .id, the population experts.



A suburb tends to follow a predictable life cycle. The traditional path has been to start as a child in a family household, move into a group or lone person household as a youth, becoming a part of a couple relationship within 5-10 years. Rearing of children is followed by an 'empty-nester' period and ultimately being a lone person, as partners pass away. Often there are other motivations for individuals to move out or into a suburb however the unavailability of appropriate housing should not require people to move elsewhere. A diversity of housing types encourages older people to down size within the community and for children/young families to stay (id, the Population Experts, 2012).

**Figure 6.1: The suburb lifecycle. Source: id, the Population Experts, 2012.**



“Understanding the changes that people make at different ages in their life, and the different types of housing they are likely to consume at those life stages is an important factor in forecasting future population and household types. The life stage which the majority of households in an area are going through gives an insight into its location in the suburb life-cycle, and the likely life-path of those households in the future” (id, The Population Experts, 2011).

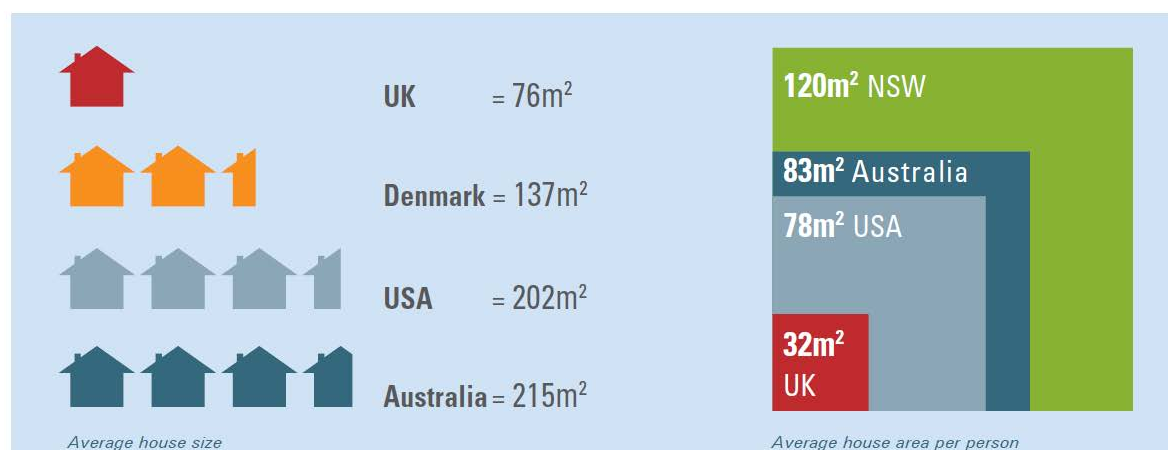
Providing more housing will not necessarily ensure housing needs are met. The key is to ensure there is more diversity within housing (Grattan Institute, 2011).

### Box 1. Implications for The Local Planning Strategy

Encourage a diversity of housing types within suburbs to meet the current and future needs of residents. This does not necessarily mean smaller dwellings.

Over the last decade Houses in NSW have been some of the largest in the world. See Figure 6.2.

Figure 6.2: House sizes. Source: Department of Planning and Infrastructure, 2011.



### Bedrooms per dwelling

A diversity of bedrooms per dwelling contributes to housing choice which in turn may create more affordable options.

There is generally a relationship between the number of bedrooms per dwelling and the size, type and tenure of dwellings and the people who live in them. For example larger dwellings tend to have more bedrooms and attract families compared to higher density housing which have lesser bedrooms and tend to attract smaller households. Larger dwellings tend to be lived in by home owner/s rather than leased out to others.

According to the 2011 Census three bedroom dwellings were the most common housing type in Newcastle equating to 43.5% of all homes. Five bedroom dwellings were the fastest growing dwelling type in Newcastle between 2006 and 2011 with an increase of 28%. See Table 6.2.

**Table 6.2: Number of bedrooms per dwelling, The City of Newcastle. Source: ABS Census 2011.**

City of Newcastle	2011			2006			Change
Number of bedrooms	Number	%	Regional NSW	Number	%	Regional NSW	2006 to 2011
0 or 1 bedrooms	3,960	6.5	4.7	3,843	6.5	4.7	+117
2 bedrooms	16,002	26.3	18.1	15,752	26.8	18.5	+250
3 bedrooms	26,485	43.5	43.3	25,790	43.9	44.6	+695
4 bedrooms	9,242	15.2	23.7	8,114	13.8	22.4	+1,128
5 bedrooms or more	2,176	3.6	5.1	1,731	2.9	4.6	+445
Not stated	3,020	5	5.1	3,527	6	5.2	-507
Total households	60,885	100	100	58,757	100	100	+2,128

### Number of bedrooms per dwelling, 2011

■ City of Newcastle ■ Regional NSW

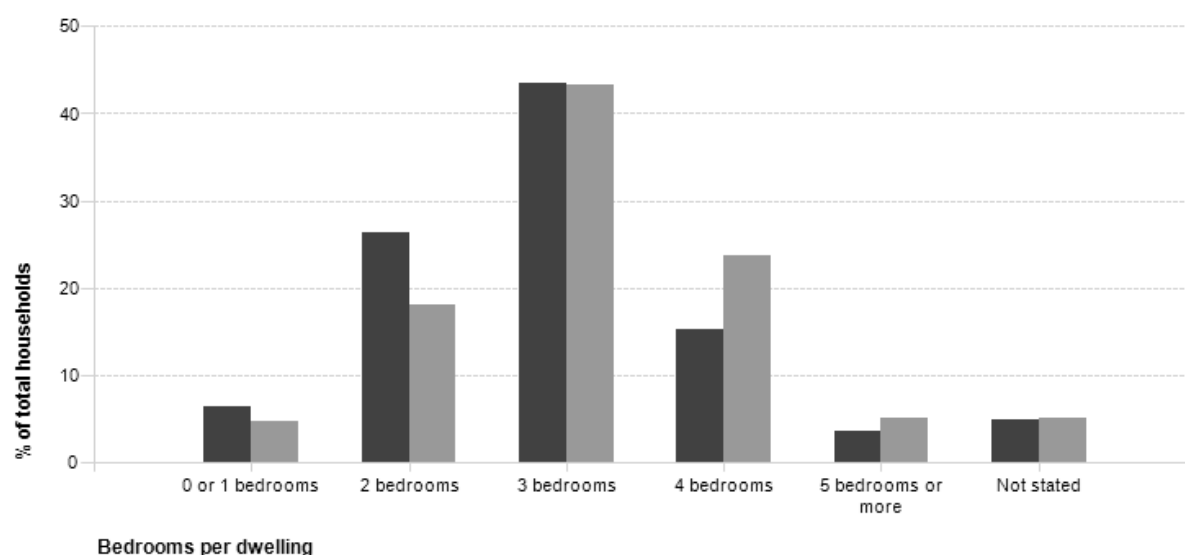
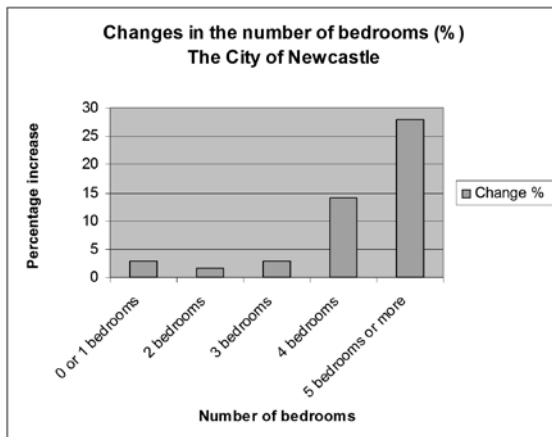
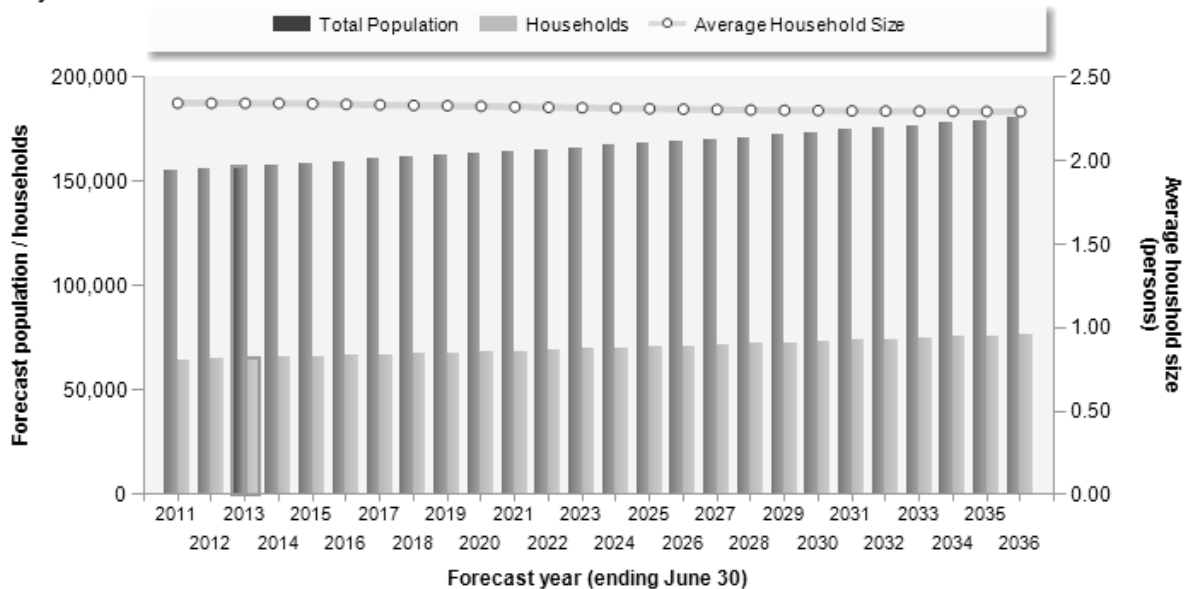


Figure 3: Change in number of bedrooms. Source: id, the Population Experts, 2012.



In 2011 the average household size (persons per dwelling) in Newcastle was 2.35. In 2036 the average household size is expected to drop to 2.30.

Forecast population, households and average household size, City of Newcastle

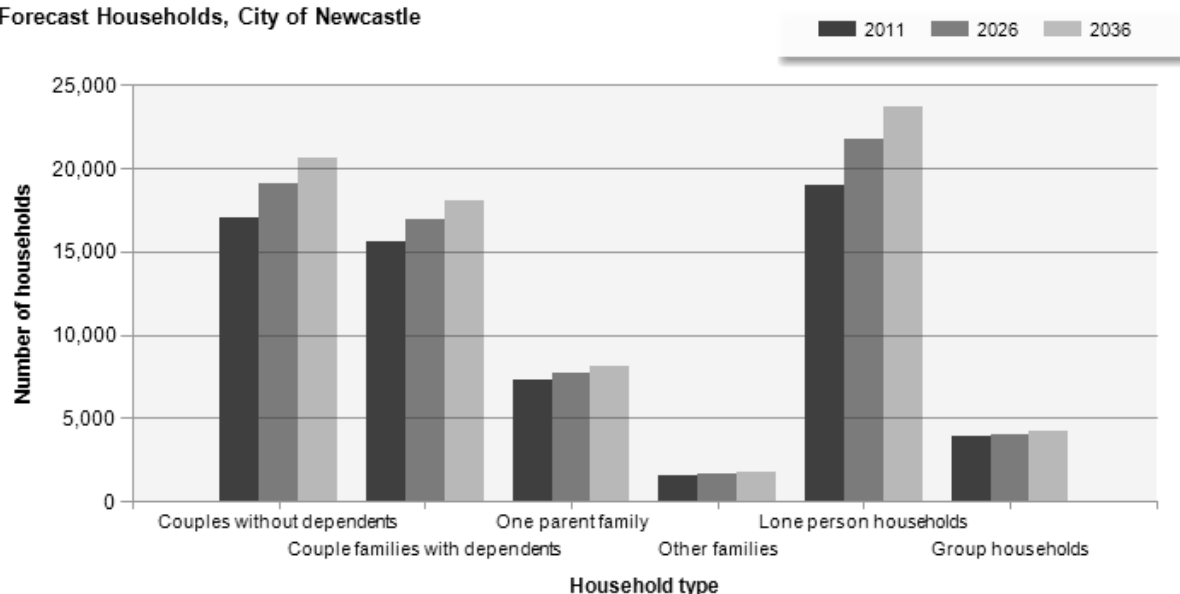


According to Housing NSW, the City of Newcastle has the greatest diversity of housing stock, in terms of the number of bedrooms, in the Lower Hunter. Despite this diversity, there are a large proportion of single persons and aged persons in housing stress (Housing NSW 2009). This relationship may indicate a need for greater diversity and more adaptable housing stock so that people can age in place.

The figure below highlights the growing need to address housing for this age group. In 2011 lone person households were the largest household type within the City of Newcastle, accounting for almost 30% of all households. Lone person households are also forecast to be the largest growing household into 2036.



Forecast Households, City of Newcastle



While lone person households are forecast to grow and we need to cater for this demographic by providing smaller dwellings. Family and Community Services also highlight the need for larger dwellings with more bedrooms for couples and families. Finding accommodation for this household type in recent times has been challenging (Family and Community Services, 2014).

Housing those in housing stress is particularly encouraged in areas well serviced with infrastructure because well connected residential areas with good access to centres (employment) may reduce other living costs such as transport.

### Box 2. Implications for the Local Planning Strategy

Encourage a diversity of bedrooms within housing stock to cater for the current and future needs of residents.

## Affordable Housing

Affordable Housing is defined by Housing NSW as housing that is appropriate to the needs of a household in terms of size, form and location and within their means to pay for it.

Affordability is generally measured by comparing the rent or purchase price of housing with the capacity of that household to pay. A commonly used benchmark of affordability for lower income households is where housing costs are below 30% of gross income. Whereas someone on a high income paying in excess of 30% of income may be able to live comfortably, for those on low incomes even paying 30% of income may be problematic

financially and they are likely to face considerable difficulty finding suitable accommodation. Housing stress is a term used for those struggling to afford 30% of one's income on housing (Housing NSW, 2009).

“A mix of appropriate and affordable housing is needed, not only to meet household needs, but so that communities can maintain social cohesion, support the functioning of local economies and sustain a range of local services and businesses” (Housing NSW 2009).

Housing affordability is an issue for both purchasers and renters in the City of Newcastle, with low income private renters generally being the most vulnerable. This is in line with the situation nationally.

### **Box 3. Implications for the Local Planning Strategy**

Encourage a diversity of housing types to meet the current and future needs of residents.

**Appendix A** suggests changes to the Newcastle LEP and DCP 2012 to encourage greater diversity.

Encourage housing growth near public transport, centres and high amenity areas to relieve housing and living stress.

## **Affordable Living**

Affordable living is a combination of housing diversity, housing affordability, self contained neighbourhoods, transport options, supportive environments and economic development.

Affordable living is a concept that recognises that the total cost of living is greater than just housing costs. “It incorporates the way in which we live, the size and types of housing we choose, the resources we use and how we move around” (Sunshine Coast Regional Council, 2010).

As energy costs, including transport, continue to rise the cost of living will also increase. Hence a greater diversity of adaptable and well designed homes close to employment and other essential services will assist in the reduction of these costs.

**Box 4. Implications for the Local Planning Strategy**

Encourage initiatives to reduce energy consumption associated with developing new housing and ongoing costs associated with transport, by encouraging housing growth within existing established urban areas.

Encourage the protection of existing affordable housing options to minimise costs associated with new development.

**Home Purchasers**

For many lower and middle income households, access to the home ownership market is becoming more difficult. At March 2012, the proportion of dwellings affordable for purchase to households on 50 to 80 percent of median income (low income households) was just 0.9% in Newcastle, compared to the average across the greater metropolitan area of 1.4% and 15.3% in non-metropolitan NSW. Clearly it is extremely difficult for lower income earners to afford to purchase housing in Newcastle. In comparison, Maitland had 4.0% at March 2012, Cessnock 25.4% and Lake Macquarie 1.9% (Housing NSW, 2012).

From the 2006 Census, the proportion of low and moderate income households in Newcastle who are purchasing and are in housing stress<sup>1</sup> is 45%. This represents an increase in the number of low and moderate income households in stress of 18.3% from the 2001 Census. The proportion in stress in Newcastle is lower than the average of 61% for the GMR and compares with 43% in Maitland, 41% in Cessnock and 46% in Lake Macquarie.

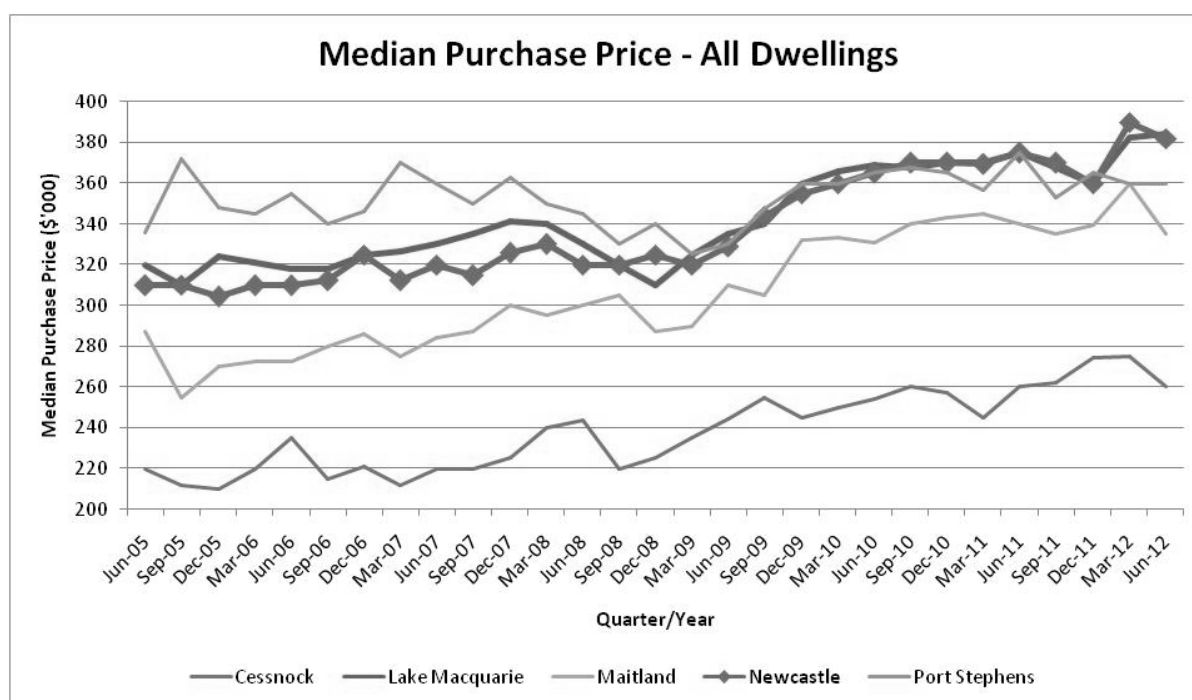
The chart below shows the median purchase price for Maitland, Newcastle, Cessnock and Lake Macquarie LGAs as well as non-metropolitan NSW over the period from June 2005 to June 2012. Generally, purchase prices in the housing market have been relatively stable over the period shown, with prices decreasing slightly from 2007-08 but steadily increasing since late 2008 (Housing NSW, 2012).

**Box 5. Implications for the Local Planning Strategy**

Investigate land use incentives to encourage affordable housing. See **Attachment A**.

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<sup>1</sup> Housing stress is a term used for those struggling to afford 30% of ones income on housing.

**Figure 6.4: Median purchase price in the Lower Hunter, June 2005 to June 2012. Source: NSW Housing.**

At June 2012, the median purchase price for houses in Newcastle was \$387,000 (up 1.5% in the last 12 months), while for units the median purchase price was \$355,000 (down 0.8% in the last 12 months). Over the period shown, median purchase prices in Newcastle have increased at an average rate of 3.8% per annum, which is considerably above the average rate of growth for non-metropolitan NSW (2.2%) and metropolitan NSW (2.1%). Median purchase prices in Newcastle and Lake Macquarie are the highest in the Lower Hunter housing market (Housing NSW, 2012).

The median dwelling prices for the Lower Hunter housing market at December 2011 are in Table 6.3.

**Table 6.3: Median dwelling prices in Newcastle and surrounding LGAs. Source: Housing NSW, 2011.**

LGA	Median house price	Annual change	Median strata price	Annual change
Newcastle	\$387,000	1.5%	\$355,000	-0.8%
Lake Macquarie	\$395,000	4.3%	\$341,000	4.3%
Cessnock	\$283,000	6.3%	\$245,000	-0.8%
Maitland	\$355,000	-1.4%	\$253,000	-16.6%
GMR	\$295,000	-5.6%	\$320,000	-2.4%

## Private Rental

People on low incomes living in rental housing are some of the most vulnerable people in the community. This group is most at risk if there is a reduction in supply of rental stock or the price increases in the rental market. According to Housing NSW, these groups are overrepresented by young people, the elderly, Aboriginal people and people with disabilities (Housing NSW, 2009).

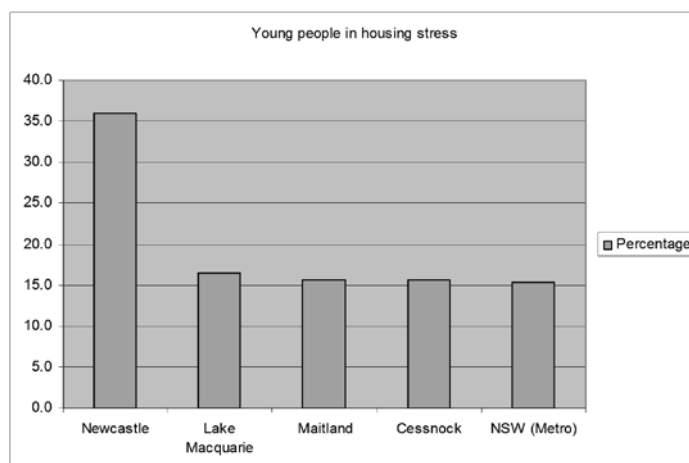
One way Housing NSW examines housing stress for private renters, is to look at Centrelink data, for people who are receiving Commonwealth Rent Assistance (CRA). These are people who are on statutory or very low incomes, who are living in private rental properties and whose rent is high enough for them to qualify for additional financial assistance (Housing NSW, 2009).

When assessing the adequacy of supply of affordable rental housing, it should be noted that lower cost stock is often occupied by moderate and higher income households which are able to compete favourably with lower income households, particularly in a tight rental market (Housing NSW, 2009).

Using Centrelink data, Housing NSW calculated what proportion of people on low incomes in the private rental market and in receipt of CRA are paying more than 30% of their income as an indicator of housing stress. At June 2010, Newcastle had 11,676 private renters in receipt of CRA and over 49% in housing stress (Housing NSW, 2012).

Single person households form by far the largest number of households in housing stress in Newcastle, comprising 76% of all those in stress, followed by single parents (15%). Of the 7,804 CRA recipients who are single person households 56.0% are in housing stress (Housing NSW, 2012).

**Figure 6.5: Young people in housing stress, 2012. Source: NSW Housing.**



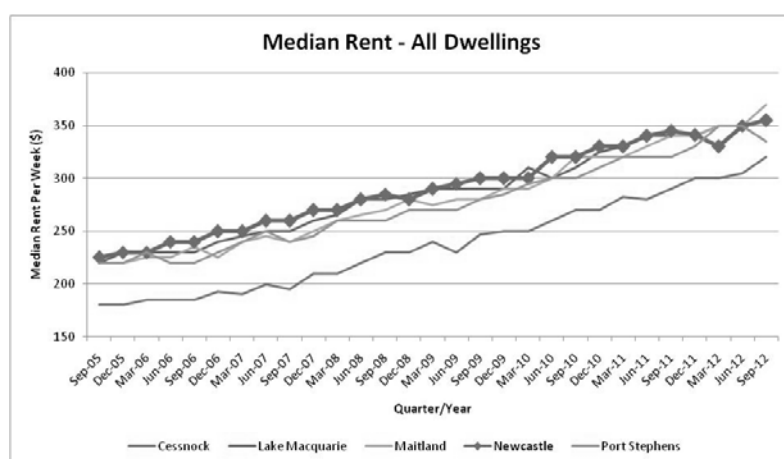
This data indicates that the private rental market in Newcastle is not catering adequately for the needs of lower income households in the private rental market and particularly single person households (Housing NSW, 2012).

This is particularly impacting on young renters, with a huge 36.0% of those in receipt of CRA and in housing stress, aged under 25 years.

At March 2012, the percentage of properties in the private rental market in Newcastle that are theoretically affordable to households on 50 to 80 percent of median income (low income households) was 39.9%. The proportion of affordable private rental housing for low income households in Newcastle at March 2012 is above the average for the Greater Metropolitan Region (GMR)<sup>2</sup> of 13.6% but well below the average of 52.2% in non-metropolitan NSW. Within the Lower Hunter housing market, at March 2012, Maitland had 37.2% of all rental housing theoretically affordable to low income households, Cessnock 59.6% and Lake Macquarie 39.6% (Housing NSW, 2012).

The chart below, prepared by Housing NSW, shows the difference in median rental levels between Newcastle, Cessnock, Maitland and Lake Macquarie local government areas (LGAs) over the period from September 2005 to September 2012. In all four LGAs rents have steadily increased over this period. The median rent price in all LGAs shown, with the exception of Cessnock, is well above the average of non-metropolitan NSW. See Table 6.4 for medium rents within non-metropolitan regions.

**Figure 6.6: Median rents in the Lower Hunter, 2005 to 2012. Source: Housing NSW**



<sup>2</sup> The Greater Metropolitan Region (GMR) refers to Greater Sydney which includes:

*The Inner Ring:* Ashfield, Botany Bay, Lane Cove, Leichhardt, Marrickville, Mosman, North Sydney, Randwick, Sydney, Waverly & Woollahra. *Middle Ring:* Auburn, Bankstown, Burwood, Canterbury, Canada Bay, Hunters Hill, Hurstville, Kogarah, Ku-ring-gai, Manly, Parramatta, Rockdale, Ryde, Strathfield & Willoughby.

*The Outer Ring:* Baulkham Hills, Blacktown, Blue Mountains, Camden, Campbelltown, Fairfield, Gosford, Hawkesbury, Holroyd, Hornsby, Liverpool, Penrith, Pittwater, Sutherland, Warringah, Wollondilly, Wyong.

*Rest of GMR:* Cessnock, Kiama, Lake Macquarie, Maitland, **Newcastle**, Port Stephens, Shellharbour & Wollongong.

At September 2012, the median rent in Newcastle for one bedroom dwellings (all dwellings – houses and units) was \$238 (up 13.3% in the last 12 months). Median rent for two bedroom dwellings was \$350 (up 6.1% in the last 12 months); \$400 (with a 2.6% increase in the last 12 months) for three bedroom dwellings and \$522.5 (up 13.6% in the last 12 months) for four or more bedroom dwellings. Over the period shown, median rents in Newcastle have grown at a steady rate (Housing NSW, 2012).

**Table 6.4: Medium Rents in Newcastle and surrounding Regions. Source: Housing NSW, 2012**

LGA	One bedroom	Two bedroom	Three bedroom	Four+ bedrooms
Newcastle	\$238 (13.3%)	\$350 (6.1%)	\$400 (2.6%)	\$522.5 (13.6%)
Lake Macquarie	\$210 (5.0%)	\$330 (10.0%)	\$390 (8.3%)	\$490 (6.3%)
Cessnock	\$193 (13.2%)	\$270 (10.2%)	\$300 (0.0%)	\$400 (5.3%)
Maitland	\$185 (2.6%)	\$300 (7.1%)	\$350 (4.5%)	\$440 (4.8%)
Greater Metro Region	\$400 (2.6%)	\$435 (3.6%)	\$435 (2.4%)	\$530 (0.0%)
Non-metro NSW	\$170 (12.9%)	\$235 (6.8%)	\$300 (3.4%)	\$470 (2.2%)

Vacancy rates are another indicator of the state of the rental market. According to the Real Estate Institute of NSW, vacancy rates in the Hunter for November 2012 were 1.7% and were 1.6% in Newcastle. Vacancy rates have been very tight (below 3.0%) in the Hunter for some time (Housing NSW, 2012).

According to Housing NSW, a 3% vacancy rate represents a balance between supply and demand for rental housing. Less than three percent represents a shortage and can lead to additional pressure on rental costs (Housing NSW, 2013).

“Housing stress does more than just reduce household spending power. It has a significant effect on people’s ability to get a job; it adds stress to relationships; makes it difficult for children to be educated; and, in extreme cases, can lead to homelessness. It also divides our cities and regions into separate enclaves of affluent and poor.” St Vincent de Paul Society, 2007.

## Key workers

The term “key worker” broadly refers to workers who provide essential community services including nurses, teachers, police, fire fighters and social workers. Generally, key worker roles are low to medium paid and may be excluded from living close to work because of housing costs. They may also be burdened by poor access to transport as many of these roles are shift work and peripheral locations are less well serviced.



At the 2011 Census, the City of Newcastle had a labour force of 74,542 persons. The three most popular industry sectors were:

- Health Care and Social Assistance (11,204 people or 15.9%)
- Retail Trade (7,337 people or 10.4%)
- Education and Training (6,638 people or 9.4%).

In combination these three industries employed 25,179 people (35.8%) of the total employed resident population. Health care and social assistance related jobs will continue to play an important role into the future of Newcastle particularly with an ageing population and continued growth of the City's medical facilities.

Housing must meet the needs of key workers.

**Box 6. Implications for the Local Planning Strategy**

Encourage a diversity of housing near employment opportunities and centres.

Protect major employment lands to cater for future needs of residents.

## Social Housing

Social housing is a form of affordable rental housing and comprises subsidised housing that provides a secure, affordable rental option for people on low incomes. Social housing is provided by public authorities such as Housing NSW, community housing providers and other not for profit organisations (The Department of Planning and Infrastructure, 2011).

The need exists to ensure that rent levels are affordable for low income residents while enabling social housing providers the opportunity to purchase dwellings close to essential services and facilities (The Department of Planning and Infrastructure, 2011).

Public housing accounts for the largest form of social housing. As at December 2009, there were 3,496 tenants in public housing in Newcastle. Just under half of all public housing tenants were aged between 25 and 54 years (47.8%) compared with 48.3% across NSW. Conversely, there is a slightly higher proportion of public housing tenants under the age of 25 (2.2% compared with 2.0% across NSW).

Approximately 67% of tenants in public housing are single person households (compared with 49.8% across non-Metropolitan NSW). The proportion of single parent households (11.1%) is lower than the NSW average (16.7%) while the proportion of couple with children households (5.7%) is slightly higher than the NSW average (5.4%) (Housing NSW, 2011).

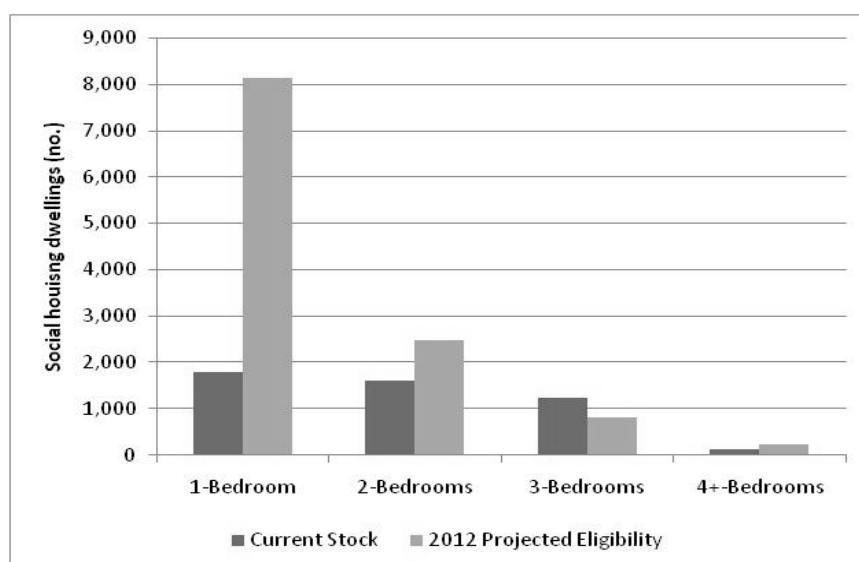
Over one-third of public housing tenants in the City of Newcastle receive the Disability Support Pension while approximately one quarter receives the Age Pension. Compared with the NSW average, a significantly higher proportion of tenants are receiving the Disability Support Pension (42.3% compared with 28.5% for NSW), while a lower proportion of public housing tenants are receiving benefits through the Parenting Payment Scheme (7.9% for Newcastle compared with 14.8% for NSW) (Housing NSW, 2011).

An analysis of the gap between current social housing stock and projected eligibility for social housing across NSW has been used to identify markets in which projected unmet need was greatest. This analysis places the Lower Hunter region in the second lowest quartile in terms of unmet need. This means that the gap between current stock and projected eligibility is relatively low compared with other housing markets (Housing NSW, 2011). See Table 6.5 for projections until 2021. It is estimated there will be 34,057 social housing eligible household in the Lower Hunter in 2021.

**Table 6.5: Projected social housing requirements in the Lower Hunter. Source: Housing NSW.**

LGA	2021 One Bedroom Required	2021 Two Bedrooms Required	2021 Three Bedrooms Required	2021 Four or more Bedrooms Required	2021 Total SH eligible HH (excluding Purchasers)
Cessnock	1,543	599	320	108	2,571
Lake Macquarie	7,078	2,408	1,277	529	11,292
Maitland	2,207	903	508	198	3,815
Newcastle	8,116	2,472	819	235	11,642
Port Stephens	3,093	950	464	230	4,737
<b>TOTAL</b>	<b>22,037</b>	<b>7,332</b>	<b>3,388</b>	<b>1,300</b>	<b>34,057</b>

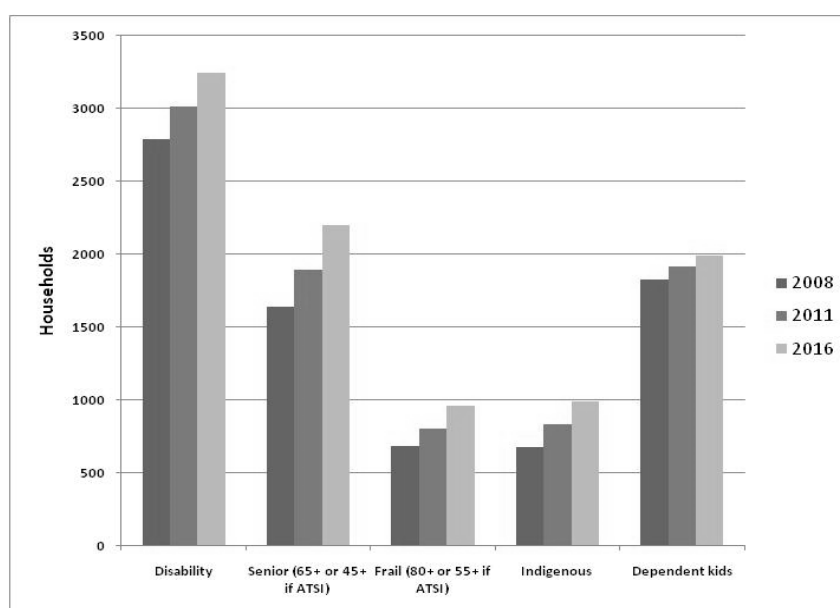
A comparison between projected social housing eligibility (as at 2021) and current social housing stock suggests that a significantly higher proportion of one and two-bedroom properties will be required. While the number of three-bedroom dwellings exceeds projected eligibility, there is also a smaller gap between the current stock of four-bedroom dwellings and projected eligibility (Housing NSW, 2011).

**Figure 6.7: Current social housing stock in Newcastle compared with 2021 projected eligibility Source: Current stock - LHC data files, Oct 2010; Projected eligibility – Housing Analysis and Research Unit.**

In 2011, it was estimated that of those households eligible for social housing in Newcastle, approximately 3,000 were headed by a person with a disability. This is followed by the number of households with dependent children (1,917 in 2011), with the third most significant category being households headed by a senior (1,894 in 2011).

The groups expected to grow the most significantly by 2016 are indigenous households followed by frail-aged households. The number of indigenous households is expected to grow by 46.5% between 2008 and 2016 and the number of frail-aged households is expected to grow 41.2% (Housing NSW, 2011).

**Figure 6.8: Projected housing need in Lower Hunter housing market.** Source: Current stock - LAHC data files, Oct 2010; Projected eligibility – Housing Analysis and Research Unit.



Council has had some involvement in the direct provision of affordable housing through the Building Better Cities Scheme. This federally funded scheme was established in 1996 involving a partnership between Council, Housing NSW and the then Hunter Development Corporation. It is unclear at this stage whether the committee will continue. Regardless of this, the Local Planning Strategy is seen as a means to facilitate the delivery of affordable homes.

## Homelessness

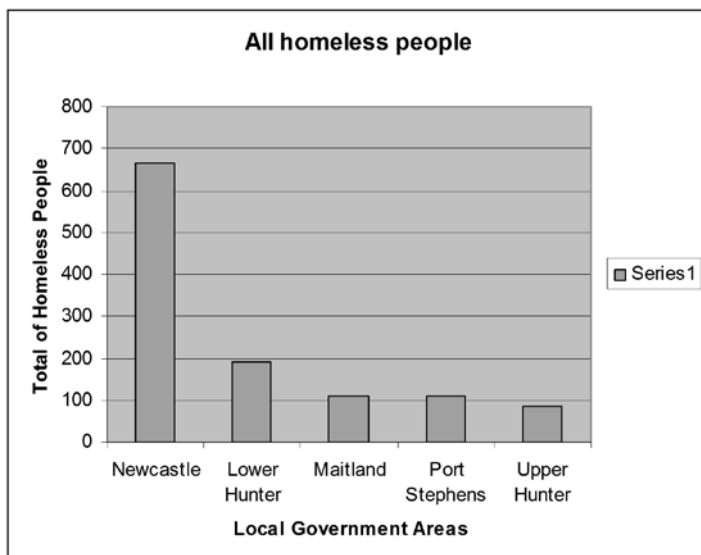
At the 2011 Census 667 people were recorded to be homeless in Newcastle. The break down of homeless people is shown in Figure 6.9.

With many homeless people, homelessness is not the only issue to be addressed.

“Homeless people may be escaping domestic violence or abuse, may have a range of health problems including mental health and substance abuse, may have a disability, live in a disadvantaged community, may be unemployed and have inadequate income, be exiting prison or the juvenile justice system and have nowhere to go or some combination of these issues” (Housing NSW, 2009).

There is a large number of homeless people in Newcastle compared to the rest of the Hunter Region.

Figure 6.9: All homeless people in the Lower Hunter, 2011. Source: 2011 Census.



## Boarding Houses

A boarding house provides a form of low cost rental housing for a wide range of tenants. A boarding house generally includes individual bedrooms and some shared facilities like kitchen, bathroom and common areas.

This style of accommodation is particularly prevalent in Newcastle possibly because of a lack of affordable housing options, a high number of low socio-economic households and perhaps as an option for student housing. Since 31 July 2009, 30 development applications for boarding houses have been approved in the City of Newcastle (as at June 2013). On top of this, 8 new DAs for boarding houses await determination (June 2013).

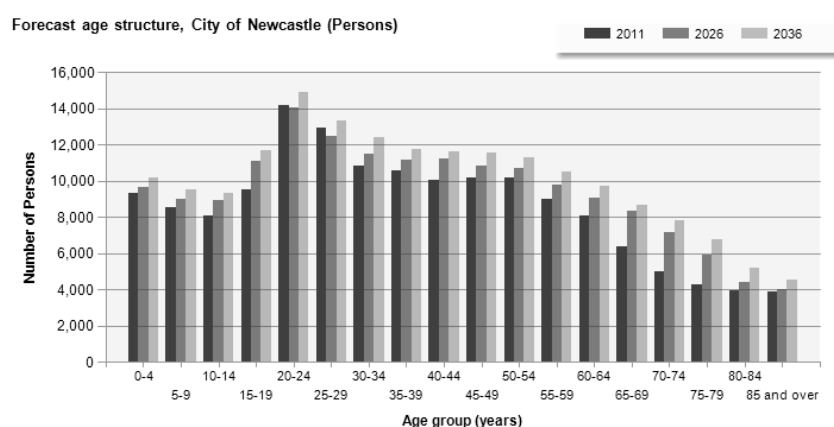
It should be noted that this is one form of housing and may not suit all household types. Boarding houses need to be managed well to ensure the safety of all tenants.

**Table 6.6: Total number of DAs for boarding houses, The City of Newcastle 31 July 2009 to 6 March 2013.**

Suburb	Number of boarding houses approved
Mayfield	8
Jesmond	5
Newcastle	4
Waratah West	4
Waratah	2
Adamstown	2
Hamilton	2
Mayfield West	2
Birmingham Gardens	2
Cooks Hill	2
The Junction	1
Islington	1
Wickham	1
Beresfield	1
Wallsend	1
<b>Total</b>	<b>38</b>

## Housing older people

At the 2011 Census there were 16,803 people (11.3%) over the age of 70 living in Newcastle. The 70-74 year old age group is forecast to have the largest proportional increase (relative to its population size) by 2026, who are forecast to increase by 42.3% to 7,134 persons.



Providing housing for an ageing population is a major challenge. There will be an increasing demand for age-appropriate housing which is reinforced by the governments support for ageing-in-place and non institutional care options. Age appropriate housing refers to housing that meets the needs of a person throughout the life cycle. For example, a single space may be at different times a home office, teenage retreat, family study or bedroom for an elderly relative. In addition, one large family home could be split into two smaller dwellings to accommodate smaller households. In doing this the option exists to remain in ones familiar environment.

Our ageing population value the following:

- security, where they can stay in a familiar environment rather than move to residential aged care
- the ability to maintain independence in their own community
- housing that is appropriate and suitable for their longer term needs
- accessibility to transport, support services, family and friendship networks
- housing that is affordable and
- neighbourhoods that are quiet and close to other older people (Housing, 2006).

Housing will need to address the above values. Housing should be diverse, well serviced and adaptable with changing circumstances. The concept of adaptable housing will allow ageing in place. Universal housing can also allow for aging in place. Universal housing allows for appropriate fittings and fixtures (eg. lower light switches and door handles), wider corridors and doorways, ramps and lifts if necessary and more. Universal housing encourages a more sustainable long term plan for housing the elderly (less demolition and construction costs, etc).

#### **Box 7. Implications for the Local Planning Strategy**

Encourage adaptable housing so people have the option to age in place. **Appendix A** suggests changes to the Newcastle LEP and DCP 2012 to encourage adaptable housing.

Encourage Safe, Assessable, Friendly and Efficient neighbourhoods. See **Appendix B** for more on the SAFE criteria.



## Housing younger people

In 2011, the most populous age group in the City of Newcastle was 20-24 year olds, with 14,165 persons. This represents almost 9% of all residents. This is a larger percentage than regional NSW which equated to just under 6%. The large number of young people may be due to the University of Newcastle, TAFE, employment opportunities and more.

Youth are particularly vulnerable in terms of housing. Safe, secure and affordable housing is particularly critical for young people who cannot live with their parents, or are making the transition to independent living. A shortage in affordable and well located youth accommodation can result in homelessness as generally youth are on lower incomes. Youth accommodation should be in proximity to educational institutions or employment as this is generally where they wish to live.

The following is a common trend affecting youth accommodation across Australia:

- A significant number of young people living independently spend more than 30% of their income on housing eg. they are in housing stress.
- There is a lack of affordable rental housing near tertiary institutions in the inner suburbs for students.
- Difficulties included paying up front housing costs, including bond, rent in advance, connection fees for essential services.
- Young people also cited that the housing available was in poor condition and discrimination by estate agents or landlords as housing issues (Housing NSW, 2009).

### Box 8. Implications for the Local Planning Strategy

Encourage growth around the university, centres and public transport.

Encourage a diversity of housing near the university.

## Caravan Parks

Newcastle has a single caravan park, offering permanent accommodation, the Palm Valley Motel and Home Village at Tarro. At 2011 there were 56 caravans or 'caravan like accommodation' for permanent residents recorded within Newcastle. There are trends across NSW in regards to declining numbers of caravan parks for short stay and permanent residents. Housing NSW stress the importance of retaining or supporting caravan park type accommodation as they provide housing choice to people with limited housing options, both for purchase and rental. Caravan parks provide housing to people who may not have the references to access housing in the private rental market, who may not be able to afford anything else or who need flexibility. The closure of caravan parks or manufactured home estates or conversion to tourist sites or other uses or the absence of this housing form reduces housing options available for people on low incomes. Given the decline in the number of caravan parks across NSW, when a caravan park is redeveloped or there is a switch from long term to short term sites, residents are at risk of homelessness.

The home village component of the Palm Valley Motel and Home Village at Tarro has plans to expand indicating a demand for this type of low cost housing.

Again, this type of housing may not suit all households. It is also worth noting, that there can also be unforeseen costs involved.

## Secondary Dwellings

A secondary dwelling, traditionally known as a 'granny flat' is a self-contained dwelling that may be located within, attached to or separate from the main dwelling on the one property.

More secondary dwellings can increase the supply and diversity of affordable housing. A secondary dwelling can add value and flexibility to one's home. An additional dwelling can provide space for elderly to age in place while allowing a full time carer to live close or provide housing for younger people or simply lease out.

Secondary dwellings up to a floor area of 60m<sup>2</sup> are permitted (with consent) in all of Newcastle's residential zones.

## Medium Density Living

There has started to be a shift in focus towards smaller, well designed, low-rise medium density homes that offer affordable options. They are seen to be desirable because they:

- are less expensive to build
- Do not need major site amalgamation
- Perform better environmentally than most high-rise housing
- Can deliver a greater mix of more affordable housing types
- Fit into existing streets and neighbourhoods
- Suit a wide range of demographic groups (The Department of Planning, 2011).

Multi dwelling housing and Residential Flat Buildings are allowed in the R2 Low Density Residential, R3 Medium Density and R4 High Density Residential Zones.

## 2. Residential development in Newcastle

### *Delivery of housing*

There are a number of stakeholders involved in the delivery of housing in New South Wales. A brief description of each role is provided below.

There are a number of different systems for the assessment of new developments within New South Wales. These systems are specifically tailored to cater for varying size, nature and complexity of different projects. These factors will determine which assessment system applies to a particular development (NSW Planning & Environment).

### **Role of state government**

The State Government prepares the Lower Hunter Regional Strategy and other regional strategies that broadly identify where new growth is to be accommodated. The State Government administers the legislation and policy that regulates much of housing delivery in NSW. In particular, the Environmental Planning and Assessment Act 1979 (EP&A Act) and subordinate instruments such as State Environmental Planning Policy (SEPP) 65 – Design Quality of Residential Flat Development, SEPP (Exempt and Complying Development Codes) 2008, SEPP (Housing for Seniors or People with a Disability) 2004 and SEPP (Affordable Rental Housing) 2009. A list of SEPPs related to housing can be found later in this chapter under Statutory and Policy Context.

The Department of Planning and Environment (NSW Government body for Planning) is predominantly responsible for assessing applications under the State significant assessment system for projects whose size, complexity, importance or potential impacts mean they are of State, rather than local or regional significance.

The State Government has committed to doing more to promote the delivery of housing and is a key goal under the NSW Planning system reform.

### **Role of local government**

Local government establishes a pattern of land use that is regulated by its Local Environmental Plan (LEP) as a series of zones and development controls which includes controlling location of housing types and density. This is generally informed by a planning strategy or equivalent. The Local Planning Strategy aims to fulfil this purpose. The Local Government administers the LEP and may change the LEP to achieve a desired pattern of

development. Statutory controls are supplemented with development guidance presented as development control plans. Local government must ensure that sufficient land is available to meet the projected demands for housing, employment and community uses as well as protecting lands for recreation and environmental purposes.

While it is not Council's responsibility to ensure the feasibility of private development, it is important that Council's controls enable development to be able to respond to market demand. Facilitating economically sustainable development is therefore important but cannot be the sole consideration. Other issues that are important to the community also need to be considered and may require intervention through planning controls to address. For example, this chapter has not only established a need to cater for population increases but has also identified shortfalls in terms of housing diversity (type and size) and also adaptability to ensure residents can age in place. **Appendix A** contains some suggested changes to planning controls to assist in addressing these later issues.

#### **Box 9. Implications for the Local Planning Strategy**

Examine planning controls for residential development to determine their impact on efficient housing delivery. In particular consider merits of small lot housing, particularly in new neighbourhoods and also compatibility of single dwellings provisions within DCP with those within the complying development SEPP.

Development under Part 4 (of the EP&A) is administered by Council as a development application. An application is assessed against the LEP and DCP controls and a decision issued. Single dwellings may be assessed as complying development (subject to specific requirements) and enjoy reduced approval timeframes. Higher density housing such as dual occupancies, multi-unit dwellings and residential flat buildings are assessed by officers and may be subject to public consultation and the elected Councils approval.

### **Role of development industry**

The development industry will interpret the housing market, determine the feasibility of development and invest money into the housing market.

The development industry has a role in increasing private housing supply and encouraging diversity.

## **Role of other housing providers**

Housing NSW is an agency of the NSW Department of Family and Community Services who provide social housing and a range of housing solutions to meet the needs of the community.

Housing NSW work with the community and development industry to provide “safe, decent and affordable housing opportunities for those most in need so that they can live with dignity, find support if needed and achieve sustainable futures” (Housing NSW, 2012).

Housing NSW operates under the Housing Act 2001 to manage the New South Wales Government’s housing portfolio and develop broader housing strategies. It is also responsible for administering the various Commonwealth and State Housing Agreement Acts.

Housing NSW provides long-term subsidised rental housing through three sectors, commonly known as social housing:

*Public Housing:* Housing NSW directly manages approximately 122,000 properties.

*Community Housing:* Housing NSW provides more than 19,000 properties through community housing providers.

*Aboriginal Housing:* Housing NSW manages more than 4,300 properties on behalf of the Aboriginal Housing Office.

## **Building Approvals**

Residential building activity depends on many factors that vary with the state of the economy including interest rates, availability of mortgage funds, government spending and business investment. Large financial changes such as the 2008/09 GFC are observed in the building approvals data, however the number of approvals fluctuate substantially from year to year simply as a result of the short-term nature of many construction projects and the cyclical nature of the building industry.

According to the ABS (2011), there have been 14,529 residential building approvals<sup>3</sup> in Newcastle since June 1995. Out of the total number of residential building approvals, 43% were single dwellings and the remaining 57% were dual occupancies, secondary dwellings, multi dwellings, residential flat buildings or other buildings for residential purposes.

Over this period building approvals have averaged a total of 900 per year, 43% of these are for single dwellings and 57% for other dwellings. This is consistent with the longer term trend. The Lower Hunter Regional Strategy estimates a projected 20,500 dwellings until 2031 which would equate to approximately 820 a year.

**Table 6.7: Building Approvals, The City of Newcastle. Source: ABS Census 2011.**

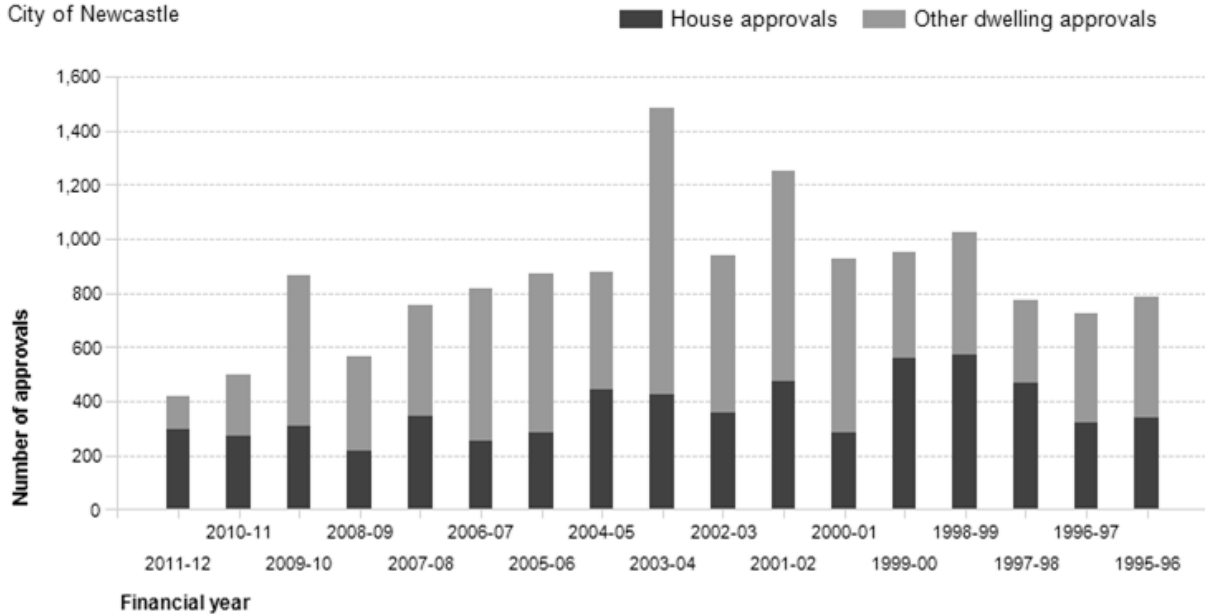
City of Newcastle	Number			Annual change		
Year (ending June 30)	Houses	Other	Total	Houses	Other	Total
2011-12	296	125	421	+25	-100	-75
2010-11	271	225	496	-36	-331	-367
2009-10	307	556	863	+92	+203	+295
2008-09	215	353	568	-129	-58	-187
2007-08	344	411	755	+88	-149	-61
2006-07	256	560	816	-30	-24	-54
2005-06	286	584	870	-158	+150	-8
2004-05	444	434	878	+18	-623	-605
2003-04	426	1,057	1,483	+68	+476	+544
2002-03	358	581	939	-115	-198	-313
2001-02	473	779	1,252	+190	+133	+323
2000-01	283	646	929	-277	+256	-21
1999-00	560	390	950	-12	-60	-72
1998-99	572	450	1,022	+105	+143	+248
1997-98	467	307	774	+145	-97	+48
1996-97	322	404	726	-18	-43	-61
1995-96	340	447	787			

<sup>3</sup> This data does not include alterations and additions to existing dwellings and reflects actual numbers of approvals rather than the number of dwellings approved per site.



## Building approvals, houses and other dwellings

City of Newcastle



### *Council Approved Development Applications*

**Appendix C** shows a breakdown of Council approved development applications for residential development from 1 February 2007 to 30 June 2012.

During this period three quarters (75%) of dwelling approvals were single dwellings. The highest number of single dwelling approvals over the past 5 years was at:

1. Fletcher (35%)
2. Adamstown (11%)
3. Wallsend (9.5%)
4. Merewether (8%)

The high number of single dwelling approvals at Fletcher may be due to large release of greenfield sites now available for future development and the delivery of that housing type by the development industry. The highest number of ‘other’<sup>4</sup> dwelling approvals in the past 5 years was at:

- Wallsend (17%),
- Merewether (8%),
- Mayfield (7%) and
- Adamstown (6%).

The majority of ‘other’ residential dwelling approvals were dual occupancy (equating to 54% of other dwellings), followed by 3 dwellings or more (43%) and secondary dwellings (3%).

The majority of dual occupancies were approved at Wallsend (20%), Merewether (12%), Adamstown (10%) and Beresfield and Tarro (8%). A large proportion of 3 or more dwellings were approved in Wallsend (14%), Mayfield (9%) and Jesmond (8%).

The highest number of dwellings being demolished in the past 5 years included Merewether (19%), New Lambton (10%), Adamstown (6%), Hamilton South and East (6%) and Mayfield (5%). A high volume of activity was also seen in alterations and additions in New Lambton (9%), Wallsend (7%), Mayfield (5%) and Hamilton South and East (5%).

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<sup>4</sup> Other’ is defined as a dual occupancy, secondary dwelling, multi dwelling, residential flat building or building for long term residential purposes. This data does not include alterations and additions to existing dwellings and reflects actual numbers of approvals rather than the number of dwellings approved per site.

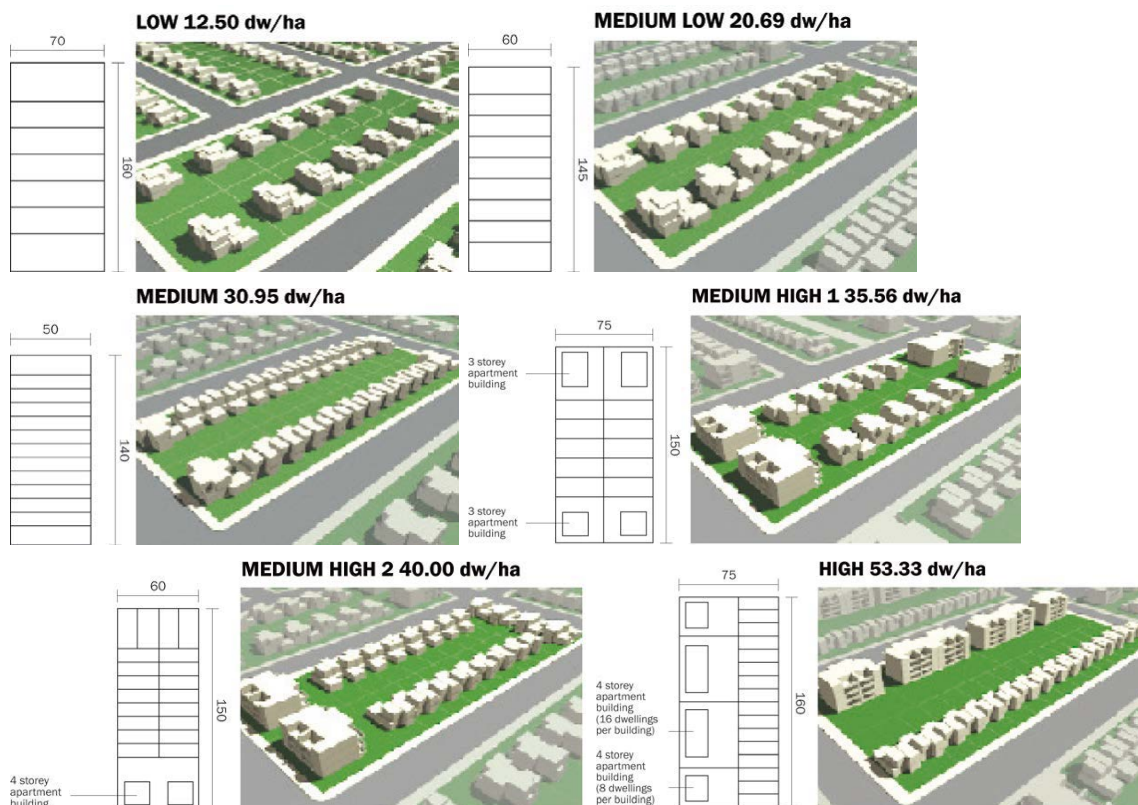
### 3. Residential densities and policy

#### *Residential Development Strategy*

The Residential Development Strategy (RDS) is a component of the Newcastle Urban Strategy (NUS). The RDS sought to promote greater densities within a walkable distance from town centres and train stations where a neighbourhood satisfied the SAFE criteria. The criteria assesses whether a neighbourhood is Safe, Assessable, Friendly and Efficient. Refer to **Appendix B** for more detail. Each centre and train station catchment was 'ground truthed' in 2009 which resulted in an update to the strategy and informed the Newcastle Local Environmental Plan 2012 so that the R3 Medium Density Residential and R4 High Density Residential zones are in proximity to centres and transport nodes.

#### Density

Density can be described differently depending on what is being measured. Typical measurements are *population density* (number of residents), *residential density* (number of dwellings) and *activity density* (number of people – not necessarily residents). Most often residential density is used for planning purposes and is expressed as dwellings per hectare. The diagrams below illustrate different scales of density.



Residential density is an important concept for a residential strategy for a City. Many people associate ‘high density’ with residential towers typical of inner Sydney, Melbourne and Brisbane. This is not necessarily the case. Many cities in the world achieve high residential densities in building forms other than residential flat buildings and residential towers. An example of high density residential development in Newcastle is Honeysuckle where there are over 50 dwellings per hectare. As a comparison Cooks Hill at 40 dwellings per hectare is only slightly lower. An example of lower density residential development is Maryland where there are 10 dwellings per hectare.

Appropriate density in well considered built forms can be very beneficial to communities and neighbourhoods by increasing activity, vibrancy and social mix. Appropriate levels of density around neighbourhood and local centres helps support these businesses and where located on public transport routes and around public transport nodes, encourages the use of public transport thereby reducing car trips.

#### **Box 10. Implications for the Local Planning Strategy**

Ensure that anticipated growth can be accommodated.

In Newcastle, density is managed by zoning and development controls in the Local Environmental Plan (LEP). The primary development controls for density are floor space ratio (FSR), height of buildings (HOB) and minimum lot sizes (LSN). These are used by architects and building designers to produce a building form. Council has more detailed development guidance in some areas and for some development types under the development control plan.

Density can also be altered by minimising lot size. The LEP currently restricts vacant residential development lots to 400m<sup>2</sup> or 450m<sup>2</sup>, depending on location. Smaller lot size down to 200m<sup>2</sup> can only be considered in conjunction with a dwelling designed for the smaller lot. In this case the dwelling must be constructed prior to the lot being created. This can add costs to development, which are then passed onto future buyers and compromise affordability.

Providing a mix of lot sizes at subdivision stage in urban release areas may also facilitate housing diversity as opposed to relying on traditional multi dwellings housing developments.

The aerial photographs below indicate different scales of residential density achieved in the City of Newcastle. Left to right includes examples of low to higher density. As you can see high density does not necessarily have to be high rise. Look at Cooks Hill for example.

<b>Low Density</b>	<b>Density (dwellings per hectare)</b> 1 dw/ha	<b>Density (dwellings per hectare)</b> 10+ dw/ha
		
<b>Medium Density</b>	<b>Density (dwellings per hectare)</b> 20+ dw/ha	<b>Density (dwellings per hectare)</b> 30+dw/ha
		
<b>High Density</b>	<b>Density (dwellings per hectare)</b> 40+ dw/ha	<b>Density (dwellings per hectare)</b> 50+dw/ha
		

#### Box 11. Implications for the Local Planning Strategy

Review minimum lot sizes for residential subdivision. Refer to clause on lot sizes in **Appendix A**.

## 4. Statutory and Policy Context

The following provides a summary of the statutory and policy context that applies to residential lands.

### ***State Government Policy Making***

#### **Newcastle Urban Renewal Strategy 2014 (Draft)**

The Newcastle Urban Renewal Strategy 2014 was released by the NSW State Government and provides the detailed strategic planning for the Newcastle city centre. The strategy projects an additional 6,000 additional dwellings in the Newcastle City Centre by 2036.

The strategy includes the following vision for the Newcastle City Centre:

“Newcastle will continue to grow and evolve to strengthen its position as the Hunter region’s capital. The city centre’s location and setting between the river and ocean make Newcastle a compact, people friendly city with unique attributes.

Newcastle city centre will be a vibrant regional hub and attractive destination for businesses, residents and visitors, providing accessible and suitable employment opportunities, a choice of retail and other services, and local, national and international investment opportunities.”

Principle seven of the strategy relates to housing mix and affordability:

#### **Principle Seven**

Delivering of more residential development in the city centre will enhance vibrancy and viability through increased day and night activity, and support for jobs and services. Encourage a range of housing types for a variety of markets, including student and seniors housing.

Following the release of the Strategy the NSW Government made amendments to zones and development controls in the Newcastle LEP 2012 and also prepared a development control plan to help guide development in the city centre.

One of the main changes affecting residential zoned land in the city centre is the introduction of R4 High Density Living in Newcastle East and West. The strategy also encourages the retention of heritage items and adaptive re-use.



## Lower Hunter Regional Strategy 2006

The [Lower Hunter Regional Strategy \(LHRS\) 2006](#) estimated that an additional 20,500 dwellings will be required to house Newcastle's growing population by 2031. The strategy prepared by NSW Department of Planning and Environment is currently being reviewed and these figures will likely be revised downward to reflect changes in actual growth that has occurred since the LHRS was prepared.

The strategy recognises that new housing needs to reflect changing housing demands including reduced occupancy rates, smaller households, growing number of lone person and single person parent households as well as a decline in couples with dependent children.

The strategy also identified that while housing affordability is more affordable in the Lower Hunter than other parts of the greater metropolitan region, it is still an issue that needs to be addressed.

To overcome challenges the strategy proposes that:

- An adequate supply of land is zoned for residential purposes to cater for the housing needs and changing population.
- Local planning is undertaken to enable increased housing densities in-and-around centres to support existing infrastructure and services and facilitate revitalisation.
- Local plans and strategies will provide for a mix of housing types and densities near jobs, transport and services, and ensure centres and corridors are planned to have the capacity to accommodate their agreed dwelling projections.
- Local planning will adopt the neighbourhood planning principles in new areas.
- Local plans will consider appropriate affordable strategies tailored to local opportunities to improve housing affordability.
- Local environmental plans should align with the strategy.

The first stage of review is the discussion paper that was released for comment in March 2013.



## **The Lower Hunter over the next 20 years: A discussion Paper, March 2013**

The NSW Department of Planning and Environment has released a discussion paper on the delivery of sustainable growth, within the Lower Hunter, over the next 20 years. The paper will ultimately guide a revised version of the Lower Hunter Regional Strategy, 2006-31.

The discussion paper highlights the number of challenges affecting current housing supply in the Lower Hunter such as land being reserved for biodiversity offsetting, lack of infrastructure to both stimulate and support housing, lack of certainty financing development and changing housing preferences. The paper suggests that Hunter is expected to grow at a faster rate than previous years as economic conditions improve.

### **State Environmental Planning Policies (SEPPs)**

There are a number of SEPPs that interact with the provision of housing in New South Wales. The following includes a list of SEPPs relevant to the City of Newcastle and a brief summary.

#### State Environmental Planning Policy No 65—Design Quality of Residential Flat Development

SEPP 65 aims to raise the design quality of residential flat development across the state through the application of a series of design principles. It provides for the establishment of Design Review Panels to provide independent expert advice to councils on the merit of residential flat development. The accompanying regulation requires the involvement of a qualified designer throughout the design, approval and construction stages.

The Residential Flat Design Code provides tools for improving the design of residential flat buildings and gives guidance on how the design quality principles provided under SEPP 65 can be applied to new developments.

#### State Environmental Planning Policy (Affordable Rental Housing) 2009

The provision and maintenance of affordable housing is one of the objectives of the [Environmental Planning and Assessment Act 1979](#). The NSW Government wishes to support planning policies that encourage the development of affordable housing whilst taking into account the impacts on local needs and character.

Affordable rental housing is housing for low and moderate income earning households. These are currently households with an annual income of up to about \$80,000. This includes people who have no place to live, people on low and moderate incomes and key workers who need to live close to their employment.

This SEPP was introduced in 2009 to increase the supply and diversity of affordable rental and social housing in NSW. It establishes a consistent planning regime for the provision of affordable rental housing. The policy provides incentives for new affordable rental housing, facilitates the retention of existing affordable rentals, and expands the role of not-for-profit providers. It also aims to support local centres by providing housing for workers close to places of work, and facilitate development of housing for the homeless and other disadvantaged people.

#### SEPP (Exempt and Complying Development Codes) 2008

This SEPP aims to streamline assessment processes for development that complies with specified development standards. The policy provides exempt and complying development codes that have State-wide application. It identifies types of development that are of minimal environmental impact that may be carried out without the need for development consent. It also provides types of complying development that may be carried out in accordance with a complying development certificate as defined in the *Environmental Planning and Assessment Act 1979*. The erection of single dwellings is a category of a complying development.

#### State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

The Building Sustainability Index (BASIX) aims to deliver equitable, effective water and greenhouse gas reductions across the state. The SEPP ensures consistency in the implementation of BASIX throughout the State by overriding competing provisions in other environmental planning instruments and development control plans.

#### State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004

The aim of the Housing for Seniors or People with a Disability SEPP encourages the development of high quality accommodation for our ageing population and for people who have disabilities or are on low income- housing that is in keeping with the local neighbourhood.

The Policy does this by setting aside local planning controls that may prevent the development of housing for seniors or people with a disability that meets the development criteria and standards set in the policy.

## Local Government Policy Making

### Newcastle Community Strategic Plan 2030

The [Community Strategic Plan](#) sets a clear community direction for housing and neighbourhoods in Newcastle. The community see the following objectives as important.

**Table 6.8: Extract from the Community Strategic Plan 2030 identifying those strategic directions and objectives that are relevant to housing and neighbourhoods.**

Our Strategic Directions for Newcastle	Our Objectives
<p><b>Liveable and Distinct Built Environment</b></p> <p>An attractive city that is built around people and reflects our sense of identity.</p>	<ul style="list-style-type: none"> <li>• A built environment that maintains and enhances our sense of identity</li> <li>• Mixed use urban villages supported by integrated transport networks</li> <li>• Greater diversity of quality housing for current and future community needs</li> <li>• Best practice energy and water efficient buildings and infrastructure</li> </ul>

### Newcastle Urban Strategy

The [Newcastle Urban Strategy](#) (NUS) is Council's current city-wide land use policy. The NUS is designed to analyse, influence and determine:

- Land use, transport and development practises
- Corresponding social, economic and ecological impacts
- Social and economic trends and their implications for city growth
- The role each neighbourhood and district plays eg residential
- Roles Newcastle plays locally, regionally and globally.

The NUS also includes a residential development strategy (RDS) which seeks to increase residential densities in areas that are well serviced by public transport or are close to centres. The NUS highlights the importance of the SAFE criteria in respect to future growth precincts. The LPS will replace this strategic document.

## Newcastle Local Environmental Plan 2012 (LEP)

The Standard Instrument (Local Environmental Plans) Order 2006 provides for 5 residential zones. The [Newcastle Local Environmental Plan 2012](#) applies 3 residential zones.

**Table 6.9: Residential zones of the Standard Instrument (Local Environmental Plans) Order 2006.**

### Residential Zones

*R1 General Residential*

R2 Low Density Residential

R3 Medium Density Residential

R4 High Density Residential

*R5 Large Lot Residential*

Note: The R1 and R5 zones are not used in the Newcastle Local Environmental Plan 2012.

### Objectives of each zone

Text in **bold** and **red** highlights objectives mandatory under the standard template.

#### R2 Low Density Residential

- **To provide for the housing needs of the community within a low density residential environment.**
- **To enable other land uses that provide facilities or services to meet the day to day needs of residents.**
- To accommodate a diversity of housing forms that respects the amenity, heritage and character of surrounding development and the quality of the environment.

#### R3 Medium Density Residential

- **To provide for the housing needs of the community within a medium density residential environment.**
- **To provide a variety of housing types within a medium density residential environment.**
- **To enable other land uses that provide facilities or services to meet the day to day needs of residents.**
- To allow some diversity of activities and densities if:
  - i. the scale and height of proposed buildings is compatible with the character of the locality, and
  - ii. there will be no significant adverse impact on the amenity of any existing nearby development.

- To encourage increased population levels in locations that will support the commercial viability of centres provided that the associated new development:
  - i. has regard to the desired future character of residential streets, and
  - ii. does not significantly detract from the amenity of any existing nearby development.

#### Zone R4 High Density Residential

- **To provide for the housing needs of the community within a high density residential environment.**
- **To provide a variety of housing types within a high density residential environment.**
- **To enable other land uses that provide facilities or services to meet the day to day needs of residents.**
- To promote a denser urban form along transport corridors while respecting the residential character of adjoining streets.
- To maximise redevelopment and infill opportunities for high density housing within walking distance of centres.
- To provide for commercial development that contributes to the vitality of the street where provided within a mixed use development.

### Newcastle Development Control Plan 2012 (DCP)

The Newcastle Development Control Plan 2012 (DCP) contains local controls for residential development. Controls are generally contained in specific section to residential development however there are number of applicable controls elsewhere in the DCP. The DCP is available at [www.newcastle.nsw.gov.au](http://www.newcastle.nsw.gov.au)

**Appendix A** includes possible changes to the Newcastle LEP and DCP 2012 to encourage diverse and adaptable housing to meet the future needs of the community.

## 5. Residential Lands

There are designated areas where residential development is the primary development type envisaged for that area. These are designated R2 Low Density Residential, R3 Medium Density Residential and R4 High Density Residential.

Residential development is also permitted in a number of other land use zones. This is usually provided in conjunction with other development activities or subservient to other development types. For example, shop top housing is permitted in the B1 and B2 business zones but can only be provided in development where the ground floor is activated by commercial or retail premises.

### *Land uses*

The following table lists the differences of permitted uses<sup>239</sup> in each of the residential zones. The purpose of the exercise is to compare the differences between the zones to make sure the differences are justified. A full list of permitted and prohibited uses is available within the [Newcastle Local Environmental Plan 2012](#).

Legend: **C** Permitted with consent **X** prohibited **I** permitted under Infrastructure SEPP.

	R2 Low Density Residential	R3 Medium Density Residential	R4 High Density Residential
<b>Residential accommodation (group term)</b>	C	C	X
Dual occupancies	C	C	X
Dual occupancies (attached)	C	C	X
Dual occupancies (detached)	C	C	X
Dwelling houses	C	C	X
hostels	X	C	C
Rural worker's dwellings	X	C	X
Semi-detached dwellings	C	C	X
Seniors housing	C	C	X
Residential care facilities	C	C	X
Home business (not in group term)	X	C	C
Backpackers accommodation	X	C	C
Serviced apartments	X	C	C
Business premises	X	X	C
Funeral homes	X	X	C
Office premises	X	X	C
Food and drink premises	X	X	C
pubs	X	X	C
Restaurants or cafes	X	X	C
Take-away food and drink premises	X	X	C
kiosks	X	X	C
Service stations (not in group terms)	X	X	C
Car parks	X	C	C
Health services facilities	X	I	I
hospitals	X	I	I
Medical centres	X	I	I
Health consulting rooms	X	I	I
Places of public worship	X	C	C
Recreation facilities (indoor)	X	X	C
Exhibition homes	C	C	X
Exhibition villages	C	C	X



**Box 12. Implications for the Local Planning Strategy**

The following land uses should be reviewed as part of the Local Planning Strategy:

- To allow home businesses with consent in R2 zone.
- To remove rural workers dwellings from all zones.
- To allow seniors housing in R4 zone.



# Local Planning Strategy

## Chapter 7: **Recreation**

## **Chapter 7 Cover**

Title: My favourite park

The front cover was painted by Rachael Brooks as part of the community consultation undertaken for the Newcastle 2030 Community Strategic Plan. The brief was to *'express in painting the Newcastle the participant would like to see in 20 years time.'*

## ***What is the purpose of this chapter?***

The provision of recreational facilities contributes positively toward the quality of life of the community; hence it is identified as an important factor to consider in the preparation of the LPS.

The aim of this chapter is to ensure future recreational needs of the community are met.

Although this chapter acknowledges issues relating to the delivery of recreational facilities and services by Council, these are otherwise addressed within Council's [Parkland and Recreation Strategy 2014](#). The focus of this chapter is on Council's land use planning provisions and the implications on land zoning, land use permissibility, and development standards.

This is to be achieved through the following objectives.

- Provide an overview of how recreational uses are provided across Newcastle.
- Review the existing statutory and policy framework for delivering recreational uses to the community.
- Identify opportunities and challenges for meeting future recreational needs and expectations of the community.
- Outline the land use implications for the local planning strategy and potential actions arising from these.

The chapter does not make firm recommendation for amending Newcastle Local Environmental Plan 2012 or Newcastle Development Control Plan 2012 but rather identifies matters to be considered or investigated further as actions of the LPS.

The main challenges in providing adequate recreational land in the future include an increased demand due to population growth, increased density, changes in demographics, shift in recreation types pursued, as well as a limit of adequate land and fiscal constraints on Council's budget.

This chapter advocates for the Local Planning Strategy to include criteria for identifying an adequate supply of recreational land when rezoning land within new urban land release areas. In existing urban areas other options to consider include embellishing existing open space to cater for multiple purposes, improving connectivity for pedestrians and cyclists, co-location of community and recreational facilities with public schools, public – private partnership arrangements, private investment opportunities that compliment public recreation

# 1. Role of Recreation

## *What is recreational land?*

Recreation is an activity that people undertake for leisure as part of their discretionary time. These include both organised and impromptu activities and pursuits ([Healthy Active By Design](#)). Hence recreational land includes areas specifically designated for this purpose, whether open space or recreational facilities.

## Open Space

Newcastle's open spaces ranges from large natural areas such as the coastline (with its headlands, bays, and beaches) natural waterways, wetlands, and bushland reserves; as well as including developed spaces such as parks, sportsgrounds, and shared pathways.

This chapter focuses on the recreational aspects of open space land. The conservation values of natural and undeveloped land are already addressed within the 'Environment' chapter.

## Recreational facilities

Recreational facilities includes infrastructure specifically developed for active or passive recreation, such as sportsgrounds, courts, skate parks, swimming pools, indoor recreation centres, playgrounds, shared pathways and fitness stations. Recreational facilities may also include other commercially operated development uses that provide entertainment or otherwise satisfy people's leisure pursuits.

Given this broad interpretation of recreation it may be considered by some that retail outlets are a recreational facility. However, for the purpose of this chapter recreational facilities are those with the primary objective of providing recreation to the broader community and fulfil at least one of the benefits identified below.

## *What are the benefits of recreation land uses?*

## Health and wellbeing

Being physically active is an important part of leading a healthy lifestyle. Scientific evidence clearly links regular physical activity to a wide range of physical and mental health benefits. Other than those who are physically active as part of their employment, most people rely on



recreational facilities and open space to undertake physical activity. This may be through participation in an organised sport or fitness or by informal activities.

The [Premiers Council for Active Living \(PCAL\)](#) identifies parks and other areas of public open space as means for providing local destinations for people to walk and cycle to and be active in; provide exposure to nature, which can be restorative and provide positive mental health benefits.

For children and young families, parks provide a place to meet and for children to participate in physical and social play.

For older people, open space and recreational facilities provide opportunities for social interaction, maintaining healthy bodies, a quality of life, and independence.

The provision of public open spaces and recreational facilities is thus a key factor in promoting active living and providing important physical, psychological and social health benefits for individuals and the community.

It makes neighbourhoods desirable, healthy and attractive places to live and contributes to building social capital and equity.

## **Environmental**

Areas of public open space protect and support a number of significant biodiversity values including natural landscapes, significant flora and fauna and various ecosystems. Population growth, urban development, habitat loss and fragmentation, are placing significant pressure on the city's biodiversity reserves. The protection and enhancement of these biodiversity values within areas of public open space will be critical for the sustainability of the Newcastle ecology.

Areas of public open space also provides for the protection of scenic quality of the cities natural attributes, protects the amenity, character and identity at a neighbourhood and suburb level.

## **Economic**

Quality parkland and recreational facilities provide significant economic opportunities, stimulates economic growth, and improves property values.

Recreation and fitness activities are increasingly being provided by private sector service providers on both private and public lands, which increases employment opportunities and stimulates activity within existing centres.

## ***How are recreational land uses provided?***

### **Land Zoning**

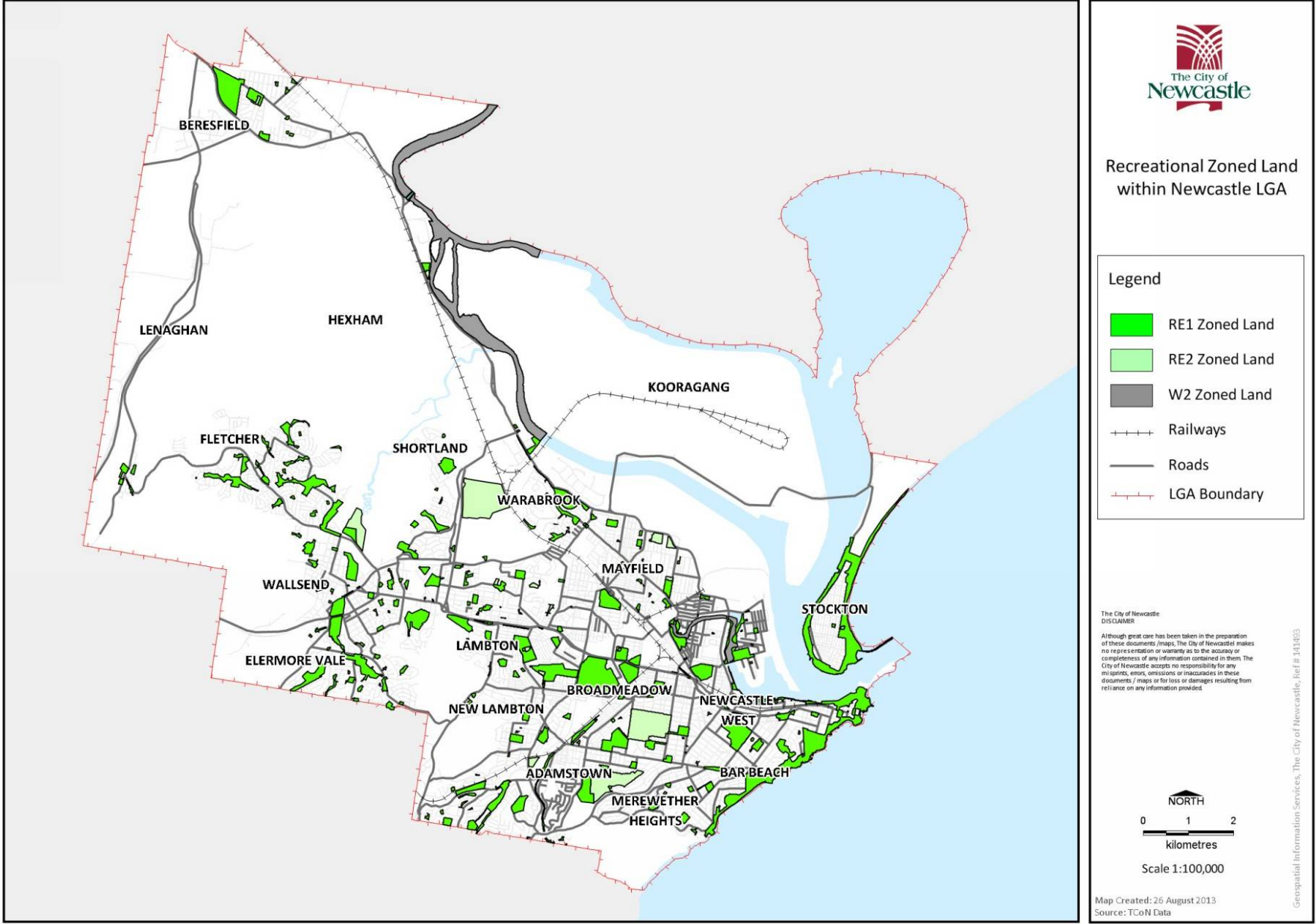
Land set aside predominantly for recreation purposes is currently zoned under Newcastle LEP 2012 as either RE1 Public Recreation or RE2 Private Recreation, dependant on land ownership, and/or management. Furthermore, Newcastle LEP 2012 also zones certain waterways as W2 Recreational Waterways. Map 7.1 shows land zoned for recreation under Newcastle LEP 2012.

Land zoned RE1 Public Recreation is generally either owned by the City of Newcastle or is Crown land (State owned) managed by Council, as the Trustee of the land reservation, and used for community purposes. The zoning is used in conjunction with land classification as a means of indicating that the land is set aside for community purposes. This will be discussed further within this chapter.

The Hunter River and its port provides Newcastle with recreational opportunities, however due to the port related uses the majority of this waterway is zoned SP1 Special Activity under SEPP (Three Ports) 2013. The remaining waterways to which Newcastle LEP 2012 applies are zoned W2 Recreational Waterways and permit a range of uses associated with aquatic recreation.



Map 7.1 – Land zoned for recreation under NLEP 2012



The Environment chapter identifies that certain lands, which are used for recreation purposes, are currently zoned as environmental protection. This is often due to the environmental attributes of the land.

Conversely, much of the land zoned for public recreation within newly released areas in the western part of the city consist riparian corridors with high conservation value but offer little opportunity for formal recreational uses.

Map 7.2 identifies potential areas within Newcastle that require further investigation to ensure that land use zoning reflects the current or intended use of the land. The categories identified include:

- Land currently zoned RE1 Public Recreation that may more appropriately be included within an environmental zone where consisting:
  - bushland
  - coastal wetland
  - water course
  - floodway
  - bushfire category 1 and 2.
- Council owned or managed land NOT zoned RE1 Public Recreation where consisting:
  - sportsground
  - parkland assets
  - and
  - an area of 0.5 hectares or greater (being generally the minimum size for usable open space as per the Newcastle DCP 2012).

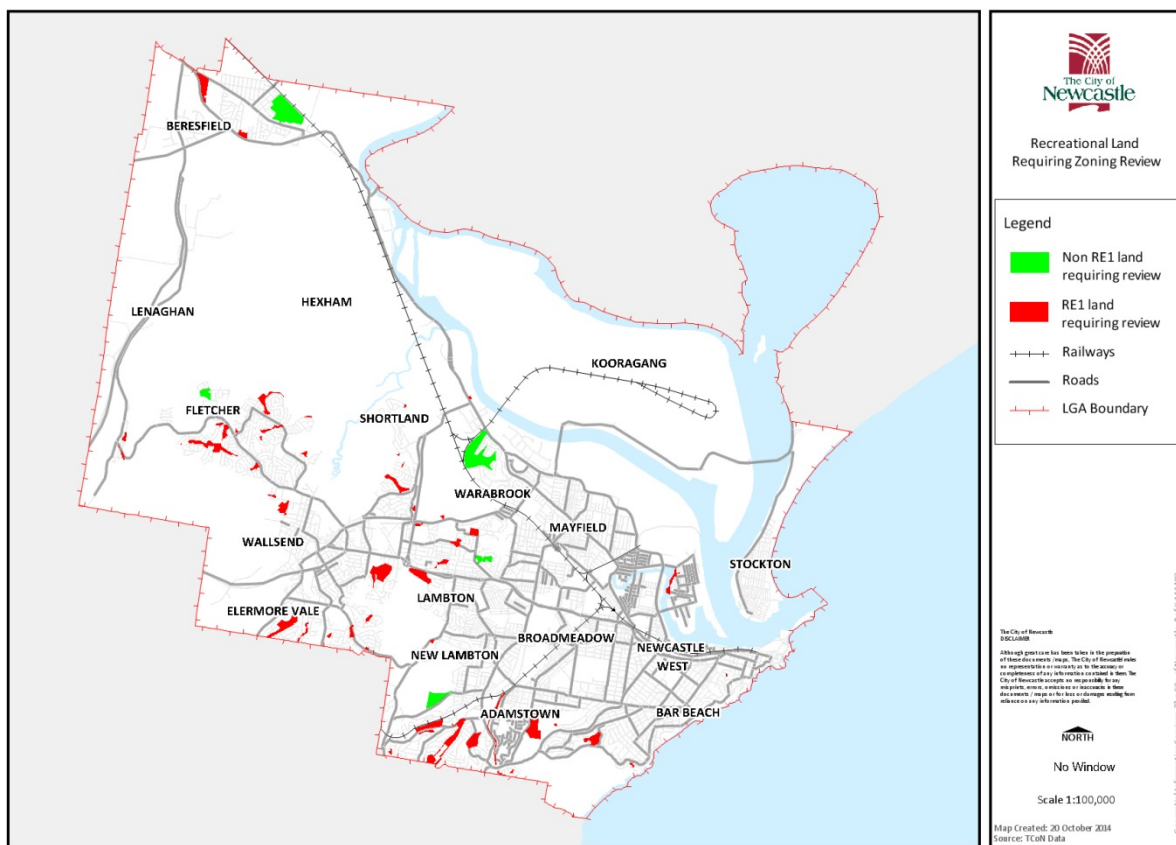
Land zoned RE2 Private Recreation is owned and operated by the private sector or a particular interest group or club. Land zoned RE2 Private Recreation is intended for the provision of recreational uses by paying customers or exclusively by group or club members.

Various forms of private recreational land uses are also permissible in other zones.

#### **Implication for Strategy**

- Review both Environmental and Recreational land to ensure LEP zoning reflects its intended use.
- Consider splitting the zoning on public land where necessary to better reflect the intended purposes of each part.

Map 7.2 – Land requiring zoning review



## Land uses permissibility

Land uses with the primary objective of providing recreation to the broader community are defined under Newcastle LEP 2012, and include such things as Community facilities, Recreation areas, Recreation facilities and Water recreation structures.

Other land uses that are generally operated for paying customers or members may also contribute to peoples recreational pursuits; these include such uses as Amusement centres, Entertainment facilities, Registered clubs, and Food and drink premises.

Furthermore, it should be noted that although Educational establishments are not recreational facilities as such they often contain recreational facilities that are ancillary to their function. These include sportsgrounds, courts, playgrounds, as well as outdoor and indoor recreational facilities.

## 2. Provision of Recreational Land Use

### *How is recreational land governed?*

#### Legal framework

**NSW Local Government Act 1993** outlines the functions, responsibilities, and operations of Local Councils within NSW. The Act requires all land owned by Councils to be classified as community or operational and outlines how community land is categorised and managed through Plans of Management. The Act also outlines the legal process for changing classification of Council owned land.

The classification of land is further described within this paper.

In 2012, the Minister for Local Government, appointed a Local Government Acts Taskforce to develop new legislation to meet the current and future needs of Local Government and the community. The taskforce has reviewed the need for classifying land and has proposed to simplify the current processes for Council land management, and ensure consistency with the Crown Lands regime.

The changes proposed to the Local Government Act will require Councils to:

- Strategically manage council-owned public land as assets through the IPR framework.
- Balance reasonable protections for public land use and disposal where the land is identified as having significant value or importance.
- End the classification regime of public land as either community or operational land and instead, require the council resolution at the time of acquiring or purchasing land to specify the proposed use or uses.
- Provide that a proposed change in the use or disposal of public land, including consultation mechanisms, should be dealt with through the council's asset management planning and delivery program.
- Retain the requirement for a public hearing to be held by an independent person where it is proposed to change the use or dispose of public land identified as having significant value or importance. The results should be reported to and considered by the council before a decision is made and proposals should be addressed through council's community engagement strategy.

- Recognise the LEP zoning processes and restrictions applying to council owned public land.
- Review the prescribed uses to which public land may be applied to accommodate other uses appropriate to the current and future needs of the community.
- Cease the need for separate plans of management for public land to be prepared and maintained, and in lieu, utilise the asset management planning and delivery program.
- Cease the need for a separate report to be obtained from the Department of Planning and Environment where proposed leases and licences of public land are referred to the Minister for Local Government for consideration.

**Crown Lands Act 1989** controls the management and use of crown reserves and how these are managed and administered through a trust. The Act also outlines the roles and requirements of the responsible trustees.

**Environmental Planning and Assessment Act 1979** is the governing legislation for planning and controlling land uses within NSW. Part 3 of the Act relates to the type and hierarchy of instruments, guides and directions that manage the type, location and standards of land uses. Part 4 relates to the assessment, determination, and implementation of land uses.

Council's planning provisions as enabled by this Act include the following:

- **Newcastle Local Environmental Plan 2012 (LEP)** identifies land use zones and the type of development or activities permitted within these. The LEP also contains standards that determine the maximum potential of the land based on its capability, envisaged purpose, and potential impacts. The two factors governing recreation within the LEP are zoning and land uses. The LEP is also used as a means of changing the classification of Council land despite not containing the controlled version of the land register, which lists existing land classification.
- **Newcastle Development Control Plan 2012 (DCP)** guides how development is to be implemented. This includes identifying the minimum requirements of land uses, including new open space being provided to Council.

The Newcastle Development Control Plan (DCP) 2012, (Landscape, Open Space, and Visual Amenity elements) identifies objectives for open space associated with new developments to:

- be meaningful to place and community
- be multi-functional and adaptable

- provides diversity of recreational experience
- encourages social interaction
- be safe, equitable and accessible
- enhances environmental sustainability
- be financially sustainable.

A number of 'controls' or design guidelines are identified to ensure new open space meets the aforementioned objectives. These include:

- The location of parkland within 400m walking distance of all dwellings and 15 minutes drive to a district level facility
- Parkland that is well-sited having regard to the movement network, regular in shape, level, has access to all services, public transport, has road frontage to facilitate access.

Furthermore, the DCP includes criteria for land NOT suitable for parkland to avoid past mistakes of accepting land that will not fulfil the communities' needs and/or results in an ongoing liability to Council. Hence, land considered unacceptable includes spaces that are:

- less than 5000m<sup>2</sup> in area, unless it adjoins existing or identified future public open space
- is required solely to ensure provision or protection of riparian zones
- contains identified bush fire Asset Protection Zones
- has frontage of less than 50m to a public road; and
- serves primarily as a stormwater management or drainage control purpose.

The application of the 'controls' or design guidelines within the Newcastle DCP (2012) to existing parkland throughout the LGA would identify a number of deficiencies.

- **Development Contributions Plan** prepared by Council under section 94 and 94A of the *Environmental Planning and Assessment Act 1979* in order to identify future infrastructure needs resulting from an increase in population and development, determine the cost required for providing such infrastructure and determining the portion funded by such development. Contributions can fund such things as the purchase of land for open space.

Council may also enter into agreements with applicants to provide or fund recreational facilities and open space as part of issuing consent for development.



## State Government Policy

**The NSW State Plan 2021: A Plan to make NSW Number One** is the principal strategic plan for delivering the vision for NSW. Relevant objectives for recreation facilities are identified under the principle "Strengthen our local environment and communities" and include:

- Goal 24 - Make it easier for people to be involved in their communities
- Goal 27 - Enhance cultural, creative, sporting and recreation opportunities.

**NSW Healthy Eating and Active Living Strategy 2013-2018** provides a whole of government framework to promote and support healthy eating and active living in NSW and to reduce the impact of lifestyle-related chronic disease.

The Strategy aims to encourage and support the community to make healthy lifestyle changes at a personal level, and create an environment that supports healthier living through better planning, built environments and transport solutions.

**Lower Hunter Regional Strategy 2006-2031** (LHRS) is the strategic land use planning framework to guide the sustainable growth of the Lower Hunter over the next 25 years. The strategy includes principles for delivering a range of land uses to provide the right mix of houses, jobs, open space, recreational space and green space.

This strategy is currently being reviewed by the NSW State Government.

## Local Government Policy

**Newcastle 2030 Community Strategic Plan** (revised 2013) is Council's key strategic planning document under the Integrated Planning and Reporting Legislation (2009).

The strategy seeks to guide and inform policies and actions throughout the city for the next 20 years in order to implement the community's vision for Newcastle, to be a 'smart, liveable, and sustainable city'.

The [Newcastle 2030 Community Strategic Plan](#) (revised 2013) contains seven strategic directions. Supporting these directions are 23 objectives to be achieved over the next 10 years and strategies to achieve these.



The objectives relevant to the provision of recreation include:

- Objective 3.1 Public places that provide for diverse activity and strengthen our social connections.
- Objective 3.3 Safe and activated places that are used by people day and night.
- Objective 4.2 Active and healthy communities with physical, mental and spiritual wellbeing.

**The Parkland and Recreation Strategy (2014)** was developed to guide the provision of parkland and recreation facilities for current and future communities.

The Strategy:

- outlines the current supply of parkland and recreation facilities in the Newcastle LGA
- outlines the current and future demand of parkland and recreation facilities in the Newcastle LGA
- describes the key challenges and opportunities that impact on Council's provision of parkland and recreation facilities
- defines Council's desired levels of provision of parkland and recreation facilities
- provides a ten year management action plan for Council's parkland and recreation facilities.

## ***Who provides recreation land uses?***

### **Federal government**

The Australian Federal Government is not responsible for providing recreational land within Newcastle. This level of government does provide funding through grants from time to time for specific projects but has no ongoing role in delivering recreation to the community.

## State government

The NSW State government is a major land owner and provider of recreational land through the Crown Land reserve system in accordance with the *Crown Lands Act 1989*. The Crown reserve system is NSW's oldest and most diverse system of natural, cultural and open space. It provides many of the State's town squares and local parks, state heritage sites, buildings, community halls, nature reserves, coastal lands, waterway corridors, sport grounds, racetracks, showgrounds, caravan parks, camping areas, travelling stock routes, rest areas, walking tracks, commons, community and government infrastructure and facilities.

Crown reserves are generally managed by either reserve trust boards, Crown Lands Division, local councils or State government departments.

The majority of crown land managed by Council are used for recreation and managed as open space. This includes the majority of coastal reserves as well as many parks and sportsgrounds.

Individual sporting clubs and associations also manage and control crown land for their purposes.

The NSW government is also responsible for the provision of public schools and TAFE colleges, which also contain valuable recreational and sporting assets. Due to security concerns and management of these facilities, they are usually fenced off and unavailable to the general community. However, there are examples of schools having agreements with individual sporting codes or service providers for use of school facilities after hours and weekends, for sporting and other recreational uses including, fitness groups, martial arts, and even weekend markets.

## Local government

The City of Newcastle (TCoN) is responsible for managing a range of parkland and recreation facilities, including recreation parks, sportsgrounds, swimming pools, ocean baths, beaches, bicycle and shared pathways, netball, tennis and basketball courts, skate parks, playgrounds, dog exercise areas and community gardens.

Under the terms of the *Local Government Act* (1993) Council is responsible for the management of a significant amount of land and infrastructure, both owned directly by Council and/or land that has been placed in Council's care and control by the State.

Land owned by Council can be classified as either operational or community land.

**Operational Land** ordinarily comprises land held as an investment or which facilitates Council carrying out its functions e.g. works depot or a council garage. Operational land is generally not available for community use.

**Community Land** is intended for public benefit and must be managed in accordance with the requirements of the *Local Government Act* (1993). Council is required to prepare and maintain Plans of Management for community land under its management control.

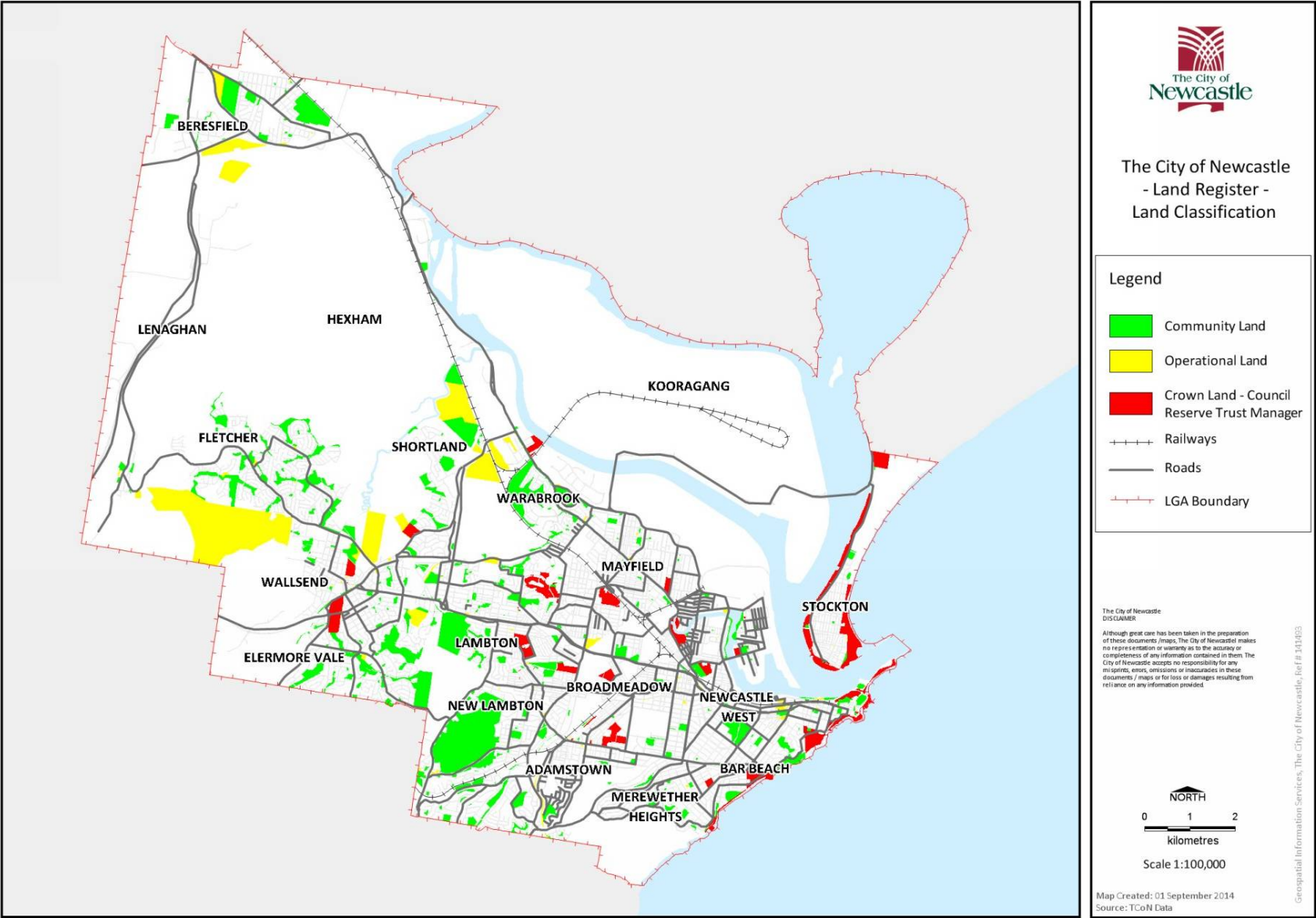
Master plans are often developed as part of a site specific Plan of Management (e.g. Foreshore Park, Blackbutt Reserve) and provide detailed guidance for the use and development of community land.

Community land can be further divided into a number of categories that focus on the essential intent of the land. These categories include natural areas, sportsgrounds, parks, areas of cultural significance and general community use. All community land is managed through a Plan of Management that describes the purpose of the land, designated activities, maintenance levels and actions.

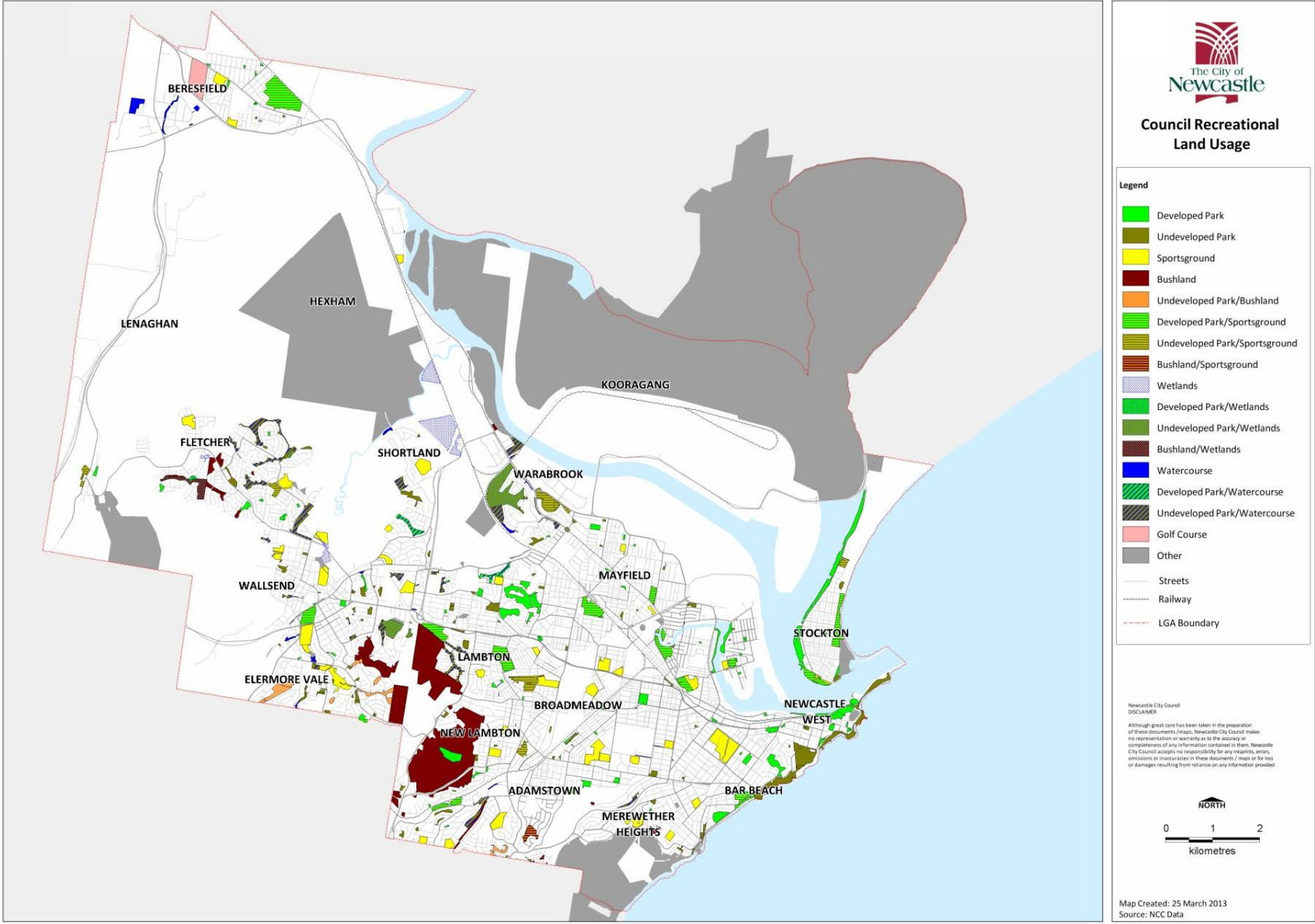
Map 7.3 reflects Council's land register and identifies land classification of Council owned land as well as showing all Crown land under Council management. Crown land under which Council is trustee is also generally classified as community land under the *Local Government Act* (1993).

Map 7.4 identifies the land use of community land and crown reserves that Council manages.

Map 7.3 – Council's Land Register



Map 7.4 – Recreational uses on community land and crown land



## Private and Community Sector

Recreational facilities include uses provided by private operators and clubs or community/sporting organisations. The former being located on freehold titled land whereas the latter may also be located on Crown reserves. Facilities located on Council or Crown land are zoned RE1 Public Recreation whereas freehold land may be zoned RE2 Private Recreation zone or another zone (that permits the use).

The provision of privately operated recreational facilities is based on a user pays business model and is subject to ongoing feasibility and profit in order to operate.

Council is currently in the process of outsourcing the operation of its inland swimming pools to private operators. If an alternate option was proposed, such as a lease or full privatisation of council pools or other facilities, this may have implications on the classification and potentially zoning of the land.

## *Where is recreational land provided?*

### Measures of adequacy

To guide recreation facility provision, [Parks and Leisure Australia](#), the industry peak body, in association with government and industry partners, has developed draft benchmarks for community and recreation infrastructure provision within existing and new development areas.

Various attributes are used to measure the quantity and quality of recreational facilities and parkland, which include:

- location/accessibility
- allocation (area or amount per person)
- size and shape
- quality/functionality.

These attributes were used to measure the adequacy of existing facilities provided across the city in developing Council's Parkland and Recreation Strategy.

The measures applicable to providing recreational land use are likely to include:

- Necessity (no other feasible option is available)
- Suitability of land to be made fit for purpose
- Pliability (can a range of functions be fulfilled now or in the future?)
- Proximity to intended user catchment.



## Hierarchy of open space

To assist in the identification and assessment of parkland and recreation facilities, it is common practice to define facilities under a facility classification hierarchy. A commonly used hierarchy, as used within Council's [Parkland and Recreation Strategy](#), is to class facilities as either Regional, District or Local, as defined below:

**Regional facilities** attract visitors from across the LGA and beyond. They tend to cater for large numbers of people or teams due to their uniqueness, opportunity offered or the scale of events that may be staged. They are of a high standard and receive the highest levels of service. Foreshore Park Newcastle East is an example of a regional park. Newcastle No. 1 and No. 2 sportsgrounds in Newcastle West are an example of a regional recreation facility.

**District facilities** are well developed spaces of substantial size that offer a broad range of quality recreation opportunities. They attract visitors from across a number of suburbs, however they do not have the level of infrastructure that a regional facility has. These spaces receive the second highest level of service. Dixon Park Merewether is an example of a district park. Adamstown Sportsground No. 1 is an example of a district recreation facility.

**Local facilities** are defined spaces which primarily serve a local population. They provide a limited range of facilities to support recreational pursuits and receive the third highest level of service. Arthur Park Adamstown is an example of a local park. Lindsay Memorial sportsground Beresfield is an example of a local recreation facility.

It is important to note that a facility may cross over several classifications, in this instance it will be considered as the higher classification, for example if a sporting complex is capable of hosting district competitions but is also used for regular local sporting fixtures then it will be classified as District not Local.

The large majority of facilities provided within the Newcastle LGA are of a local standard. Table 7.1 identifies proposed standards of provision for existing and future sport and recreation facilities within the LGA.

These standards are not intended to be prescriptive, but rather to act as a tool to guide equitable provision whilst providing for diversity and the meeting of specific needs within local communities. The desired standards aim to guide the type of facilities and the triggers for future sport and recreation facility development within the LGA.



**Table 7.1: Parkland standards of provision (source: Newcastle Parkland and Recreation Strategy 2014)**

Park Category	Role	Accessibility	Desirable Size	Characteristics likely to find	Desired Provision
<b>Regional</b>	Defined spaces that attract visitors from across the city and beyond due to their uniqueness, opportunity offered or the scale of events that may be staged	Expectation is that people will drive to these spaces.	10 + hectares. Size will reflect location, natural setting and special features of individual sites.	Quality landscaping, public art, interpretative signage, appropriate supporting amenities and user facilities. Excellent access for people of all ages and abilities and excellent vehicles access with a substantial frontage to a major road. Highly visible and preferably adjacent to a local town centre.	One per 250,000 people.
<b>District</b>	A park area of substantial size, well developed, offering a broad range of quality recreation opportunities. Central to populations of approximately 15,000 – 25,000.	Not necessarily within walking distance. Expectation is that people will drive to these spaces	1.5 -10 hectares. It should be generally regular in shape, preferably not less than 50m wide.	A range of facilities to cater for a variety of users and recreational activities, including: quality landscaping, signage, playground equipment for toddlers, juniors and older children, seating, shade, paths, toilets, BBQ facilities, and lighting. May support community gardens and/or off leash dog exercise areas in larger sized parks.	One per 15,000 – 25,000 people.
<b>Local</b>	Defined spaces primarily serving a local population. Positioned in a visible location for safety.	300- 500 m / 5-10 minutes walking time to majority of households. No busy road crossings to access.	0.5 – 1.5 hectares. Recommended minimum of 0.2 ha for existing parkland unless it adjoins other open space.	A limited range of facilities to support recreational activities including: minor landscaping reflecting existing vegetation, signage, some playground equipment, limited seating, shade and limited paths to enhance play opportunities. May support community gardens and/or off leash dog exercise areas in larger sized parks.	Ideally within 500m of residents.

## Distribution of Open Space

As identified in Table 7.1 above, local parks are ideally located within 500m of residents. This ensures that communities have access to local recreational facilities within their neighbourhood.

Map 7.5 illustrates the distribution of recreational land across the City and the 500m walkable catchment around these. The catchments are defined as 'pedsheds' within the Newcastle Parkland and Recreation Strategy and are simply shown as radii measured 500m from the parkland. These do not consist of a detailed analysis of accessibility to parkland or the quality of parkland but rather highlight the adequacy of recreational land supply across the city.

The pedsheds are shown in two shades to distinguish between areas within 500m to recreational land with an area of at least 0.5Ha and those within 500m of recreational land with areas of less than 0.5Ha.

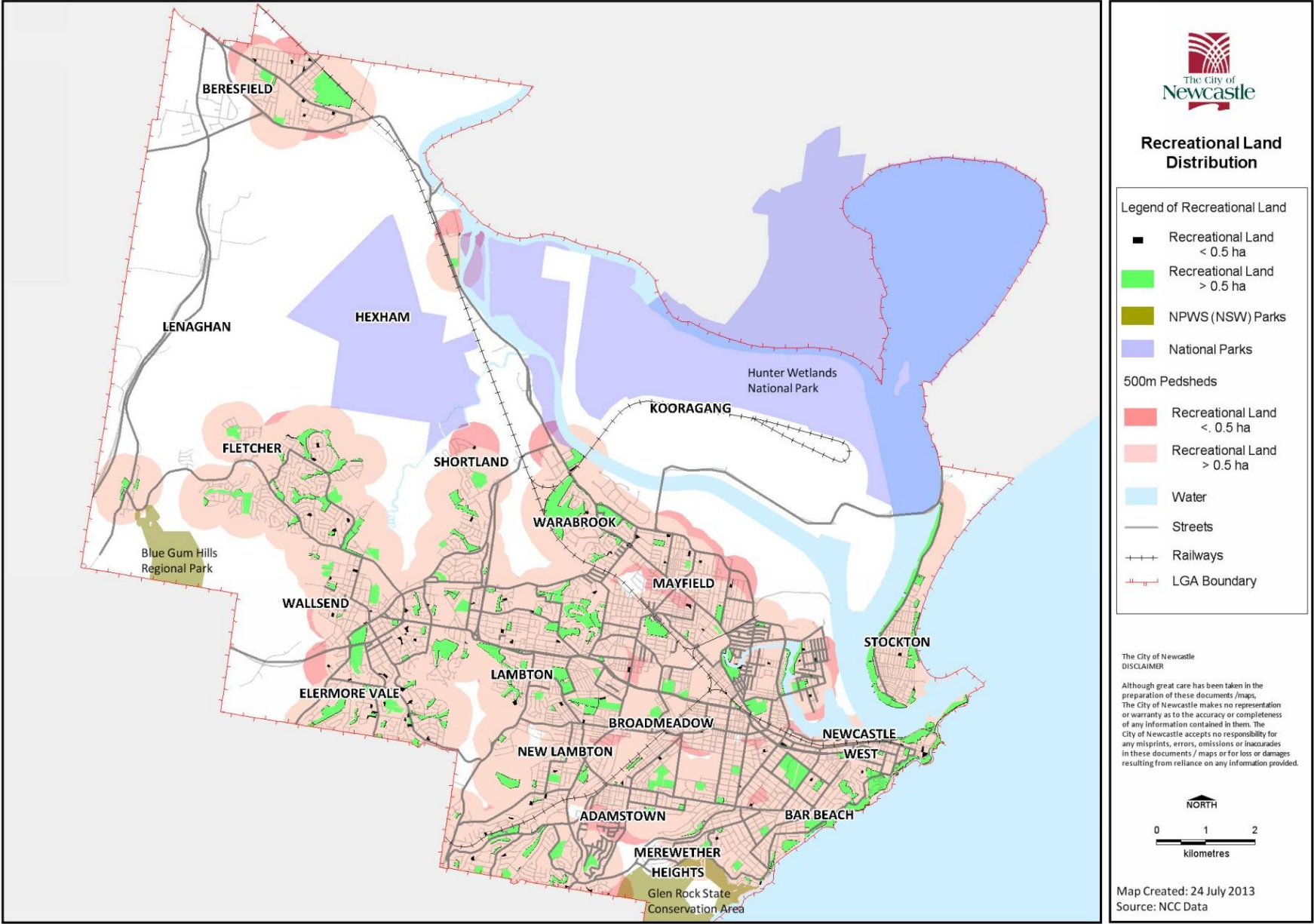
The recreational land shown includes land that has the potential to provide local recreation regardless if this land is currently developed parkland or undeveloped parkland.

Sportsgrounds were also included as these are usually able to provide some level of local recreational facilities on their periphery.

Golf courses were not included, as these are usually used exclusively by paying patrons and members. Land wholly consisting bushland, wetlands, or watercourses were excluded as having potential for providing the role of a local recreational facility, despite their potential to provide some non-traditional passive recreation.

The analysis has identified that the Newcastle LGA generally has sufficient recreation 'land' coverage, noting that this does not necessarily account for the quality/functionality of the land.

Map 7.5 – Distribution of recreational land across the City and 500m walkable catchment



### 3. Future Challenges

#### *What are the future demands for open space*

##### **Population increases and demographic change**

Population growth across Newcastle Local government area, within the next 12 years (to 2026) will result in an additional 14,000 residents. By 2036, the population is forecast to be 180,643, an increase of 25,760 persons (16.6%).

The proportion of children and older adults residing in Newcastle is projected to significantly increase over the coming years. Whilst this will affect certain suburbs more than others, there will be significantly different patterns of use and demand for recreation facilities and services.

Increases in the number of children and young people will progressively place pressure on active recreation facilities. For example, demand for sportsgrounds, specialised recreation facilities such as skate parks, netball courts, pools and activity opportunities including parks and playgrounds is likely to be high in these areas.

Conversely, increasing numbers of older people will progressively place pressure on passive recreation spaces and facilities. The demand for non-contact activities such as walking, golf, lawn bowls, swimming, group exercise, and contemplative pursuits in parkland areas is likely to be sustained or increased.

The provision of additional facilities and/or increasing the capacity of existing parkland and recreation facilities for future residents will be required.

##### **Density increases**

The development of medium to high density dwelling areas within urban renewal corridors represents a major component of projected population growth within the city. Private open space within medium to high density dwellings is often limited to smaller yards, decks and balconies. Accordingly, population intensification is likely to increase pressure on existing parkland and recreation facilities, particularly where existing space is already limited.

##### **Implication for Strategy:**

In areas of higher residential densities, such as the R3 Medium residential density and R4 High density residential zones, the retention and embellishment of smaller parks will be of greater importance than in the R2 Low density residential zone, where residents have larger private open space. This is especially the case where limited alternative options within proximity are available.

Council generally is not in favour of maintaining smaller open space areas below 0.2Ha as these areas are often considered too small to serve recreation purposes. It is generally considered favourable to have fewer but higher quality public recreation areas.

## Sport and Recreation Participation

To gain a broad understanding of potential demand for related facilities, it is appropriate to consider current national trends based on participation figures from the Australian Sports Commission (ASC) and Australian Bureau of Statistics (ABS).

Of 'all physical activities', walking had the highest total participation rate, with 35.9% persons aged 15 years walking for exercise or recreation in a 12 month period (this excluded bushwalking, which is categorized separately). Other activities with relatively high total participation rates were aerobics/fitness activities (23.5%), swimming (13.0%), cycling (11.9%) and running (10.6%).

Organised activities with notable increases of participation, for people over 15 years of age, between 2001 and 2010 included:

- Australian rules football (+64%)
- outdoor football (+55%)
- outdoor cricket (+33%)
- lawn bowls (+20%)
- group aerobics/fitness (+26%).

Organised activities with notable increases of participation, for people aged below 15 years old, between 2006 and 2010 included:

- martial arts (+34%)
- basketball (+25%)
- athletics (+14%)
- outdoor soccer (+13%).

Organised activities experiencing declines in participation, for people over 15 years of age, between 2001 and 2010 include:

- club tennis (−24%)
- tournament golf (−8%).

Organised activities experiencing declines in participation, for people aged below 15 years old, between 2006 and 2010 include:

- indoor soccer (−18%)
- outdoor cricket (−9%).

Non-organised activities with notable increases of participation, for people over 15 years of age, between 2001 and 2010 included:

- running (+71%).
- cycling (+45%)
- walking (+44%)
- weight training (+34%).

Between 2009 and 2012, participation in bike riding increased for boys and girls, 4% and 3% respectively.

Non-organised activities experiencing declines in participation for people over 15 years of age between 2001 and 2010 include:

- tennis (– 24%)
- swimming (– 6%)
- golf (– 5%)

Current national trends provide a broad understanding of the likely future demand for facilities and activity opportunities but do not provide a measure for quantifying the amount of open space land required locally. Further analysis of local demand and trends are outlined in the Newcastle Parkland and Recreation Strategy.

#### **Implication for Strategy:**

- The need for lineal areas of open space and connections that can accommodate such activities as walking, running, and cycling. These may include such facilities as the harbour side promenade, the Bathers Way along the coast, the Fernleigh track, the Wallsend to Edgeworth cycleway, and the potential pipeline walkway between Wallsend and Minmi. Furthermore there may be opportunities to provide such facilities along former rail lines and the edge of riparian corridors.
- A continued need for large open space areas that can accommodate playing fields and associated infrastructure.

### ***What are the challenges to delivering recreational land uses***

#### **Equitable distribution**

Best practice in recreation planning supports the provision of parkland and recreation infrastructure based on both quantitative and qualitative criteria including; industry benchmarks, minimum sizes, distance and accessibility by residents, proximity of other recreation opportunities, local demand, profile of local community and various design criteria. Thus ensuring a quantitative standard of provision unique to each locality can be developed.



A number of demographic characteristics are projected to significantly influence the demand for and provision of parkland and recreational facilities and services over the next twenty years. In order to successfully provide for the future community, these key drivers will need to be at the forefront of all consideration of planning.

The key demographic feature and likely implications on demand for parkland and recreation facilities are identified in Table 7.2, below.

**Table 7.2: Implications on recreation facilities due to demographic change.**

Demographic feature	Likely Implications
Increased number of children and youth	<ul style="list-style-type: none"> <li>• Ongoing demand for family oriented open space and facilities, including facilities and activity opportunities for children and young people (playgrounds, skate and BMX facilities).</li> <li>• Increased demand for sport.</li> <li>• Increased demand for health and fitness opportunities to support young adults, including gyms and swimming pools and cycle trails.</li> </ul>
Increased number of older people	<ul style="list-style-type: none"> <li>• Increased demand for facilities and services to support older people, e.g. safe and appealing places to sit and relax, accessible places, indoor and outdoor places for activities.</li> <li>• Increased demand for accessible places and facilities, especially catering to people with a disability.</li> </ul>
Increased proportion of lone person households	<ul style="list-style-type: none"> <li>• Increased demand for facilities and spaces which provide opportunities to meet other people.</li> </ul>
Increased proportion of flats, units and apartments	<ul style="list-style-type: none"> <li>• Increased demand for parkland spaces and community facilities where people can gather and socialise due to the lack of private outdoor space.</li> <li>• Increased demand for parkland spaces where new residential development involves smaller lot sizes (and small backyards) which limit scope for physical activities.</li> </ul>



## **Financial sustainability**

Councils throughout NSW are facing significant challenges in terms of providing financially sustainable services to the community. Council has responded to these challenges by delivering a series of strategic documents to identify clear priorities and efficiency improvements.

Tighter Council budgets challenged by a significant asset portfolio, infrastructure backlog and increasing costs associated with the provision and maintenance of the range of services requested by the community will continue to be a significant challenge.

The allocation of Federal and State government grants, improved financial performance of community assets, in addition to partnerships with business and the wider community, will be essential in delivering quality and sustainable parkland and recreation facilities.

## 4. Opportunities and Actions

### *How may new recreational land be provided in future?*

#### Requirements in urban release

The Newcastle DCP 2012 and the Western Corridor Section 94 Contributions Plan (2014) have clear requirements of the type and amount of land to be provided in new urban release areas at the point of subdivision, however it is important that the LPS also provides clear principles and criteria to consider in the rezoning of land.

The following principles should be considered in determining the extent, type, and location of new public recreation land when rezoning land for new urban release areas:

- the adequacy of existing parklands and recreational facilities in the locality (i.e. to meet the requirements set out in Table 7.1\*)
- the potential for augmentation, co-location and connectivity with proposed facilities and activity centres
- location of cultural heritage or natural features
- district or regional recreational use should also have access to public transport and frontage to suitable road hierarchy.

In considering the suitability of land to be zoned RE1 Public Recreation, Council should consider the following criteria.

Land zoned RE1 Public Recreation should:

- Not display any factors that may significantly limit its usability such as:
  - biodiversity or riparian corridor
  - flooding, stormwater management, or drainage control
  - contaminated soils
  - acid sulfate soils
  - mine subsidence
  - bush fire Asset Protection Zones
  - any other hazards or relevant factor identified.
- Not be burdened by easement or caveat on title that limit its usability
- Have the capacity to accommodate recreational facilities related to its intended purpose for passive and/or active open space or recreation

- NOT be less than 0.5 hectares in size, have a minimum dimension of 50m, and have a slope no greater than 1 in 20
- Link existing and / or proposed areas of open space and other community-focused land uses (e.g. shopping centres, libraries, transport nodes, schools, and community centres)
- Have at least 50% frontage to a public road, facilitating visibility in to and from the site.
- Have maintenance and emergency vehicle access
- Be able to be serviced with connection to water mains, sewerage, electricity and other utility services
- Facilitate the safe, convenient, and enjoyable movement of pedestrians, cyclists and other activities from surrounding areas.

\*Council's *Parkland and Recreation Strategy 2014* provides further information in relation to recreational facilities standards.

## Collocation and partnerships

Public and private schools contain varying levels of recreational facilities. Expanding and improving access to these existing facilities for community use outside of school hours, particularly sports field and indoor recreational facilities, has the potential to meet the significant demand that exists within the community.

Where possible recreational and community should be co-located and within recreation land or located near or within commercial zones.

Options for public - private partnerships may also be facilitated by enabling a broad range of recreational facilities within commercial and/or employment lands.

## How can recreational land be improved?

### Initiatives for existing urban areas

In established urban areas there is often limited area available for providing new recreational land. In some instance, alternative opportunities will need to be examined in order to provide for the recreational needs of the community. This made include:

- Embellishment of existing parkland and open space to facilitate additional use
- Improve connections within and between existing parkland and recreation facilities
- Purchasing adjoining or alternative land may be necessary if alternative options are considered inadequate to meet the recreational needs of the affected community.

## Land uses permissibility

In order to enable options for making recreational land financially sustainable, Council may need to consider permitting additional land uses on some recreational land where such uses are complementary and do not impede on the primary function of the public recreation zone.

This may require a review of permissibility of uses within the RE1 zone to determine if uses should be included into the zone or only by permitting additional uses on certain land through the use of schedule 1 in NLEP 2012.

There are also some land uses that may sterilise land from its intended use. Certain uses currently permitted within the recreation zones, such as camping grounds and caravan parks, are currently being used as a means of providing manufactured home estates. Hence, Council should also consider the removal of these from the recreation zones and only apply these where suitable and legitimately used through the use of schedule 1 of NLEP 2012.

## Split zones

Further review may be needed to consider the need to split the zoning of land that has a dual purpose of providing recreation and other uses, including environmental management. Furthermore, this may also provide economic opportunities that improve the viability of the recreational facility or social benefits that improve the experience of end users.

## Alternative recreational uses

With a limited supply of flat, level, square, undeveloped land available for developing new sports grounds and playing fields with off the shelf designs, Council will need to consider the provision of site specific alternative forms of recreation, and may include such uses as obstacle courses, BMX tracks, community gardens or imaginative natural based uses. These will need to be considered on a case by case basis and most likely delivered by developer agreement or contributions.

## Strategic disposal of certain parkland

Land that is unsuitable for its intended purpose as a public reserve due to its limited size, shape or location, as well as land identified as surplus to current and future recreational requirements may have potential for disposal. This is an approach that is being undertaken by Councils throughout NSW as part of a proactive asset management approach.

The reclassification and sale of such parkland has a dual benefit of reducing operational costs and creating a capital development funding source, provided proceeds are invested into parkland redevelopment.

However, as parks often perform a number of functions, including the accommodation of drainage, stormwater and other operational infrastructure, environmental protection, parkland considered 'surplus' to recreational needs may be required for other purposes and/or have constraints that limit potential rezoning and sale.

Furthermore, a number of parks are owned by NSW government and are under Council care control management, which removes the potential for disposal.

The disposal of community assets should only be considered where the land serves no viable function or does not have the potential to provide a function within the future.

Particular caution should be taken in disposing recreational land in medium or high density zone areas, even where such land is less than the ideal 0.5 hectare area, as the need for public open space increase, the higher the residential density given the lack of opportunity for private recreation areas.

Small parcels of land that may be unviable recreational land in low density areas may serve the purpose of containing playground equipment, BBQs, community gardens, or even as a green visual relief that improves the overall amenity of a neighbourhood.





# Local Planning Strategy

## Chapter 8: **Environment**

## **Chapter 8 Cover**

Title: Unknown

The front cover was painted by Joshua Thompson, aged 11 as part of the community consultation undertaken for the Newcastle 2030 Community Strategic Plan. The brief was *'express in painting the Newcastle the participant would like to see in 20 years time.'*



## *What is the purpose of this chapter?*

The natural environment in the Newcastle Local Government Area (LGA) includes national parks, beaches, rivers, wetlands, bushlands, parklands and more.

“Our unique environment will be understood, maintained and protected” (Community Strategic Plan, revised 2013).

This chapter provides information on the local natural environment. It discusses relevant legislation, Council policies and land use controls.

The chapter aims to:

- Map known biodiversity values in the Local Government Area (LGA).
- Review environmental lands to ensure they are zoned appropriately and consistent with NSW state planning direction.
- Review objectives and permissible land uses for the environmental zones to ensure they are relevant and consistent with NSW state planning direction.
- Review and discuss whether any additional LEP or DCP controls are required to better manage Newcastle’s biodiversity.
- Discuss relevant State planning legislation and how it relates to Newcastle.

A mapping exercise has been undertaken to help understand Newcastle's biodiversity values. This has been done using best available information. The map is NOT to be used as definitive but provide a basis for discussion for the purpose of this working paper ONLY. Due to the nature i.e. mobility of fauna and availability of data there will be parcels of lands not identified. This does not mean they do not hold biodiversity values. See **Attachment E** for map and background discussion.

The following matters will NOT be discussed in this working paper: Air and water quality, aesthetics, visual and scenic appearance and matters pertaining to the Protection of the Environment Operations Act 1997 (POEO Act) e.g. water quality, sewerage management and noise. The working paper aims to focus on the Environmental zones and land use implications.

Natural hazards such as bushfire, flooding, acid sulfate soils and coastal erosion are discussed under the chapter 'Hazards'.

A large portion of the LGAs biodiversity values are located within lands zoned for environmental protection. While this is good news for Newcastle, there are other lands with important biodiversity values not zoned for environmental protection or at an inadequate level of environmental protection. It is important to ensure these are either zoned appropriately or best managed through other planning mechanisms.



This chapter identifies parcels of land where further investigation into the correct zone should be undertaken. Where a rezoning of land is to be considered, it should be due to a combination of significant biodiversity values (such as threatened or endangered species) and / or being constrained by bushfire, wetlands, flooding and more. In some cases, there are lands where high biodiversity values are identified but alternative plans already proposed. These include lands approved by NSW Department of Planning and Environment for employment uses at Black Hill and Beresfield. In these areas, land uses will need to be carefully managed to minimise harm to the environment while allowing areas to be used for employment and jobs. The chapter will not recommend any zone changes where NSW Department of Planning and Environment have already approved a rezoning of land.

Portions of land near the LGA boundary with Maitland City Council and Lake Macquarie City Council, that hold biodiversity values, are being considered for a zone change for consistent planning and management across boundaries.

In addition, the land uses permissible within the environmental zones have been reviewed.



# 1. Biodiversity

Biodiversity refers to the different plants, animals and micro-organisms, the genes they contain, and the ecosystems of which they form a part in terrestrial and aquatic environments. Biodiversity is not static, it is constantly changing. In the modern era the loss of biodiversity by processes such as habitat degradation, population decline and extinction is a major concern at all levels of government and the community.

Despite more than 70% of the LGA being urbanised (industrial, residential, recreational and commercial), as a coastal city located within the estuary of the State's second largest catchment, Newcastle has a high diversity of natural areas. It is these natural areas that comprise the substantial component of the City's biological diversity. They make a significant contribution towards the character of our City and comprise many complex, interlinked, ecosystems from coastal heaths and rocky shores to mangrove forests, woodlands, rainforest gullies and wetlands.

Most protected natural areas are wetlands with a relatively minor proportion having bushland. A proportion of remaining bushland remnants are unprotected and subject to future development.

In recognition of the value of biodiversity and past loss, Newcastle has established a vision, developed in the preparation of the [Community Strategic Plan 2030](#) to value our biodiversity and ecosystems and **maintain, manage and enhance** them as an asset of the City. This vision recognises that the condition and function of Newcastle's ecosystems and their biodiversity values are intrinsic to the health of our economy, to our social and cultural identity, the value of our landscapes and the well being of the community and that of future generations. It acknowledges that the conservation of biodiversity is fundamental to a sustainable future (The City of Newcastle 2013).

## Flora

The Hunter region is of biogeographic and scientific significance as it supports a transition between the northern tropical and southern temperate ecological communities. As a result, the region is both floristically diverse and has numerous plant species that are at the limit of their known distribution. Within the Newcastle LGA there is an abundance of flora species (coastal and inland) and vegetation communities reflective of this regional floral biodiversity.

## Vegetation Communities

Vegetation can be classified into distinct communities based on floristic characteristics and mapped on this basis. At a broad level this includes wetlands and estuarine communities, open forests, coastal forest and heath vegetation, rainforest and moist forests, grasslands and marine and intertidal ecosystems.

Mapping vegetation communities in the landscape is especially important for local and regional land-use planning, infrastructure and residential development, biodiversity offsets and conservation activities. In recent years, a regional vegetation classification system has been developed with associated mapping products. Field based studies remains the most accurate approach to vegetation mapping, however remote sensing using satellite data, may replace this need in the future.



## Threatened Flora Species

There are several confirmed threatened flora species listed in the Threatened Species Conservation Act 1993 (TSC Act) known to occur within the Newcastle LGA. **Attachment E** lists current recognised endangered or threatened flora in the LGA.

## Endangered Ecological Communities

An endangered ecological community (EEC) can be defined as an assemblage of species occupying a particular area that is threatened because its distribution has been significantly reduced, its distribution is so restricted the whole community is susceptible to significant threats, or the ecological function of the community is undergoing a significant decline.

Reductions in distribution are typically related to historical and/or current clearing for development. Distribution may also be restricted through naturally rare environmental conditions that are essential to the community. Declines in the ecological function of a community may result from change in community structure, change in species composition, disruption of ecological processes, invasion and establishment of exotic species, or habitat degradation or fragmentation.

Examples of EEC known to occur within the Newcastle LGA include:

- Freshwater Wetlands on Coastal Floodplains
- Themeda Grassland on sea cliffs and coastal headlands in the NSW North Coast, Sydney Basin and South East Corner bioregions
- Coastal Saltmarsh in 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
- River-Flat Eucalypt Forest on Coastal Floodplains of the NSW North Coast; Sydney Basin and South East Corner bioregions
- Lower Hunter Spotted Gum - Ironbark Forest in the Sydney Basin Bioregion

See **Attachment E** for distribution and description of EECs.

## ***Fauna***

With a diversity of marine, estuarine and terrestrial habitats it's not surprising that the Newcastle LGA enjoys a rich diversity of fauna including many that are threatened. Many of the species that can be found here are seasonal visitors that utilise the regions wetlands and bushlands as part of their wider range.

## **Endangered and Threatened Species**

The Hunter LGA has a surprisingly high occurrence of endangered or threatened fauna listed under the TSC Act, reflective of the diversity of habitats within the region. The majority of these are highly mobile species such as birds (38) and bats (9), but other groups are also represented with frogs (1), marine reptiles and mammals (4) and terrestrial mammals (1). There are also several endangered or vulnerable marine fish listed under the Fisheries Management Act 1995 (FM Act) that may also be present within the Hunter Estuary and along Newcastle's coastline. **Attachment E** lists and maps currently recognised endangered or threatened fauna in the LGA.

Some 52 threatened and 60 migratory species listed under the Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act) are also known to potentially occur in the region. Overtime additional species may be added and considered into any future planning decisions.



## *Habitat and Corridors*

A dominant natural feature of the region is the Hunter Estuary. It is recognised as one of the most important migratory shorebird habitats in NSW. Estuarine and freshwater habitats are considered as an important drought refuge for inland species.

Important habitats include seagrass beds, saltmarsh, mangroves (the second largest area of mangroves in NSW) and estuarine and freshwater wetlands. A number of major watercourses and associated riparian vegetation occur across the city, notably Ironbark Creek and Throsby Creek. While much of the lower reaches of these streams have been heavily altered the headwaters remain in a natural state.

Much of the estuary was listed under the Ramsar<sup>1</sup> Convention in 1984 and extended in 2002 and many of the regions wetlands are also protected under State Environmental Planning Policy no. 14 – Coastal Wetlands (SEPP 14). A significant proportion of the regions important estuarine and freshwater wetlands are now within the newly formed Hunter Wetlands National Park and are a focus of ongoing rehabilitation. The area is designated by BirdLife International as an Important Bird Area. See **Figure 8.1** for SEPP area.

Areas of natural forest remain in Newcastle's western and south western areas. Notable bushland parcels include Glenrock and Blue Gum Hills Regional Parks, Blackbutt Reserve, Jesmond Park and George McGregor Park however substantial forest still occurs outside of reserves. Housing development and proposed transport corridors and other infrastructure could result in a reduction in the size and further fragmentation of these remaining forest communities.

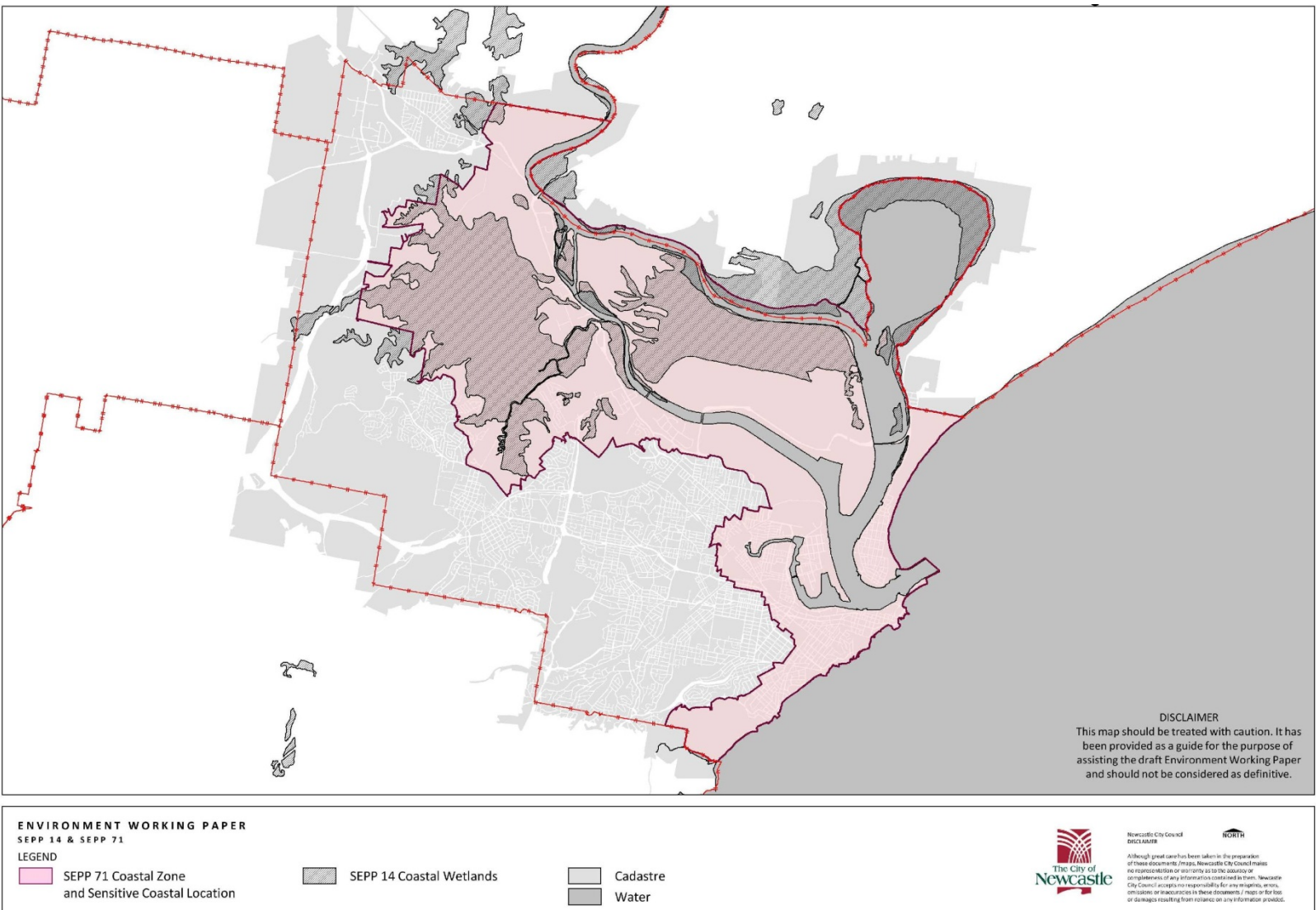
Coastal vegetation such as heath and grasslands still occurs behind some beaches and on headlands. Marine and intertidal ecosystems include sandy beaches and dunal systems, the extensive intertidal rocky shores and near shore ocean waters (The City of Newcastle 2006).

The Lower Hunter is recognised as forming part of the regionally important Watagans to Stockton Bight Biodiversity Corridor important for the movement of fauna and flora across landscapes. At a local scale, connections between bushland parcels are also recognised as important wildlife corridors. Newcastle also has a number of rock platforms and beaches which hold significant biodiversity values.

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<sup>1</sup> RAMSAR refers to a wetland of international importance

Figure 8.1: SEPP 14 and SEPP 71





## 2. Statutory and Policy Context

Federal and state legislation applies to the identification and protection of our biodiversity. The Local Planning Strategy has been prepared in accordance with any relevant federal or state legislation.

### ***Federal Government***

From a national perspective, biodiversity is principally protected under the [Environmental Protection and Biodiversity Conservation Act 1999](#) (EPBC Act).

### **The EPBC Act 1999**

The EPBC Act is the Australian Government's key piece of environmental legislation. It provides the legal framework to protect matters of national environmental significance, with the states and territories having responsibility for matters of state and local significance (Department of the Environment 2012).

The objectives of the EPBC Act are to:

- provide for the protection of the environment, especially matters of national environmental significance
- conserve Australian biodiversity
- provide a streamlined national environmental assessment and approvals process
- enhance the protection and management of important natural and cultural places
- control the international movement of plants and animals (wildlife), wildlife specimens and products made or derived from wildlife
- promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources (Department of the Environment 2012).

The eight matters of national environmental significance to which the EPBC Act primarily applies are:

- world heritage properties
- national heritage places
- wetlands of international importance (Ramsar)
- nationally threatened species and ecological communities
- migratory species (e.g. JAMBA)
- Commonwealth marine areas
- the Great Barrier Reef Marine Park
- nuclear actions (Department of the Environment 2012).

The EPBC Act affects any group or individual (including companies) whose actions may have a significant impact on a matter of national environmental significance. This includes landowners, developers, industry, councils, state and territory agencies and Commonwealth agencies.

## National Strategy for Ecologically Sustainable Development

*What is ecologically sustainable development?*

Ecologically Sustainable Development (ESD) represents one of the greatest challenges facing Australia's governments, industry, business and the community in coming years (Department of the Environment 2012).

Australia's National Strategy for Ecologically Sustainable Development (1992) defines ecologically sustainable development as “using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased” (Department of the Environment 2012).

The guiding principles of ESD are:

- decision making processes should effectively integrate both long and short-term economic, environmental, social and equity considerations
- where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation (known as the Precautionary Principle)
- the global dimension of environmental impacts of actions and policies should be recognised and considered

- the need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection should be recognised
- the need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised
- cost effective and flexible policy instruments should be adopted, such as improved valuation, pricing and incentive mechanisms
- decisions and actions should provide for broad community involvement on issues which affect them (Department of the Environment 2012).

“These guiding principles and core objectives need to be considered as a package. No objective or principle should predominate over the others. A balanced approach is required that takes into account all these objectives and principles to pursue the goal of ESD” (The Australian Government, Department of the Environment 2012).

#### **Box 1 Implications for the Strategy**

The Local Planning Strategy should support the principles of Ecologically Sustainable Development in any forward land use planning.

### ***State Government***

In NSW, threatened species are also protected under the following Acts which operate in conjunction with each other:

- Threatened Species Conservation Act 1995
- Fisheries Management Act 1994
- Environmental Planning and Assessment Act 1979
- National Parks and Wildlife Act 1974

## Threatened Species Conservation Act 1993

The [NSW Threatened Species Conservation Act 1995](#) (TSC Act) provides for the conservation of threatened species, populations and ecological communities of animals and plants (although the Act does not generally apply to fish). The Act sets out a number of specific objectives relating to the conservation of biological diversity and the promotion of ESD (Office of Environment and Heritage 2013).

The main objectives of the TSC Act are to:

- conserve biological diversity and promote sustainable development
- prevent the extinction of native plants and animals
- protect habitat that is critical to the survival of endangered species
- eliminate or manage threats to biodiversity
- properly assess the impact of development on threatened species
- encourage cooperative management in the conservation of threatened species (Office of Environment and Heritage 2013).

The TSC Act achieves these objectives in four ways:

- An independent, scientific listing process of threatened species, populations and ecological communities
- Habitat protection, providing opportunities to improve degraded environments and protects areas of high conservation value and areas critical to the survival of threatened species<sup>2</sup>
- Species recovery and threat abatement through recovery plans, threat abatement plans, statements of intent and the Threatened Species Priorities Action Statement
- Strategic planning and development control processes (Office of Environment and Heritage 2013).

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<sup>2</sup> Critical habitats are areas of land that are crucial to the survival of particular threatened species, populations and ecological communities. There is no area of critical habitat in Newcastle according to the Register of Critical Habitat in NSW.

The Act also amends other Acts to provide for the facilitation of the appropriate assessment, management and regulation of actions that may damage critical or other habitat or otherwise significantly affect threatened species, populations and ecological communities. For example the Act adds Species Impact Statement requirements to the Environmental Planning and Assessment Act 1979 and extends the coverage of interim protection orders and conservation agreements under the National Parks and Wildlife Act 1974 (Office of Environment and Heritage 2013).

## **Fisheries Management Act 1995**

The primary act governing the management of fish and their habitat in NSW is the [Fisheries Management Act 1995](#) (FM Act). It aims to conserve, develop and share the fishery resources of the State for the benefit of present and future generations and, in particular to:

- conserve fish stocks and key fish habitats<sup>3</sup>
- conserve threatened species, populations and ecological communities of fish and marine vegetation
- protection of specific areas, such as Marine Protected Areas and Intertidal Protected Areas<sup>4</sup>
- promote ESD, including the conservation of biological diversity.

To meet these objectives, the Act outlines legislative provisions to protect fish habitat and outlines provisions to conserve threatened species of fish and marine vegetation and their habitat \*(NSW Department of Primary Industries 2013).

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<sup>3</sup> Key fish habitats exclude most artificial habitats unless its supports threatened species, populations and/or communities

<sup>4</sup> There are no marine reserves or intertidal protected areas in the Newcastle LGA

## Environmental Planning and Assessment Act 1979

The [Environmental Planning and Assessment Act 1979](#) (EPA Act) imposes obligations on developers and consent authorities to assess and consider the impacts of proposed development on threatened species during the development assessment process (e.g. by requiring a species impact statement in some circumstances).

### Box 2 Implications for the Strategy

The Local Planning Strategy will be prepared in accordance with NSW planning legislation.

## NSW National Parks and Wildlife Act 1974

Under [The National Parks and Wildlife Act 1974](#) (NPW Act) the Director-General of the NPWS is responsible for the care, control and management of all national parks, historic sites, nature reserves, reserves, Aboriginal areas and state game reserves. State conservation areas, karst conservation reserves and regional parks are also administered under the Act (Office of Environment and Heritage 2011).

The objectives of this Act are the conservation of nature, objects, places or features, fostering public appreciation, understanding and enjoyment of nature and cultural heritage and their conservation (including biological diversity) of cultural value within the landscape and providing for the management of land reserved under this Act in accordance with the management principles applicable for each type of reservation including, but not limited to, the conservation of:

- habitat, ecosystems and ecosystem processes
- biological diversity at the community, species and genetic levels
- landforms of significance, including geological features and processes
- landscapes and natural features of significance including wilderness and wild rivers
- places, objects and features of significance to Aboriginal people
- places of social value to the people of New South Wales
- places of historic, architectural or scientific significance (Office of Environment and Heritage 2011).

## Water Management Act 2000

The [Water Management Act 2000](#) controls the extraction of water, how water can be used, the construction of works such as dams and weirs, and the carrying out of activities on or near water sources in NSW (Office of Water 2014).

The NSW Office of Water defines riparian corridors under the Act and regulates what works and activities can occur within them through the issuing of controlled activity approvals. New riparian corridor guidelines commenced on 1 July 2012 which introduced new definitions for riparian corridor widths using the Strahler stream ordering methodology (Office of Water 2014).

Previously riparian corridors included a vegetated buffer and a core riparian zone and excluded a range of activities, such as roads, development lots, recreational areas, detention basins and infrastructure. Under the new rules, the core riparian zone has been replaced with a vegetated riparian zone. The vegetated buffer has been removed and a broader range of activities can be undertaken in the vegetated riparian zone (Office of Water 2014).

### Box 3 Implications for the Strategy

The Local Planning Strategy will support the protection of riparian corridors.

The Newcastle Environmental Management Plan (adopted in 2013) recommends an update to Council's Biodiversity Strategy. The Local Planning Strategy could make recommendations that additional mechanisms be investigated as part of the review to create greater awareness and ensure riparian corridors are protected.

Options may include consideration of one or more of the following:

Riparian corridors may be mapped and a clause be inserted into the LEP to consider riparian corridors during development assessment. Further controls may also be included in the DCP as well. However caution should be taken to avoid replication of State legislation/integrated approval process (e.g. Activity approvals under the WM Act).



## State Environmental Planning Policy No.14 – Coastal Wetlands

The aim of this [policy](#) made under the EPA Act is to ensure that a selection of mapped coastal wetlands are preserved and protected in the environmental and economic interests of the State by setting restrictions on development of certain land and carrying out of restoration works (NSW Planning & Infrastructure 2013). See **Figure 8.1** for where this policy applies.

## State Environmental Planning Policy No.71 - Coastal Protection

This [SEPP](#) applies to land within the coastal zone. The NSW coastal zone is defined in the Coastal Protection Act 1979 and generally includes land one kilometre inland from the coast, one kilometre landward around any bay, estuary, coastal lake or lagoon and one kilometre along either bank of a coastal river. A sensitive coastal location is land within 100m of the mean high water mark, a coastal lake, Ramsar wetland or land within 100m of a SEPP 14 wetland (NSW Planning & Environment 2013).

In regards to development, a consent authority must consider certain matters set out in the SEPP including any detrimental impact a development may have on the foreshore, scenic qualities, the conservation of threatened species and the protection of wildlife corridors, and the likely impact of coastal process and coastal hazards on the development. See **Figure 8.1** for where this policy applies (NSW Planning & Environment 2013).

## Draft NSW Biodiversity Strategy 2010-2015

The [draft NSW Biodiversity Strategy 2010-2015](#) aims to provide a framework to coordinate and guide investment in biodiversity conservation in NSW.

The following approaches were used to develop the draft Strategy:

- more effective targeting of existing public and private investment in biodiversity conservation to maximise outcomes through the identification of state scale priority area for investment
- use of existing regional structures and mechanisms to deliver biodiversity outcomes (such as the catchment management authorities, local government and other public authorities), avoiding the need for new arrangements
- acknowledgment of, and continuing support for, existing programs delivered by many government and non-government partners that result in significant outcomes for biodiversity conservation

- the importance of partnerships across public and private sectors to deliver biodiversity outcomes based on the best available science (Office of Environment and Heritage 2010).

The draft Strategy was released for public consultation on 24 November 2010. It is yet to be finalised by the Office of Environment and Heritage.

## Lower Hunter Regional Strategy 2006

The Lower Hunter Regional Strategy (LHRS) is the State Government's 25 year land use strategy for the Lower Hunter. A review of the LHRS is currently underway. The primary purpose of the LHRS is to ensure that adequate land is available and appropriately located to sustainably accommodate the projected housing and employment needs of the region's population over the period (NSW Planning and Infrastructure 2006).

The LHRS works with the Conservation Strategy to ensure that future growth makes a positive contribution to the protection of sensitive environments and biodiversity.

The LHRS recognises the importance of large vegetated areas being linked via habitat corridors at a landscape scale. A number of green corridors have been identified for protection such as the Watagans to Stockton Green Corridor.

The Watagans to Stockton Green Corridor has also been identified within the Lower Hunter Conservation Strategy and the Newcastle- Lake Macquarie Western Corridor Planning Strategy but definitive mapping of the corridor is lacking, with differences occurring between all three documents.

The key environmental challenges for the Region are to accommodate significant population growth whilst protecting the environment.

The LHRS recommends that:

- biodiversity impacts can be lessened by increasing the proportion of dwellings built in existing urban areas with all new development directed away from areas known for their biodiversity significance.
- The Watagans to Stockton Corridor is protected and enhanced

- The regions waterways and associated riparian corridors are protected and enhanced through stormwater management plans
- Access to mineral resources is maintained, with utilisation of those resources undertaken only where consideration of environmental, social and economic issues is thoroughly assessed (NSW Planning and Infrastructure 2006).

An action of the LHRS is to ensure LEPs protect green corridors.

#### **Box 4 Implications for the Strategy**

The Local Planning Strategy has been prepared in accordance with any recommendations made in the revised Lower Hunter Regional Strategy.

### **The Lower Hunter Over the next 20 years: A Discussion Paper**

The Lower Hunter Regional Strategy is under review. As part of this review the State and Federal Governments are undertaking a strategic assessment of the Lower Hunter. This will comprise a single regional-scale assessment of environmental values. The strategic assessment will put in place a conservation framework that satisfies NSW and Australian legislation, provides a regional framework to protect high value conservation areas and streamline development processes.

Biodiversity offsetting is discussed in the discussion paper as a housing blockage. The biodiversity offsetting process is under review as part of the review of the LHRS.

The [Discussion Paper](#) states that new urban development proposals in the green corridors may not be made. The new LHRS will review the mapping and definition of the Green corridors (NSW Planning and Infrastructure 2013).

### **Lower Hunter Regional Conservation Plan 2009**

The [Regional Conservation Plan](#) (RCP) is a companion document to the LHRS. The RCP will be revised following completion of the new LHRS.

The RCP sets out a 25-year program to direct and drive conservation planning. The RCP seeks to establish a framework to guide conservation efforts in the Lower Hunter (Office of Environment and Heritage 2009).

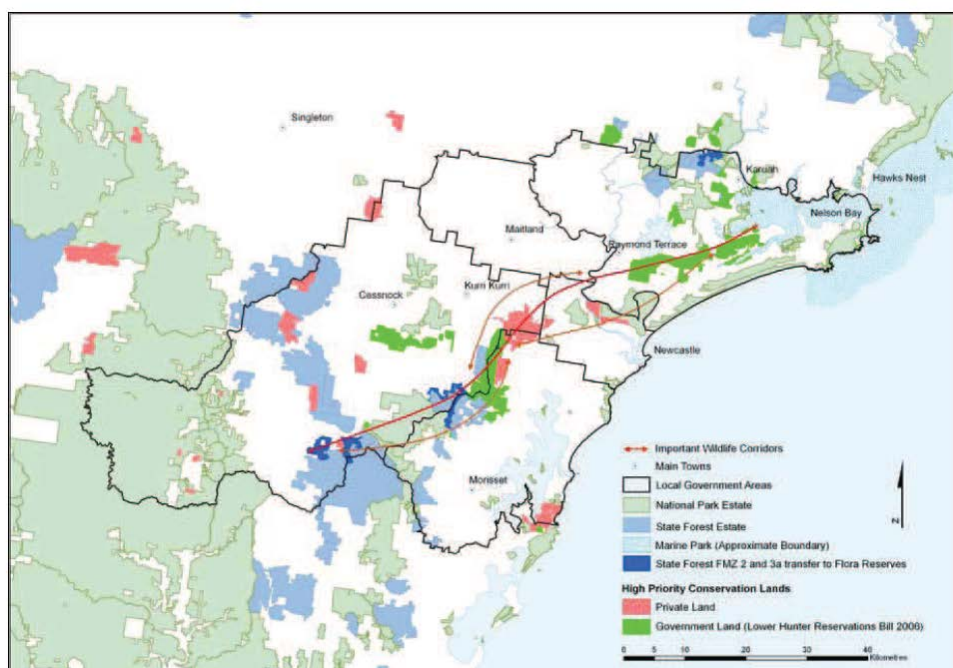
The principles of biodiversity planning adopted in the RCP are:

- to improve or maintain ecological processes and the dynamics of terrestrial ecosystems in their landscape context
- to improve or maintain viable examples of terrestrial ecosystems throughout their natural ranges
- to improve or maintain viable populations of the various biological organisms throughout their natural ranges
- to improve or maintain the genetic diversity of the living components of terrestrial ecosystems (Office of Environment and Heritage 2009).

The key priorities for biodiversity planning in relation to improving or maintaining biodiversity values are:

- the first priority – to avoid losses to biodiversity and promote protection of biodiversity values *in situ*
- the second priority, where the first priority is unachievable – to mitigate adverse impacts to biodiversity
- as a last resort, compensate for unavoidable losses to biodiversity (Office of Environment and Heritage 2009).

The RCP highlights important green corridors.



Source: The Lower Hunter Regional Conservation Plan, NSW Planning & Infrastructure 2009

The RCP aims to provide the first significant step to achieving biodiversity certification in accordance with the TSC Act.

#### *What is Biobanking?*

The NSW Government has introduced the Biodiversity Banking and Offsets Scheme (or 'BioBanking') to help address the loss of biodiversity values, including threatened species (Office of Environment and Heritage 2009).

“BioBanking enables biodiversity credits to be generated by landowners who commit to enhance and protect biodiversity values on their land through a biobanking agreement. These credits can then be sold, generating funds for the management of the site. Credits can be used to counterbalance (or offset) the impacts on biodiversity values that are likely to occur as a result of development. The credits can also be sold to those seeking to invest in conservation outcomes, including philanthropic organisations and government” (Office of Environment and Heritage 2009).

The RCP also discusses how planning agreements can be used to conserve or enhance the natural environment.

#### *What is a planning agreement?*

“Planning agreements provide a voluntary facility for planning authorities and developers to negotiate flexible outcomes in respect to development contributions. These agreements are a means to enable the planning system to deliver sustainable development, through which key economic, social and environmental objectives of the State and local government can be achieved” (Office of Environment and Heritage 2009).

“As such, planning agreements are currently being viewed as one of a series of methods to be utilised to ensure that the environmental impacts of a development are taken into account, and that appropriate impact mitigation, site amelioration and/or offsets are provided by the developer. Planning agreements may be additional to, or replace, the relevant Section 94 /A Developer Contributions Scheme applying to a particular LGA” (Office of Environment and Heritage 2009).

“While planning agreements will be instigated largely at the rezoning stage, the provisions of these agreements will be written in such a way that they will carry through to the development application phase. As such, planning agreements can be viewed as having a strategic planning basis, and one that has statutory links with the development application process” (Office of Environment and Heritage 2009).

Another strategic planning mechanism aimed to conserve the natural environment is a Voluntary Conservation Agreement (VCA).

#### *What is a Voluntary Conservation Agreement?*

“A VCA is a negotiated contract between landholders and the Minister administering the NPW Act which aims to conserve the natural, cultural and/ or scientific values of a property or portion of a property, restricting land uses likely to compromise these values. Landholders may be individuals, groups, corporations, local governments or government departments. In the case of government departments, either the department or the Minister responsible for that department may enter into the VCA with the Minister administering the NPW Act” (Office of Environment and Heritage 2009).

“The aim of a VCA is to facilitate conservation on private and public land by working with people and communities in conservation management. This approach seeks to complement the formal reserve system, support recovery of threatened species, populations and communities, conserve cultural heritage, aid the movement of wildlife in the landscape and to protect, restore and rehabilitate areas of biodiversity value” (Office of Environment and Heritage 2009).

“Once signed by both the Minister and the landholder, the VCA is registered on the land title, binding all ‘successors in title’ (future landholders) to its terms” (Office of Environment and Heritage 2009).

The VCA program relies upon the active management of the lands by the landholder. Toward this aim, OEH consults with the landholder to develop a Plan of Management for the area covered by the VCA (Office of Environment and Heritage 2009).

The new planning system proposed by the State Government proposed changes to the above. The Local Planning System will need to reflect any changes.

## Newcastle – Lake Macquarie Western Corridor Planning Strategy 2010

The [Newcastle–Lake Macquarie Western Corridor Planning Strategy](#) identifies key planning principles and known infrastructure requirements that will guide future urban expansion and conservation in the western corridor. The planning principles take into consideration proximity to existing residential areas and employment lands, site constraints, major transport linkages and regional and local conservation corridors (Office of Environment and Heritage 2010).

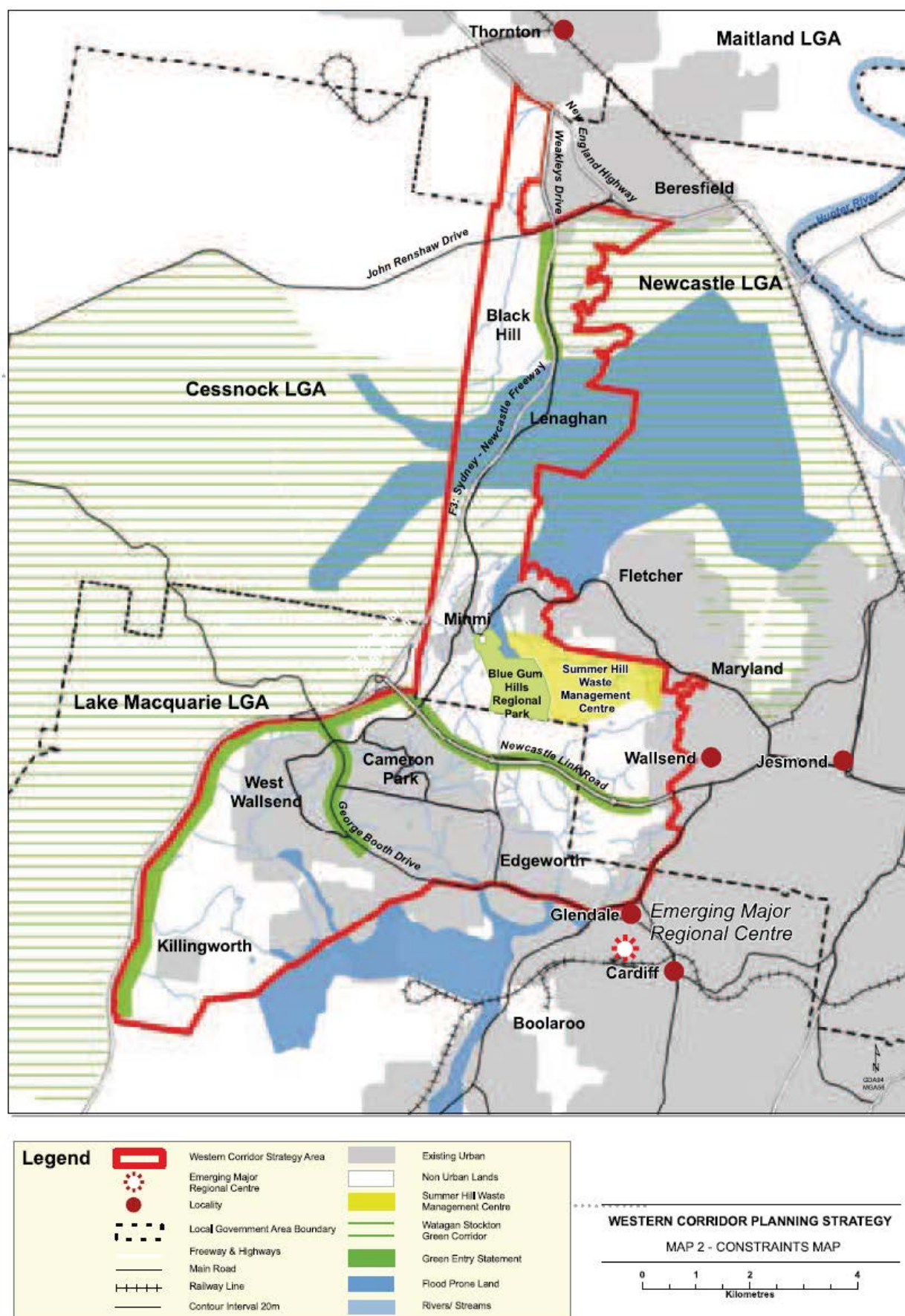
The Watagan to Stockton green corridor transects the study area between Black Hill and Minmi and includes Hexham Swamp wetlands.

Rezoning proposals that impact on native vegetation and areas of biodiversity value will need to be assessed in accordance with the requirements of the EP&A Act 1979 and the TSC Act 1995.

Rezoning proposals should attempt to conserve key habitat areas for threatened species, and maintain subregional and local conservation corridors.



Figure 8.2: Western Corridor Planning Strategy - Map 2: Constraints Map



## Hunter-Central Rivers Catchment Action Plan 2013

The [Hunter-Central Rivers Catchment Action Plan](#) (CAP) is a guide to protecting and improving the region's natural resources. Developed by the Hunter-Central Rivers Catchment Management Authority (CMA), the CAP builds on the work achieved through the Hunter, Central Coast and Lower North Coast catchment blueprints, by identifying and prioritising the natural resource issues facing land managers in our region, and ensuring that investment is made in areas of greatest need for our environment and communities (HCRCA 2013).

A new Catchment Action Plan has been prepared for 2013-2023.

## Hunter Estuary Coastal Zone Management Plan 2009

The [Hunter Estuary Coastal Zone Management Plan](#) is a strategic and long-term plan developed through a specifically designed and legislated framework. The document has been prepared in partnership with Maitland City Council and Port Stephens Council. It aims primarily to provide guidance for achieving a sustainable estuary in the future, giving balanced consideration to environment, social and economic demands on the river system (BMT 2009).

Implementation of the plan is overseen by the Hunter Estuary Technical Working Party whose membership comprises both government and community representatives.

## Local Government

### Newcastle Community Strategic Plan 2030

The [Community Strategic Plan](#) sets a clear community direction for Newcastle's environmental lands. The community see the following objectives as important.

**Table 8.1: Extract from the Community Strategic Plan 2030 identifying those strategic directions and objectives that are relevant to environmental lands.**

Our Strategic Directions for Newcastle	Our Objectives
<b>Protected and Enhanced Environment</b>  Our unique environment will be understood, maintained and protected.	Our unique natural environment is maintained, enhanced and connected.
<b>Open and Collaborative Leadership</b>  A strong local democracy with an actively engaged community and effective partnerships.	Integrated, sustainable long-term planning for Newcastle and the Region.

#### Box 5 Implications for the Strategy

The Local Planning Strategy has a role to play in continuing to support the community's vision to understand, protect and enhance the natural environment.

## Newcastle Urban Strategy (update 2009)

The [Newcastle Urban Strategy](#) is Council's current city-wide land use policy. The strategy promotes the principles of Newcastle Urbanism. Newcastle Urbanism currently guides planning and development in the LGA. Principles specifically relevant to the environment include the following:

- Be responsive to site conditions, both natural and human, including prominent landscapes and townscapes such as ridges, water bodies and other topographic features, such as the City Centre skyline
- Protect and preserve ecosystems by minimising (or eliminating) air, soil and water borne pollutants
- Be energy efficient in the materials and building techniques used, recycling and reducing the use of resources whenever possible (The City of Newcastle 2009).

In addition to the above principles, Newcastle Urbanism encourages consolidated growth around centres and transport nodes as a means to promote sustainable development and better transport usage.

The Local Planning Strategy replaces the Newcastle Urban Strategy.

## Newcastle Local Environmental Plan 2012

The Standard Instrument (Local Environmental Plans) Order 2006 provides for 4 environmental zones and 3 waterways zones. The [Newcastle Local Environmental Plan 2012](#) applies 4 environmental zones and 1 waterways zone.

### *The 'E' zones*

**Table 2: Environmental zones of the Standard Instrument (Local Environmental Plans) Order 2006.**

Environmental Zones
E1 National Parks & Nature Reserves
E2 Environmental Conservation
E3 Environmental Management
E4 Environmental Living

## Objectives of each zone

Text in **red** are the mandatory objectives under the standard template. Text in black are local Newcastle objectives.

### E1 National Parks & Nature Reserves

- To enable the management and appropriate use of land that is reserved under the National Parks and Wildlife Act 1974 or that is acquired under Part 11 of that Act.
- To enable uses authorised under the National Parks and Wildlife Act 1974.
- To identify land that is to be reserved under the National Parks and Wildlife Act 1974 and to protect the environmental significance of that land.

### E2 Environmental Conservation

- To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.
- To prevent development that could destroy, damage or otherwise have an adverse effect on those values.
- To provide for the management of the majority of the Hunter River floodplain by restricting the type and intensity of development to that compatible with the anticipated risk to life and property.
- To provide for the conservation, enhancement and protection of the Hexham Wetlands.

### E3 Environmental Management

- To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.
- To provide for a limited range of development that does not have an adverse effect on those values.
- To provide for the conservation of the rural and bushland character of the land that forms the scenic edge of and the gateway to urban Newcastle.

### E4 Environmental Living

- To provide for low-impact residential development in areas with special ecological, scientific or aesthetic values.
- To ensure that residential development does not have an adverse effect on those values.

- To conserve the rural or bushland character and the biodiversity or other conservation values of the land.
- To provide for the development of land for purposes that will not, or will be unlikely to, prejudice its possible future development for urban purposes or its environmental conservation.

### The 'W' zone

**Table 3: Waterways zones of the Standard Instrument (Local Environmental Plans) Order 2006.**

Waterways Zones
W1 Natural Waterways
W2 Recreational Waterways
W3 Working Waterways

#### W2 Recreational Waterways

- To protect the ecological, scenic and recreation values of recreational waterways.
- To allow for water-based recreation and related uses.
- To provide for sustainable fishing industries and recreational fishing.

### Applying the E zones

Environmental lands contain special or high ecological, scientific, cultural or aesthetic values. In some cases they may also have recreational values. These values should be protected, managed and where necessary restored to their original state. Activities and development on or near sensitive environmental lands should not have an adverse effect on any of these values.

Lands of environmental significance should be zoned E1 National Parks and Reserves, E2 Environmental Conservation, E3 Environmental Management or E4 Environmental Living. Waterways are to be zone either W1 Natural Waterways or W2 Recreational Waterways. In the Newcastle Local Environmental Plan 2012 (LEP) the following zones are used.

### The 'E 1' zone

The E1 National Parks and Reserves Zone applies to existing areas identified under the National Parks and Wildlife Act 1974 or areas identified as proposed for national park or nature reserves agreed by the NSW Government. The E1 zone includes Blue Gum Hills Regional Park, Glenrock State Conservation Area, Hunter Wetlands National Park and Pambalong Nature Reserve. See **Figure 8.2** for Zoning of our environmental lands.

### The 'E 2' zone

The E2 zone applies to lands of high environmental significance. It provides for the highest level of protection, management and restoration while allowing compatible land uses. Lands near an E1 or W1 zone should generally be zoned E2 to act as a buffer of protection. An example of this kind of buffering would be the environmentally sensitive lands around Hunter Wetlands National Park.

### The 'E 3' zone

The E3 zone applies to special environmental lands where a broader range of uses are required but also need of protection. This zone may be appropriate where environmental hazards exist and careful planning and management is required. Examples may include lands affected by flooding, coastal erosion or bushfire.

### The 'E 4' zone

The E4 zone applies to special environmental lands which can accommodate low impact housing. This zone also currently applies to lands in the western part of the local government area where investigations are required to determine land that is suitable for urban development and land that should be protected within an environmental zone.

Where the primary focus of the land is not for the conservation and or management of environmental values, a different zone should be applied.

### The 'W 2' zone

The W2 Recreational Waterways zone aims to protect the ecological, scenic and recreation values of recreational waterways. It allows water-based recreation and related uses and sustainable fishing practices where the values of the waterway are not diminished.



Currently the W2 zone applies to Throsby Creek. The Hunter River is covered in the SP1 Special Activities Zone, Three Ports State Environmental Planning Policy (SEPP) and the E1 zone. Parts of the Hunter River are zoned W2.

There are a few challenges with zoning waterways. NSW Planning and Environment generally encourage an entire waterway to be zoned the one zone (i.e. no split zonings of waterways), that where one intersects a national park, it is zoned E1, and that all lands abutting the waterways need to complement the waterways zone and vice versa. The adjoining land uses should ensure the ecological, scenic and recreation values of the waterways are not diminished in any way. Additionally where smaller waterways exist it is not necessary that they are zoned for waterways purposes but zoned the same as the adjoining lands. For example if a creek runs through a residential zone, it is to be zoned residential.

### Potential Zone Changes

Having regards to the aims of the E zones there are a number of areas across the LGA that are considered to warrant further investigation. Figure 8.3 has been prepared to highlight some potential areas.

Through the subdivision redevelopment of land Council often has land dedicated to it for community purposes. This may include areas such roads or parks but also often includes areas such as vegetated creek lines that are not specifically for recreation purposes. These areas often have high environmental values, particularly where they form the upper catchment to the Hunter Wetlands. It is important that these areas be appropriately zoned to ensure their environmental value can be protected and managed into the future.

#### **Box 6 Implications for the Strategy**

- **Ensure environmentally sensitive land has an appropriate environmental zone. Refer to Figure 8.2 for current zoning and Figure 8.3 for areas that require further investigation.**
- **Subdivision:**
  - **Land dedicated to Council with environmental values appropriately zoned.**
  - **Consider appropriate management mechanisms of the environmental land at subdivision stage (eg ownership).**

Figure 8.3: Environmental Zones

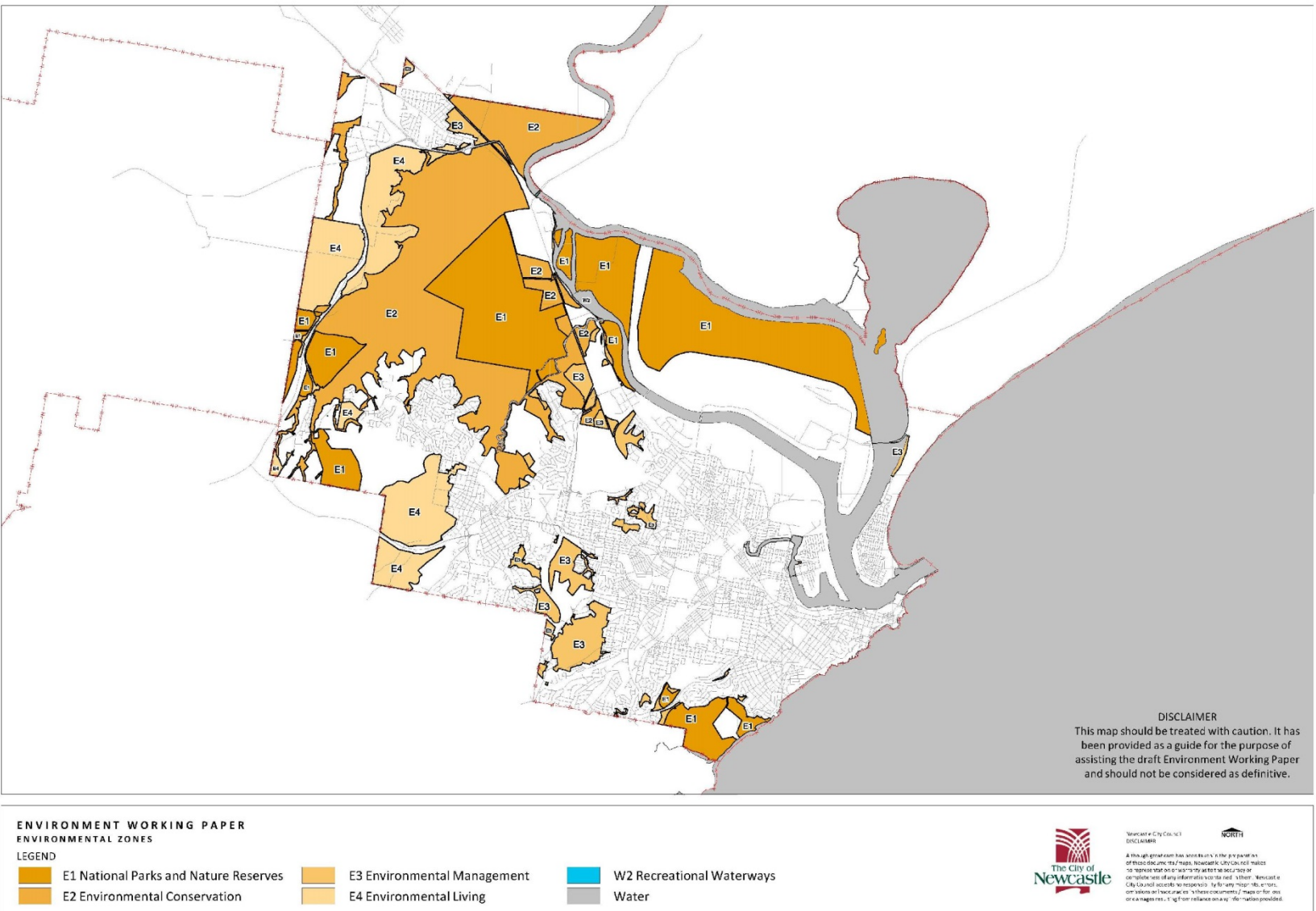
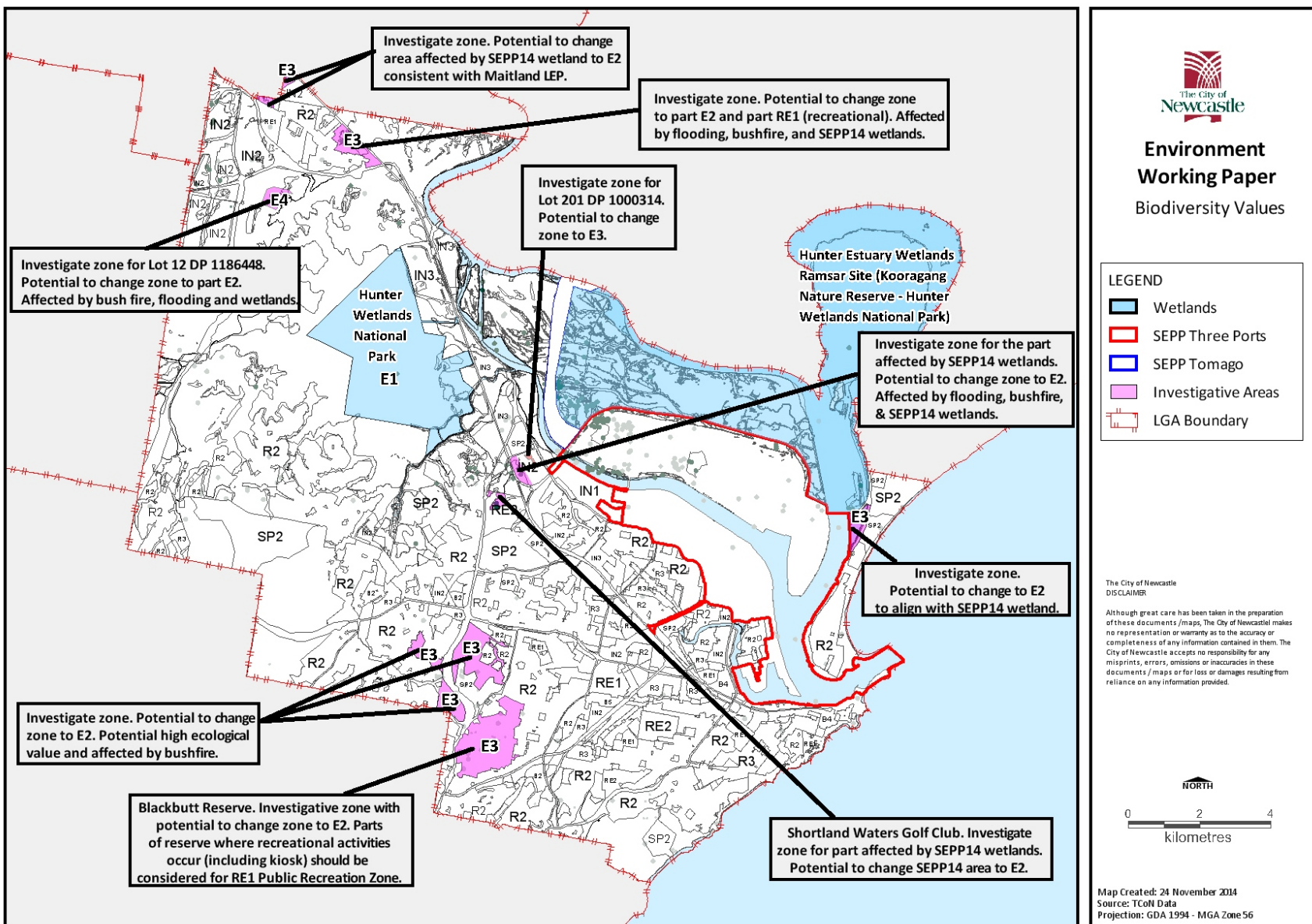


Figure 8.4: Biodiversity Values and Potential Zone Changes



## Land uses

The following table lists the differences of permitted uses in each of the environmental zones. The purpose of the exercise is to compare the differences between the zones to make sure the differences are justified. A full list of permitted and prohibited uses is available within the Newcastle Local Environmental Plan 2012 at [www.legislation.nsw.gov.au](http://www.legislation.nsw.gov.au). Please note the E1 zone has not been included as no development is allowed in this zone.

Key	E2 Environmental Conservation	E3 Environmental Management	E4 Environmental Living
X = prohibited			
C = permitted with consent			
X or C = under review			
<b>Agriculture (group term)</b>			
Aquaculture	X	C	X
Intensive plant agriculture eg cultivation of irrigated crops	X	X	C
<i>Horticulture</i>	X	X	C
<i>Turf farming</i>	X	X	C
<i>Viticulture</i>	X	X	C
<b>(Landuse terms outside agriculture group term)</b>			
Animal boarding or training establishments	X	C	C
<b>Residential accommodation (group term)</b>			
Secondary dwellings	X	X	C
<b>(Landuse terms outside residential accommodation group term)</b>			
Home-based child care	X	C	C
Home business	X	C	C
<b>Tourist and visitor accommodation</b>			
Bed and breakfast accommodation	X	C	C
<b>(Landuse terms outside tourist and visitor accommodation group term)</b>			
Camping grounds	X	C	C
Caravan parks	X	C	C
<b>Commercial Premises</b>			
Landscaping material supplies	X	X	C
Plant nurseries	X	X	C
Roadside stalls	X	C	C
Neighbourhood shops	X	X	C
<b>Air transport facilities</b>			
<b>(Landuse terms outside Air transport facilities group term)</b>			
Electricity generating works	X	C	X
Passenger transport facilities	X	X	C
<b>Educational establishments</b>			
schools	X	C	I
<b>(Other landuse terms relating to community infrastructure)</b>			
Child care centres	X	C	C
Community facilities	X	C	C

Emergency services facilities	X	C	C
Information and education facilities	X	C	C
Research stations	X	X	C
Respite day care centres	X	C	C
<b>(Landuse terms within signage group term)</b>			
<b>Signage</b>	X	C	X
Advertising structure	X	C	X
Building identification sign	X	C	X
Business identification sign	X	C	X
<b>(Landuse terms relating to recreation)</b>			
Recreation facilities (outdoor)	X	C	X
Water recreation structures	X	C	X
<b>(Other miscellaneous land use terms)</b>			
cemetery	X	C	X

### Box 7. Implications for the strategy

The following land uses should be reviewed against the objectives of the zone to determine if they are appropriate:

- Aquaculture in the E3 zone – should it be made prohibited, considering the intensive nature of these facilities?
- Beekeeping in the E2 zone – should it be made prohibited?
- Camping grounds in E2 – should it be made permissible?
- Caravan parks in the E3 and E4 – should be made prohibited, considering their potentially intensive nature (eg moveable dwellings & manufactured home estate via SEPP 36 – Manufactured Home Estates).
- Eco tourist facilities in all E zones – should they be made permissible, considering these areas are likely to contain the environmental attributes to attract these facilities?
- Child care centres in the E3 and E4 zone – should they be made prohibited?
- Community facilities in the E3 zone – should they be made prohibited?
- Information and education facilities in the E2 zone – should they be made permissible?
- Research stations in the E2 and E3 zones – should these be made permissible?
- Signage (advertising structure) in the E3 zone – should these be made prohibited but otherwise make business and building identification signage permissible in E zones associated with any permissible business?

\* The land uses have been refined due to community feedback received.

## Newcastle Development Control Plan 2012

There is no specific section in the [Development Control Plan](#) (DCP) that focuses on biodiversity. However, there are a number of controls contained within the sections of the DCP aimed to minimise impacts on the environment. These include soil, tree, energy efficiency, stormwater, water and waste management. In addition, there are controls that relate to built form and landscaping aimed to protect the environment.

### Box 8 Implications for the Strategy

The Local Planning Strategy could recommend that a DCP Section on biodiversity be prepared.

Various Councils have DCP Sections on Biodiversity. Generally they provide guidelines and controls for lands in riparian zones and habitat corridors. In some cases they specify locally important flora and fauna and methods of protection.

In addition, the introduction of a Biodiversity Clause and Map into the LEP could be considered. The areas to which the provision can apply will most likely be communities, habitats for significant flora and fauna and corridors that provide for and support or contain high biodiversity values. It would not apply to E1 land as the National Parks and Wildlife Act 1974 applies to such lands. The map could include but not be limited to: Habitat for threatened species and populations, endangered ecological communities, corridors of value for inter-and intra-regional connectivity and other significant species, communities and their habitats identified within a regional or local study. It should not be widely applied and only to areas of high biodiversity significance that have been identified through the strategic planning process. Caution should be taken to avoid replication of existing State legislation/integrated approval processes.



## Draft Model Local Provision – Biodiversity (Terrestrial)

### General Information

This clause provides for the identification of high value biodiversity areas and requires the consent authority to be satisfied that impacts on those biodiversity values are avoided or minimised by any proposed development.

- (1) The objective of this clause is to maintain terrestrial biodiversity, including:
  - (a) protecting native flora and fauna,
  - (b) protecting the ecological processes necessary for their continued existence, and
  - (c) encouraging the recovery of native flora and fauna, and their habitats.
- (2) This clause applies to land identified on the [Name] Local Environmental Plan [Year] Natural Resource – Biodiversity Map
- (3) When assessing a development application, the consent authority must consider potential adverse impacts from the proposed development on:
  - (a) the condition and significance of the vegetation on the land and whether it should be substantially retained,
  - (b) the importance of the vegetation in that particular location to native fauna
  - (c) any potential to fragment, disturb or diminish the biodiversity values of the land, and
  - (d) the condition and role of the vegetation as a habitat corridor, and any proposed measures to minimise or mitigate those impacts
- (4) Before granting consent to development to which this clause applies the consent authority must be satisfied that:
  - (a) the development is sited, designed and managed to avoid potential adverse environmental impacts, or
  - (b) where an impact cannot be avoided, and having taken into consideration feasible alternatives, the proposed design, construction and operational management of the development will mitigate and minimise those impacts to a satisfactory extent.

## Newcastle Biodiversity Strategy 2006

The [Newcastle Biodiversity Strategy](#) provided the first steps toward making biodiversity issues an important and integrated part of decision-making, especially in relation to strategic land use planning, management of the City's open spaces, design and maintenance of urban infrastructure, development control and education. The document describes the important values of Newcastle's biodiversity, identifies issues resulting in the continuing loss of biodiversity, provides a clear direction for conservation and provides a framework for prioritising and implementing actions (The City of Newcastle 2006).

The strategy contains the following vision:

**“Newcastle values its biodiversity and its ecosystems and will maintain, manage and enhance them as an asset of the City.”**

A revised Biodiversity Strategy is proposed in the Newcastle Environmental Management Strategy.



## Newcastle Environmental Management Strategy 2012

Council has developed the [Newcastle Environmental Management Strategy](#) to replace the Newcastle Environmental Management Plan 2003. The Strategy provides an overall framework for environmental management for The City of Newcastle which:

- evaluates past achievements
- identifies opportunities for improvement
- brings together existing programs
- incorporates new advances in environmental management
- identifies gaps, new issues and priorities
- refines environmental objectives and strategies
- ensures alignment with the Newcastle Community Strategic Plan (The City of Newcastle 2013).

### Box 9 Implications for the Strategy

The Local Planning Strategy should ensure that biodiversity values and key threatening processes are adequately considered.

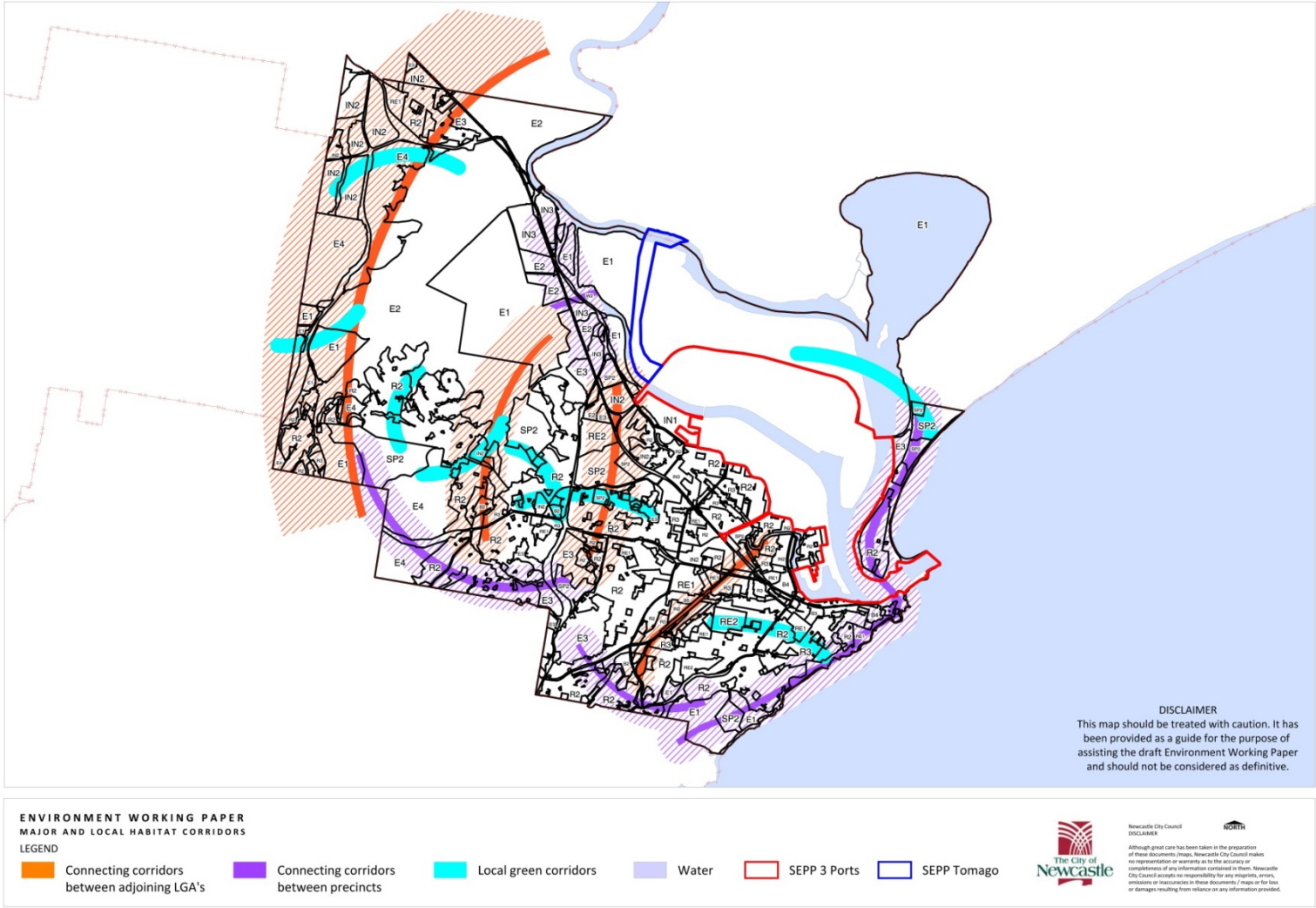
## Green Corridors and Landscape Precincts Plan 2005

The Newcastle Green Corridors and Landscape Precincts Plan aims to provide opportunity for Council to increase the quality and quantity of green spaces within the city while taking into account Council's other strategic priorities such as the provision of recreation opportunities and increased housing and employment opportunities. It proposes to:

- Rationalise, update and simplify current information on landscape precincts and plant species selection City-wide.
- Define a series of actual and potential 'corridors' or 'green linkages' across the city and provide for their enhancement using appropriate species.
- Raise the awareness of developers, community groups, residents and other landholders in planting appropriate species.
- Coordinate the project work of Council so that appropriate species are chosen where planting is proposed (The City of Newcastle 2005).

The Green Corridors and Landscape Precincts Plan provides maps illustrating major and minor green corridors within the LGA. These corridors are not reflected in the Newcastle LEP and DCP so have had limited influence on development. The corridors do guide certain council activities. As already mentioned, a review of the Newcastle Biodiversity Strategy is proposed in the Newcastle Environmental Management Strategy. This review is likely to revisit the placement, role and management of such habitat corridors. See **Figure 8.4** for major and minor corridors.

Figure 8.5: Major and local habitat corridors







# Local Planning Strategy

## Chapter 9: **Transport**

## **Chapter 9 Cover**

Title: The future painting

The front cover was painted by Isabella Zulumouski aged 8 as part of the community consultation undertaken for the Newcastle 2030 Community Strategic Plan. The brief was *'to express in painting the Newcastle the participant would like to see in 20 years time.'*

### ***What is the purpose of this chapter?***

The provision of a good public transport system can encourage a well connected, efficient and sustainable city. The availability of transport has a direct influence on land use planning including the location of high density residential land and commercial centres. To encourage the use of public transport higher density residential zones should be located close to areas with good access to public transport. It is also important that commercial centres are easily accessed to ensure convenient access to goods and services.

The purpose of this chapter is to:

- Provide an overview of the transport forms in Newcastle.
- Outline the role each level of government has in transport planning.
- Introduce the principle of integrated land use and transport.
- Present PTAL (Public Transport Accessibility Levels) mapping of the Newcastle Local Government area to determine if higher density residential zones, commercial centres and activity nodes correlate with accessible public transport.
- Ensure that future growth is in areas accessible by public transport.
- Review Council's land use controls for consistency with State Government transport policies.
- Review parking and transport provision for development to ensure they are contributing to an integrated and functional city and have a positive influence on growth, development potential and travel patterns.

# 1. Transport forms in Newcastle

Transport can be defined as the conveying of people or goods from place to place. A transport system that is diverse, extensive, convenient and adaptive will encourage sustainability. A dysfunctional transport system characterised by limited modes, congestion, pollution and social isolation will undermine Newcastle's future.

There are a range of transport systems in Newcastle which are outlined below.

## *Roads and Streets*

Roads and streets can be categorised by function and expressed as a road hierarchy. A typical hierarchy for Australian roads is freeways, arterial roads, sub-arterial or collector and local roads or streets.

A road hierarchy allows priorities to be set for each road category. For example, higher order roads such as freeways and arterial roads are engineered for high volume distribution by car, public transport and freight. Lower order roads, such as collectors and local roads are engineered for public transport, local traffic, cycling and pedestrians. It is generally ideal for town centre streets to prioritise pedestrians over all other modes of transport. This is suitable in some town centres but not all town centres in the Newcastle LGA. Town centre streets are characterised by low traffic speeds, wide pedestrian pavements and multiple, safe crossing points. The road hierarchy and characteristics of each classification are shown in **Table 9.1**.

Newcastle, being a largely established urban area, has significant road infrastructure already in place. The Roads and Maritime Services and the City of Newcastle are responsible for their own road assets within the local government area. **Table 9.1** outlines the responsibilities for each tier of the road hierarchy.

Most improvements to the road network in Newcastle will come about by improvements to the established network. However, there are several large projects underway or planned that will have significant impacts on the existing networks including the Newcastle Inner City Bypass and M1 to Raymond Terrace. These are outlined in more detail in the 'Infrastructure' chapter of this background report.



**Table 9.1:** Adapted from: Network and Corridor Planning Practice Notes (Roads and Traffic Authority, NSW, 2008); Newcastle Transport Strategy – Background working paper- Roads and Freight.

Road Hierarchy	Administrative system	Purpose / characteristics	Traffic volumes per day	Responsibility
<b>Freeway and motorway</b>	State Road	<ul style="list-style-type: none"> <li>• Vehicle priority</li> <li>• High speed</li> <li>• Heavy Vehicle / Freight use</li> <li>• Wide, multipurpose lanes</li> <li>• Noise walls</li> </ul>		Roads and Maritime Services
<b>Arterial Road</b>	State Road	<ul style="list-style-type: none"> <li>• Vehicle Priority</li> <li>• High speed</li> <li>• Wide, multipurpose lanes</li> <li>• Through traffic from one region to another</li> <li>• Heavy vehicles</li> </ul>	>50,000 vehicles	Roads and Maritime Services
<b>Sub-arterial Road</b>	Regional Road	<ul style="list-style-type: none"> <li>• Public transport and cycling</li> <li>• Connects arterial roads to development</li> <li>• Traffic from one part of a region to another</li> <li>• Heavy vehicles limited</li> </ul>	5,000 – 20,000 vehicles	Local Government
<b>Collector Road</b>	Local Road	<ul style="list-style-type: none"> <li>• Public transport and cycling</li> <li>• Provide access to properties and distributes traffic</li> <li>• Small amount of through traffic</li> <li>• Heavy vehicle use generally not appropriate</li> </ul>	2,500 – 10,000 vehicles	Local Government
<b>Local Road</b>	Local Road	<ul style="list-style-type: none"> <li>• Pedestrian priority</li> <li>• Low speed</li> <li>• High quality street works</li> <li>• Provide access to properties</li> <li>• Heavy vehicle use generally not appropriate</li> </ul>	<2,500 vehicles	Local Government

## Private vehicles

The road and street network in the Newcastle LGA are utilised by buses and private vehicles. The 2011 census showed that 82.4% of households owned at least one vehicle, while 11.2% did not. In comparison regional NSW had higher car ownership rates with 86% of dwellings in regional NSW owning at least one car and 7.6% not owning a car. The most significant change in car ownership in the Newcastle LGA between the 2006 and 2011 census was the number of households with two motor vehicles, which rose by 2,595 households. The number of households with no motor vehicles also decreased by 1,548 households. In 2011 65.8% of people in the Newcastle LGA drove to work as a driver and 5.6% of people travelled to work as a passenger in a car.

## Heavy Vehicles

Heavy vehicles also utilise the road network for freight and distribution purposes. The road hierarchy above outlines where heavy vehicle traffic is likely to occur. It is important that routes to and from our employment lands, particularly the Port of Newcastle, are protected. It is also important that heavy vehicles be avoided where possible from our collector and local roads to avoid impacts upon amenity.

## Buses

Most suburbs within Newcastle and the eastern part of Lake Macquarie are serviced by buses provided by Newcastle Buses and Ferries. Services extend from the Newcastle City Centre to Sandgate, Wallsend, Glendale, Speers Point, Valentine and Caves Beach (refer Infrastructure chapter for the bus network map).

The majority of the Newcastle LGA is within the Outer Metropolitan Bus Contract Region 5. The Transport for NSW service planning guidelines stipulate that a bus must be within 400m of the majority of households (Transport for NSW Service Planning Guidelines p. 17).

A number of private bus operators connect the remaining suburbs, as well as towns and regional centres throughout the Lower Hunter, to Newcastle. Service frequencies and the operating periods vary between routes.

## ***Train***

Newcastle is part of the NSW TrainLink service with a network which extends from Sydney to the Blue Mountains, Central Coast and the Hunter. NSW TrainLink trains and coaches provide regular daily travel to the Upper Hunter, North Western and North Coast regions, and connections in Sydney for Canberra, Melbourne, Southern and Western region trains. The NSW Government has announced that the Newcastle rail line will be truncated at Wickham from 26 December 2014.

## ***Stockton-Newcastle Ferry***

The Stockton – Newcastle Ferry operates regularly from the terminal on Queens Wharf, located along the Newcastle Foreshore. From Monday to Thursday the ferries start from 5:15am and run about every half an hour until 11pm. On Friday and Saturdays the ferries run until midnight. On Sundays and public holidays the ferry runs from 8:30am until 10:00pm.

## ***Cycling***

There are a number of both on road and off road cycle routes in the Newcastle Local Government area. The major cycle routes in the Newcastle LGA include the Fernleigh Track between Adamstown and Belmont, the Tramway track between Wallsend and Glendale, coastal cycleway and from the Newcastle CBD to Newcastle University. The adopted Newcastle Cycling Strategy (2012) and Action Plan outlines a number of proposed cycle ways which aim to connect employment, education nodes, shopping centres and parks and beaches.

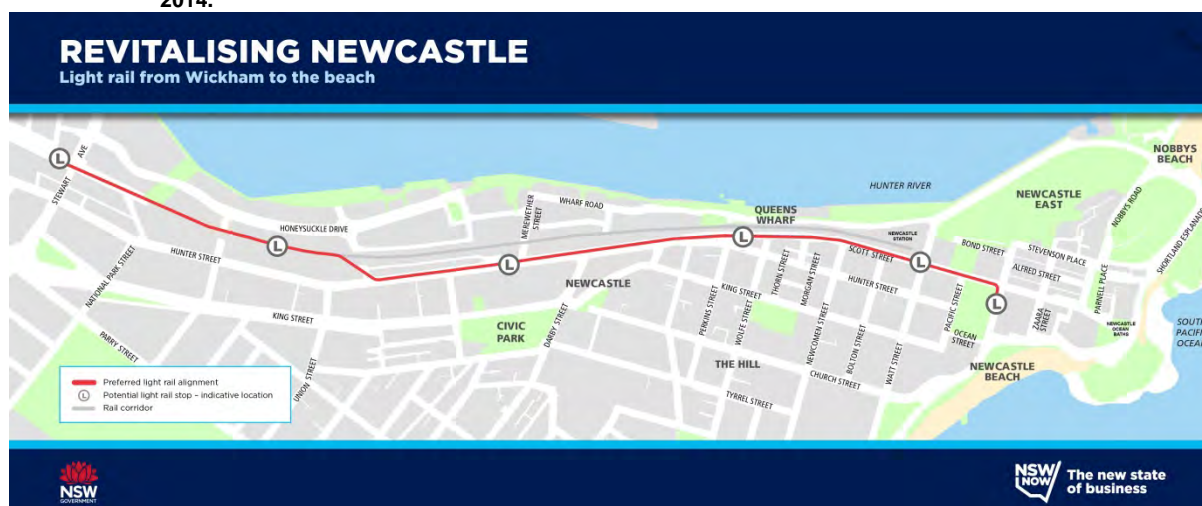
## ***Walking***

Newcastle has a substantial network of footpaths and shared pathways. Footpaths are provided by Council and in some cases are provided privately as part of a development. Projects for pedestrian facilities are prioritised based on types of development in the area (e.g. schools, shops), safety, traffic impact, facility benefits, and additions and linkages to existing pathways.

## Light rail

In 2013 the NSW Government announced that light rail would be introduced to the Newcastle City Centre between Wickham and Newcastle Beach as an integrated transport solution and to revitalise the city centre. The light rail is intended to provide connection between the city centre and the waterfront. The introduction of light rail to Newcastle is being managed by Urban Growth in conjunction with the Department of Planning and Environment and Transport for NSW. In early 2014 Urban Growth released for community consultation three options for the light rail route. Following consultation a preferred light rail route was announced in May 2014. The preferred light rail route is to travel east from the new Wickham interchange along the existing rail corridor towards Worth Place where the light rail will join Hunter Street and travel along to Pacific Park.

**Figure 9.1:** The preferred light rail route for the Newcastle City Centre which was announced by Urban Growth in 2014.



## 2. Responsibilities

### *Role of Federal Government*

The Australian Government establishes legislation and targets for transport and it is often the responsibility of the State and Local government to implement the legislation and required actions to meet the targets specified by the Federal Government.

Through the Commonwealth's *Disability Discrimination Act 1992* the Federal Government establishes the requirements for access to public transport. It is then the role of State and Local Government to implement these access requirements.

The Federal Government also prepares the National Road Safety Strategy. This strategy outlines targets to meet for road safety and to reduce the number of accidents. The strategy requires all three levels of Government to implement a series of actions to meet the safety targets. The Federal Government encourages and promotes walking and cycling as transport through the National Cycling Strategy and the Walking, Riding and Access to Public Transport Report.

### *Role of State Government*

The provision of public transport is largely the responsibility of the State Government through Transport for NSW and the planning of future land use and growth.

The State Government prepares regional strategies, such as the Lower Hunter Regional Strategy, that broadly identify where new growth is to be accommodated. Strategic policies written at a State level influence planning strategies that are created by Local Government. More detail on the planning documents released by the State Government is provided below under Existing Government Policies in this chapter.

The NSW Government is responsible for the road network, public transport networks, timetabling, pricing and transport interchanges. Through these factors the State Government is able to influence travel behaviour.

## ***Role of Local Government***

Local Government has a varied role in the provision of transport infrastructure. Local government is able to influence transport patterns through land zonings, density controls and other development provisions.

Council has very little direct role in the provision of public transport eg buses and rail, as most of these are provided by the State Government. Local government provides support infrastructure for public transport including shelters and seats, maintaining the road network and advocating for improvements to public transport.

Local Government can facilitate the provision of public transport and other sustainable modes of transport, such as walking and cycling through land use planning and development control functions. Local Government plays a key role in controlling the density of land uses and is able to target higher residential and employment densities around area with good access to public transport and to encourage sustainable transport options. The density provisions and permissible land uses in Council's Local Environmental Plan (LEP) can influence travel patterns.

Local Government also has the ability to influence travel behaviour through the provisions contained in Council's Development Control Plan (DCP) and the assessment of development applications. The Newcastle DCP 2012 targets higher density residential land uses around five Urban Renewal Corridors, Broadmeadow, Hamilton, Islington, Mayfield and Adamstown which are identified as having better access to public transport and commercial centres. The DCP contains car parking rates and requirements for end of trip facilities which can influence people's choice of transport mode.

Through Developer Contribution Plans and conditions of consent of development applications, Local Government is able to facilitate the provision of roads, footpaths, cycleway and traffic management facilities which can influence the travel behaviour of the community.

## ***Role of the private sector***

A number of private bus companies operate in the Hunter connecting suburbs which are not covered by Newcastle buses, as well as towns and regional centres throughout the Lower Hunter to Newcastle. Service frequencies and the operating periods vary between routes.

### **3. Existing Government Policies**

#### ***State Government Policies***

##### **Newcastle Urban Renewal Strategy 2012 (Draft)**

The Newcastle Urban Renewal Strategy 2014 was released by the Department of Planning and Environment. The Strategy only applies to the Newcastle City Centre including the suburbs of Wickham, Newcastle East and Newcastle West. One of the guiding principles of the strategy is transport access and connectivity. A reoccurring theme throughout the strategy is promoting transport, access and connectivity to and within the City Centre.

The Strategy recommends a number of potential amendments to Council's parking controls which could be implemented through Council's planning documents. These recommendations include introducing a cap on car parking, reviewing accessibility to visitor car parking, reviewing car parking rates and introducing park and ride facilities.

##### **Lower Hunter Regional Strategy 2006**

The Lower Hunter Regional Strategy 2006 was prepared by the Department of Planning and Environment and outlines growth in the region for the next 25 years including employment, transport, housing and the environment. The strategy has a target of 20,500 new residential dwellings in the Newcastle Local Government area; of this 4,000 new dwellings are to be located in the City Centre (Lower Hunter Regional Strategy, Department of Planning and Environment, 2006. p 18 and 27). An additional 10,000 jobs are projected for the City Centre, along with 1,600 jobs at the University and 300 additional jobs at the John Hunter Hospital (Lower Hunter Regional Strategy, Department of Planning, 2006. p18). A key action in the strategy is to concentrate employment and residential development close to public transport. This can be achieved through Council's land use planning documents. The Department of Planning and Environment are currently preparing the new Lower Hunter Regional Growth Plan which will replace this strategy.

##### **NSW Long Term Transport Master Plan**

In December 2012 the NSW Government released the NSW Long Term Transport Master Plan. The Plan sets a framework for policy and investment decisions for the next 20 years and aims to achieve a balance between actions that expand the capacity of the transport



network and those that improve the way it operates. A key principle is the integration of land use and transport planning.

## **Hunter Regional Transport Plan 2014**

In March 2014 the NSW Government released the Hunter Regional Transport Plan. The plan provides more detail on transport in the Hunter including light rail in the City Centre and improved road connections. The plan aims to provide better connections to jobs, study and town centres.

## **Local Government Policies**

### **Newcastle 2030 Community Strategic Plan (CSP)**

The CSP sets out the vision for a smart, liveable and sustainable city to the year 2030. Two key strategic directions in the CSP can be achieved in part from Council's LPS – to create a 'connected city' and 'a liveable and distinctive built environment'.

A connected city has two objectives which can be achieved through transport planning:

- *A “linked network of cycle and pedestrian paths”; and*
- *“a transport network that encourages energy and resource efficiency”* (Newcastle 2030 Community Strategic Plan, Newcastle City Council 2013, p 38).

These two objectives can be achieved through provisions in Council's land use planning documents and development controls such as car parking rates, end of trip facilities and the location of commercial and residential zones.

A liveable and distinctive built environment can be achieved through a number of objectives, one being to create mixed-use urban villages supported by an integrated transport network (Newcastle Community Strategic Plan, Newcastle City Council 2013, p.62). The CSP suggests that this is achieved through:

- *“Concentrated growth of housing around transport and activity nodes, where there are appropriate services and amenities”* (Newcastle 2030 Community Strategic Plan, Newcastle City Council 2013, p.62)

This is discussed in more detail below - Public Transport Accessibility Levels (PTAL).

A caring and inclusive community can also be facilitated by the objective for active and healthy communities with physical, mental and spiritual wellbeing. One of the strategic directions to achieve this is

- *“Ensure the community has access to needed services and facilities, particularly those most in need”* (Newcastle 2030 Community Strategic Plan, Newcastle City Council 2013, p.56)

As discussed within this chapter under Public Transport Accessibility Levels (PTAL) locating our housing and centres in proximity to transport supports alternative transport options, including public transport but also walking and cycling.

### **Newcastle Urban Strategy (NUS)**

The Newcastle Urban Strategy was first prepared in 1998 and is being transformed into the Newcastle Local Planning Strategy. The NUS contains the principles of Newcastle Urbanism and the concept of integrating land use and transport.

### **Newcastle Local Environmental Plan 2012 (LEP)**

The Newcastle LEP 2012 is a legal document that outlines the land use and density controls for land within the Newcastle LGA. It is a legal document, containing a series of maps and a written instrument. The density provisions and permissible land uses in Council's LEP can influence travel patterns.

### **Newcastle Development Control Plan 2012 (DCP)**

The Newcastle DCP 2012 supports the Newcastle LEP and provides additional guidance which is used when preparing and assessing development applications. The DCP contains controls to encourage higher density development along the Newcastle Urban Renewal Corridors of Islington, Mayfield, Hamilton, Broadmeadow and Adamstown, which follow the key transport routes in Newcastle. The DCP also contains provisions for car parking and end of trip facilities for development with an aim to ensure developments have adequate parking while encouraging the use of public transport, walking and cycling.

## Draft Newcastle Transport Strategy

The City of Newcastle has adopted a Newcastle Transport Strategy. The transport strategy aims to guide Council's transport-related decisions and actions. The strategy consolidates a number of transport documents and allocates responsibilities and actions for a range of transport initiatives.

### 4. Transit Orientated Development

Integration of all modes of transport and land use is essential to support a well connected, inclusive, efficient and sustainable city.

Transit oriented development (TOD) is a planning concept that promotes the creation of a network of well-designed, human-scale urban communities focused around transit nodes. This concept had previously been adapted and applied to the Newcastle Urban Strategy to define the substantial, moderate and limited growth precincts according to their SAFE walking distance from a district centre and train station. These precincts then informed the land use zones and the height and floorspace ratio development controls in Council's LEP and DCP.

#### **Implications for the strategy:**

Continue to promote transit orientated development through the LPS, zoning and density provisions in the LPS, Council's LEP and DCP.

## 5. Public Transport Accessibility Levels (PTAL)

### *What is PTAL?*

Public Transport Accessibility Levels (PTAL) are a measure of the accessibility of a point to the public transport network. PTAL measures the density of public transport at a certain point in the Local Government area, taking into account the walk access time and service availability (Transport for London, Measuring Public Transport Accessibility Levels, 2010). The detailed methodology behind PTAL mapping is complex and additional information on the methodology and potential limitations of the tool can be found on the following link

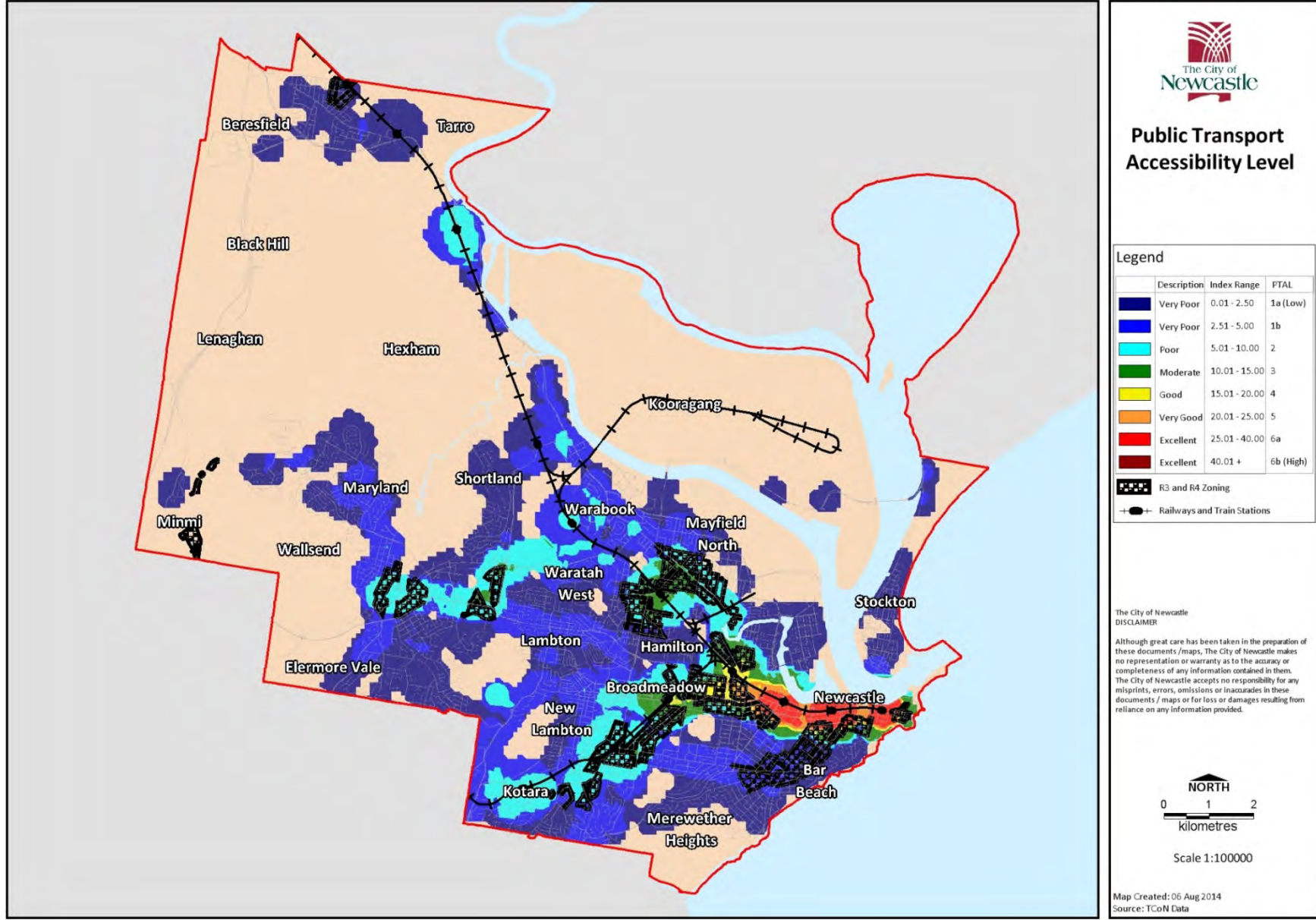
<http://data.london.gov.uk/documents/PTAL-methodology.pdf>

PTAL mapping has been undertaken in a number of metropolitan cities around Australia and internationally, including London. Originally developed in the United Kingdom, PTAL mapping is designed for major cities. This can result in areas such as Newcastle appearing to have very poor public transport access as public transport is often not as dense in regional cities as it is in capital cities. Nevertheless, the relative accessibility of one area compared to another is a useful tool for land use planning. PTAL calculates the density of public transport in an area, giving each location a banding. The bandings are then colour coded for mapping purposes. The scale ranges from dark blue, which is poor to red, which is excellent. In general, the areas with the brighter colours (yellow, orange and red) have better access to public transport. Once it is known which areas have better access to public transport higher density residential uses and activity nodes can be placed around these areas to encourage higher public transport use and support the principles of transport orientated development.

### *PTAL Mapping in the Newcastle LGA*

The PTAL mapping which has been undertaken for the Newcastle LGA is shown in **Figure 9.2**. Most of the Newcastle LGA has a PTAL rating of very poor; however the areas around the commercial centres and renewal corridors generally have better public transport being ranked poor or moderate. The Newcastle City Centre has the highest rating, ranging from moderate to excellent.

Figure 9.2 Public Transport Accessibility Level - LGA



The Newcastle LGA has a high reliance on the train network with the areas around train stations having a higher rating than those around bus stations. Train stations seem to have a greater impact on improving accessibility than bus stops. The high rating for the Newcastle City Centre is significantly influenced by the rail line. Train stations are generally more reliable when planning land uses as they are less likely to move or change routes in comparison to buses. Future timetabling changes may alter the PTAL mapping for Newcastle.

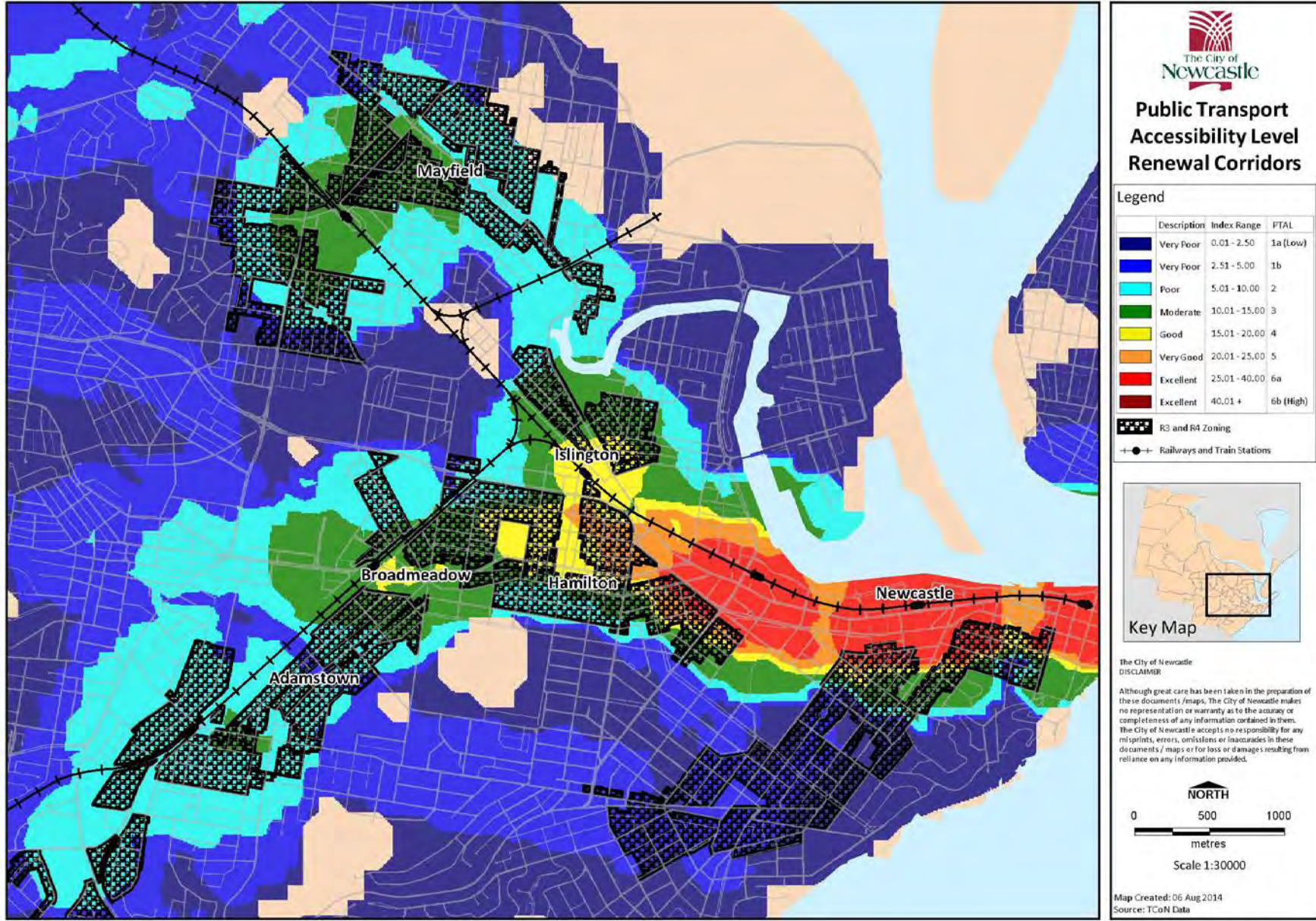
## Transport and residential zones

Following the concept of Transit Orientated Development, a sound planning principle is to locate higher density residential zones around areas with good access to public transport and close to commercial centres. This encourages public transport use and promotes walking. In Newcastle higher density residential development is targeted to the R3 Medium Density Residential, R4 High Density Residential zones and the Newcastle Urban Renewal Corridors (Adamstown, Islington, Hamilton, Broadmeadow and Mayfield). The urban renewal corridors generally contain a mix of R3 and R4 zoning along with commercial zonings.

The R3 Medium Density Residential zones and R4 High Density Residential zones have been overlayed with the PTAL map in **Figure 9.3**.



Figure 9.3: Public Transport Accessibility Level for the Renewal Corridors





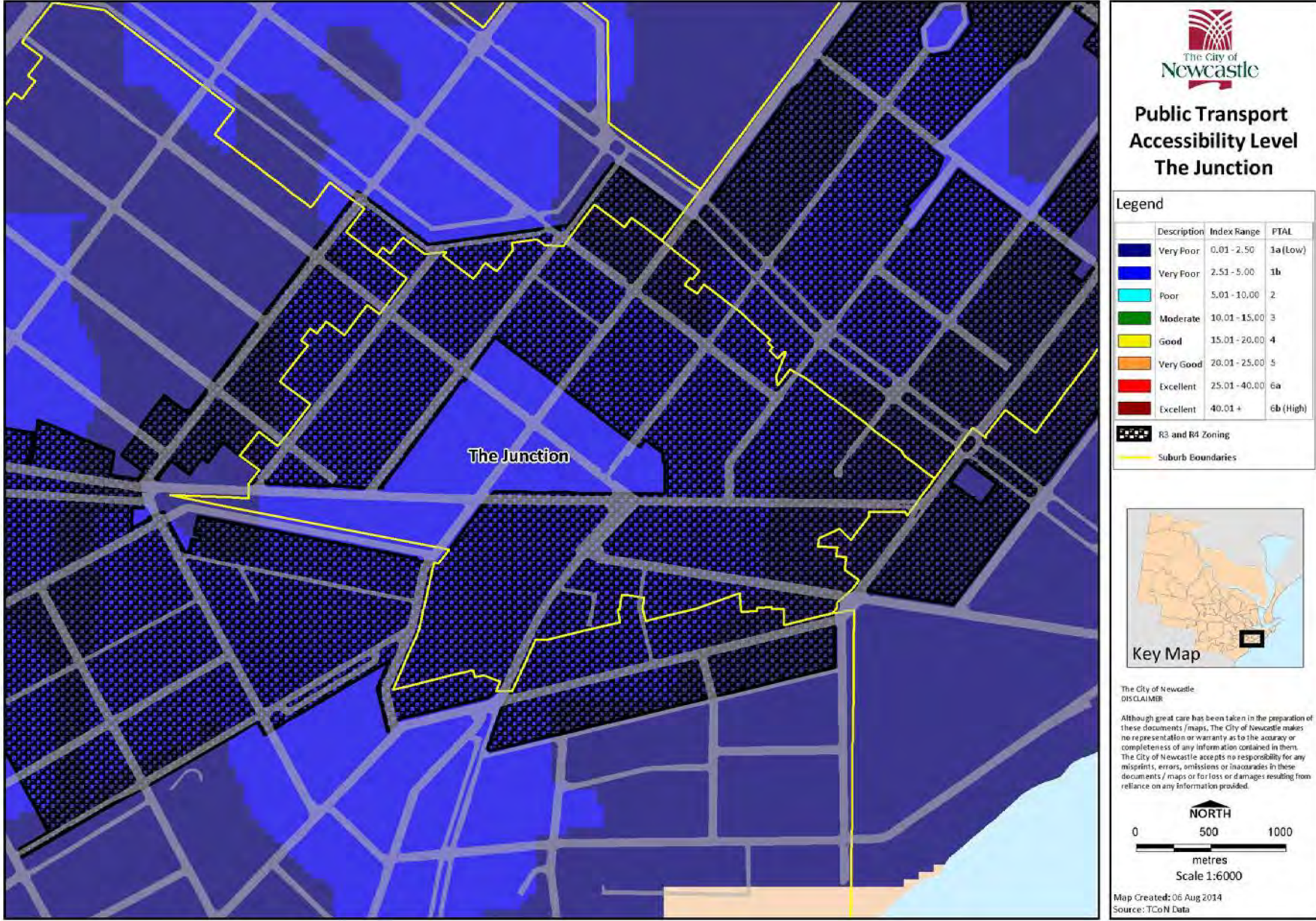
The figure demonstrates that the R3 and R4 zones and the urban renewal corridors generally match up with the areas in Newcastle which have better access to public transport. This demonstrates that the renewal corridors and higher density zones in these locations are in the correct area for transport planning purposes and should be maintained.

**Implications for the strategy:**

Maintain higher density residential zonings along the urban renewal corridors and close to areas with better access to public transport.

The R3 and R4 zoned areas around The Junction and the southern end of Cooks Hill (**Figure 9.4**) has poorer access to public transport than similar residential zoned land such as in the renewal corridors. Although having poorer access to public transport the R3 and R4 zoned land at The Junction is close to a commercial centre and is relatively flat, providing the potential for walking and cycling provision in the area to be improved. In this regard the higher density is still considered warranted.

Figure 9.4: Public Transport Accessibility Level for The Junction



## Commercial centres and activity nodes

The commercial centres of Wallsend, Jesmond, Waratah and Kotara are located in areas with better access to public transport than the majority of the Newcastle LGA. Locating commercial centres in areas with higher access to public transport is a principle which should be maintained in the Local Planning Strategy to encourage greater use of public transport.

### Implications for the strategy:

Maintain commercial centres in areas which are accessible by public transport.

The University of Newcastle and John Hunter Hospital are two major employers in the Newcastle LGA and attract large numbers of customers. Public transport in these areas is ranked as poor. Given the significance of these centres and significant number of people commuting to the centres each day Council should continue to advocate for better public transport connections to these areas.

### Implications for the strategy:

Council to continue to advocate for improved public transport at key activity nodes, such as John Hunter Hospital and the University of Newcastle.

## New Residential Development

A significant amount of land in the western corridor surrounding Minmi has recently been rezoned to residential land uses. Future development in this area should consider the provision of public transport in the design and planning.

### Implications for the strategy:

Require new residential development to incorporate provisions for public transport.



## 6. Parking in developments

The consideration of parking is an important component of all development. Parking controls can influence choice in travel, urban design, living costs and development costs. Council's parking rates are currently outlined in Section 7.03 Traffic, Parking and Access of the Newcastle DCP 2012. The parking rates in Council's DCP are based on the Guide to Traffic Generating Development released by the Roads and Maritime Services in 2002.

The parking provisions in the NDCP vary depending on the type of use (e.g. childcare centres, pub, schools, etc) except for non-residential development in the Newcastle CBD which is based on a flat rate of 1 space per 60m<sup>2</sup> gross floor area. As a disincentive for providing parking that is above that required in the DCP, additional parking is added to the gross floor area calculation for developments. Parking can be provided at less than the required rate if it is demonstrated by the applicant that it is appropriate in the circumstances of the case.

Parking is also required under the DCP for motorcycle and bicycle parking, along with end of trip facilities (ie showers and lockers) for larger developments. The provision of end of trip facilities assists in encouraging people to use other modes of transport than driving eg commuter cycling.

In residential development visitor parking is sometimes required. Visitor parking in developments such as residential flat buildings which have secure access have the potential to be inaccessible and consequently, underutilised. The visitor parking requirements could be reviewed to determine if they can be made more accessible.

### **Implications for the strategy:**

Review visitor parking rates and determine if they can be more accessible. If not consider eliminating visitor parking requirements.

## *Hunter New England Health and University*

Hunter New England Health and the University of Newcastle are independent parking authorities who act as separate parking entities and can administer their own paid parking schemes in designated areas.

## ***Park and ride***

The Newcastle Urban Renewal Strategy suggests that further investigation be carried out into creating a park and ride facility near either Warabrook, Lambton or Charlestown to encourage greater use of public transport into the Newcastle City Centre. Further investigation is needed on this.

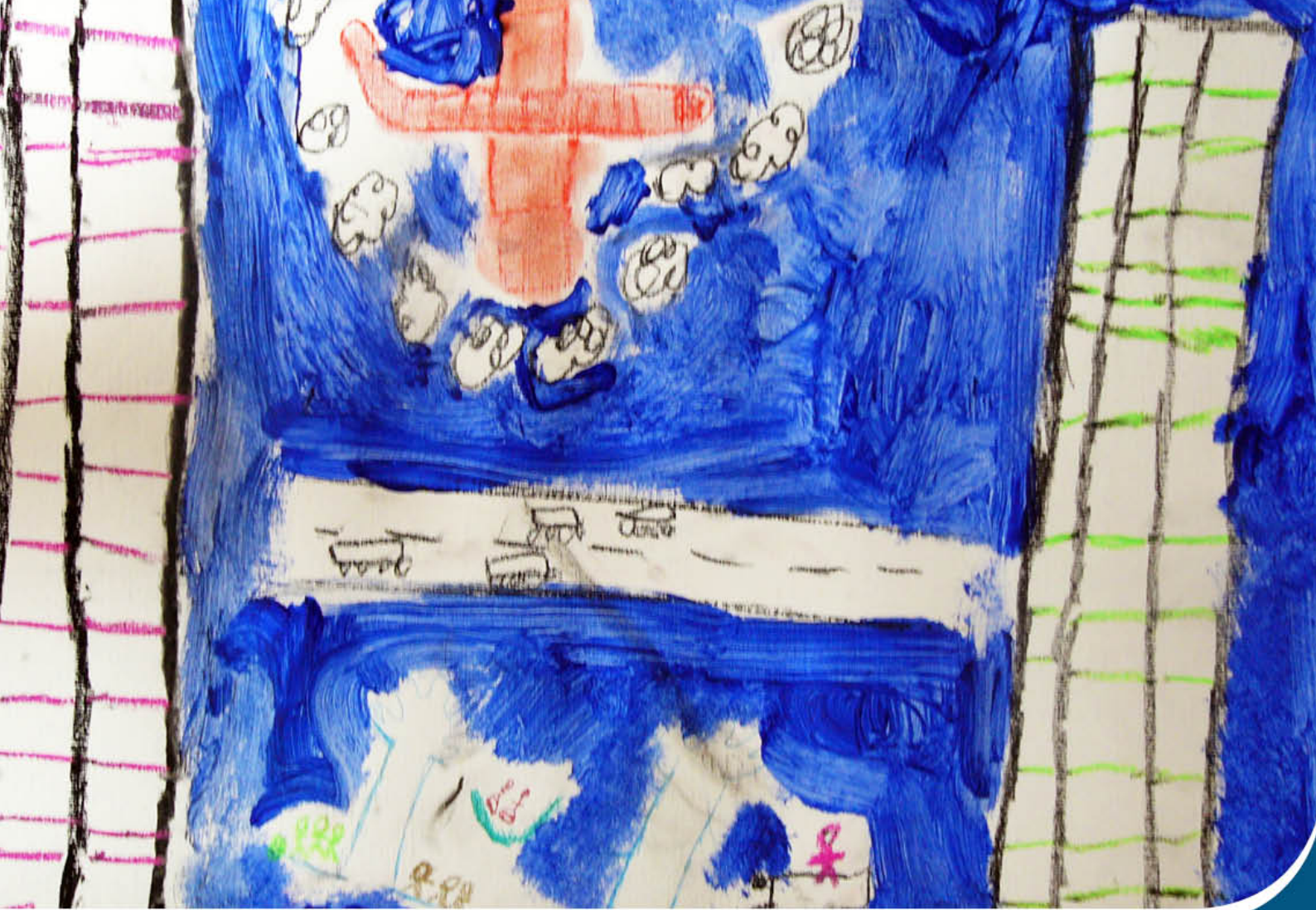
### **Implications for the strategy:**

Investigate potential locations and the viability of park and ride facilities.

## **7. Towards a Connected City**

The current planning principle of targeting high density residential growth in the urban renewal corridors remains sound, following analysis of the PTAL mapping which confirms that the renewal corridors have better access to public transport. Targeting higher density residential zonings around areas with better access to public transport should be continued to encourage public transport use. Council's parking controls could be reviewed to ensure parking provided in developments is accessible. The parking requirements in Council's planning documents need to ensure that sufficient parking is provided for developments while still encouraging the use of public transport.

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# Local Planning Strategy

## Chapter 10: **Infrastructure**



## **Chapter 10 Cover**

Title: True Blue

The front cover was painted by Thomas Cairns aged 10 as part of the community consultation undertaken for the Newcastle 2030 Community Strategic Plan in 2009. The brief was to *'express in painting the Newcastle the participant would like to see in 20 years time.'*

### ***What is the purpose of this chapter?***

Infrastructure is the fundamental physical and organisational structures needed for the operation of a city including transport, waste, water and sewerage systems, stormwater, electrical and telecommunications networks. It may also include other structures such as community and recreational facilities, open space, natural assets, education facilities and hospitals.

The purpose of this chapter is to provide a desktop review of important infrastructure that may constrain or support future development in areas across Newcastle.



Newcastle is well serviced by most types of infrastructure including water and waste water infrastructure managed by Hunter Water, sporting, recreational and cultural facilities.

The University, TaFE, the Port of Newcastle, John Hunter and Mater Hospitals are major infrastructure facilities that contribute to local employment and provide high level services to the community and region.

# 1. Infrastructure

Infrastructure may be defined as the fundamental physical and organisational structures needed for the operation of a city. Most often the term is applied to physical structures that support a society, such as roads, waste, water and sewerage systems, stormwater, electrical and telecommunications networks. However, it also includes community and recreational facilities, open space, bushlands, wetlands, education facilities and hospitals.

Some infrastructure discussed below including open space and recreation and transport are addressed in more detail in other chapters specific on these themes.



## *Transport*

Integrated land use and transport is essential to support a well connected, inclusive, efficient and sustainable city. A transport system that is diverse, extensive, convenient and adaptive will encourage sustainability. A dysfunctional transport system characterised by limited modes, congestion, pollution and social isolation will undermine Newcastle's future. Integration of all modes of transport is important to support a sustainable city.

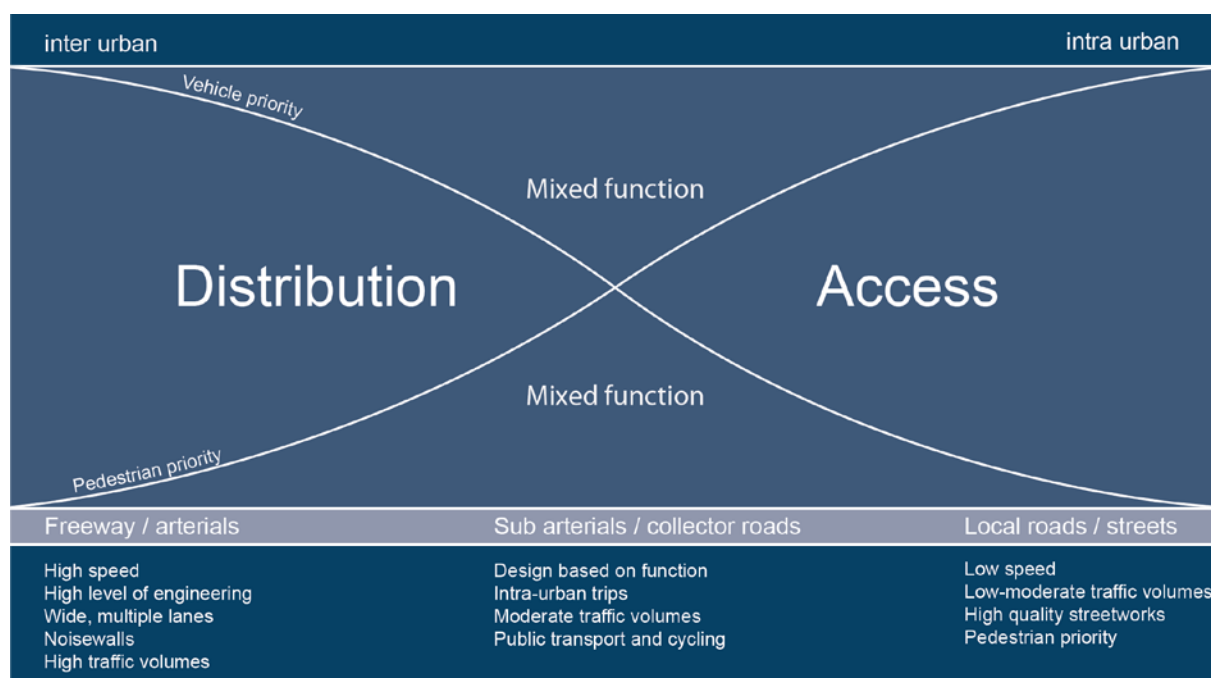
The NSW Government has released the NSW Long Term Transport Master Plan. The Plan sets a framework for policy and investment decisions for the next 20 years and aims to achieve a balance between actions that expand the capacity of the transport network and those that improve the way it operates. The Plan focuses heavily on Sydney, however, it provides principles which will guide development of regional transport plans. A key principle is the integration of land use and transport planning.

## **Roads and streets**

Roads can be categorised by function and expressed as a road hierarchy. A typical hierarchy for Australian roads is freeways, arterial roads, sub-arterial or collector and local roads or streets.

A road hierarchy allows priorities to be set for each road category. For example, higher order roads such as freeways and arterials are engineered for high volume distribution by car, public transport and freight. This is achieved by wide, multiple lanes, integrated signalling systems and restricted access. Lower order roads, such as collectors and local roads are engineered for public transport, local traffic, cycling and pedestrians. Town centre streets generally prioritise pedestrians over all other modes. These are characterised by low traffic speeds, wide pedestrian pavements and multiple, safe crossing points.

**Figure 10.1: Road hierarchy and access requirements.**



Newcastle, being a largely established urban area, has significant road infrastructure already in place. The Roads and Maritime Services and the City of Newcastle are responsible for their own road assets in the local government area. Most improvements to the road network will come about by improvements to the established network. However, there are several large projects underway or planned that will have significant impacts on the existing networks, such as completion of the Newcastle Inner City Bypass.

### Newcastle Inner City Bypass

The Newcastle Inner City Bypass (Highway 23) between the Pacific Highway at Bennetts Green and the Pacific Highway at Sandgate is a long standing proposal to provide an orbital road link. The Shortland to Sandgate section of the Inner City Bypass has recently been completed.

A preferred route has been identified for the Rankin Park to Jesmond section of the bypass and was displayed for community comment in February 2007. The preferred route corridor has been included in Newcastle City Council's Local Environment Plan (LEP) to reserve the corridor.

In June 2014 the NSW Government announced it would complete the \$280 million Rankin Park to Jesmond section of the inner city bypass.

A refined strategic design is currently being prepared by the State Government and is expected to be displayed for community feedback mid 2015.

### M1 to Raymond Terrace

The Pacific Highway upgrade between the M1 Motorway and Raymond Terrace involves a 15 kilometre dual carriageway upgrade of the Pacific Highway bypassing Heatherbrae.

Roads and Maritime Services has undertaken investigations to upgrade the Pacific Highway to provide the 'missing link' between the M1 Motorway south of John Renshaw Drive and the Raymond Terrace bypass.

Roads and Maritime Services have approached Port Stephens and Newcastle Councils to formally reserve the highway corridor in their local environmental plans. The boundaries of the corridor are based on the final concept design.

Timing of construction will depend on funding availability. Once this is determined, an environmental assessment will commence and planning approval will be sought to allow construction to commence.

## **Rail**

Newcastle is part of the CityRail network, which extends from Sydney to the Blue Mountains, Central Coast and the Hunter. **Figure 10.2** shows the Hunter Rail Network and connections to the Central Coast and Sydney. The NSW Government has recently truncated heavy rail services at Wickham.

Country Link trains and coaches provide regular daily travel to the Upper Hunter, North Western and North Coast regions, and connections in Sydney for Canberra, Melbourne, Southern and Western region trains.

Newcastle's rail line is an important part of the overall transport system. The rail network currently provides good access to some of Newcastle's main employment and recreation precincts.

Transit oriented development (TOD) is a planning concept that promotes the creation of a network of well-designed, human-scale urban communities focused around transit nodes. This concept was adapted and applied to the Newcastle Urban Strategy to define the substantial, moderate and limited growth precincts according to their safe walking distance from a district centre and train station. These precincts then informed the land use zones and the height and floorspace ratio development controls. These concepts have been carried forward into the Local Planning Strategy.

## High Speed Rail

The Australian Government has committed to a strategic study on the implementation of high speed rail on the east coast of Australia. The study, which is being carried out in two phases, is looking at potential routes from Brisbane to Sydney, Canberra and Melbourne, as well as the economic viability of such a network. It is drawing on international experience, public and private sector expertise, growth forecasts and other contemporary data.

The report found that such a network could:

- cost between \$61 billion and \$108 billion (in \$2011) to build and involve laying more than 1,600 kilometres of new standard-gauge, double-track;
- achieve speeds of up to 350 kilometres per hour and offer journey times as low as 3 hours between Brisbane and Sydney and Sydney and Melbourne; just 40 minutes from Sydney to Newcastle; and 1 hour between Sydney and Canberra;
- carry around 54 million passengers a year by 2036 including, for example, about half those who would have flown between Sydney and Melbourne—currently the world's fifth busiest air corridor; and
- offer competitive ticket prices, with one way fares (in \$2011) from Brisbane to Sydney costing \$75–\$177; Sydney to Melbourne \$99–\$197; and \$16.50 for daily commuters between Newcastle and Sydney.

Figure 10.2: Hunter Rail Network Map



## Buses

Most suburbs within Newcastle and the eastern part of Lake Macquarie are serviced by buses provided by Newcastle Buses and Ferries. Services extend from the Newcastle City Centre to Sandgate, Wallsend, Glendale, Speers Point, Valentine and Caves Beach (refer Figure 10.3).

The majority of the Newcastle LGA is within the Outer Metropolitan Bus Contract Region 5. The Department of Transport's service planning guidelines stipulate that a bus must be within 400m of residences in built up areas.

A number of private bus operators connect the remaining suburbs, as well as towns and regional centres throughout the Lower Hunter, to Newcastle.

Service frequencies and the operating periods vary between routes.



## Stockton-Newcastle Ferry

The ferry runs regularly from the terminal on Queens Wharf, located along the Newcastle Foreshore. From Monday to Thursday ferries start from 5.15am and run about every half an hour until 11:00pm. On Friday and Saturday the ferries run until midnight. On Sundays and public holidays the ferry runs from 8.30am until 10.00pm.

## Cycling and walking

The City of Newcastle adopted the Newcastle Cycling Strategy and Action Plan in March 2012. The Plan represents Council's commitment to the enhancement of cycling in Newcastle. It builds on earlier bike plans and strategies of Council and is intended as the key document to direct Council's future spending on cycling related infrastructure works and programs.

Newcastle has a good network of footpaths and off road shared paths and its climate and topography suit trips by walking and cycling. Already popular recreational activities, there appears to be significant potential to increase trips by walking and cycling as the overwhelming majority of trips undertaken are less than 10km and a large percentage of these less than 2km.



Figure 10.3: Newcastle and Lake Macquarie Region Guide.



## Port of Newcastle

The Port of Newcastle has been instrumental in the development of the City. The first coal export occurred in 1799 to Bengal. Between 1799 and 1829 the Port of Newcastle shipped 50,000 tonnes of coal. Today, the Port of Newcastle is the world's largest coal port exporting over 134 million tonnes in 2012. The Port also handles more than 40 other commodities.

The port includes the channel, berths, land for cargo handling, storage and distribution, supporting transport corridors and Nobby's Headland.

There are currently 20 berths of varying capacity. Nine of these berths are allocated to the export of coal with the remaining eleven berths handle bulk



liquids, solids, break bulk, containers and project cargo.

The Port of Newcastle is a significant contributor to the Hunter Region's economy. The importance of the Port to the Hunter and the State is recognised in the State Environmental Planning Policy (Three Ports) 2013. The SEPP zones the land SP1 Special Activities. The objective of the Special Activities zone is to maximise the use of waterfront areas to accommodate port facilities and industrial, maritime industrial and bulk storage premises that benefit from being located close to port facilities. It is also to ensure the efficient movement and operation of trading vessels, and to provide for the efficient handling and distribution of freight from port areas through the provision of transport infrastructure. The zone also facilitates development that by its nature or scale requires separation from residential and other sensitive land uses. Land uses that support the Port, such as freight transport facilities, transport depots, warehouse and distribution centres and industries that import or export cargo through the port should be encouraged.

The port is well serviced by strategic transport corridors providing an advantage over other east coast metropolitan ports. The corridors that connect the port to the transport network being the Murandoo Rail Siding at Mayfield, the Kooragang Rail line and Industrial Drive are included with the Port boundary identified in the SEPP and recognised as an integral part of



the Port's infrastructure. Port activities do have impacts on other parts of the transport network such as heavy vehicles on local roads, conflicts between passenger and freight rail and other issues to do with noise and dust.

The major east coast rail corridor linking Brisbane to Sydney and Melbourne passes close to the Port. The rail lines heading through the Hunter valley and further west that have been developed by the coal industry are available for use by all trade. In addition to coal, significant volumes of wheat, grains and metal concentrates arrive at the port by rail.

The Port with Port of Newcastle Pty Ltd now manages the Port through a 99 year lease from the NSW Government. The port of Newcastle Pty Ltd has recently has released the Port Development Plan 2015-2020 outlining their development objectives over the forthcoming period.

## **Terminal 4**

Port Waratah Coal Services operates both the Carrington Coal Terminal and the Kooragang Coal Export Terminal located at the eastern end of Kooragang Island. PWCS are proposing to develop a fourth coal terminal at the western end of Kooragang Island. The proposed extension, known as Terminal 4 (T4) will seek to meet the increasing overseas demand for energy, the ongoing expansion of the coal industry in the Hunter Valley, and PWCS legal obligation to clients.

## **Newcastle Coal Infrastructure Group**

The Newcastle Coal Infrastructure Group Pty Limited (NCIG) Coal Export Terminal is located in the centre of Kooragang Island. The terminal services long life coal mines in the Newcastle, Hunter Valley, Gunnedah, Gloucester and Western Coalfields of New South Wales.

## ***Health, education and community facilities***

There are several major medical and education facilities in Newcastle. These facilities serve a large geographical region that extends into the North Coast of NSW and west into the Upper Hunter.

### **John Hunter Hospital**

The John Hunter Hospital is the principal referral centre and community hospital for Newcastle, Lake Macquarie and Northern New South Wales. It is the main teaching hospital of the University of Newcastle. The hospital contains the only trauma centre in New South



Wales outside of the Sydney Metropolitan Area, and has the busiest emergency department in the State.

John Hunter is the region's largest hospital with 550 adult beds and another 101 paediatric beds in the John Hunter Children's Hospital. The Royal Newcastle Centre (formerly

Royal Newcastle Hospital), opened next to the John Hunter Hospital in April 2006, providing another 144 beds. Patients from the Hunter Region and beyond are referred to John Hunter for treatment in a range of specialities, including anaesthesia and intensive care, orthopaedics (elective and trauma), cardiology and cardiac surgery, emergency medicine, endocrinology, gastroenterology, neonatal intensive care, nephrology, neurology, obstetrics and gynaecology, oral and maxillofacial surgery, respiratory medicine, and trauma.

### **Mater Hospital**

With 195 beds and supported by an emergency department and intensive care unit, Calvary Mater Newcastle is the Hunter region's major centre for oncology (cancer) services, haematology, clinical toxicology and research. The hospital is also home to the Newcastle Melanoma Unit and Hunter BreastScreen, and has a stroke service which provides a seamless care approach to stroke treatment and assessment for people of the Hunter.

Calvary Mater Newcastle is a teaching hospital in affiliation with many teaching institutions and is fully accredited by the Australian Council on Health Care Standards.

## **Hunter Medical Research Institute**

Established in 1998, the Hunter Medical Research Institute (HMRI) is a unique partnership between Hunter New England Health, the University of Newcastle and the community. The establishment of HMRI is a unique opportunity to capitalise on the region's strategic advantage in health and medical research and biotechnology.

As a research hub, HMRI is creating an environment that nurtures health and medical research. HMRI provides a focal point for the coordination of research strategy, resources and funding.

HMRI has recently completed its new building in Rankin Park Campus of Hunter New England Local Health District. The \$90 million HMRI Building will bring together more than 450 medical researchers from the University of Newcastle and Hunter New England Health to improve the health of the Hunter community, boost the local economy and create jobs.

## **University of Newcastle**

A determined campaign by Hunter residents was the driving force behind the creation of the University. In the early 1950s, Newcastle University College was established on a technical college site at Tighes Hill under the authority of the then University of Technology New South Wales (now the University of New South Wales). Just five full-time students were enrolled when classes began and study concentrated on science, mathematics and engineering.



Over the next 10 years, the growth in student numbers and the community's desire for a university to call its own led to the University becoming an autonomous institution. Today some 35,500 students are enrolled in programs across five faculties. Over 85 undergraduate programs are on offer and the range of postgraduate study options is continually growing.

The University has matured from a locally-focussed institution to one that is global in its outlook. Graduates are sought after by employers at home and overseas. Working with communities locally and internationally, the University strives to achieve – creating opportunities, delivering result and raising the bar across every field.

The University's main campus is located at Newcastle's Callaghan Campus. Since amalgamation the University has expanded its operations in a variety of locations including the dual-sector Central Coast Campus (at Ourimbah), Newcastle City precinct, Port Macquarie campus and present in the Sydney CBD, Taree, Tamworth, Orange, Moree and Singapore.

### Newcastle (Callaghan)

Established in 1951 as the Newcastle University College, the campus at Callaghan is the main campus of the university. The campus is located 12km from the Newcastle City Centre. There are approximately 172 buildings set amongst 144 hectares of natural bushland. The site has residential student accommodation currently for 964 students with plans for another 778 beds.

### City Precinct

The university has a presence in the Newcastle City Centre. Part of the School of Creative Arts (incorporating the Newcastle



Conservatorium of Music) is located in the Civic Centre precinct along with the Newcastle Legal Centre and the Newcastle Business School. The University occupies six buildings in the City Centre and surrounding suburbs.



The university is aiming to create a vibrant, active and engaged presence in the city centre through the expansion of the proposed city campus which would relocate components of the university's Faculty of Business and Law from Callaghan into the city.

The city campus would be located close to the NSW Justice Precinct, TAFE NSW facilities and Honeysuckle. Locating a city campus in the commercial and legal heart of the city would promote greater opportunities for work integrated learning and professional engagement, and enhance access, participation and attainment to higher education for Hunter communities.

### Infrastructure

The university is responsible for the planning, maintenance and upgrades to infrastructure and services, including roads, electricity, water, waste water, stormwater and telecommunications at the Callaghan Campus. This is centrally funded by the university and will continue to place a significant financial constraint on university operations.

A key infrastructure constraint relates to transport and access. The university has developed a Strategic Transport Management Plan to address the range of transport movement needs of the Callaghan Campus to support planned growth over the next 10 years. The campus is poorly serviced by convenient and frequent public transport and the area would benefit from improved pedestrian and cycling paths.

## **TaFE**

The Hunter Institute of TaFE NSW is an Australian Registered Training Organisation and member of the TaFE NSW network of Institutes.

- 15 Campuses (including several in Newcastle)
- 2010 Student Enrolments = 64,288
- 2,500 Teachers and support staff

There are three (3) Hunter Institute campuses in Newcastle;

1. Newcastle Campus (Tighes Hill)
2. Hunter Street Campus
3. Hamilton Campus

The institute offers courses in Business & IT, Architecture, Electrotechnology, Fashion, Fitting & Machining, Hair & Beauty, Health Sciences, Maritime, Marine Engineering, Music & Performing Arts, Nursing, Real Estate & Retail including specialist studies in Boat and Shipbuilding, Civil Engineering, Rigging & Scaffolding.

Newcastle TaFE courses cover faculty areas such as Business & Computing, Creative Industries, Health & Community Services, Industry & Natural Resources and Tourism & Hospitality.

### **Hunter School of the Performing Arts**

Hunter School of the Performing Arts offers a unique educational environment as NSW's only fully-selective Performing Arts School. The school delivers education programmes with a focus in dance, drama and music. The school has over 1100 students.

### **Primary and Secondary Schools**

There are many primary, secondary and specialist schools both public and private in Newcastle.

## ***Entertainment, sporting, recreation and cultural facilities***

Newcastle enjoys a variety of entertainment and sporting facilities typical of a City. Some of the key facilities are highlighted below.

### **Hunter Region Sporting Venues Authority**

The Hunter Region Sporting Venues Authority (HRSVA) is a NSW Government agency that is responsible for the planning and management of all assets previously held by the Newcastle International Sports Centre Trust and Newcastle Showground and Exhibition Trust in accordance with the Sporting Venues Authority Act 2008.



The Authority oversees and manages the following sporting and entertainment venues in Newcastle. The Newcastle Showground is set on 9.8 hectares. It features a show ring which is 150 metres long and 110 metres wide with seating for 3,000. There are also additional pavilions which are available as required.

The Newcastle Entertainment Centre based on the Newcastle Showground is located six minutes from the centre of Newcastle. The Newcastle Entertainment Centre services a population base in excess of one million patrons. It is the premier regional venue with the sixth largest market in Australia.

Directly opposite the Newcastle Entertainment Centre is the Newcastle Exhibition Centre. It is a multi-purpose venue with 1,650 square metres of floor space, ideal for exhibitions and clearance sales.

Hunter Stadium is the centrepiece of the Hunter Venues Sports Precinct. Originally it was known as the International Sports Centre and it was officially opened by Her Majesty Queen Elizabeth II on the 10th of April 1970. The rectangular multi-purpose outdoor Stadium is the

home ground to the Hunter Region's two flagship sporting franchises, the Newcastle Knights (NRL) and the Newcastle Jets (A-League).

## National Park

National Park is one of Newcastle's largest and oldest sportsgrounds and open space reserves, covering over 20 hectares at Union and Parry Streets in Newcastle West. It remains a major, and long-established, sporting venue which is highly valued by sporting groups and users.

National Park is one of Newcastle's premier grounds for several sporting codes, and includes two regional standard sporting facilities, as well as being valued for the variety of sporting opportunities it offers. The park is also valued for the large expanse of open space it offers in an increasingly urbanised environment.



The recent redeveloped No. 2 Sportsground provides further opportunity for use of the park through community events. The park caters for a variety of sports – including netball, soccer, cricket, rugby league, rugby union, AFL, athletics, tennis and croquet. It is one of Newcastle's premier grounds for several of these codes, as well as a regularly-used venue for school sports. The park also provides opportunities for passive recreation such as walking and casual play or games – including a small playground and scattered picnic facilities – and offers a venue for community or cultural events.

Several community groups are based at the park – including Life without Barriers and Scouts.

## Civic Cultural Precinct

The Civic Cultural Precinct is a dynamic hub for the cultural expression and civic life of Newcastle and the Hunter region. It includes the gallery, the Civic Theatre, the Newcastle Library and the Museum.

Newcastle Museum is located in the Honeysuckle Railway Workshops. The museum houses three static exhibitions themed around the history of Newcastle, BHP and coal mining, and science, maths and engineering.

Newcastle Art Gallery is unique in Australia. It boasts one of the most comprehensive collections of Australian art of any regional gallery and is frequently selected as the only regional gallery in the state to host national and travelling exhibitions.

The City of Newcastle is the principal financial supporter of the Gallery. Funding is also provided by corporations, the Gallery's Foundation and the State Government.

## **Bathers Way**

Newcastle's beaches and coastline are some of the city's greatest assets. It is an area that is increasingly being recognised at local, national and international levels for its beauty, environmental values, recreational opportunities and diverse range of activities.

The Bathers Way stretches from Nobby's Headland to Glenrock State Conservation Area. A public domain plan for this area is a Council and Department of Lands initiative to revitalise the facilities, connections and interpretation of Newcastle's coastal assets.

## **Glenrock State Conservation Area**

Glenrock State Conservation is located ten minutes drive from the Newcastle City Centre and offers an array of recreational opportunities. Glenrock includes the last surviving pocket of coastal rainforest in the region and protects a number of ancient Aboriginal sites.

## **Hunter River Estuary**

Hunter Wetland National Park, Kooragang Wetland and The Wetland Centre offer community pedestrian, canoe and bicycle access and education experiences of internationally significant RAMSAR listed wetlands.

## **Blackbutt Bushland Reserve**

Blackbutt Reserve is six kilometres from Newcastle's City Centre. It occupies over 182 hectares of bushland land and provides visitors the chance to enjoy nature trails, wildlife



exhibits, children's playgrounds and recreational facilities. Blackbutt in conjunction with the adjacent area of Jesmond Bushland creates a green biodiversity heart/hub for the city.

### **Blue Gum Hills Regional Park**

The Blue Gum Hills Regional Park offers additional natural area recreational experiences and biodiversity conservation within western corridor of the City.

### **Other facilities**

There are many other open space, recreation, community and cultural facilities throughout the Newcastle local government area. A hierarchy of facilities and assets is an important to cater for a diverse community set in a diverse urban environment. Council has prepared the Parkland and Recreation Strategy 2014 to help inform the planning of open space.



## ***Water and waste water services***

Hunter Water is a State-owned Corporation established under the [Hunter Water Act 1991](#). Hunter Water provides water and wastewater services to over half a million people in the lower Hunter region. As of 2012, there are 227,695 properties connected to the water network and 215,748 to the wastewater network. The geographical area of operation covers 5,366km<sup>2</sup> with a population of 560,603 in the local government areas of Cessnock, Lake Macquarie, Maitland, Newcastle, Port Stephens, Dungog and small parts of Singleton.

### **Water supply**

Hunter Water delivers on average 184 mega litres of water per day. Grahamstown Dam is the primary raw water source for Newcastle. It has a capacity of 190,000 mega litres.

Newcastle is serviced by an extensive network of existing water distribution infrastructure. Much of the older trunk infrastructure was designed to support more water intensive industrial development than exists now. Therefore, there is surplus capacity to accommodate greater population and residential density in Newcastle without significant upgrades to the trunk or region network.

Where an upgrade of the distribution and reticulation network is required to service new development it is generally funded by the developers. Where an upgrade facilitates more than one development, Hunter Water administers a reimbursement policy that returns contributions to the original developer.

Hunter Water maintains a comprehensive inventory of assets. Maintenance of the distribution and reticulation network is undertaken in accordance with a servicing plan or in response to an identified risk or a failure.

Hunter Water undertakes comprehensive demographic and development forecasting to anticipate demands for its services. Where maintenance work is scheduled in an area identified for growth, Hunter Water may allow for greater capacity. However, it does not generally construct infrastructure ahead of actual development.



The cost of servicing development of existing urban land with water infrastructure in Newcastle is significantly less than the costs for providing that infrastructure in greenfield areas<sup>1</sup>.

## Waste water

Hunter Water maintains an extensive system to transport waste water, which includes 4,477km of sewer main systems, 380 pumping stations and 18 wastewater treatment works.



Newcastle is well serviced by an extensive network of existing waste water infrastructure. There is surplus dry-weather capacity to accommodate greater population and residential density in Newcastle without significant upgrades to the network. During wet-weather events flows in the system are higher because of stormwater infiltration. In some areas this can exceed the capacity and cause dysfunction. Hunter Water is progressively upgrading infrastructure in identified or high risk areas to address this.

There are two sewerage treatment plants in the Newcastle LGA. The Burwood Beach facility is located in Glenrock State Conservation Reserve. It services most of the Newcastle and part of the Lake

Macquarie. The Shortland facility services the remainder of Newcastle.

Each of the facilities is protected by a buffer that excludes sensitive land uses.

Some waste water treatment technologies produce by-products that have other applications and uses such as the capture and use of methane to generate electricity. Hunter Water advocate these technologies and will consider their use where supported by a business case demonstrating that they are feasible.

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<sup>1</sup> Greenfield development is the development of land that has not previously been developed for urban purposes.

The cost of servicing development of existing urban land with sewerage and waste water infrastructure in Newcastle is significantly less than the costs for providing that infrastructure in greenfield areas.

## Water recycling and reuse

Hunter Water recycles approximately 5091ML per year. Recycled water usage is supplied for various purposes in the Lower Hunter however there are currently few applications in Newcastle Local Government Area. Hunter Water will consider a proposal that is supported by a business case demonstrating that the project is feasible.

## Stormwater

The stormwater system directs rainwater and surface run-off to creeks, rivers, lakes and the ocean. The City of Newcastle, Hunter Water Corporation and the Hunter Catchment Management Trust each have significant roles in stormwater and catchment management in Newcastle.

There are a number of trunk stormwater systems in Newcastle that convey stormwater to the point of discharge. The trunk system was constructed to help address flooding caused by stormwater (approx. 1930-1970). The following key catchments, containing these drainage systems, cover Newcastle's suburbs:

1. Cottage Creek Catchment
2. Throsby Creek Catchment
3. Ironbark Creek Catchments (including Dark, Maryland and Wentworth Creeks)
4. Local Coastal and estuarine areas
5. Parts of Greenway and Purgatory catchments cover northern suburban areas.

The management of urban stormwater quality is a complex issue requiring consideration of ecological, social and economic issues as well as physical interactions with the natural environment.

The City of Newcastle has a strong stormwater policy framework including the Urban Water Management Policy 2004, [Newcastle Stormwater Management Plan 2004](#), the [Development Control Plan](#) elements 7.06 and 7.07 and the [Technical Manual: Stormwater and Water Efficiency for Development](#) that incorporates Water Sensitive Urban Design principles to encourage sustainable urban water management.

There are areas that are affected by inundation from stormwater because of historic development patterns, inadequate infrastructure or because of the characteristics of the catchment. Council is working to minimise the stormwater impacts where possible.

As most of Newcastle is urbanised, increased densities and therefore more impervious surfaces do not contribute significantly to the volume of stormwater when managed appropriately. New development (other than single dwellings) is required to demonstrate how pre development flows are maintained.

The main focus of this discussion is to identify where stormwater presents a constraint to future development. Council maintains a database of stormwater related complaints. Where these occur Council has highlighted those sub-catchments for further investigation.

## Telecommunications

Newcastle is well serviced by telecommunications infrastructure which is provided by a number of service providers. The NBN Co rollout will further contribute to Newcastle's telecommunications assets. The rollout is expected to occur for most of Newcastle in the next 1-3 years.



The future of telecommunications is uncertain but continued demand by consumers for access and speed is expected to drive the industry. 4G and 5G technologies exist but with limited application in Australia at this stage.

The Commonwealth *Telecommunications Act 1997*, the *Radio Communications Act 1992* and NSW *Environmental Planning and Assessment Act 1979* and *State Environmental Planning Policy (Infrastructure) 2007* provide the framework for regulating the provisions of telecommunications in Australia. There are many telecommunications facilities that are exempt from development approval or classified as complying development. All other telecommunications facilities are permitted anywhere but only with consent. In determining

an application the consent authority (usually Council) must consider the SEPP, the Commonwealth legislation and the NSW Telecommunications Facilities Guideline.

## ***Waste Management***

The Summerhill Waste Management Centre is a class 1 solid waste landfill managed by the City of Newcastle and licensed by the NSW Environment Protection Authority (EPA) to take putrescible and non-putrescible solid waste.

Council actively looks for ways to reduce waste going to landfill. Much of the waste material brought to Summerhill has potential to be diverted from landfill and turned into valuable resources. Green waste is turned into a range of compost and mulch products on-site. Council engages in waste education programs to minimise waste generation and encouraging recycling.

The Summerhill Waste Management Facility has an expected life of 30-50 years based on current tonnage. At the moment, Summerhill provides waste disposal primarily for Newcastle. This limited service catchment and therefore waste stream volume means that investment in specialist waste management technologies is generally unviable.

A regional waste management strategy that provides specific waste streams facilities may support this investment.

Promotion of waste minimisation and recycling as well as recycling technology and better (and less) packaging materials are expected to result in reduced volumes of waste being disposed by landfill.

## ***Other Utilities***

### **Electricity and Gas**

Gas is an important energy resource for New South Wales. It fuels domestic and industrial uses and is playing an increasingly significant role as a fuel source for electricity generation.

NSW is unique among the mainland states of Australia with no commercially viable reserves of natural gas within its borders or in adjacent waters at this time. Gas supplies for NSW are sourced from the Cooper Basin in South Australia and from Victoria.

AGL Energy Limited (AGL) proposes to develop the Newcastle Gas Storage Facility Project (the Project) at Tomago, New South Wales (NSW). The Project is required to meet AGL's peak gas market requirements over winter and to provide additional security of gas supply during supply disruption events. Currently, NSW does not have any similar gas storage capacity. Specifically, AGL seeks to develop the site which will include:

- A processing plant that will convert pipeline natural gas to liquefied natural gas (LNG) by cooling it to -162°C. It will be capable of processing up to 66500 t of LNG per year;
- An insulated, non-pressurised LNG storage tank capable of containing 30000 t or 63000 m<sup>3</sup> of LNG, equivalent to 1.5 petajoules (PJ) of natural gas, and an associated containment area
- A re-gasification unit to convert the LNG in the storage tank back into natural gas
- A flare stack with a height of approximately 15m to combust hydrocarbons discharged from the process
- A truck loading facility to allow the dispatch of up to 1,000 tankers of LNG per year
- A 5.5 km long pipeline will connect the gas storage facility to the receiving station at Hexham
- A natural gas receiving station at Hexham to link the Project into the NSW gas network via the existing Wilton-Newcastle trunk pipeline.

The estimated capital cost of the Project is \$300 million

The Hunter is home to four (4) power stations that generate over 60 per cent of the State's electricity. However, none are located in Newcastle. Four state-owned companies distribute electricity around NSW. TransGrid manages the high voltage transmission power lines and towers, cables and substations, while three electricity distributors, Essential Energy, Ausgrid and Endeavour Energy, deliver the electricity to consumers in their network regions.

The distribution of electricity is not considered to pose a significant impediment to development in Newcastle. However, the growing sustainable energy industry is an issue that should be acknowledged in a 20 year strategy. The future of electricity generation is uncertain. Coal fired power generation has a finite life and there will be a point where an alternative will be required. The future of energy production and distribution will be affected by:

- The cost and acceptance of a fuel alternative such as coal seam gas or natural gas,
- The adoption of mass sustainable energy generation such as wind or solar farms;
- The advancement, cost and take of sustainable domestic power solutions such as solar panels;
- Another technology.

## 2. Infrastructure Implications for Our Future

- Newcastle has an extensive and relatively fixed road network i.e. there is limited opportunities for new roads. Future capacity will rely largely on network improvements.
- Road infrastructure needs constant and ongoing maintenance. As these assets age the cost of maintenance activities increase and compete with other Council activities.
- As traffic congestion increases reallocation of existing road space to mass public transport (i.e. buses) and freight over private vehicles may be necessary to ensure the road network remains functional at peak times.
- Any change to the Newcastle rail line that results in the cessation, partial closure or reduced services may require reconsideration of land use and density controls around these stations.
- Regional road works such as the Hunter Expressway and F3 to Raymond Terrace will extend the labour market catchment however this may lead to increased congestion of local roads at peak times.
- The high speed rail project if pursued could have a significant impact on the future of Newcastle. However this is unlikely to occur within the lifetime of the Strategy.
- Newcastle is generally well serviced by infrastructure. There is capacity within the existing sewerage and water infrastructure to accommodate growth without significant augmentation.
- Water and sewerage infrastructure costs are significantly less for development of existing urban areas than the development of new urban areas.
- The minimum buffer (400m) to the City's two sewerage treatment plants should be maintained.

- Council recognises that there are flooding issues in some catchments that are being addressed through collaborative community and public planning processes.
- Stormwater management is not considered a significant impediment to development.
- The Port will continue to be an important generator of industry and employment for the region. The availability of industrial land, the protection of routes into and out of the Port and interface issues will be key issues for the future.
- The Port and its related industries need to be protected from encroachment by sensitive land uses.
- The impact of Port related activities such as rail freight and truck movements on established areas needs to be considered.
- The University of Newcastle will continue to be an important asset to the region. Increased student numbers is likely to result in ongoing demand for affordable rental accommodation, public transport and other supporting infrastructure.
- The John Hunter Hospital, Mater Hospital and supporting medical industry will continue to be important facilities for Newcastle and the region.
- Synergies between key institutions such as Hunter Medical Research Institute will drive opportunities for research, innovation and development.
- The future of energy production and distribution is uncertain. Newcastle will need to be resilient to accommodate any unforeseen changes.
- The provision and maintenance of a hierarchy of good quality open space, natural areas, recreation and sporting venues are essential to promote healthy mind, healthy living and a healthy population.
- Open space, natural areas, recreation and sporting venues need to be adaptable to changing needs of the community over time.
- The provision and maintenance of facilities, spaces and venues to support arts, performance and cultural activities is important.
- Newcastle's mix of cultural, recreational and sporting venues will continue to attract visitors to Newcastle.



## Infrastructure Mapping



**Working Paper: Infrastructure**  
**Local Planning Strategy**

**Infrastructure: Map 1 of 4**

- Newcastle LGA
- Line
- Rail network
- Train stations
  - Rail Line
- Road Hierarchy
- Arterial Roads
  - Sub arterial
  - Collector roads
- New Road Works



Map Created: November 2012  
Source: NCC Data

Newcastle City Council  
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## Working Paper: Infrastructure

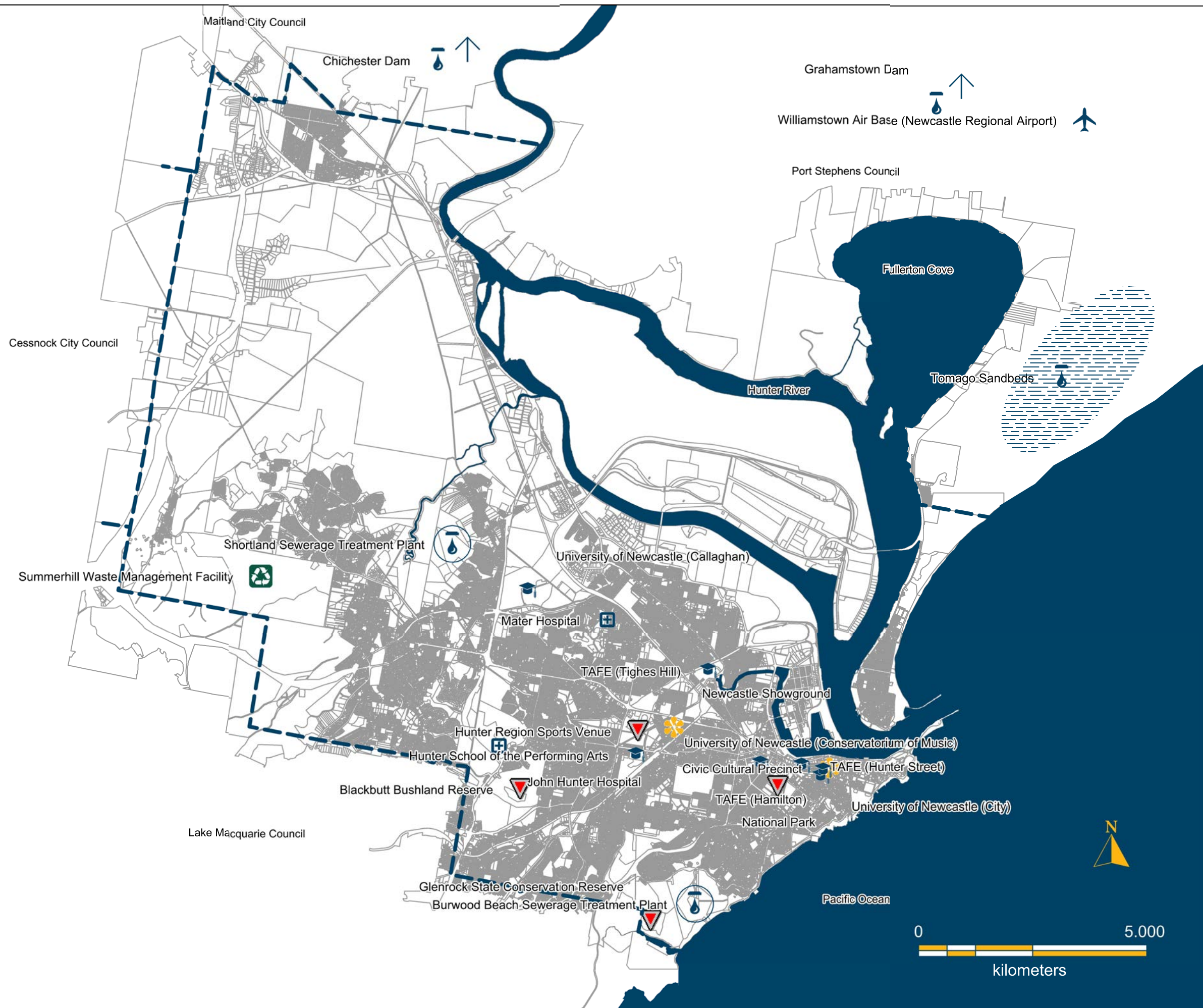
### Local Planning Strategy

#### Infrastructure: Map 2 of 4

##### Newcastle LGA

— LGA boundary

-  Education facilities
-  Entertainment and cultural facilities
-  Health facilities
-  Regional airport
-  Sports and recreation facilities
-  Waste Management
-  Water and wastewater services



Map Created: November 2012  
Source: NCC Data

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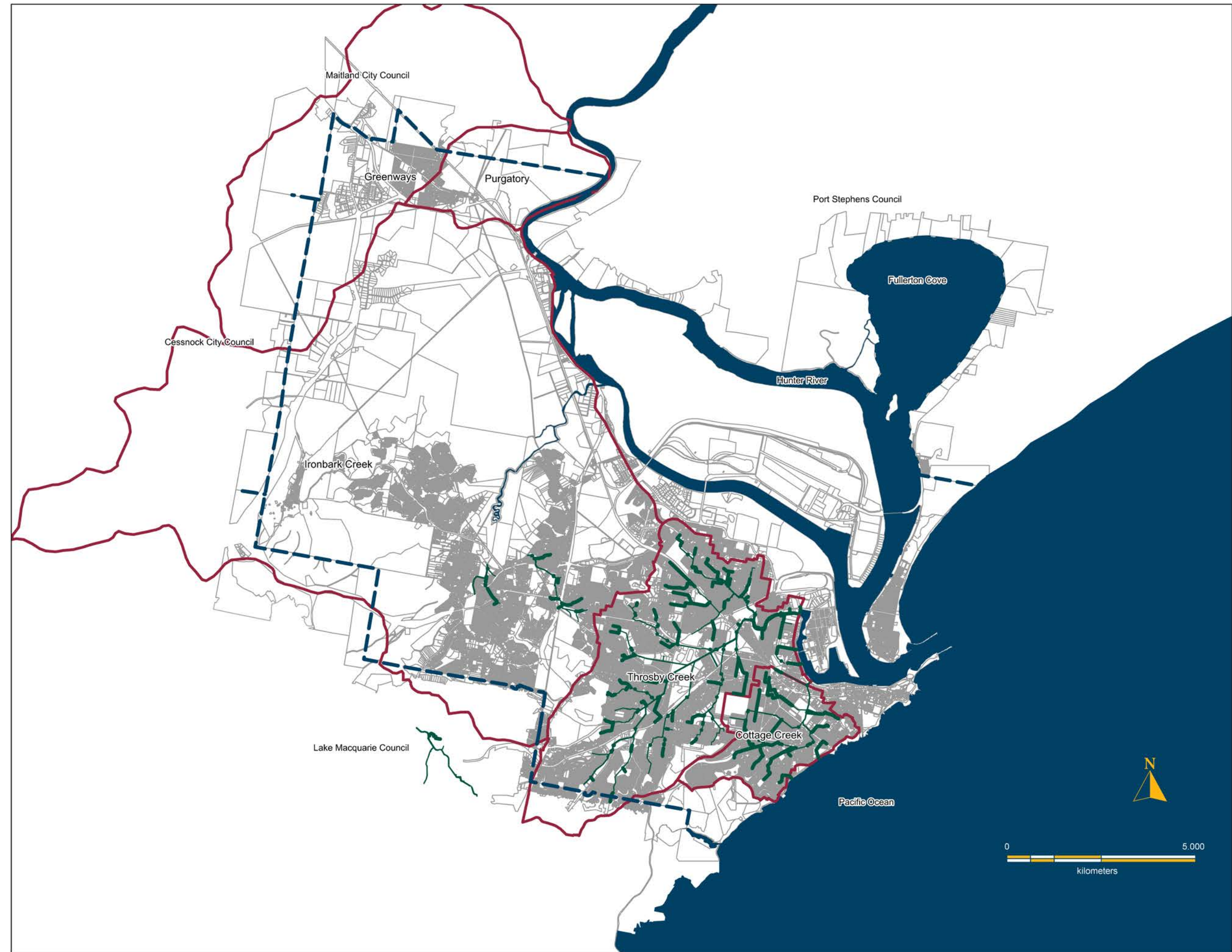
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**Working Paper: Infrastructure**  
**Local Planning Strategy**

**Infrastructure: Map 3 of 4**

- Newcastle LGA**  
— LGA Boundary
- Hunter Water Channels**  
— Hunter Water Channels
- Stormwater Catchment**  
— Catchment boundaries



Map Created: November 2012  
Source: NCC Data

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**Working Paper: Infrastructure**  
**Local Planning Strategy**

**Infrastructure: Map 4 of 4**

**Newcastle LGA**

— LGA boundary

**National Broadband Network**

**Estimated rollout**

1 Year

3 Years

**Port of Newcastle**

SEPP (Major Development) 2005

Cessnock City Council

Maitland City Council

Port Stephens Council

Fullerton Cove

Hunter River

1 year

3 years

Lake Macquarie Council

Pacific Ocean



Map Created: 29 October 2012  
Source: NCC Data and NBNCo  
([www.nbnco.com.au](http://www.nbnco.com.au))

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# Local Planning Strategy

## Chapter 11: **Heritage**

## **Chapter 11 Cover**

Title: Riding to Merewether Baths

The front cover was painted by Georgia Cook, aged 8 as part of the community consultation undertaken for the Newcastle 2030 Community Strategic Plan. The brief was *'to express what the participant values most about Newcastle and/or the strengths of Newcastle.'*



### *What is the purpose of this chapter?*

Newcastle has a rich cultural heritage. Our heritage provides a physical link to the work and way of life of earlier generations and must be conserved and protected for future generations to enjoy and learn from.

*Our Objectives* “Culture, heritage and place are valued, shared and celebrated” The Community Strategic Plan.

*(Newcastle 2030 Community Strategic Plan)*

Items considered to be of heritage significance can include buildings, monuments, Aboriginal places and objects, gardens, bridges, landscapes, archaeological sites, shipwrecks, relics, bridges, streets, industrial structures and conservation precincts.

There are economic, social and environmental benefits associated with conserving cultural heritage such as increased tourism and less energy usage associated with demolition of buildings, waste disposal and the manufacture of new materials and construction.

The purpose of this chapter is to discuss the importance of cultural heritage, roles and responsibilities of those involved in the conservation and protection process and implications for the LPS.

# 1. Heritage

## *Aboriginal Heritage*

Aboriginal heritage consists of those places and objects that contribute to the story of Aboriginal people in NSW. It can help identify the links that places may have with each other. Aboriginal people moved around NSW and passed on stories, information and knowledge by going to these special places.

Aboriginal heritage includes places and items that are important to the local Aboriginal community or to Aboriginal people of NSW. These are places or objects that people have a connection to, both physically and spiritually.

Aboriginal heritage can include natural features such as creeks or mountains, ceremonial or story places or areas of more contemporary cultural significance such as Aboriginal missions or post contact sites.

The Aboriginal presence in the Coal River area predates European contact and has been continuous to the present day.

The associations, over time, of particular places, sites and areas with Aboriginal culture can be revealed, as permissible, through further consultation and study.

National Parks and Wildlife Service (NPWS) is part of The Office of Environment and Heritage (OEH). NPWS are responsible for the management of Aboriginal heritage (through the National Parks and Wildlife Act 1974 and regulations) and local government has responsibility for local heritage, through environmental planning instruments such as LEPs and DCPs.

Listing heritage places and objects means that Aboriginal communities can assert their right to manage their own heritage.

## *Non Aboriginal heritage*

In New South Wales, the responsibility for managing and regulating non-Aboriginal heritage is split between the state and local governments. The NSW Heritage Council, assisted by the NSW Heritage Branch, has responsibility for items of state heritage significance listed on the State Heritage Register and for relics of state and local significance. Local government has responsibility for local heritage, through environmental planning instruments (EPIs) including LEPs and DCPs.

The State Heritage Register lists items and areas that have significance to the people of New South Wales, while nationally significant places are listed on the National Heritage List administered by the Commonwealth Department of Environment, Water, Sustainability Population, and Communities. Places of global significance (eg Sydney Opera House) are inscribed on the World Heritage List, administered by United Nations Educational, Scientific and Cultural Organization (UNESCO).

Heritage places from all four lists collectively demonstrate the unique history and achievements of the people of NSW and Australia.

## **Heritage Items**

Heritage listings can apply to single buildings (Heritage items), or larger precincts or suburbs (Heritage Conservation Areas). The terms Heritage Item<sup>1</sup> and Heritage Conservation Area<sup>2</sup> are defined in the Newcastle Local Environmental Plan 2012.

Heritage items are listed for three reasons:

- to safeguard their heritage significance through regulatory control
- to promote their long term conservation and
- to provide incentives for their survival, occupation and use.

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<sup>1</sup> A heritage item means a building, work, place, relic, tree, object or archaeological site the location and nature of which is described in Schedule 5 of the Newcastle Local Environmental Plan 2012

<sup>2</sup> A heritage conservation area means an area of land of heritage significance as shown in the Heritage Map which is contained within the Newcastle Local Environmental Plan 2012

There are around 700 heritage items in Schedule 5 of the Newcastle LEP 2012. Many are clustered in the city centre and in the older village centres, reflecting Newcastle's urban development. Broadly, the range of item types is illustrated in the box below:

Buildings		#	%
<i>Sub-category</i>	Dwellings	210	30%
	Commercial (eg hotels)	291	41%
	Church/ rectory/ hall	65	9%
	Schools	39	5%
Parks, trees, gardens		54	7%
Monuments and other		34	4%

Of these, 209 (30%) have been adapted or recycled for purposes unrelated to the original use. For example, five churches in the Newcastle LGA are now used for residential and commercial purposes. Other examples of adapted heritage are electricity sub stations used as dwellings, banks as office spaces and boutique bars, administration buildings as fitness centres, houses as doctors' surgeries, and railways as shared pathways for pedestrians and cyclists. Recycling prolongs the life of heritage items, often providing an income stream for the ongoing care and protection of these items.

## Heritage Conservation Areas

There are six Heritage Conservation Areas in Newcastle: The Hill, Cooks Hill, the Newcastle City Centre, Newcastle East, Hamilton "Garden Suburb", and Hamilton Beaumont Street. Guidelines relating to the types of alterations and additions appropriate in these areas are contained in the [Newcastle Development Control Plan](#).

Generally, most buildings inside a heritage conservation area will *contribute* to the character of the area. Many will reflect the historical pattern of development. It is the conservation of these 'contributory' buildings that is important in maintaining the character of such areas; the more that are removed or demolished, the more likely the heritage significance of the conservation area will be diminished. Hence, development in heritage conservation areas needs to be



carefully assessed against development controls aimed at minimising the loss of heritage significance through attrition.

## Non Aboriginal Archaeology

Historical Archaeology is the study of the past using physical evidence in conjunction with historical sources. It focuses on the objects used by people in the past and the places where they lived and worked.

Archaeological sites can be listed on the State Heritage Register. Archaeological sites may also be listed in the heritage schedules of LEPs.

Archaeological Zoning Plans or Archaeological Management Plans are an important tool for identifying areas of archaeological potential that could be affected by development. Such studies provide information that can then be used in planning controls and design development. They are useful in providing a research design to shape the future content of archaeological studies of an area. Newcastle has an adopted Archaeological Management Plan (1997) that provides a management framework for the treatment of archaeological sites. It provides a predictive model that assists in development design and planning.

## 2. Responsibilities

As already mentioned, in New South Wales, the responsibility for managing and regulating Aboriginal heritage and non-Aboriginal heritage is split between the NSW Heritage Council, OEH, NPWS and local government. The NSW Heritage Council, assisted by the Heritage Branch, has responsibility for items of state heritage significance listed on the State Heritage Register and for relics of state and local significance.

Each local government area (LGA) is responsible for the identification of local heritage, usually through a LGA heritage study. Councils must also make provisions for heritage in environmental planning instruments and for the inclusion of local heritage in the heritage schedule of an LEP. This can include Aboriginal heritage, non-Aboriginal heritage and archaeological sites.

### 3. How do we manage Heritage?

The City of Newcastle adopted a heritage policy in 1998. The policy was revised in June 2013 reaffirming Council's commitment to managing the city's heritage. The policy recognises the importance and diversity of the heritage present within the Newcastle LGA. This includes Aboriginal heritage, buildings, structures, precincts, streetscapes, monuments, memorials, moveable heritage, industrial and maritime relics, trees, archaeological sites and artifacts, items in institutional collections, and the cultural landscapes that comprise the environment of the Newcastle LGA.

The Policy aligns with the [Newcastle 2030 Community Strategic Plan](#) (CSP), the Heritage Council of NSW *Local Government Heritage Guidelines* 2002, the NSW Heritage Office *Recommendations for Local Council Heritage Management* 2001 (revised 2009) and the Department of Environment and Climate Change NSW *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* 2010. The policy is a robust set of principles based on world's best heritage practice.

There are four key principles in managing the city's heritage which are articulated in the Heritage policy. These principles are: knowing our heritage, protecting our heritage, supporting our heritage, and promoting our heritage.

One of the main ways in which Council manages the city's heritage is by identifying and listing heritage items and areas in the local environmental plan. This enables regulatory controls to be applied to the consideration of developments that may affect these items. Furthermore, listing enables planning and zoning incentives to be applied to these items to promote their protection and safeguard their future.

### 4. Statutory and Policy Context

The following provides a summary of the statutory and policy context that applies to heritage places or items.

#### Protecting Aboriginal heritage

Listing heritage places and objects means that Aboriginal communities can assert their right to manage their own heritage. Measures for the protection of Aboriginal



places and objects are included in several pieces of legislation, including:


*National Parks and Wildlife Act 1974*

*Heritage Act 1977*

*Environmental Planning and Assessment Act 1979*

[The National Parks and Wildlife Act](#) provides statutory protection for all Aboriginal objects and places in NSW. Areas are gazetted as Aboriginal places if the Minister is satisfied that there is enough evidence to show the area is, or was, of special significance to Aboriginal culture.

[The Heritage Act](#) protects the State's natural and cultural heritage. Aboriginal places or objects that are recognised as having high cultural value can be listed on the State Heritage Register.

[The Environmental Planning and Assessment Act](#)  provides protection by considering impacts on Aboriginal heritage in land use and planning decisions. The three main areas are:

- planning instruments allow particular uses for land and specify constraints. Aboriginal heritage is a value which should be assessed when determining land use
- section 79C of the Act lists impacts which must be considered before development approval is granted. Aboriginal heritage is one of these possible impacts
- State government agencies act as the determining authority on the environmental impacts of proposed activities and must consider a variety of community and cultural factors, including Aboriginal heritage, in their decisions.

#### Aboriginal Cultural Heritage Reform

The NSW Government is currently undertaking an Aboriginal cultural heritage reform. This is likely to result in stand alone Aboriginal cultural heritage legislation for NSW.

### Protecting non-Aboriginal heritage

Measures for the protection of Non-Aboriginal heritage in Newcastle are provided in the LEP, through planning controls and through conservation incentives.

In summary, Council requires that all development proposals demonstrate how they meet the heritage conservation objectives contained in the Newcastle LEP and the Newcastle DCP. The LEP mandates that Council must consider the heritage significance of a heritage item, when assessing a development application that involves a heritage item, and must consider how a development proposal affects the heritage significance of the item or heritage conservation area. Council must also consider how any negative impacts that may arise are to be mitigated. Council must also consider what impacts might arise when a development is proposed near a heritage item.

Non-Aboriginal archaeological sites and relics are regulated through Section 139 and 140 (the relics provisions) of the *NSW Heritage Act 1977*. The Act prescribes that where land is being excavated that is known to contain a relic, an excavation permit must be obtained from the Heritage Council of NSW. The Act also requires that a person who has discovered a relic must notify the Heritage Council of the discovery within a reasonable time. There are heavy penalties for breaches under the Heritage Act, including fines, confiscation of equipment, and imprisonment.

### Newcastle Urban Renewal Strategy 2012 (updated 2014)

The Department of Planning and Infrastructure released the Newcastle Urban Renewal Strategy 2012 (updated 2014).

The strategy discusses renewal opportunities within the city centre of Newcastle.



There are many heritage buildings within the Newcastle city centre. The strategy notes there are opportunities to retain and re-use these buildings so that they can continue to contribute to the character and uniqueness of the city.

A guiding principle of the strategy is to encourage innovation in the design process.

## Lower Hunter Regional Strategy 2006

The LHRS acknowledges the rich cultural heritage in the Lower Hunter. It highlights the resource rich landscapes and various Aboriginal artefacts. The relationship between Aboriginal people and their land is of great importance.

There is growing pressure on places of heritage significance due to population growth. The strategy emphasises the need to ensure heritage schedules are constantly reviewed and kept up to date to protect the region's cultural heritage.

The strategy is currently subject to review.



### Box 1 Implications for the Strategy

The Local Planning Strategy needs to reflect the visions contained within the Lower Hunter Regional Strategy. Heritage schedules are to be regularly reviewed and up to date.

## Newcastle Community Strategic Plan 2030 (revised 2013)

The CSP sets direction for Newcastle's cultural heritage.

**Table 11.1: Extract from the Community Strategic Plan 2030 identifying strategic directions and objectives relevant to cultural heritage.**

Our Strategic Directions for Newcastle	Our Objectives
<b>Protected and Enhanced Environment</b>  Our unique environment will be understood, maintained and protected.	<ul style="list-style-type: none"> <li>Greater efficiency in the use of resources</li> </ul>
<b>Vibrant and Activated Public Places</b>  A city of great public places and neighbourhoods promoting people's health, happiness and wellbeing.	<ul style="list-style-type: none"> <li>Culture, heritage and place are valued, shared and celebrated.</li> </ul>
<b>Caring and Inclusive Community</b>  A thriving community where diversity is embraced, everyone is valued and has the opportunity to contribute and belong.	<ul style="list-style-type: none"> <li>A creative, culturally rich and vibrant community.</li> </ul>
<b>Liveable and Distinctive Built Environment</b>  An attractive city that is built around people and reflects our sense of identity.	<ul style="list-style-type: none"> <li>A built environment that maintains and enhances our sense of identity.</li> <li>Best practice energy and water efficient buildings and infrastructure</li> </ul>
<b>Smart and Innovative City</b>  A leader in smart innovations with a healthy, diverse and resilient economy.	<ul style="list-style-type: none"> <li>A vibrant diverse and resilient green economy built on educational excellence and research.</li> <li>A culture that supports and encourages innovation and creativity at all levels</li> <li>A thriving city that attracts people to live, work, invest and visit.</li> </ul>
<b>Open and Collaborative Leadership</b>  A strong local democracy with an actively engaged community and effective partnerships.	<ul style="list-style-type: none"> <li>Active citizen engagement in local planning and decision-making processes and a shared responsibility for achieving our goals.</li> </ul>

**Box 2 Implications for the Strategy**

The principles underpinning the Local Planning Strategy are to be consistent with the Community Strategic Plan.

**Newcastle Urban Strategy**

The Newcastle Urban Strategy was Council's city-wide land use policy prior to the LPS. The principles of Newcastle Urbanism inform planning instruments and DCPs. The following principles concern heritage.

***Principle 10***

Use architecture that reflects and supports local culture, heritage and identity, and responds to local climatic conditions

***Principle 13***

Be energy efficient in the materials and building techniques used, recycling and reducing the use of resources whenever possible.

***Principle 14***

Adapt existing buildings to new uses wherever possible.

**Newcastle Local Environmental Plan 2012**

The LEP contains clause 5.10 which aims:

- (a) to conserve the environmental heritage of the City of Newcastle
- (b) to conserve the heritage significance of heritage items and heritage conservation areas including associated fabric, settings and views
- (c) to conserve archaeological sites
- (d) to conserve Aboriginal objects and Aboriginal places of heritage significance.

The LEP provides directions on development consent – when it is required and what is required.

Heritage items, Heritage conservation areas (Cooks Hill, Hamilton Business Centre, Hamilton South Garden Suburb, Newcastle City Centre, Newcastle East and The Hill) and Archaeological sites for Newcastle can be found in Schedule five or the heritage map in the [LEP](#).

It is relevant to note that the Newcastle Earthquake of 1989 had profound and lasting implications for the built environment of Newcastle and still influences how we deal with heritage today. The City experienced the loss of over 500 buildings, which led to moves to protect historic areas from further loss by demolition. In 1992, several heritage conservation zones were gazetted through the Newcastle LEP. Both the City Centre Heritage Conservation Area and the Beaumont Street Heritage Conservation Area emerged as a reaction against demolition and the sense of loss caused by the demolition of 500 of the city's buildings. Today, the boundaries of these Heritage Conservation Areas are perhaps ready to be reviewed. Have these areas served their purpose and how can the character of the City Centre in particular be retained in its emergent revitalisation?

### **Box 3 Implications for the Strategy**

Investigate mechanisms to better protect heritage places. This may include additional floor space ratio or building height or relaxed car parking requirements if heritage buildings are protected.

## **Newcastle Development Control Plan 2012**

The Newcastle DCP includes specific sections on heritage. These include [Section 5.4 Aboriginal Heritage](#), [5.5 Heritage Items](#), [5.6 Archaeological Management](#) and [5.7 Heritage Conservation Areas](#).

The DCP provides guidance and controls to assist in the design of development and in the development assessment process.



## ***Federal Government Policy Making***

The Environmental Protection and Biodiversity Conservation Act 1998 (EPBC Act) provides for the protection and conservation of items of national heritage significance as well as heritage items that are owned by the Commonwealth.

There are two heritage lists regulated through the EPBC Act – the National Heritage List, for items of outstanding value to the nation; and the Commonwealth Heritage list, for heritage items owned by the commonwealth (regardless of their level of significance).

The threshold for inclusion on the National Heritage List is very high – within the Newcastle LGA, there are no heritage items on the National Heritage List. Attempts have been made by community and academic bodies to nominate items to the NHL, however none of these have been accepted to date (October 2013).

There are only two heritage items owned by the Commonwealth in Newcastle – Fort Wallace and Nobbys Lighthouse – and both of these are regulated through the EPBC Act by virtue of their inclusion on the Commonwealth Heritage List. Although rare, the Commonwealth has exercised the regulatory controls in the EPBC Act. Recently, the Commonwealth refused a development application for a restaurant and function centre at Nobbys, because the Commonwealth determined there would be an unacceptable material impact on the lighthouse's heritage values.

## **5. Existing studies and research**

The City of Newcastle has undertaken extensive research into the city's heritage since the early 1980s, providing a robust and well-informed heritage management framework. Studies include: City-wide Heritage Study 1997; Newcastle Aboriginal Heritage Study 1995; Archaeological Management Plan 1997; Newcastle Inner Areas Conservation Planning Study 1984; and several heritage studies of Cooks Hill, The Hill, Newcastle East and Hamilton South. Tourism and interpretative plans have been prepared to guide the development of heritage sites such as the Convict Lumber Yard, Bathers Way and Fort Scratchley Historic site. Further investment in these sites will ensure Newcastle continues to grow its heritage tourism offering and maintain a reputation for unique and interesting tourism experiences.

Conserving heritage places has long been recognised for the economic and social benefits that are returned to the city, and recently, the environmental benefits in conserving heritage buildings has been recognised outside the heritage sector. Conserving heritage buildings reduces energy usage associated with demolition, waste disposal and the manufacture of new materials and construction. Conservation promotes sustainable development by conserving the embodied energy in buildings. Embodied energy is the sum of all the energy required to produce a building and all of its parts. The concept can be useful in determining the "real" replacement cost of a building. It is worth noting that many older buildings constructed of timber, concrete or brick, have lower scale embodied energy than modern buildings of glass, steel and aluminium, and often lower operational costs owing to better thermal mass and passive cooling and heating. Furthermore, one of the most important factors in reducing the impact of embodied energy is to design long life, durable and adaptable buildings, characteristics of many heritage buildings.

The Productivity Commission conducted an inquiry into the conservation of Australia's historic heritage places in 2006<sup>3</sup>. The Inquiry identified two emerging trends in heritage conservation - the greater shift to adaptive re-use over demolition; and the growth in heritage tourism. The Inquiry noted that rising levels of wealth, gentrification, advances in knowledge and education, and shifts in social attitudes could be expected to lead to changes in the way Australians view (and positively value) heritage. It was concluded that into the future, this would lead to new positive approaches to heritage items and greater levels of private investment in heritage assets. Retaining buildings for their embodied energy and to prevent waste going to landfill, is also proving to be an increasingly positive trend.

The Inquiry also noted that where historic heritage is conserved for tourism purposes, other benefits arise. For example, hotels, shops, and restaurants may be established in historic precincts to cater for the tourism market. The development of tourism infrastructure can, in turn, bring additional benefits including providing an income stream to fund repair and maintenance. This is relevant to Newcastle because there is both a viable tourism sector in the city as well as a critical mass of heritage items that offer product to the tourism market.

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<sup>3</sup> Australian Government Productivity Commission 2006, Conservation of Australia's Historic Heritage Places, Productivity Commission Inquiry Report, VIC

The Newcastle Heritage Policy 2013 takes the position that adaptive reuse and building renovation is preferred to wholesale demolition of heritage items and buildings in heritage conservation areas. Demolition is an ever present issue, and often undermines the effort to create sympathetic and appropriately scaled infill development. Wherever possible, development should retain, renovate and reuse historic buildings to achieve a liveable and distinctive built environment.

#### **Box 4 Implications for the Strategy**

Recognise the environmental benefits in conserving buildings (regardless of heritage status). This could be considered as another tool in managing climate change.

Recognise the tourism benefits in conserving heritage buildings.

The way that our urban environment has historically developed means there will be a higher concentration of historic (and heritage) buildings close to the centres of cities and villages. Furthermore, recent investigations in the City Centre have confirmed the widespread presence of Aboriginal archaeology concealed beneath streets and buildings in the Newcastle City centre. At the same time, the planning framework and higher land values in the inner suburbs can place pressure on the heritage buildings within the inner city and village nodes and any unidentified Aboriginal heritage. This will be a challenge for the LPS because the presence of heritage sites and buildings will require careful consideration, and possibly retention and conservation which will mean balancing housing targets against heritage conservation objectives.

#### **Box 5 Implications for the Strategy**

Ensure Aboriginal heritage is considered in the Local Planning Strategy.

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# Local Planning Strategy

## Chapter 12: **Hazards**

## **Chapter 12 Cover**

Title: The beach at night

The front cover was painted by Gabriella Mills, aged 10, as part of the community consultation undertaken for the Newcastle 2030 Community Strategic Plan. The brief was *‘to express what the participant values most about Newcastle and/or the strengths of Newcastle.*

### *What is the purpose of this chapter?*

“Environment and climate change risks and impacts are understood and managed”

(Community Strategic Plan, revised 2013).

Newcastle has a long history of exposure to hazards such as flooding, coastal erosion and bushfire, particularly due to early settlement patterns that failed to fully appreciate these hazards.

The chapter aims to:

- Identify the principal hazards affecting the City of Newcastle.
- Outline the implications of these hazards, particularly where they pose a more serious risk to life and property.
- Discuss land use planning implications to ensure those hazards are managed to an acceptable risk level to ensure Newcastle is a robust and resilient City.



## 1. Hazards

A hazard is an event or a series of events which is characterised by a certain magnitude and likelihood of occurrence (Middlemann M.H. 2007). Newcastle has a long history of exposure to hazards such as flooding, coastal erosion and bushfire. A resilient city is one that can withstand such an extreme event without suffering devastating losses, damage, reduced productivity and quality of life (Godschalk 2003). The degree to which property or life is affected by a hazard is referred to as ‘vulnerability’ (Middlemann M.H. 2007). The challenge for the Local Planning Strategy is to address this vulnerability through land use planning to move towards a robust and resilient city.

### Policy

#### Lower Hunter Regional Strategy

The Lower Hunter Regional Strategy (LHRS) 2006 provides broad land use guidance on managing hazards. The LHRS provides that future urban development should not be located in areas of high risk from natural hazards, including sea level rise, coastal recession, rising watertable and flooding. The LHRS outlines that development in areas subject to natural hazards should be assessed according to the policies of the Floodplain Development Manual (NSW E & H, 2005) and the *Coastal Protection Act 1979*. NSW Department of Planning and Environment is currently reviewing the LHRS to produce a new Regional Growth Plan. The paper *The Lower Hunter over the next 20: A Discussion Paper* (NSW P & E, 2013) suggests that building resilience to natural hazards, including consideration of climate change, will continue to be a key role of land use planning.

#### Newcastle Community Strategic Plan (CSP) 2030

The CSP 2030 sets the vision for a smart, liveable and sustainable city to the year 2030. The LPS aims to build upon the principles of the CSP. A ‘protected and enhanced environment’ is one of the seven core strategic directions of the CSP. An objective of this direction is:

*“Environment and climate change risks and impacts are understood and managed.”*

The paper explores this objective further in the context of the principal hazards affecting the City of Newcastle.

It is important that property owners and developers are aware of any hazards affecting their property by following a due diligence process. When purchasing a property, the section 149 Planning Certificate which forms part of the contract of sale, will indicate if the property is affected by some types of hazards. The relevant policy and legislation is outlined under discussion of the particular hazard.

## Flooding

It is hard to define flooding simply. However, for The City of Newcastle flood planning and management purposes, flooding is considered to be any significant flow within a channel or waterway as well as concentrated overbank flow or temporary storage / ponding of water resulting from rainfall within local catchments, or backwater inundation from elevated downstream waters, such as the Hunter River (BMT WBM 2012).

Flooding affects about 1 in 3 properties within the City of Newcastle. Of the 58,000 developed properties in the City of Newcastle more than 21,000 are located on the floodplain. The vast extent of flooding across the City necessitates that flooding is managed at a City-wide scale rather than at a local catchment scale (BMT WBM 2012).

Flooding can occur from:

- flash flooding from the local catchments,
- river flooding from the Hunter River, and
- ocean flooding from high water levels in the ocean and harbour.

(BMT WBM 2012)

**Table 12.1: Approximate number of properties affected by flooding events (BMT, WBM 2012)**

Flood Event	Approximate number of properties affected	Approximate number of properties flooded above floor level
10% Annual Exceedence Probability	7,500	250
1% Annual Exceedence Probability	11,000	2,000
Probable Maximum Flood	21,000	10,000

It is not realistically possible to eliminate all flood risks from Newcastle. The aim of future flood management is to ensure that existing and future development is exposed to an ‘acceptable’ level of risk, consistent with other risks that people live with on a day to day basis.

Local councils have a responsibility for managing the flood risk in their local government area (NSW Planning & Infrastructure 2007). Section 733 of the *Local Government Act 1993* protects councils from liability if they have followed the requirements of the NSW Government's Flood Prone Land Policy and Floodplain Development Manual, the 'Manual' (NSW E & H 2005). The policy and manual supports the wise and rationale development of flood prone land. This is achieved by the strategic consideration of a number of key issues relating to protecting existing and future occupants of flood prone land from the ramifications of flooding. These key issues are:

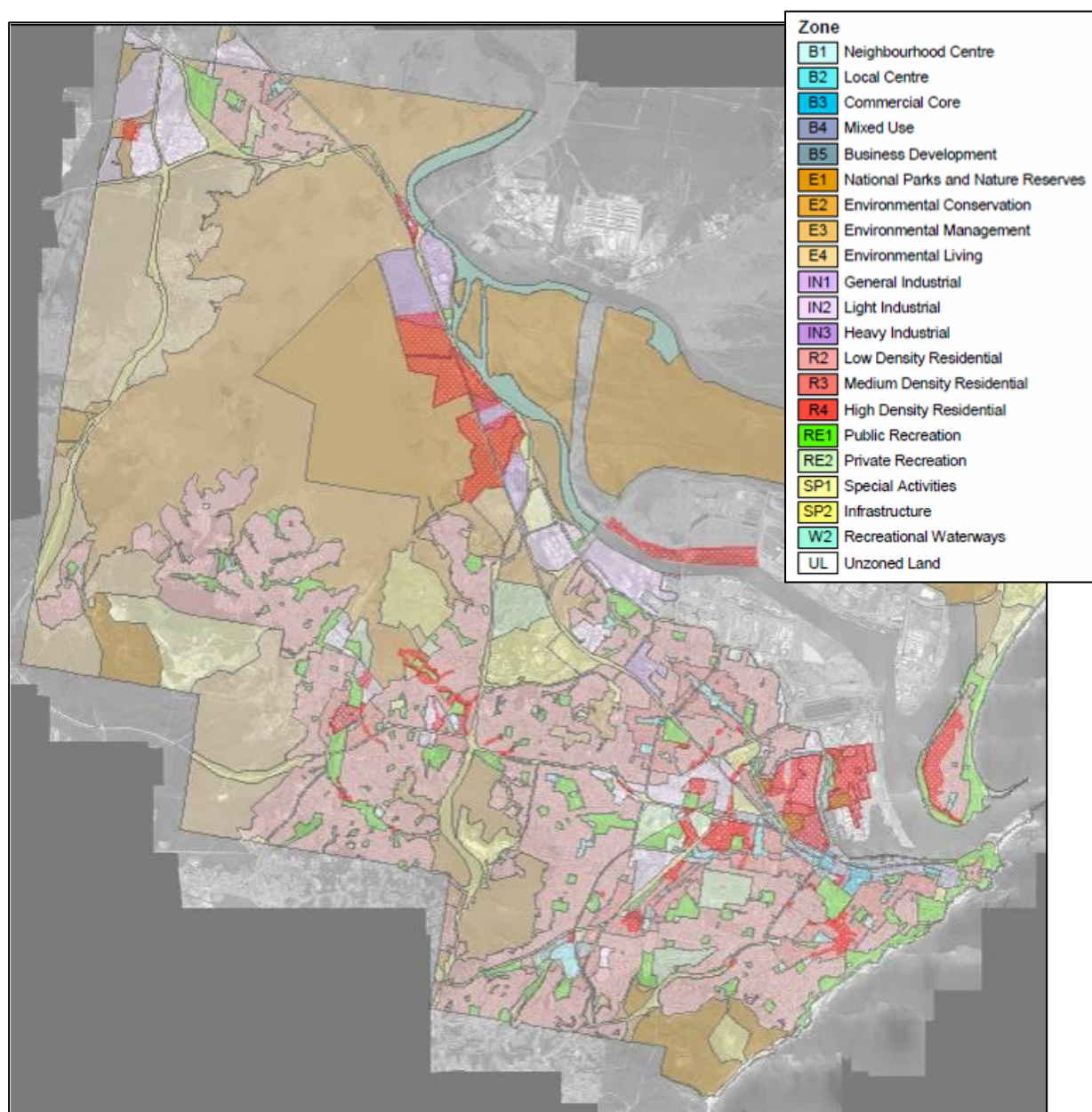
- safety of people
- management of the potential damage to property and infrastructure
- management of the cumulative impacts of development.

### **The Newcastle City Wide Floodplain Risk Management Study and Plan (2012)**

The Newcastle City Wide Floodplain Risk Management Study and Plan (BMT WBM – June 2012) (CWFP) was adopted by Council on 26 June 2012 and was prepared in accordance with the NSW Government's Manual.

Figure 12.1 provides an indicative preliminary assessment of where land use zonings are potentially in conflict with flood risks (shown in red with white cross-hatch).

Figure 12.1: Potential conflict between flooding and land use zones (BMT WBM 2012)



In summary Figure 12.1 highlights the issues associated with the three categories of flooding:

- Ocean flooding – Affecting low lying areas notably within Carrington, Maryville and Wickham.
- Flash flooding - Areas affected by floodways, such as the Wallsend commercial centre.
- River flooding - Particularly the Hexham floodplain.

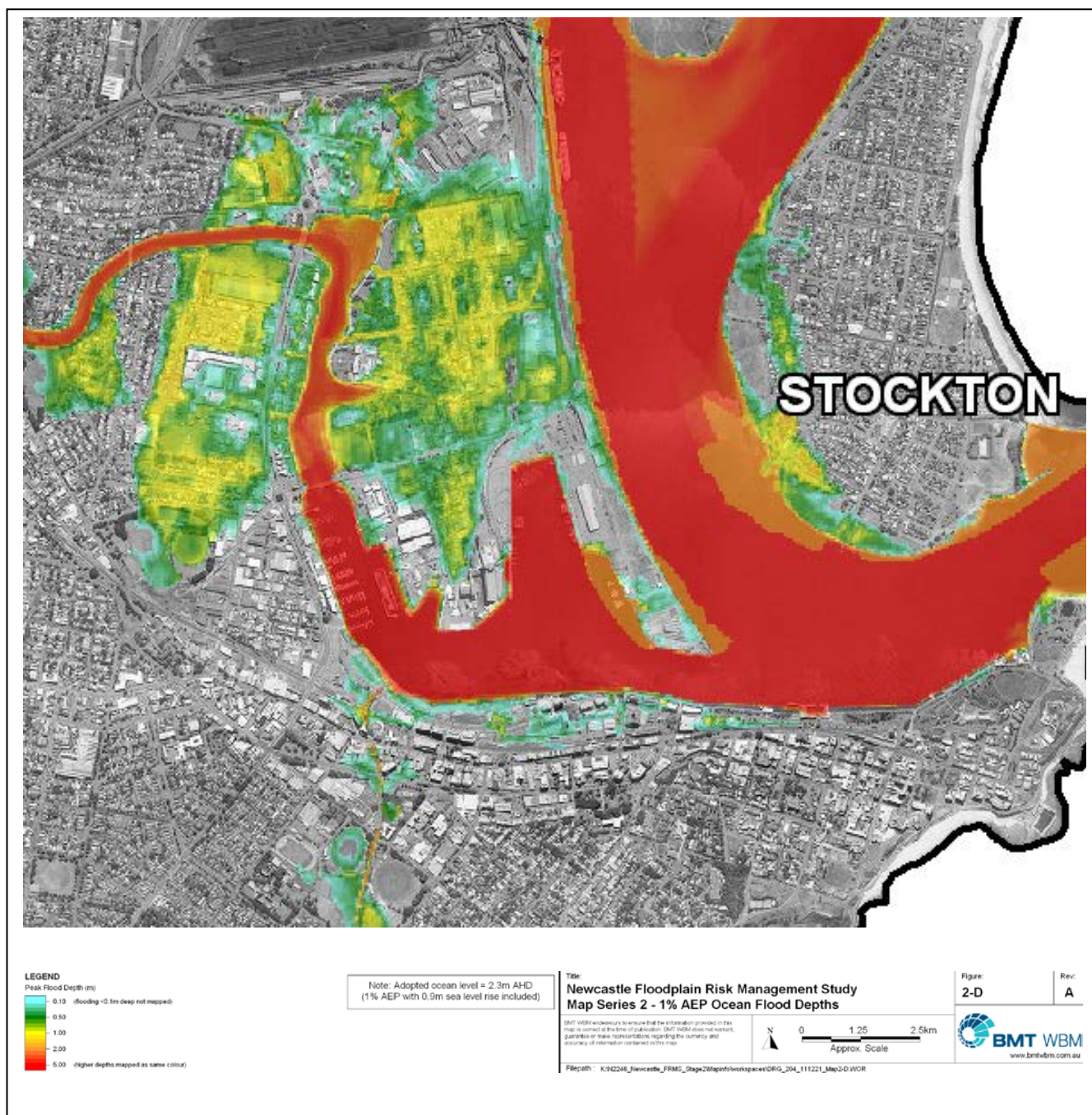
Flooding regimes are in reality more complex than simply categorising into ocean flooding, flash flooding and river flooding. There are circumstances where two or more of these coincide. However, for the purposes of this chapter it is worthwhile considering land use implications within the context of these categories. This is because there are different ways to manage each of these types of flooding regimes from a land use planning perspective.

#### Ocean Flooding

Figure 12.2 below estimates the extent of the 1% Annual Exceedence Probability (AEP) flood from the ocean. A 1% AEP is often referred to as a 1 in 100 year flood event. It can be seen that it primarily affects low lying areas within Carrington, Maryville and the northern section of Wickham.



Figure 12.2: 1% AEP Ocean Flood Depths (BMT WBM 2012)





**Streets in Carrington are susceptible to inundation by king tides (BMT WBM 2012)**

### Climate change and sea level rise

The CWFP identifies that one of the future challenges for the City of Newcastle will be managing the potential flood risks associated with climate change and sea level rise. Without intervention, certain localities within the LGA are likely to experience gradual changes in flooding frequency, duration and depth as time passes.

The NSW Government's previously adopted values for future sea level rise have been incorporated under the CWFP into Council's flood mapping, which have been used to set current flood planning levels (FPL). A FPL is the predicted flood level plus freeboard (a buffer of generally 500mm) for new development floor levels. Changes in design rainfall intensity may also have an impact on flood levels, however, until such time that any changes become more certain, the CWFP recommends that the current modelling results be used as the basis of setting FPLs.

Current FPLs for the low-lying suburbs of Wickham, Maryville and Carrington incorporate a sea level rise projection of 0.9 metres. Thus, the FPL is based on a 1% AEP ocean storm level occurring once the sea level has risen by 0.9 metres. With freeboard, the FPL in these areas is currently set at 2.5m AHD. However, the CWFP notes that if sea level rose by 0.9 metres, these low lying suburbs would likely become uninhabitable, as groundwater would be permanently at surface level, making the areas permanently swampy. Indeed this situation is likely to occur with a sea level rise of less than 0.5 metres (i.e. within about 50 years based on the NSW Government's former sea level rise projections).



It is for this reason that this CWFP recommends the development of a *strategic position* on the future management of these low-lying suburbs for a timeframe of about 50 years. Given this ultimatum position and the associated timeframe/trigger for impacts, it would seem unreasonable to continue to impose FPLs within these suburbs at levels based on a sea level rise that cannot be accommodated. The CWFP therefore recommends that as part of the strategic planning review process, further consideration be given to the measures imposed on future development within these areas. In time, it is envisaged that the strategic position for future management of the low-lying suburbs will become enshrined within future planning provisions. Council is currently working to develop a future strategic position on the low lying suburbs. This is beyond the scope of the LPS project at this stage, however, further changes to land use planning and/or development controls may be recommended. Relevant findings will be included as part of on-going review of the LPS.

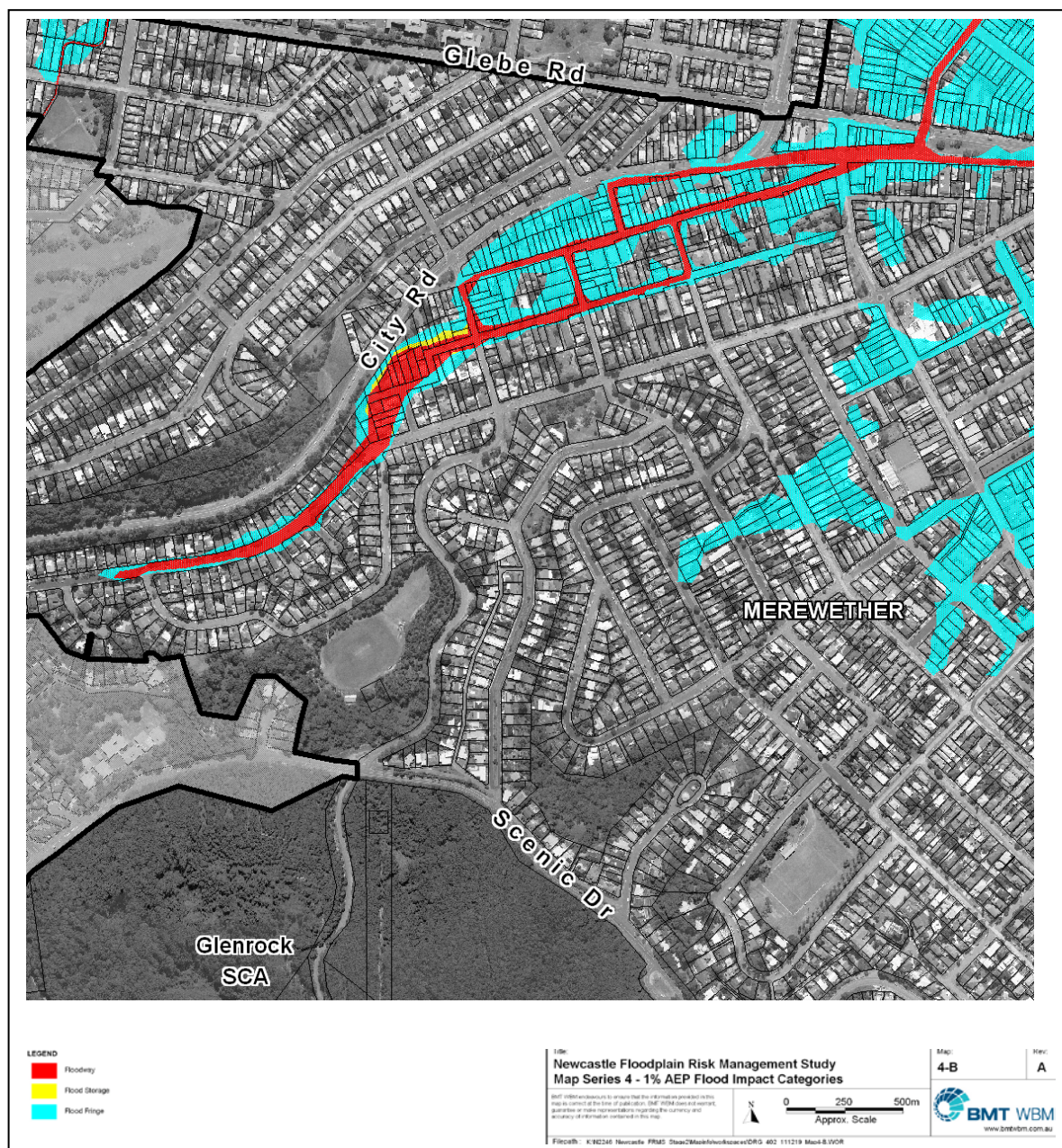
A challenge is to manage low lying lands where people currently live, but is subject to ocean flooding.

In the meantime, the CWFP outlines that it would be desirable to restrict further expansion of residential development within these low lying areas that are known to be subject to inundation. Such measures include a moratorium on spot rezoning. It is fortunate that the majority of existing residential zoned land within the low lying areas is already zoned R2 Low Density Residential, however, there is some R3 Medium Density Residential zoned land that may need to be reconsidered in light of the CWFP recommendations.

### Flash Flooding

Of particular concern is the risk to life hazard that floodways present to the Newcastle community with waters prone to rise quickly to several metres in depth, travelling at high velocity. While floodways are generally restricted to open channels and streets, there are areas where floodways pass through existing developed properties. For example Figure 12.3 below indicates the extent of the 1% AEP flood for a floodway in Morgan/Selwyn Street Merewether which affects developed properties.

Figure 12.3: 1% AEP Flood Impact Categories for Merewether Heights (BMT, WBM 2012)

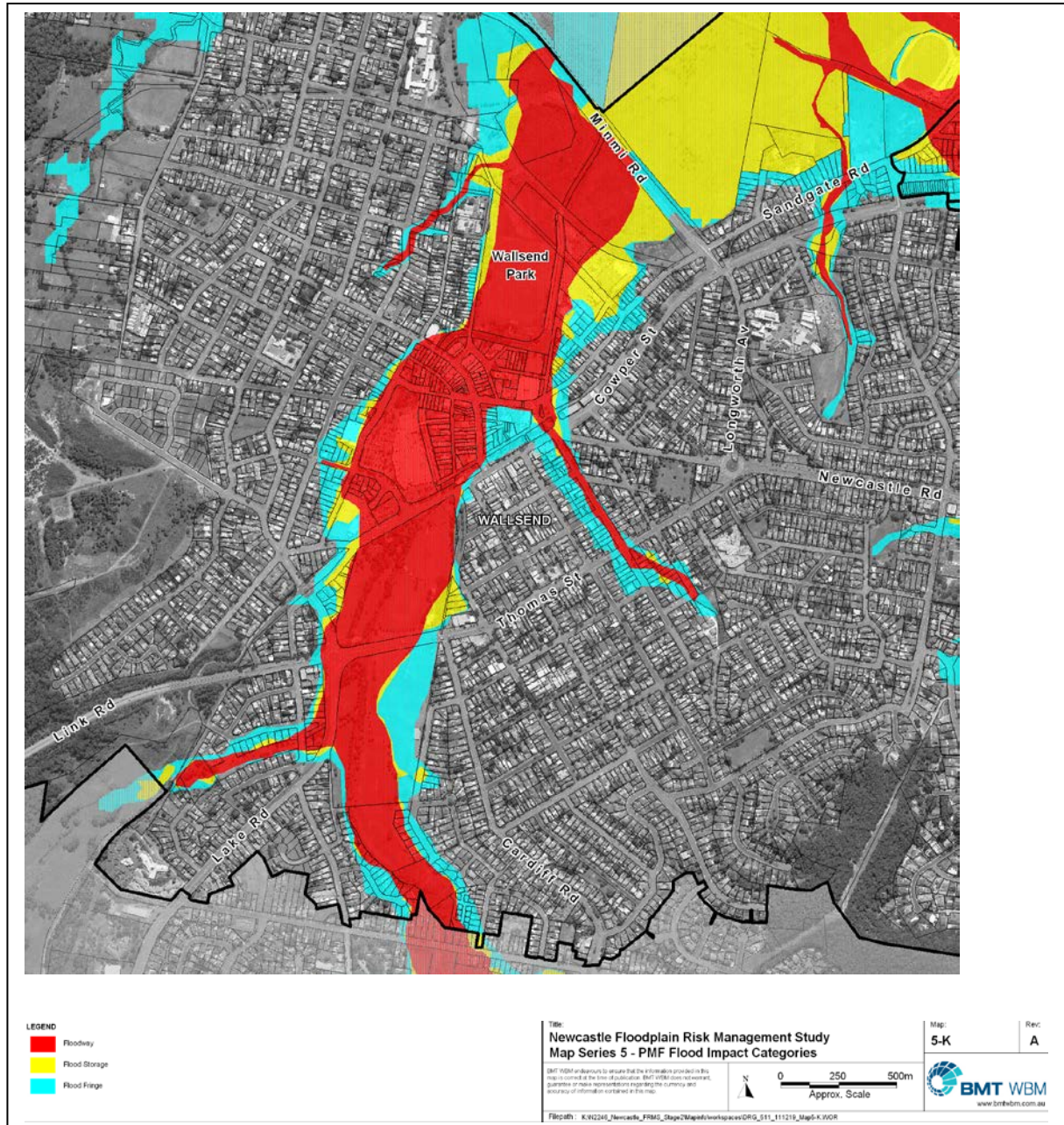


166 Morgan Street, Merewether 1984 (property now acquired and demolished by City of Newcastle) (BMT WBM 2012)



The Wallsend commercial centre is another example of an existing developed area severely affected by a floodway. Figure 12.4 below demonstrates the worst case scenario, the probable maximum flood (PMF), within the Wallsend commercial centre.

Figure 12.4: PMF Flood Impact Categories for Wallsend (BMT, WBM 2012)



A full compilation of [flood mapping](#) under the CWFP is available on Council's website.

While the Newcastle DCP 2012 does provide controls for floodway affected land these areas often retain a very high risk to life.

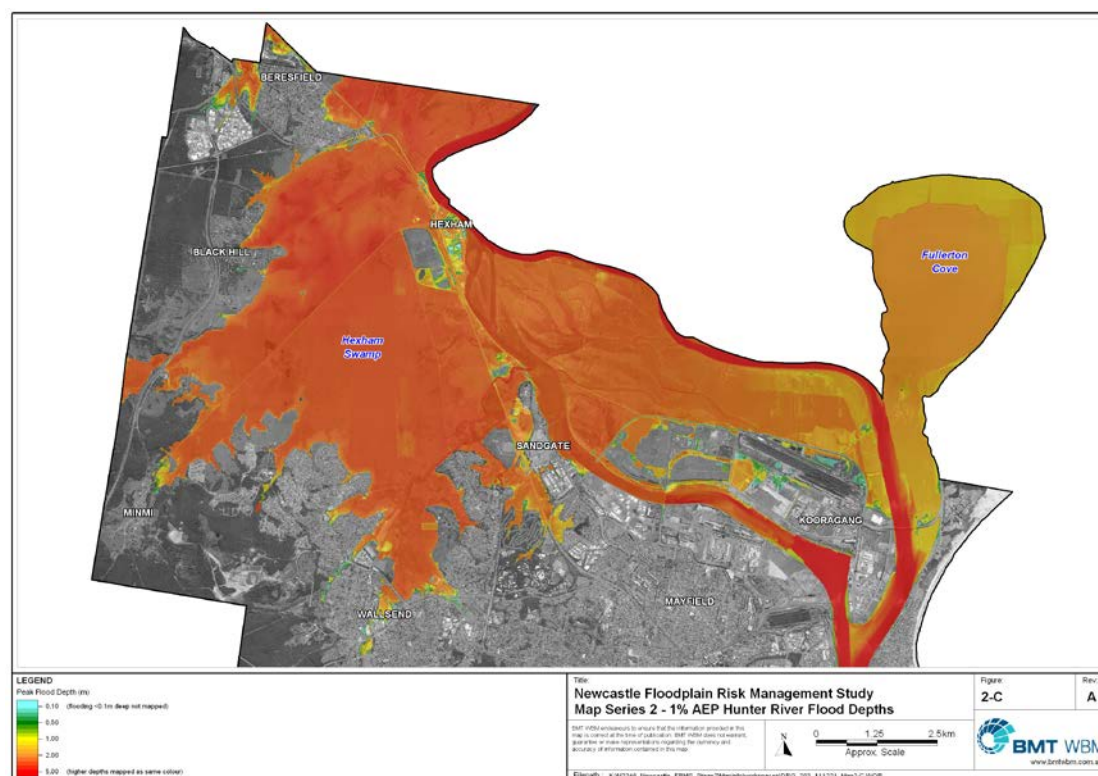
A challenge is to manage conflict between floodways and existing developed areas.

It is noted that Council is currently undertaking further studies in the Wallsend area to ascertain the merits of various engineering options to improve the floodway. The CWFP outlines that acquisition of private properties within the Wallsend, and other floodways, may be necessary to reduce risk. Such a measure would be subject to funding and may also require acquisition controls embedded into the LEP to implement this action if pursued. An appropriate zoning for the acquired properties would also need to be investigated.

### River Flooding

The primary area affected by more severe river flooding is the Hexham area which is inundated when the Hunter River floods. Figure 12.5 below shows the 1% AEP for the Hunter River.

**Figure 12.5: 1% AEP Hunter River Flood Depths (CWFP 2012)**



**Flooding in Hexham (1955), showing only the second storey of the Travellers Rest (now McDonalds). Note only roofs showing for single storey buildings behind. (BMT, WBM 2012)**

A significant portion of the urbanised areas within Hexham are zoned for industrial purposes. Industrial development is generally considered more compatible with a flood environment than residential due to lower risk to life and property. There are however a number of residential properties within the Hexham area, historical from past planning regimes. Residential is now a prohibited land use within the industrial zone and it is envisaged that over time residential land use will transition to industrial development.

The Newcastle LEP 2012 currently applies an E2 Environmental Conservation zone on other residential properties within the Hexham and Sandgate area most affected by river flooding. The E2 zone is a means to restrict development to within acceptable limits to minimise risk to life. Concurrently these properties often possess biodiversity attributes. The dual use of this zone is reflected by an additional objective which was included under the E2 zone (in addition to the standard LEP instrument).

*To provide for the management of the majority of the Hunter River floodplain by restricting the type and intensity of development to that compatible with the anticipated risk to life and property.*

In principle, it would be desirable to prevent any further residential development within the Hexham floodplain. However, the NSW Floodplain Management Manual (2005) requires that flood prone lands are not unnecessarily sterilised for development, but at the same time, flood risks are minimised. The E2 zone still enables a single dwelling to ensure the land is not unreasonably sterilised but restricts further subdivision such that the intensity of development cannot be increased. The Newcastle DCP 2012 imposes strict flooding requirements on any new development within these areas.

### Flooding Controls

The Newcastle LEP 2012 currently has no specific flood management development controls. Flooding provisions for new development are currently contained in the Newcastle DCP 2012.

### Education

Educating the public about flooding hazards is also an important aspect to flood management. When purchasing a property, the Section 149 Certificate which is part of the contract of sale, indicates whether a property is affected by flooding. A property owner can also apply to Council for a flood information certificate which provides more detailed information on the flooding hazards along with providing guidance on building requirements such as the FPL (the minimum habitable floor level).

The full CWFP including flood mapping is also available on Council's website:

[www.newcastle.nsw.gov.au/environment/flooding\\_and\\_waterways/draft\\_newcastle\\_city-wide\\_floodplain\\_risk\\_management\\_study\\_and\\_plan](http://www.newcastle.nsw.gov.au/environment/flooding_and_waterways/draft_newcastle_city-wide_floodplain_risk_management_study_and_plan)

### **Box 1 Implications for the Strategy**

The LPS is to be consistent with the recommendations of the CWFP and any additional adopted flood management plans of Council.

Ocean flooding - Within the identified low-lying areas (e.g. within areas of Maryville, Wickham and Carrington) under the CWFP consider the following measures until such time as a long-term strategic position is established for these areas:

- Consider imposing a moratorium on spot rezoning. In particular rezoning for additional residential land that would be subject to known inundation is unlikely to be appropriate.
- Consider an R2 Low Density Residential zone for all existing residential zoned land identified within the low lying areas to minimise further residential growth, noting that the majority of the affected residential zoned land is already within this zone.
- Once a long term strategic position has been established incorporate relevant provisions into the LPS and LEP/DCP where necessary.

Floodways - Development should be avoided within floodways as per the Newcastle DCP 2012. Subject to further studies acquisition of existing development within floodways may be required. If so investigate including acquisition provisions into the LEP to implement this action. Consider appropriate zoning for acquired properties such as open space.

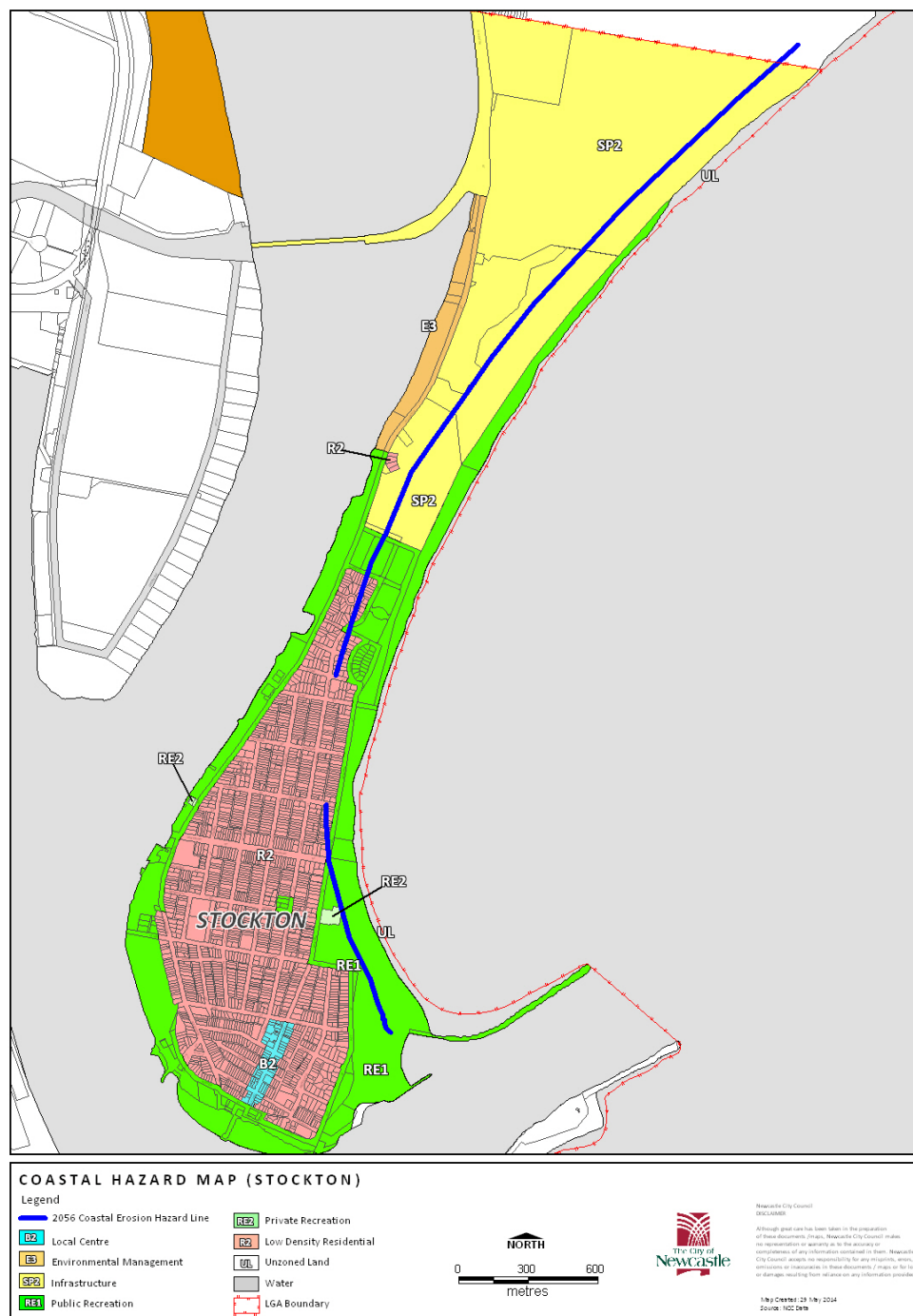
River flooding – Review the range of permissible land uses within the E2 Environmental Conservation zone to ensure they are compatible with flood risk mitigation for the Hunter River floodplain.



## Coastal erosion

Stockton beach has a long history of erosion. In December 2006, Council completed a study which identified that a number of residents at Stockton were at risk to coastal erosion by the year 2056. In May 2007 Council adopted a year 2056 worst case scenario hazard line. Letters were sent to affected residents and a notation was included on the planning certificates of properties at risk.

**Figure 12.6: Coastal Hazards (Newcastle Coastline Management Plan – Umwelt 2003)**

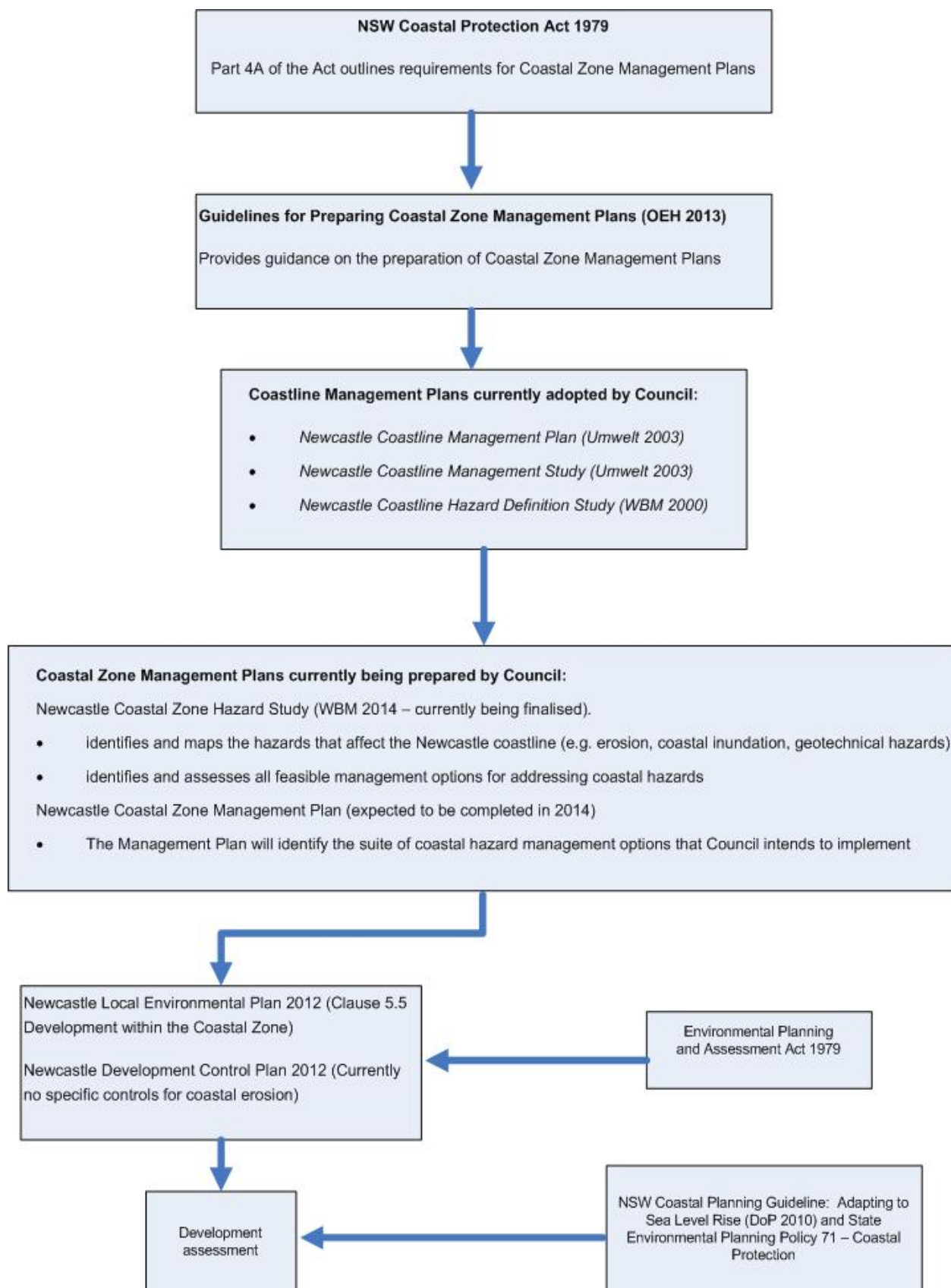




Council's have a duty of care to consider coastal erosion processes. Section 733 of the *Local Government Act 1993* provides exemption from liability for Council in relation to coastal hazards, if actions are undertaken in accordance with the principles of the *Guidelines for Preparing Coastal Zone Management Plan* prepared by the NSW Government. This means that management of coastal erosion issues will need to be undertaken in accordance with an adopted Coastal Zone Management Plan prepared in accordance with the guidelines. Council is currently in the process of preparing this plan. The plan will provide a clear direction for the management of coastal hazards along the Newcastle coastline. This will provide landowners with more certainty around the future of their coastal properties.

Council already considers the adopted year 2056 worst case scenario hazard line to assess development applications in accordance with the Newcastle LEP 2012, State Environmental Planning Policy 71 – Coastal Protection and the NSW Coastal Planning Guidelines.

Figure 12.7: Legislative framework surrounding coastal hazard management



The proposed *Newcastle Coastal Zone Management Plan* currently being prepared will identify Stockton residents at risk to erosion in the long term (up to the year 2100). The plan will outline what Council proposes to do to manage the erosion hazard at Stockton.

The NSW *Coastal Planning Guideline: Adapting to Sea Level Rise* (NSW P&E 2010) provides interim planning criteria for development in coastal risk areas, including that development should avoid or minimise exposure to immediate coastal risks.

We need to proactively manage the type and intensity of future development within the 2056 hazard line.

## Box 2 Implications for the Strategy

Implement any relevant recommendations of the Coastal Zone Management Plan once adopted by Council. This may include LEP and DCP guidelines for new development within coastal hazard areas.

In the interim the principles of the *NSW Coastal Planning Guidelines Adapting to Sea Level Rise 2010* – should be applied in particular ‘*Avoid intensifying land use in coastal risk areas through appropriate strategic and land use planning*’.

- Residential land within the existing adopted year 2056 hazard line should remain R2 Low Density Residential zone.
- Avoid new residential subdivision development within the existing adopted year 2056 hazard line.

## Bush Fire

A bush fire prone area is defined by the NSW Rural Fire service as an area of land that can support a bush fire or is likely to be subject to bush fire attack.

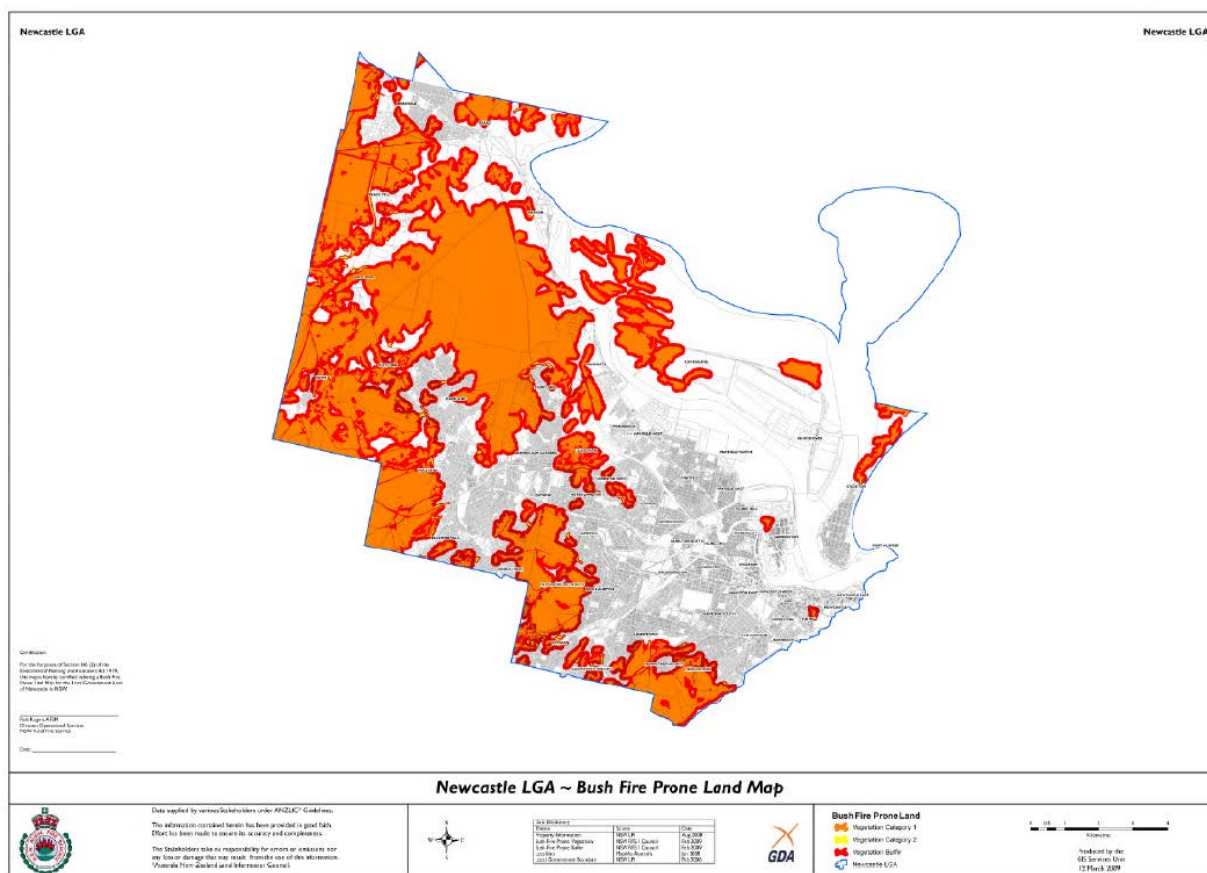
The principle guidance for bush fire planning within NSW is contained in the publication *Planning for Bushfire Protection 2006* (PBP) prepared by the NSW Rural Fire Service. PBP identifies the primary purpose of strategic planning in managing land use in bush fire prone areas is to produce mapping of bush fire prone land and determining appropriate bush fire requirements in LEPs or DCPs.

Figure 12.8 illustrates bush fire prone land in Newcastle. The bush fire prone land maps prepared by Council have been certified by the Commissioner of the NSW Rural Fire Service and act as a trigger mechanism for development of land within bush fire prone areas to ensure appropriate bush fire safety provisions are incorporated into the development (NSW Rural Fire Service 2006). The City of Newcastle is currently updating the bush fire prone land mapping.

In accordance with the *Guidelines for Bushfire Prone Land Mapping* (NSW Rural Fire Service - June 2006) there are three categories of bush fire prone land, representing decreasing levels of threat:

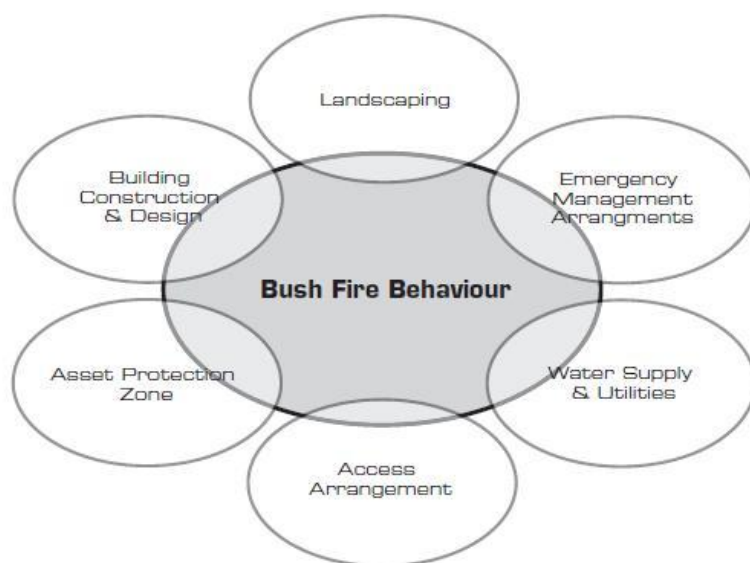
- Bush Fire Vegetation Category 1 refers to forest, woodlands, heath, wetlands
- Bush Fire Vegetation Category 2 refers to moist rainforests, shrublands, open woodlands, mallee and grasslands
- Bush fire prone vegetation buffer, with the buffering distance being 100 metres from vegetation category 1, and 30 metres from category 2.

**Figure 12.8: Bushfire Prone Land (NSW RFS 2009)**



Under the *Environmental Planning and Assessment Act 1979* new development on areas identified as bush fire prone are subject to the development and planning controls of PBP and must be designed to improve the survivability of the development and the occupants that are exposed to a bush fire hazard. The PBP requires detailed design analysis of the bush fire threat and applies a combination of bush fire protection measures to manage that risk.

Bushfire Protection Measures PBP (NSW Rural Fire Service 2006)



The Newcastle DCP 2012 also outlines bush fire requirements for development, firstly requiring compliance with PBP but also specifying that Council will not accept the ongoing management of bush fire protection measures for private development. Private development must therefore manage its own risk.

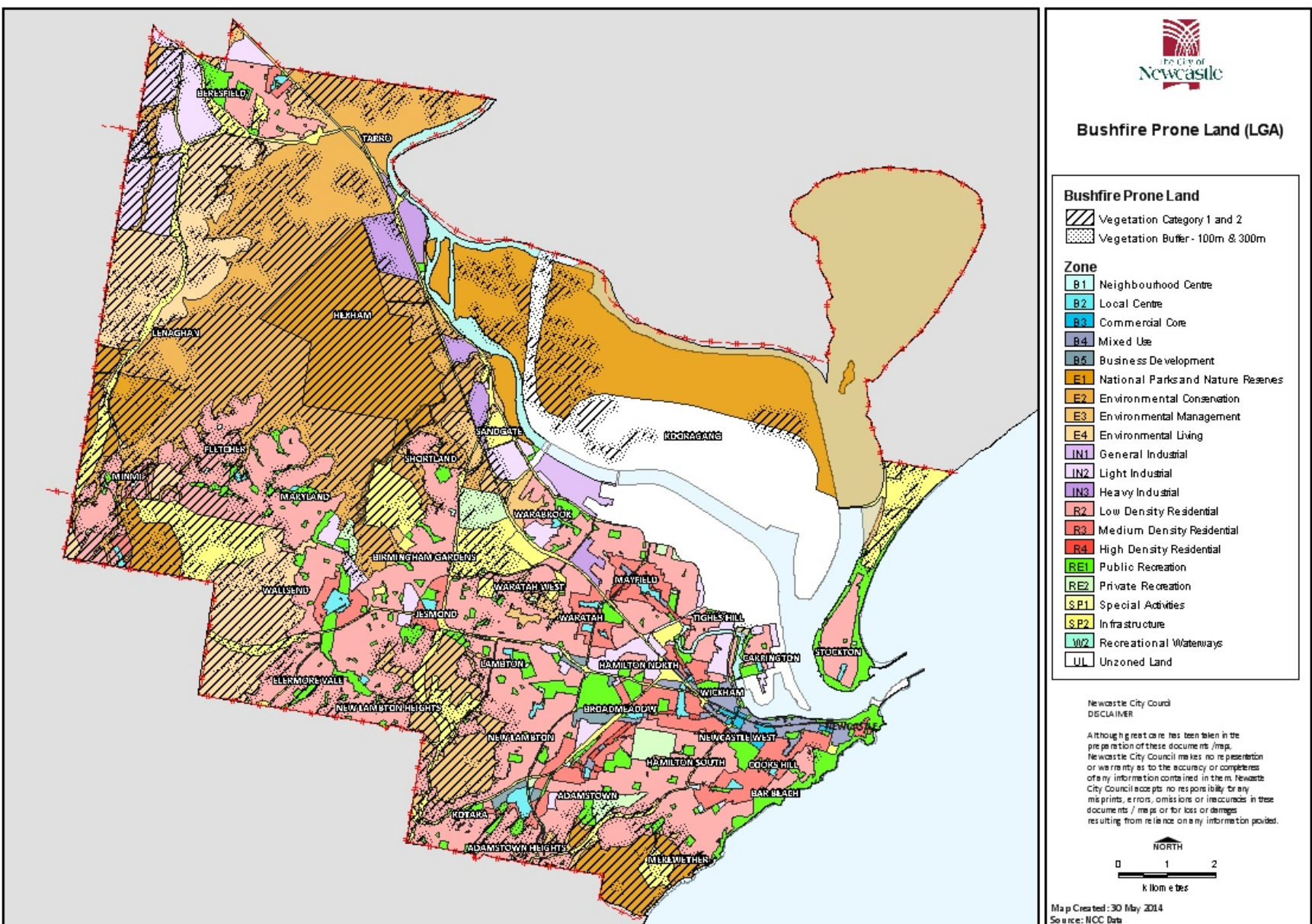
Under the *NSW Rural Fires Act 1997* certain development on bush fire prone land also requires approval (referred to as a bush fire safety authority) from the Commissioner of the NSW Rural Fire Service. This includes subdivision of bush fire prone land for residential purposes and other special fire protection purposes, including schools, child care centres, hospitals, tourist accommodation and seniors housing.

### Infill Development

Newcastle LGA has a number of urban environments directly adjoining remnant bushland pockets, such as Blackbutt Reserve. This often poses a challenge for new development as best practice bush fire planning principles contained under PBP such as asset protection zones were not implemented at the time of the original subdivision. Research has shown that 85% of houses are lost in the first 100m from bushland (NSW Rural Fire Service 2006). From a land use planning perspective it is therefore desirable to avoid locating high density residential development within an area of high bushfire risk in accordance with the principles under the NSW Rural Fire Service's *Practice Note 2/12 Planning Instruments and Policies*. A review of the current locations of the R3 Medium Density and R4 High Density residential zones identifies that they are generally well located in terms of separation from bush fire risk, other than some minor intrusion into buffer areas (Figure 12.9). They also generally have good street access for bush fire fighting purposes along with a variety of evacuation routes.



Figure 12.9: Bushfire prone land and land use zoning



### Urban Release Areas

The urban release areas (areas zoned for development but not yet developed) within the western portion of the LGA (around Minmi and Fletcher) are still partly vegetated and therefore identified as bushfire prone land. Future subdivision development within these areas will require consideration of PBP to ensure subsequent residential development is adequately protected.

The Newcastle DCP 2012 provides for controls in addition to PBP. In particular it specifies that all bush fire protection measures associated with subdivision must be located wholly within the development site.

When Council prepares a planning proposal to rezone land that is affected by bushfire risk it must address certain Ministerial Planning Directions (Section 117 directions) including consideration of bush fire risk. Specifically the planning direction includes consideration of PBP.

#### **Box 3 Implications for the Strategy**

Infill development will need to be managed in accordance with PBP, however, avoid locating medium and high density residential zones within areas of high bush fire risk, in accordance with NSW Rural Fire Service *Practice Note 2/12 Planning Instruments and Policies*. Review against revised bush fire hazard mapping.

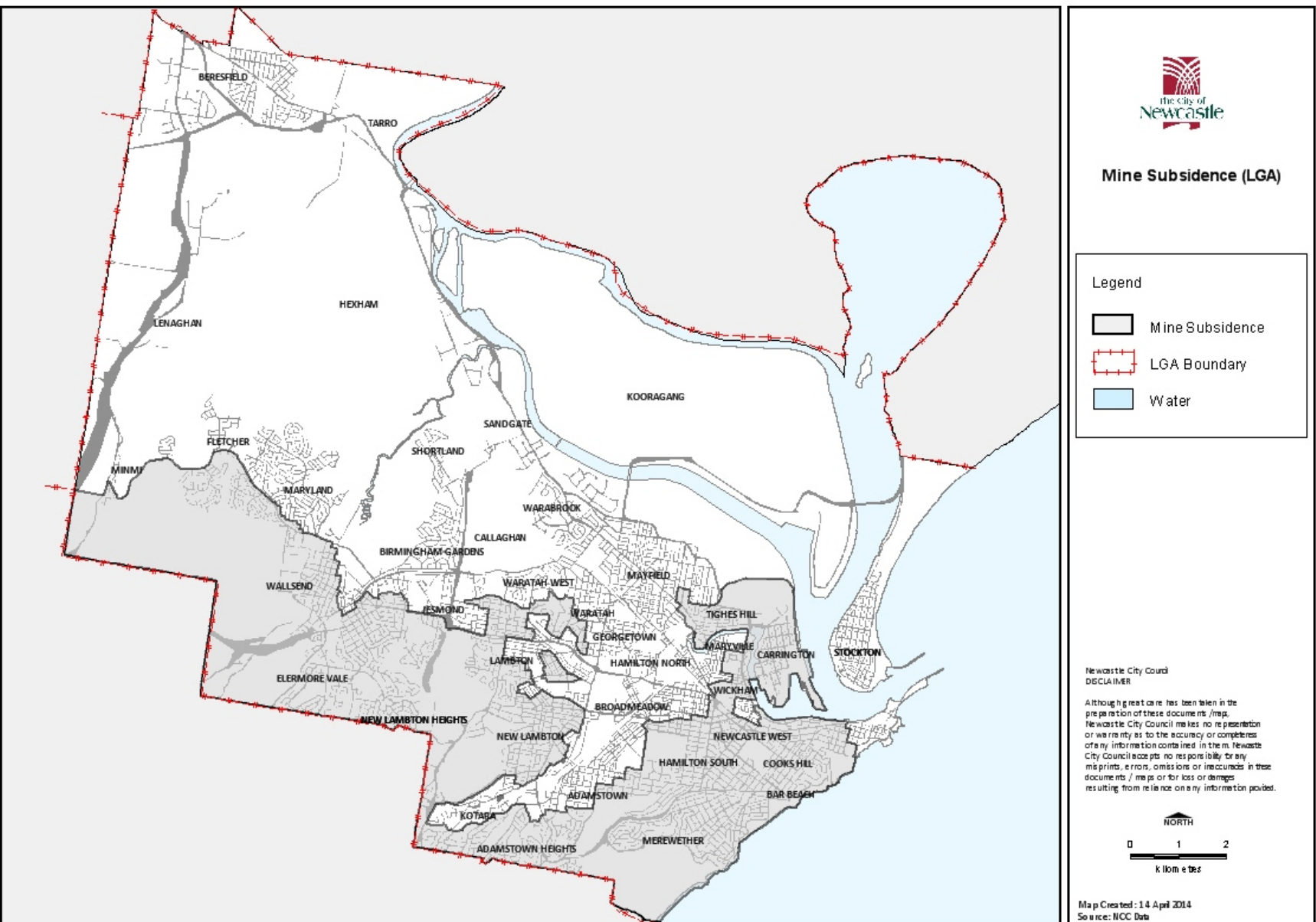
Ensure future urban release areas have regard to bush fire risk in accordance with local planning direction, PBP\* and the Newcastle DCP 2012.

\*The NSW Rural Fire service has a number of reference and guideline materials for urban release areas that provide further guidance. These include: Fact Sheet 'Streamlining Residential Development on Bushfire prone Land within Urban release Areas', Guide to Subdivision in Bush Fire Planning Urban Release Area, Guide to Urban Release Areas. Designated urban release areas are identified under the Newcastle LEP 2012 – Urban Release Area Maps.

## ***Mine Subsidence***

Mine subsidence can occur from previous or future underground coal mining. Mine subsidence can be described as the lowering or settling down of the lands surface. When underground mining occurs, the earth's forces are redistributed and there is a tendency for the void to close. The ground movement associated with subsidence can cause damage to built improvements but is generally restricted to minor cracking and the like. Figure 12.10 below indicates the extent of proclaimed mine subsidence district within the Newcastle LGA.

Figure 12.10 – Proclaimed mine subsidence district



When purchasing a property, the Section 149 Planning Certificate which is part of the contract of sale, indicates whether a property is within a mine subsidence district. New development generally requires approval from the Mine Subsidence Board which may impose development requirements such as restricting number of storeys, specifying type of building materials and special footing design. This aims to provide compatibility between the surface development and the underground mining conditions. The specific requirements on development depend on the nature of the underground mining, as this can impact the risk and severity of subsidence, and also the nature of the development proposed (NSW Mine Subsidence Board). The Mine Subsidence Board may provide advice on matters relating to mine subsidence of the development of land that may be subject to subsidence, whether or not the land concerned is within a mine subsidence district.

### Information

One of the difficulties for development within areas affected by mine subsidence can be the unpredictable nature of the extent of remediation works required. While rarely posing an absolute physical impediment to development it can compromise financial feasibility. This is particularly the case within the Newcastle City Centre where larger buildings are desired.

The Mine Subsidence Board has produced maps for the Newcastle City Centre which provides a preliminary overview of the extent of mine workings including whether grouting of those mine workings is likely to be required.

The Newcastle Urban Renewal Strategy 2012 has considered the effect of mine subsidence in the formulation of the strategy for the Newcastle City Centre, including where best to locate more dense development.

### Mine Subsidence Taskforce

A multi-stakeholder mine subsidence taskforce has been established to explore the key issues in remediating mine workings beneath the city in order to provide for certainty for most development proposals (over three storeys) to be able to proceed. The taskforce includes representatives from Mine Subsidence Board, Hunter Development Corporation, NSW Department of Premiers and Cabinet and The City of Newcastle.

#### **Box 4 Implications for the Strategy**

Within areas affected by mine subsidence, but also strategically located for higher density development, continue to work with the Mine Subsidence Taskforce to explore means to enable development to proceed.

## Acid Sulfate Soils

Acid sulfate soils are defined under the Newcastle LEP 2012.

**acid sulfate soils** means naturally occurring sediments and soils containing iron sulfides (principally pyrite) or their precursors or oxidation products, whose exposure to oxygen leads to the generation of sulfuric acid (for example, by drainage or excavation).

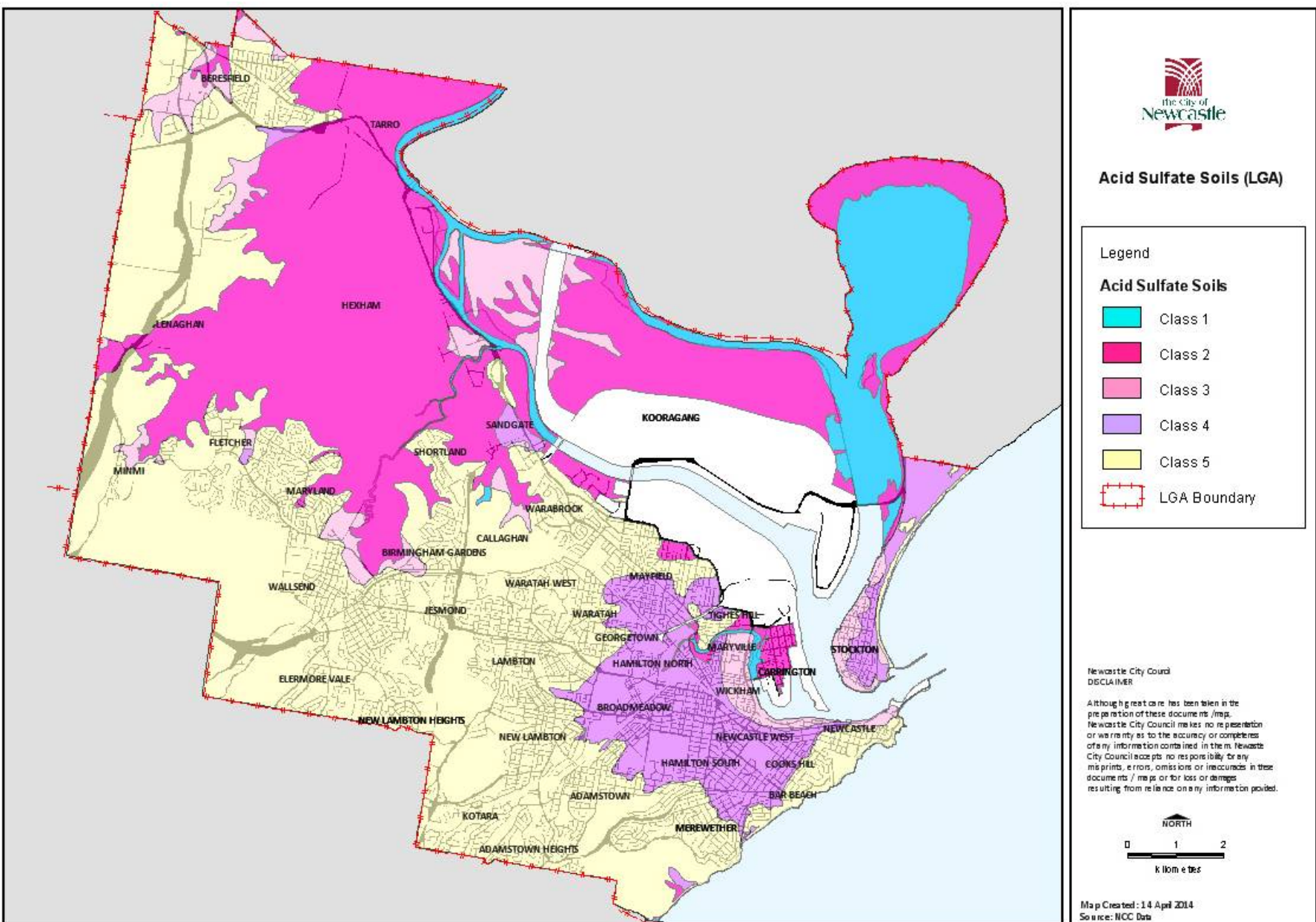
If acid sulfate soils (ASS) are disturbed sulphuric acid can be produced and can drain into waterways causing short and long term socio-economic and environmental impacts.

Examples include damage to aquatic ecosystems such as fish kills and oyster damage, human and animal health impacts from polluted waters, impacts on soil structure and damage to built structures such as bridges. Impacts can last hundreds of years.

ASS are mapped under the Newcastle LEP 2012, as shown in Figure 12.11.



Figure 12.11 Acid Sulfate Soils



The Newcastle LEP 2012 contains a standard LEP instrument clause for management of ASS. The LEP requires that development of land that is identified as being affected by ASS must be carried out in accordance with an Acid Sulfate Soils Management Plan, unless the work is of a minor nature. Management plans can vary depending upon the nature of the soils and scale of development but often involve the use of a neutralising agent such as lime to counter the acidity.

### **Contaminated Land**

Contamination is defined as ‘the condition of land or water where any chemical substance or waste has been added at above background level and represents, or potentially represents, an adverse health or environmental impact’ (National Environment Protection Measure, 1999).

Contamination of soil and/or groundwater at a site can arise as a result of poor environmental management practices in the past. The Newcastle LGA has a long history of industry or other activities that may potentially result in land contamination. Some of these include:

- Agricultural/ horticultural activities
- Chemicals manufacture and formulation
- Dry cleaning establishments
- Engine works
- Iron and steel works
- Landfill sites
- Mining and extractive industries
- Oil production and storage
- Railway yards
- Scrap yards
- Service stations
- Waste storage and treatment
- Metal treatment

(Australian and New Zealand Environment and Conservation Council National Health and Medical Research Council, 1992)

The Newcastle DCP 2012 details Council's policy regarding the management of contaminated land. The DCP follows the requirements of State Environmental Planning Policy 55 – Remediation of Land. When developing land that is contaminated, or the land use history indicates the land may be contaminated, the DCP requires investigation to remediate and/or validate contaminated soil or groundwater as part of the development proposal to ensure the land is suitable for the proposed land use. This investigation is required for both development proposals and proposals to rezone land.

When Council prepares a planning proposal to rezone land it must address certain Ministerial Planning Directions (Section 117 directions) including consideration of contamination risk.

When purchasing property, the Section 149 Planning Certificate that forms part of the contract of sale, will list any reports or other documentation required to be disclosed on the certificate by Council pertaining to contamination. This does not always guarantee that there is no contamination as Council may not have a record of all past contaminating activities.

#### **Box 5 Implications for the Strategy**

Any proposal to rezone land (particularly residential use) must consider contamination and ensure that the land is suitable (or will be suitable after remediation) for all uses that will be permitted to be carried out.

### ***Slope Stability***

A landslide is the movement of a mass of rock, debris, or earth (soil) down a slope (Australian Geometrics Society, 2007). The nature of a landslide can vary greatly in terms of size, rate of movement and frequency as can the impacts that they can cause (Australian Geometrics Society 2007). There are common examples of where landslide is potentially an issue, including:

- Where there is a history of landslide.
- Where topography (i.e. steep land) dictates sliding may occur.
- Where geological conditions render the area susceptible.
- Where constructed features, if they fail, may propagate landslide.

(Australian Geometrics Society, 2007)

Some areas of the Newcastle LGA have experienced slope stability issues in the past, particularly where sites are located on steep land. Council's have a responsibility to consider slope stability in the context of site suitability when assessing development applications.

Currently The City of Newcastle considers slope stability when assessing development applications, requesting a landslide risk management report where slope stability is considered to be an issue. However, neither the Newcastle LEP 2012 nor the Newcastle DCP 2012 has clear guidance on when a report is required or in what form such a report should take. The type of 'trigger' for submission of a report could vary but could take the form of landslide vulnerability mapping.

### **Extreme Temperature**

Extreme temperature can lead to high levels of energy consumption, illness and even loss of life (NSW Department of Planning & Environment 2014). Council's Urban Forest Policy 2007 established the following vision:

*The vision is of an attractive, liveable city with a thriving urban forest that provides economic, ecological and social benefits as part of Newcastle's essential and valued infrastructure that is managed and cared for by the City and its citizens.*

Newcastle Urban Forest Policy 2007

The policy includes within its objectives to manage the microclimate of the City. As a direction from this policy new tree management guidelines were incorporated into the Newcastle DCP 2012 to manage existing trees within development sites and to provide compensatory planting where removed.

#### **Box 6 Implications for the Strategy**

Support the urban forest to reduce heat island effect and reduce energy consumption for cooling.

## Industry

A potential source of hazard can arise from proximity of industry to sensitive areas, particularly residential. While not an 'environmental' hazard this issue can be managed through land use planning. Light industries can generally be managed through compatible type business, mitigations measures and the like. These methods were discussed in greater detail under the [Newcastle Employment Lands Strategy](#) (Hill PDA, 2013), as part of the Chapter: Centres and Employment Lands.

Heavy industry is however, by definition, required to be separated from residential areas due to the inability to mitigate impacts. It is therefore important from a land use planning perspective that there is sufficient buffer area provided to heavy industry.

### **Box 7 Implications for the Strategy**

Zones that permit heavy industries should be buffered from residential or other sensitive land uses by incorporating lower intensity buffer zones such as light industry zones.

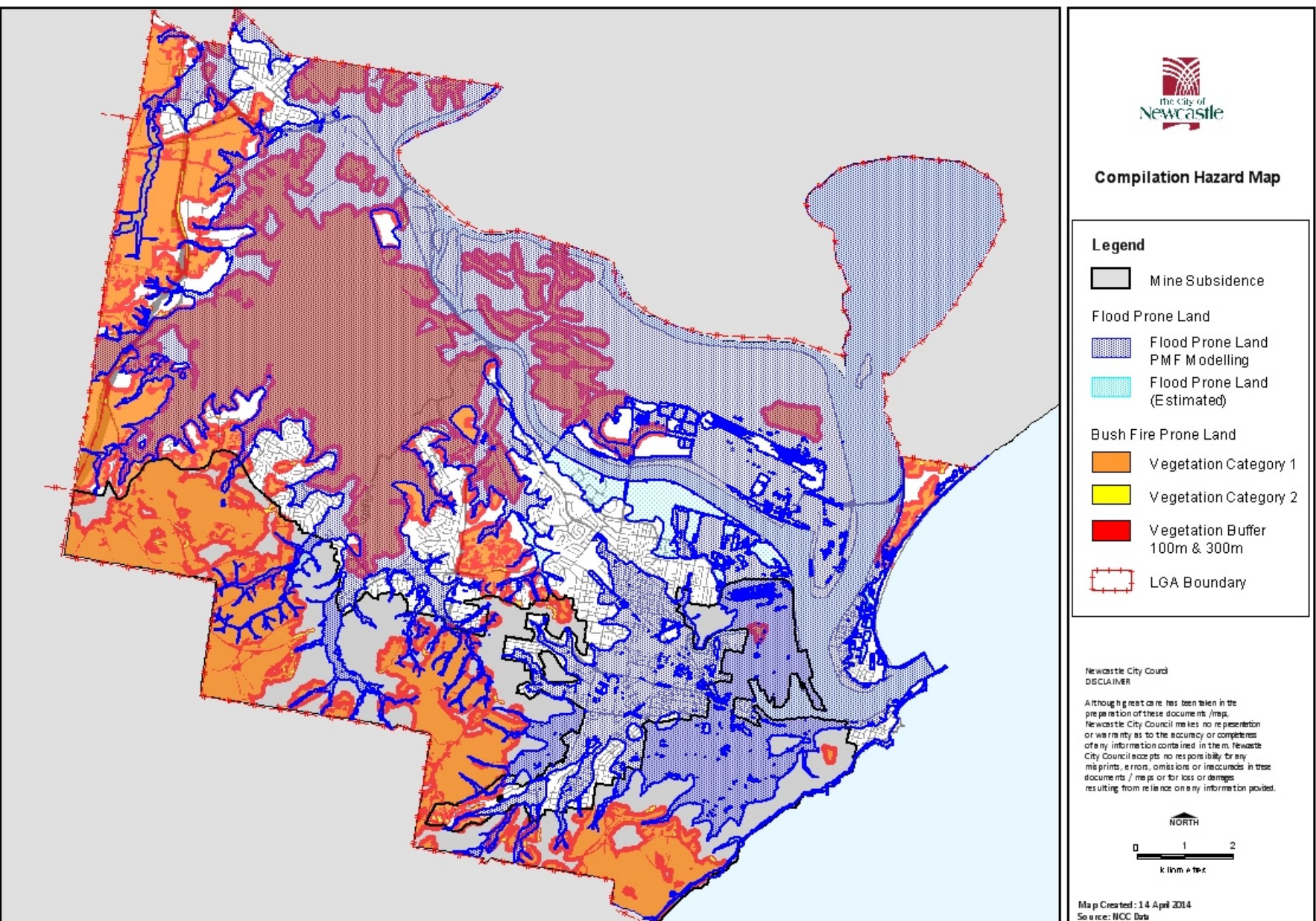
## 2. Building a Resilient City

A resilient city is one that can withstand an extreme event without suffering devastating losses, damage, reduced productivity and quality of life (Godschalk 2003). The degree to which property or life is affected by a hazard is referred to as 'vulnerability' (Middlemann M.H. 2007). The challenge for the Local Planning Strategy is to address this vulnerability through land use planning, to move towards a robust and resilient city.

Figure 12.12 shows a compilation of flood, bush fire and mine subsidence hazards across the Newcastle LGA. Figure 12.12 demonstrates that even with only three hazards there is limited land that is unaffected. When considering additional hazards such as acid sulfate soils and contamination there is even less land that is entirely unconstrained. It is therefore not possible to only develop unconstrained land. Often land may have other attributes such as proximity to services, transport or the like that means that it is desirable to develop in that area. Furthermore, Newcastle has historically developed such that there are established urban areas that are already subject to one or more hazards. Generally only the land that presents an unacceptably high risk to life or property (eg. floodways) should be quarantined from future development altogether. Otherwise, hazards need to be managed by other means, including appropriate land use controls as outlined within this paper, to help build a robust and resilient city.



Figure 12.12: Compilation of hazards



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## **APPENDIX A**

### ***Suggested changes to planning controls***



## Abbreviations

DCP	Development Control Plan
LEP	Local Environmental Plan
The Act	Environmental Planning and Assessment Act 1979

## Glossary

**Adaptable housing** refers to housing that can meet the needs of residents throughout the life cycle. It allows people to 'age-in-place'.

**Housing diversity** refers to a mix of housing types and sizes.

**Housing types** refers to a building or place used predominantly as a place of residence and includes attached dwellings, boarding houses, dual occupancies, dwelling houses, group homes, hostels, multi dwelling housing, residential flat buildings, secondary dwellings, semi-detached dwellings, seniors housing and shop top housing. Refer to the Newcastle Local Environmental Plan 2012 for definition of each type.

**Housing sizes** refers to the number of bedrooms per dwelling and the overall floor area, commonly referred to as Gross Floor Area.

## 1. Background

The housing and neighbourhoods chapter highlights a mismatch between the housing currently provided and the housing needed to accommodate the local population now and into the future. This 'gap' or mismatch between housing supply and demand is common across NSW.

The housing and neighbourhoods chapter supports greater diversity in housing types and sizes and adaptable housing to provide people with the option to 'age in place' as a means to addressing the shortfall.

Creating greater diversity in housing types and sizes can provide more options for those on lower incomes.

The purpose of **Appendix A** is to suggest ways Council could better encourage more diverse and adaptable housing stock through the local planning framework. Further investigations would need to occur during preparation of a formal planning proposal to amend the planning framework.

## 2. Suggested changes to Newcastle Local Environmental Plan 2012 (LEP)

Black text refers to text that Council cannot change. Black text refers to that specified within the LEP template prepared by the Department of Planning and Infrastructure.

Red text refers to text inserted by Council during preparation of the LEP.

Blue text refers to suggested changes to the LEP.

### *Aims of Plan*

(1) This Plan aims to make local environmental planning provisions for land in the City of Newcastle in accordance with the relevant standard environmental planning instrument under section 33A of the Act.

(2) The particular aims of this Plan are as follows:

- (a) to respect, protect and complement the natural and cultural heritage, the identity and image, and the sense of place of the City of Newcastle,
- (b) to conserve and manage the natural and built resources of the City of Newcastle for present and future generations, and to apply the principles of ecologically sustainable development in the City of Newcastle,
- (c) to contribute to the economic well being of the community in a socially and environmentally responsible manner and to strengthen the regional position of the Newcastle city centre as a multi-functional and innovative centre that encourages employment and economic growth,
- (d) to facilitate a diverse and compatible mix of land uses in and adjacent to the urban centres of the City of Newcastle, to support increased patronage of public transport and help reduce travel demand and private motor vehicle dependency,
- (e) to encourage a diverse and adaptable housing types and sizes in locations that improve access to employment opportunities, public transport, community facilities and services, retail and commercial services,
- (f) to facilitate the development of building design excellence appropriate to a regional city.

## ***Zone R2 Low Density Residential***

### **1 Objectives of zone**

- To provide for the housing needs of the community within a low density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To accommodate adaptable and diverse housing forms that respects the amenity, heritage and character of surrounding development and the quality of the environment.

### **2 Permitted without consent**

Environmental protection works and Home occupations

### **3 Permitted with consent**

Boarding houses; Child care centres; Community facilities; Dwelling houses; Educational establishments; Emergency services facilities; Exhibition homes; Exhibition villages; Flood mitigation works; Group homes; Home-based child care; Home businesses, Neighbourhood shops; Recreation areas; Residential accommodation; Respite day care centres; Roads, Tourist and visitor accommodation

### **4 Prohibited**

Backpackers' accommodation; Hostels; Rural workers' dwellings; Serviced apartments; Any other development not specified in item 2 or 3

## ***Zone R3 Medium Density Residential***

### **1 Objectives of zone**

- To provide for the housing needs of the community within a medium density residential environment.
- To provide a variety of housing types within a medium density residential environment.

- To provide a variety of adaptable housing sizes that have regard to the future desired character of the neighbourhood.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- ~~To allow some diversity of activities and densities if:~~

~~(i) the scale and height of proposed buildings is compatible with the character of the locality, and~~

~~(ii) there will be no significant adverse impact on the amenity of any existing nearby development.~~

- To encourage increased population density levels in locations that will support the commercial viability of centres and public transport. ~~provided that the associated new development:~~

~~(i) has regard to the desired future character of residential streets, and~~

~~(ii) does not significantly detract from the amenity of any existing nearby development.~~

## 2 Permitted without consent

Environmental protection works; Home occupations

## 3 Permitted with consent

Attached dwellings; Boarding houses; Car parks; Child care centres; Community facilities; Educational establishments; Emergency services facilities; Exhibition homes; Exhibition villages; Flood mitigation works; Group homes; Health services facilities; Home-based child care; Home businesses; Multi dwelling housing; Neighbourhood shops; Places of public worship; Recreation areas; Residential accommodation; Respite day care centres; Roads; Seniors housing; Tourist and visitor accommodation.

## 4 Prohibited

Any development not specified in item 2 or 3

## ***Zone R4 High Density Residential***

### **1 Objectives of zone**

- To provide for the housing needs of the community within a high density residential environment.
- To provide a variety of housing types within a high density residential environment.
- To provide a variety of adaptable housing sizes.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To promote a denser urban form along transport corridors ~~while respecting the residential character of adjoining streets.~~
- To maximise redevelopment and infill opportunities for high density housing within walking distance of centres.
- To provide for commercial development that contributes to the vitality of the street where provided within a mixed use development.
- To encourage development that has regard to the desired future character of the neighbourhood
- To support active and safe uses at pedestrian level.

### **2 Permitted without consent**

Environmental protection works; Home occupations

### **3 Permitted with consent**

Attached dwellings; Boarding houses; Business premises; Car parks; Child care centres; Community facilities; Educational establishments; Emergency services facilities; Flood mitigation works; Food and drink premises; Health services facilities; Home-based child care; Home businesses; Hostels; Kiosks; Multi-dwelling housing; Neighbourhood shops; Office premises; Places of public worship; Recreation areas; Recreation facilities (indoor); Residential flat buildings; Respite day care centres; Roads; Seniors housing, Service stations; Shop top housing and Tourist and visitor accommodation.

### **4 Prohibited**

***Any development not specified in item 2 or 3***



## ***Principle Development Standards***

The following includes a local clause that was raised as a way of encouraging more affordable homes, during exhibition of the Housing and Neighbourhood Paper.

### **Potential Affordable Housing Incentive Clause**

1 The objective of this clause is to increase the supply of affordable accommodation to low and/or medium income families.

2 This clause applies to development applications for residential accommodation (including subdivisions) in zones **R3, R4, B2, B3, and B4.**

3 Notwithstanding any development standard which applies to a development application for residential accommodation (including subdivisions), the resulting development yield (in terms of the number of subdivision lots or dwellings), maybe increased by up to 10% under this clause, subject to:

(a) Council being satisfied that the increased development yield is reasonable in the circumstances, having regard to the objectives of the development standard(s) to be varied, and the objectives of the zone.

(b) at least 50% of the increased development yield being provided for affordable housing for low or medium income families.

(c) A Deed being entered into, prior to development consent being granted, for the transfer of the affordable housing component to a not-for-profit housing authority, for the purpose of affordable housing, where any residential lots are provided at no cost (other than transfer costs), and dwellings are provided at demonstrated construction costs only (plus transfer costs).

4. Under this clause *affordable housing* has the same meaning as in the *Environmental Planning & Assessment Act 1979*.

### 3. Suggested changes to Newcastle DCP 2012 (DCP)

Suggested changes to the Newcastle DCP are discussed below to facilitate housing choice and adaptability. The text below refers to additional objectives and controls to the existing DCP sections that refer to housing.

#### ***Attached Dwellings and Multi Dwelling Housing***

##### **Housing choice**

###### Aim

To maximise housing choice.

###### Objectives

1. Ensure multi dwelling housing developments cater for a mix of household types including singles, couples, families, groups of singles, elderly people, people with disabilities and lower income earners.

###### Control

2. Provide a variety of housing types and sizes such as 1, 2, 3 and 4 bedroom units, courtyard housing, home offices, lofts, bed-sits, studio apartments, dual key apartments and other diverse forms.

##### **Adaptability**

###### Aim

To encourage adaptable housing.

###### Objectives

1. Provide adaptable housing that helps sustain community and family networks by allowing people to stay in their houses over the whole of their life.

### Controls for attached dwellings and multiple dwelling housing consisting of more than 10 dwellings

2. 10% of dwellings should be suitable for in-house care, share accommodation, which offers privacy for non-related parties living within the same household.
3. 10% of dwellings are in accordance with 'Liveable Housing Guidelines', second Edition (Department of Social Services) to meet a minimum level of silver. The seven core design features elements in the silver level are:
  1. A safe continuous and step free path of travel from the street entrance and or parking area to a dwelling entrance that is level.
  2. At least one, (level step free) entrance into the dwelling.
  3. Internal doors and corridors that facilitate comfortable and unimpeded movement between spaces.
  4. A toilet on the ground floor (or entry) level that provides easy access.
  5. A bathroom that contains a hobless (step free) shower recess.
  6. Reinforced walls around the toilet shower and bath to support the safe installation of grabrails at a later date.
  7. A continuous handrail on one side of any stairway where there is a rise of more than 1 metre.

Note. The Liveable Housing Design Guidelines provide further guidance on these core design features.

4. Dwelling design provides access to immediate areas of open space (eg. public street). Upper level dwellings shall provide access to private open space such as balconies, courtyards and/or terraces.

## ***Residential Flat Buildings***

### **Housing choice**

#### Aim

To maximise housing choice.

#### Objectives

1. Ensure residential flat buildings developments cater for a mix of household types including singles, couples, families, groups of singles, elderly people, people with disabilities and lower income earners.

#### Control

2. Provide a variety of housing types and sizes including 1, 2, 3 and 4 bedroom units, courtyard housing, home offices, lofts, bed-sits, studio apartments, dual key apartments and other diverse forms.

### **Adaptability**

#### Aim

To encourage adaptable housing.

#### Objectives

1. Provide adaptable housing that helps sustain community and family networks by allowing people to stay in their houses over the whole of their life.

#### Controls for Residential Flat Buildings consisting of more than 10 dwellings

2. 10% of dwellings should be suitable for in-house care and share accommodation, which offers privacy for non-related parties living within the same household.

3. 10% of dwellings are in accordance with 'Liveable Housing Guidelines', second Edition (Department of Social Services) to meet a minimum level of silver. The seven core design

features elements in the silver level are:

1. A safe continuous and step free path of travel from the street entrance and or parking area to a dwelling entrance that is level.
2. At least one, (level step free) entrance into the dwelling.
3. Internal doors and corridors that facilitate comfortable and unimpeded movement between spaces.
4. A toilet on the ground floor (or entry) level that provides easy access.
5. A bathroom that contains a hobless (step free) shower recess.
6. Reinforced walls around the toilet shower and bath to support the safe installation of grabrails at a later date.
7. A continuous handrail on one side of any stairway where there is a rise of more than 1 metre.

Note. The Liveable Housing Design Guidelines provide further guidance on these core design features.

4. Dwelling design provides access to immediate areas of open space (eg. public street). Upper level dwellings shall provide access to private open space such as balconies, courtyards and/or terraces.

Controls for all dwellings fronting public street within Residential Flat Buildings in the and R4 zone:

5. Ground floor residential dwellings provide:

- (a) adaptable design for future retail, studio or home business.
- (b) ceiling heights of 3.3m minimum
- (c) lightweight non-load bearing walls on ground floor that allow for the reconfiguration of rooms over time

## 4. Other suggestions

### ***Social Impact Assessment Policy***

The City of Newcastle currently has a Social Impact Assessment Policy for Development Applications. This document was prepared in 1999. The policy could be reviewed to ensure the policy applies to a rezoning of lands and clearly specifies the role of protecting, promoting and providing adaptable, diverse and affordable housing options in future decision making process.

### ***Voluntary Planning Agreements Policy***

The City of Newcastle currently has a Voluntary Planning Agreements Policy. This document was recently prepared in 2006. Voluntary Planning Agreements are one mechanism to secure funds for affordable housing. The use of Voluntary Planning Agreements to provide affordable housing options should continue to be supported by Council.



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## **APPENDIX B**

### ***The SAFE criteria***

## The SAFE criteria

The boundaries of the Residential Growth Precincts reflect how an area satisfies the SAFE criteria. For example, neighbourhoods considered a SAFE walk to a larger centre or train station can accommodate more homes and residents. Areas where these higher densities are encouraged are reflected by greater floor space ratio and building heights under the Newcastle Local Environmental Plan.

The SAFE criteria is an acronym for four characteristics that describe the quality of a pedestrian route.

Safe	Accessible	Friendly	Efficient
Streets must be designed to give equal priority to pedestrians and vehicles, allowing people to walk down the street and across it safely. In busier, more densely developed neighbourhoods, footpaths should be wider and on both sides of the street. Street corners should be designed with small turning radii to ensure vehicle turning manoeuvres are slow when negotiating corners	The street system should maximise residents' and workers' access throughout the neighbourhood. Footpath levels should be higher than the roadway and have ramped crossings provided at corners for wheelchairs and prams.	Pedestrian routes should be friendly which means personal security on the street should not be compromised. The walk must also be an interesting experience to encourage walking as an alternative to using the car. Well lit streets and verandahs, doors or windows visible from the footpath in buildings close to or on the street all help pedestrians feel safer and make walking a more enjoyable experience.	Efficiency of the street system is the fourth criteria of 'SAFE'. A system with plenty of corners and choices of routes optimises pedestrian efficiency.

Source: The Newcastle Urban Strategy.

## Substantial Growth Precinct

The substantial precinct covers the areas which are within a ten minute walk of the larger commercial centres within Newcastle, based on the SAFE criteria, and provides for the greatest density of development to facilitate and support the commercial centres and Newcastle Urbanism objectives. It is within this precinct that apartment buildings (ie. residential flat buildings) would be the expected form of development to most efficiently respond to the urban design standards that apply.

## Moderate Growth Precinct

The Moderate precinct covers areas within a five minute walk of neighbourhood commercial centres based on the SAFE criteria. It also forms a transition between the Substantial and Limited precincts. While a wide range of housing is expected to

be undertaken within this precinct, apartment and townhouse forms of development would most efficiently respond to the urban design standards that apply.

### **Limited Growth Precinct**

The Limited Growth precinct covers the remaining residential zoned land outside of the Substantial and Moderate precincts. In terms of the Newcastle Urbanism principles, development within this precinct is intended to be limited and, as such, the type of development envisaged is to be more suburban in nature but may include housing types such as townhouses and villas.

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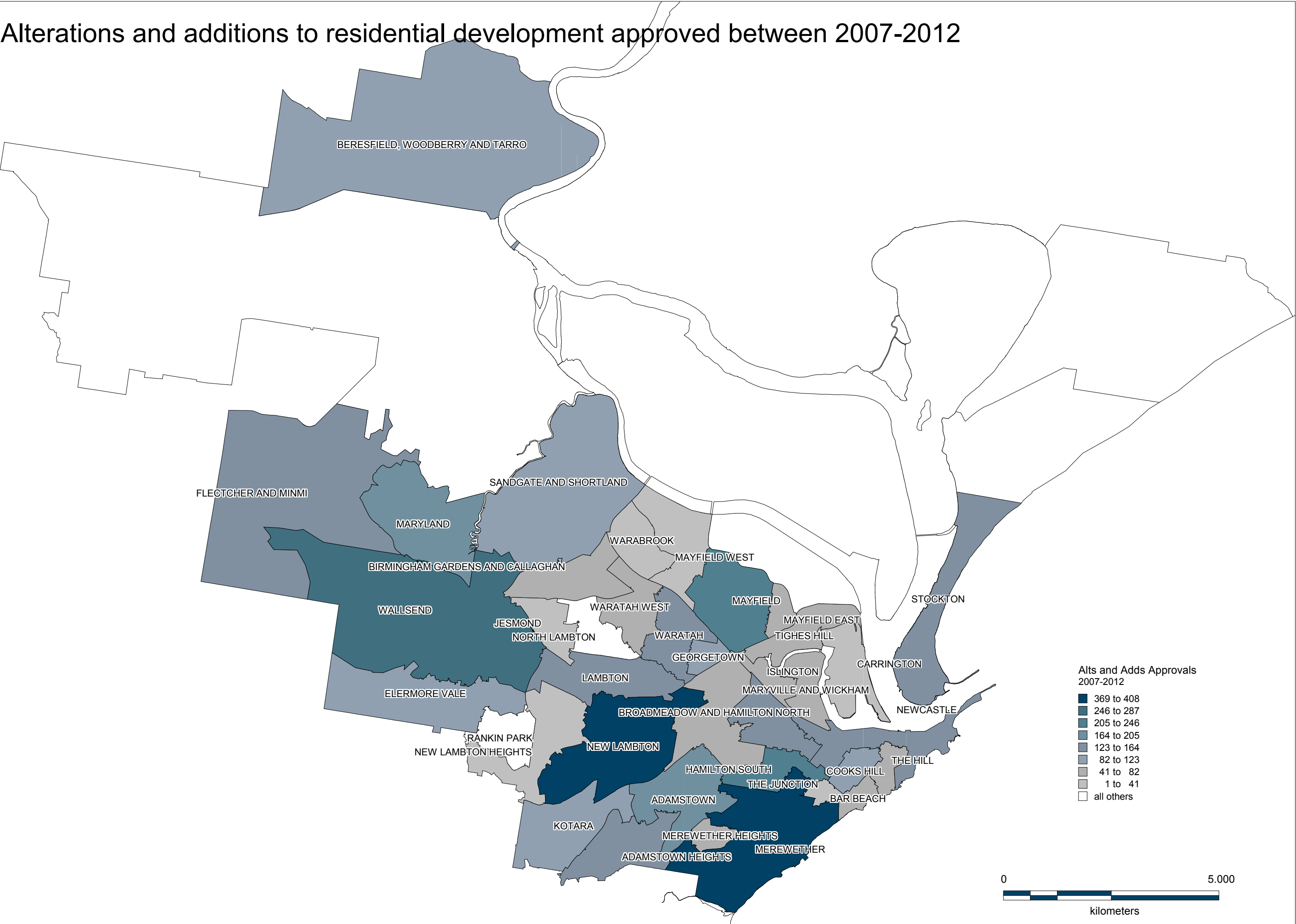
## **APPENDIX C**

### ***Council approved Development Applications for residential development from February 2007 to 30 June 2012***

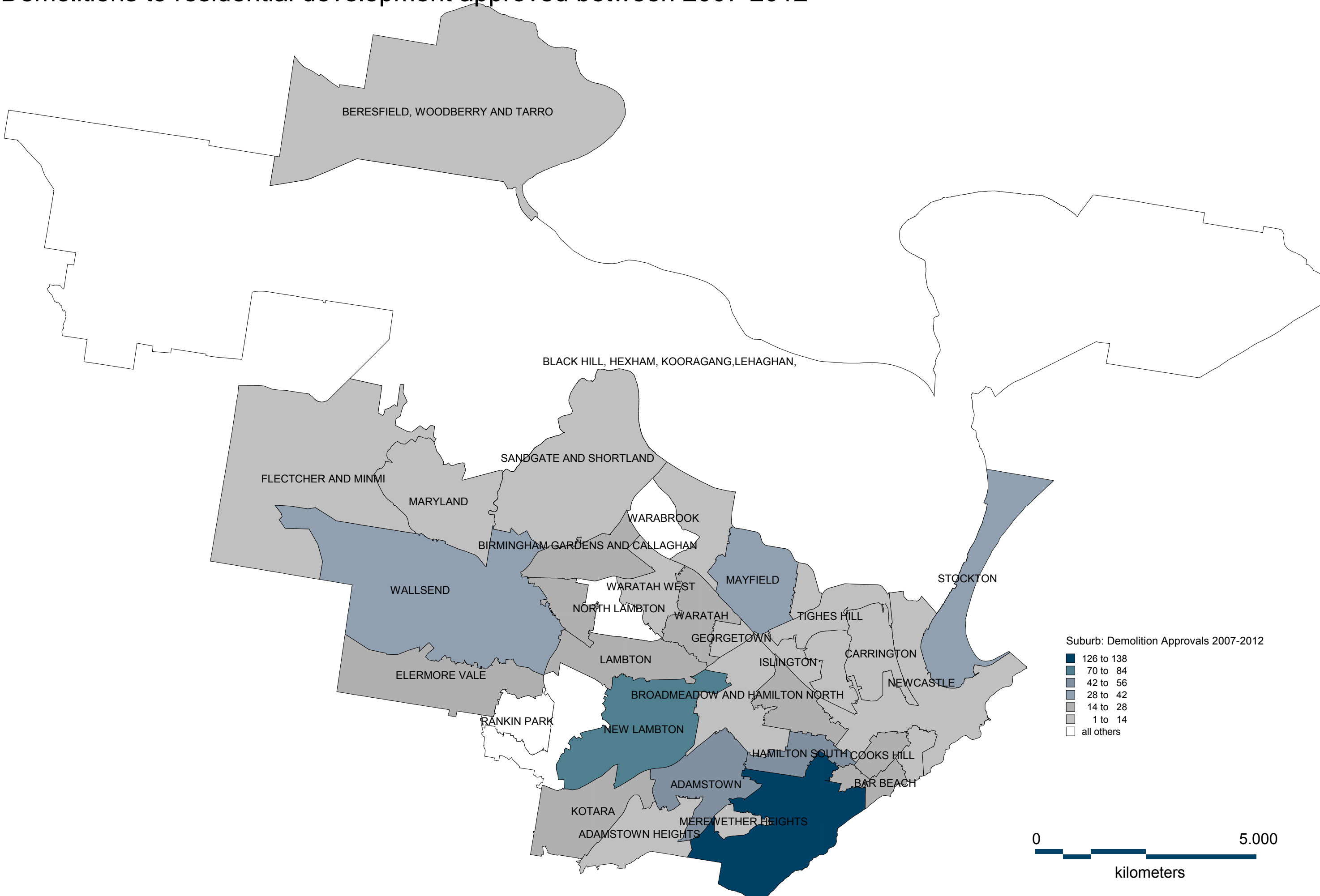


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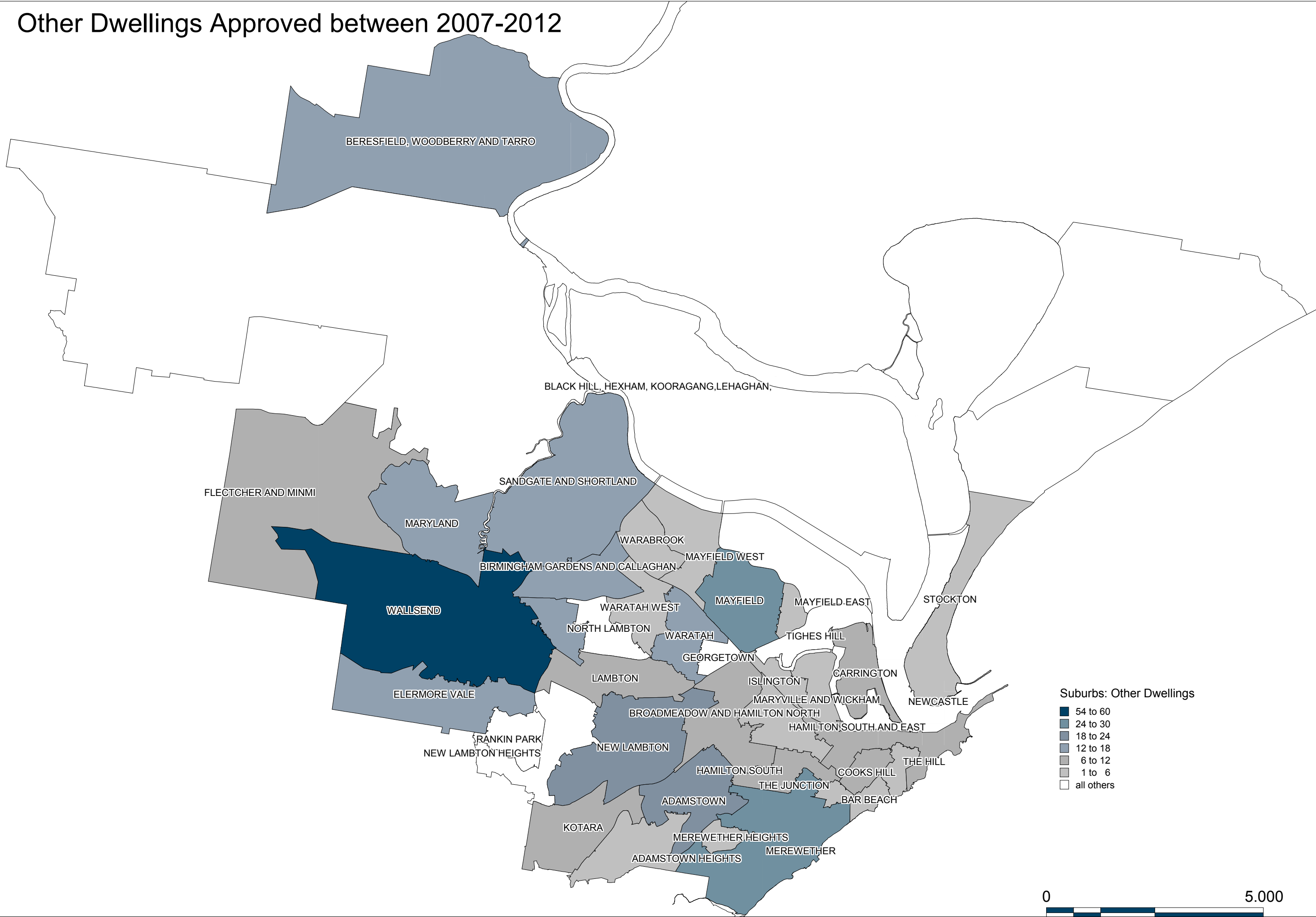
# Alterations and additions to residential development approved between 2007-2012



# Demolitions to residential development approved between 2007-2012



# Other Dwellings Approved between 2007-2012

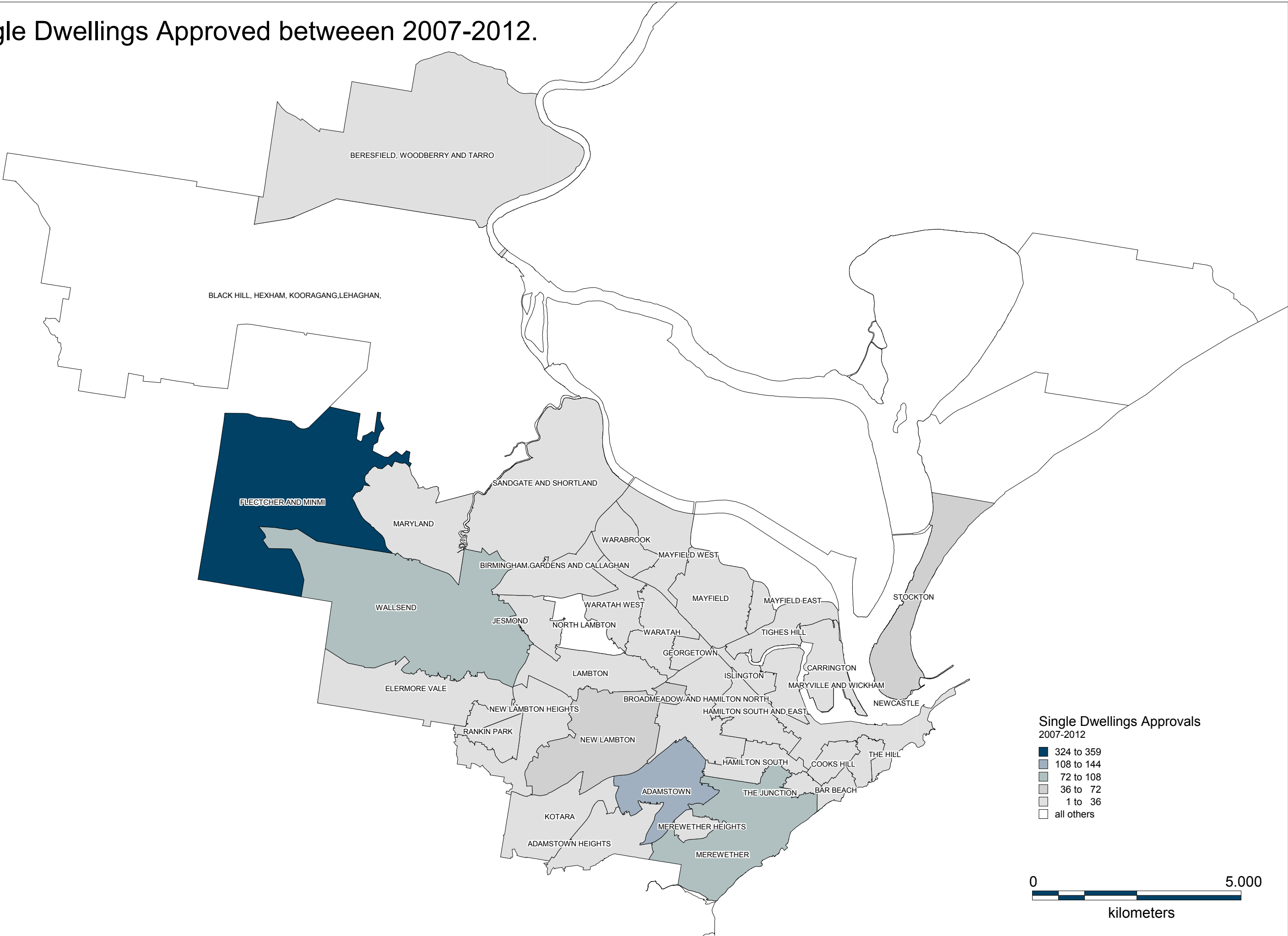


Suburbs: Other Dwellings

- 54 to 60
- 24 to 30
- 18 to 24
- 12 to 18
- 6 to 12
- 1 to 6
- all others



Single Dwellings Approved between 2007-2012.



## **APPENDIX D**

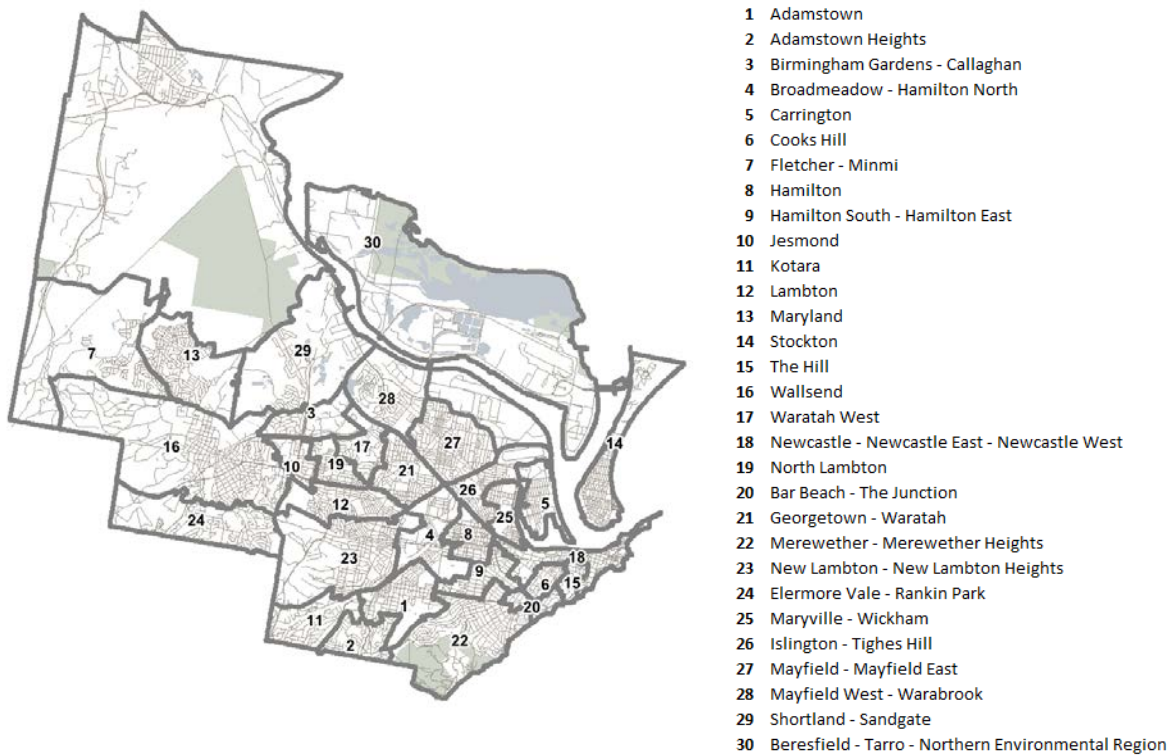
### ***Neighbourhood boundaries - small areas***



## Neighbourhood boundaries - small areas

The following neighbourhood boundaries defined as 'small areas' are the boundaries used to define the neighbourhoods in the Local Planning Strategy. There are 30 'small areas' for Newcastle Local Government Area.

These 'small areas' were the basis of the analysis by demographic consultants ID and are the smallest statistical area available from ABS data.



## Appendix E

### Biodiversity Values



## Biodiversity Values

### *What do we know about our local natural environment?*

The following discussion is a desktop assessment only. The intent is to primarily consider biodiversity values in the Newcastle Local Government Area (LGA).

This information has been mapped and intends to act a guide for the purpose of assisting land use planning. It should NOT be considered as definitive. Best and up to date information has been used where available.

Please note where values are mapped, they have been considered as equal. i.e. threatened and endangered species are considered the same value. One is not valued higher than the other for the purpose of this paper.

The following information includes:

- A review and analysis of available literature including flora and fauna studies
- A summary of relevant Fact Sheets and NSW Scientific Committee Final Determinations for threatened species and endangered ecological communities
- GIS based vegetation mapping
- Other GIS based information such as species records, statutory boundaries etc
- Records of threatened flora and threatened fauna species within the LGA included in the Atlas of NSW Wildlife, and
- Records of matters of national environmental significance in the locality obtained from the Commonwealth Environment Protection & Biodiversity Conservation Act 1999 Protected Matters Search Tool.

### Threatened Species Records

To document threatened flora and fauna, data from the NSW Wildlife Atlas was obtained for the Newcastle LGA (as at 23 Nov 2011). This raw data was further refined by:

- Removing all pre-1990 records
- Removing all records for species not currently listed under the TSC Act
- Clipping of data outside of Newcastle LGA area.

There are limitations with solely using the NSW Wildlife Atlas to document records of threatened species. Localities of fauna and flora records are not provided accurately (so as to protect certain threatened species); a degree of error exists around each point record.

The Wildlife Atlas is not a comprehensive listing of species presence, for example the atlas does not list the threatened Freckled Duck (*Stictonetta naevosa*) though this species frequently occurs in local freshwater wetlands.

This is largely due to the atlas being mostly populated with data from site specific flora and fauna studies associated with development applications or research because a requirement of wildlife survey permits is the submission of survey results to the atlas. The degree of survey effort across the LGA varies spatially as a result.

This often results in a concentration of data in landscapes undergoing development pressure for example and a lack or absence of survey effort in other localities. The absence of threatened species does not necessarily mean the locality does not possess or is used by threatened species. Unique records of certain species may occur in less studied habitats say for example through members of the Hunter Bird Observers Club, but there is no requirement for this data to be recorded in the Wildlife Atlas, it is purely voluntary.

It should also be recognised that the presence of a species at a certain locality may not necessary mean that location is of critical importance to the species, for example a record maybe a rare occurrence or a record during movement between preferred habitats. Fauna are highly mobile and may be found in areas not mapped.

The use of point data such as fauna records also does not recognise the diversity of potential 'home range' of species for example the area of potential habitat used by a skink may be relatively small versus the potential area ranged by a bat. Fauna records also do not acknowledge that certain records are transitory species as opposed to those species with permanent occupancy.

## Vegetation Mapping

There are limitations on regional scale vegetation mapping that compromise the accuracy and completeness of datasets. Historically, accurate vegetation mapping could only be achieved through fieldwork, however gaining access to private property and the cost of such approaches has its limitations. Vegetation cover and composition can change in relatively short timeframes through land management practices, fire and other degrading processes.

In recent years attempts to prepare regional scale vegetation classification and mapping using aerial photography and remote sensing techniques and validation fieldwork has been undertaken with mixed success. REMS vegetation mapping was completed in 2003 (House 2003), wetland vegetation mapping in 2006 (Burns 2006) and more recently (Sivertsen 2011). The accuracy of linework and vegetation classification of both remains unreliable and should be field validated for site specific decisions. Whilst useful descriptors of vegetation communities, for most part these mapping products do not delineate Endangered Ecological Communities (EEC); certain vegetation classes may in part possess one or more EEC.

Detailed vegetation mapping based on a mixture of fieldwork and photographic interpretation has been undertaken for specific areas of the LGA, for example for the purpose of development approvals and public land management. Where appropriate we have considered such information.

## Environmental Assessment - EPBC Act

A search for Matters of National Environment Significance in the Newcastle LGA identified:

- One wetland of International Significance (RAMSAR);
- The potential presence of two threatened ecological communities;
- The potential presence of 49 threatened species; and
- The potential presence of 60 migratory species.

The Hunter Estuary wetlands RAMSAR site consists of two components: Kooragang Nature Reserve, listed under the RAMSAR Convention in 1984 (and now part of Hunter Wetlands National Park), and the Hunter Wetland Centre, which was added to the RAMSAR site in 2002. The wetlands are situated on the northern edge of Newcastle.

Under the EPBC Act, there are two EEC listed as potentially occurring within the Newcastle LGA. These are:

- Lowland Rainforest of Subtropical Australia
- White box - yellow box - Blakely's red gum grassy woodlands and derived native grasslands.

Lowland rainforest can be considered as equivalent to the EEC Littoral Rainforest. It is highly unlikely that the White box- yellow box - Blakely's red gum grassy woodlands and derived native grasslands occur in the LGA.



Note that certain species may be listed under the EPBC Act but not the NSW TSC Act, for example the great egret (*Ardea alba*) and cattle egret (*Bubulcus ibis*), which breed in the Hunter Wetlands, are listed as migratory marine birds.

## Threatened Species, Populations and Endangered Ecological Communities - Threatened Flora

A total of seven threatened plants species (as currently listed under the NSW Threatened Species Conservation Act 1995) have been recorded in the Newcastle LGA since 1990 based on the NSW Wildlife Atlas. Additional threatened flora species are likely to exist due to potential suitable habitat in the region (e.g. RPS, 2011b p. 62) or have been previously noted as occurring in the LGA, for example NPWS (1998) and HWR (2006) acknowledge the presence of the rainforest vine White-flowered Wax Plant *Cynanchum elegans* which is listed as endangered under both the TSC and EPBC Acts but no local records exists in the atlas.

The following table summarises threatened flora species recorded in the Newcastle LGA.

Table E.1: Threatened flora species recorded in the Newcastle LGA

Common Name	Scientific Name	TSC	EPBCA	Preferred Habitat
Netted Bottle Brush	<i>Callistemon linearifolius</i>	V		Dry sclerophyll forest
Biconvex Paperbark	<i>Melaleuca biconvexa</i>	V	V	Adjacent to watercourses and within wet forest
Black-eyed Susan	<i>Tetradlea juncea</i>	V	V	Heath and in dry sclerophyll vegetation communities
Heath Wrinklewort	<i>Rutidosis heterogama</i>	V	V	Heath on sandy soils and moist areas in open forest
Magenta Lilly Pilly	<i>Syzygium paniculatum</i>	E	V	Riverside gallery rainforests and remnant littoral rainforest communities
Newcastle Double Tail	<i>Diuris praecox</i>	V	V	Coastal slopes in open heathy forests
Horned pondweed	<i>Zannichellia palustris</i>	E		Fresh to brackish, still to slowly moving waters

Black-eyed Susan (*Tetradlea juncea*) is most frequently recorded and widely distributed threatened flora species recorded within Newcastle and for this reason this species is frequently a key consideration during development approval. **Figure E.1** illustrates records for *T. juncea* in the NSW Wildlife Atlas and the remaining six threatened flora species recorded in the LGA.



## Threatened Fauna

A total of 54 threatened animal species (as currently listed under the NSW *Threatened Species Conservation Act 1995*) have been recorded in the LGA since 1990 based on the NSW Wildlife Atlas.

Additional threatened animal species are known to occur however, for example the Freckled Duck (*Stictonetta naevosa*) is referenced in a number of documents (e.g. Stuart 2002) but do not occur as an actual sighting in the atlas.

There is also a number of additional migratory bird species listed under JAMBA/CAMBA or EPBCA (marine and/or migratory) that occur in the region but are not identified in **Table E.2**. For most parts these migratory species utilise marine and estuarine littoral habitats similar to those listed in **Table E.2**.

As with flora, additional threatened fauna species are likely to occur either as permanent populations or, more likely, transient records. Certain threatened species known to occur in the Lower Hunter such as the Regent Honeyeater (*Xanthomyza Phrygia*) and Koala (*Phascolarctos cinereus*) may occur from time to time but important habitat for these species for most part no longer occurs in the Newcastle LGA.

Note that atlas records are a poor reflection of the true diversity, abundance and distribution of birds in the region; Hunter Bird Observers Club data would illustrate much more detail but have not been purchased.

**Figure E.1** illustrates records in the atlas for migratory shorebird species and other threatened bird species recorded in the atlas. ARS (2006) undertook mapping of key habitats for threatened migratory shorebirds; results within the Hunter estuary are provided in **Figure E.1**. **Figure E.1** also records in the atlas for non-avian threatened species.

Note that Herbert (2007) provides the most comprehensive recent account of bird distribution, abundance and key habitats in the Hunter Estuary.

NPWS (1998) have indicated that the number of roost sites in the Hunter has been steadily reducing to the point where the majority of migratory birds are now found at only two locations at high tide during the day and at one other during the night identified as the bridge, the dykes and the saltmarsh.

Whilst much of the important roosting, foraging and rookery sites exist within E1, considerable development pressure exists on remaining areas outside the reserve system and even habitat within the current reserve system can be compromised, for example development on Ash Island has been approved within the national park

It must be recognised that habitat within the current reserve system can be compromised by existing and additional development adjacent and within the broader catchment that feeds into wetlands.

Records of threatened species must be considered in the context of the ecology of the individual species. Forest owls for example are naturally rare and establish large and essentially non-overlapping territories. They are also dependant on 'old-growth' forest which harbours suitable tree hollows for roosting and breeding. With approved and on-going development suitable habitat for these species in the future is likely to only exist within public reserves and Summerhill Waste Management facility.

Table E.2: Threatened non-avian fauna records in the Newcastle LGA based on the NSW Wildlife Atlas.

Legend: E – Endangered

V – Vulnerable

M – Marine and/or Migratory under the EPBC Act

Common Name	Scientific Name	TSC	EPBCA
<b>Frogs</b>			
Green and Golden Bell Frog	<i>Litoria aurea</i>	E	V
<b>Mammals</b>			
Dugong	<i>Dugong dugon</i>	E	M
Eastern Bentwing-bat	<i>Miniopterus schreibersii oceanensis</i>	V	
Eastern False Pipistrelle	<i>Falsistrellus tasmaniensis</i>	V	
Eastern Freetail-bat	<i>Mormopterus norfolkensis</i>	V	
Greater Broad-nosed Bat	<i>Scoteanax rueppellii</i>	V	
Grey-headed Flying-fox	<i>Pteropus poliocephalus</i>	V	V
Humpback Whale	<i>Megaptera novaeangliae</i>	V	V
Large-eared Pied Bat	<i>Chalinolobus dwyeri</i>	V	V
Little Bentwing-bat	<i>Miniopterus australis</i>	V	
New Zealand Fur-seal	<i>Arctocephalus forsteri</i>	V	
Southern Myotis	<i>Myotis macropus</i>	V	
Squirrel Glider	<i>Petaurus norfolcensis</i>	V	
Yellow-bellied Sheath-tail-bat	<i>Saccolaimus flaviventris</i>	V	
<b>Reptiles</b>			
Green Turtle	<i>Chelonia mydas</i>	V	V

Table E.3: Threatened avian fauna records in the Newcastle LGA based on the NSW Wildlife Atlas.

Common Name	Scientific Name	TSC	EPBCA
Australasian Bittern	<i>Botaurus poiciloptilus</i>	E	E
Black Bittern	<i>Ixobrychus flavicollis</i>	V	
Black-chinned Honeyeater	<i>Melithreptus gularis gularis</i>	V	
Black-necked Stork	<i>Ephippiorhynchus asiaticus</i>	E	
Black-tailed Godwit	<i>Limosa limosa</i>	V	M
Blue-billed Duck	<i>Oxyura australis</i>	V	
Broad-billed Sandpiper	<i>Limicola falcinellus</i>	V	M
Bush Stone-curlew	<i>Burhinus grallarius</i>	E	
Comb-crested Jacana	<i>Irediparra gallinacea</i>	V	
Diamond Firetail	<i>Stagonopleura guttata</i>	V	
Freckled Duck	<i>Stictonetta naevosa</i>	V	
Gang-gang Cockatoo	<i>Callocephalon fimbriatum</i>	V	
Glossy Black-Cockatoo	<i>Calyptorhynchus lathami</i>	V	
Great Knot	<i>Calidris tenuirostris</i>	V	M
Greater Sand-plover	<i>Charadrius leschenaultii</i>	V	M
Grey-crowned Babbler	<i>Pomatostomus temporalis temporalis</i>	V	
Lesser Sand-plover	<i>Charadrius mongolus</i>	V	M
Little Eagle	<i>Hieraaetus morphnoides</i>	V	
Little Lorikeet	<i>Glossopsitta pusilla</i>	V	
Little Tern	<i>Sterna albifrons</i>	E	M
Magpie Goose	<i>Anseranas semipalmata</i>	V	
Masked Owl	<i>Tyto novaehollandiae</i>	V	
Osprey	<i>Pandion haliaetus</i>	V	
Painted Snipe (Australian ssp)	<i>Rostratula benghalensis australis</i>	E	V
Pied Oystercatcher	<i>Haematopus longirostris</i>	E	
Powerful Owl	<i>Ninox strenua</i>	V	
Providence Petrel	<i>Pterodroma solandri</i>	V	
Rose-crowned Fruit-Dove	<i>Ptilinopus regina</i>	V	
Scarlet Robin	<i>Petroica boodang</i>	V	
Sooty Owl	<i>Tyto tenebricosa</i>	V	
Sooty Oystercatcher	<i>Haematopus fuliginosus</i>	E	
Spotted Harrier	<i>Circus assimilis</i>	V	
Square-tailed Kite	<i>Lophoictinia isura</i>	V	
Superb Fruit-Dove	<i>Ptilinopus superbus</i>	V	
Swift Parrot	<i>Lathamus discolor</i>	E	E
Terek Sandpiper	<i>Xenus cinereus</i>	V	M
Turquoise Parrot	<i>Neophema pulchella</i>	V	
Varied Sittella	<i>Daphoenositta chrysoptera</i>	V	
White-fronted Chat	<i>Epthianura albifrons</i>	V	

## Endangered Ecological Communities

Several endangered ecological communities (as currently listed under the NSW *Threatened Species Conservation Act 1995*) are known to occur within the Newcastle LGA. These include:

- Lower Hunter Spotted Gum - Ironbark Forest in the Sydney Basin Bioregion
- Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions
- Themeda Grassland on sea cliffs and coastal headlands in the NSW North Coast, Sydney Basin and South East Corner bioregions
- Coastal Saltmarsh in 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
- River-Flat Eucalypt Forest on Coastal Floodplains of the NSW North Coast; Sydney Basin and South East Corner bioregions
- Littoral rainforest in the NSW North Coast, Sydney Basin and South East Corner bioregions
- Hunter Lowland Redgum Forest in 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.

There is a number of additional EEC that have the potential to occur with the Newcastle LGA. The presence of these additional EEC is considered unlikely given the history of vegetation clearance, remaining vegetation extant and previous vegetation studies.

As it now stands, there is not a single vegetation map that accurately and comprehensively defines the existence and boundary of all endangered ecological communities within the Newcastle LGA. Mapping of certain EEC does exist however, for example the mapping of *Themeda Grassland on sea cliffs and coastal headlands* can be considered all inclusive.

A description of each of the EEC follows

### Lower Hunter Spotted Gum - Ironbark Forest in the Sydney Basin Bioregion

The name given to the ecological community that occurs principally on Permian geology in the central to lower Hunter Valley. Lower Hunter Spotted Gum – Ironbark Forest is dominated by *Corymbia maculata*, (Spotted Gum) and *Eucalyptus fibrosa* (Broad-leaved Ironbark), while *E. punctata* (Grey Gum) and *E. crebra* (Grey Ironbark) occur occasionally. A number of other eucalypt species occur at low frequency, but may be locally common in the community. The understorey is marked by the tall shrub, *Acacia parvipinnula*, and by the prickly shrubs, *Daviesia ulicifolia*, *Bursaria spinosa*, *Melaleuca nodosa* and *Lissanthe strigosa*. Other shrubs include *Persoonia linearis*, *Maytenus silvestris* and *Breynia oblongifolia*. The ground layer is diverse; frequent species include *Cheilanthes sieberi*, *Cymbopogon refractus*, *Dianella revoluta*, *Entolasia stricta*, *Glycine clandestina*, *Lepidosperma laterale*, *Lomandra multiflora*, *Microlaena stipoides*, *Pomax umbellata*, *Pratia purpurascens*, *Themeda australis* and *Phyllanthus hirtellus*. In an undisturbed condition the structure of the community is typically open forest. If thinning has occurred, it may take the form of woodland or a dense thicket of saplings, depending on post-disturbance regeneration (determination).

A map based on REMS is provided in **Figure E.1**. This EEC within the LGA is under threat with a number of development proposals within its distribution. Part of the existing distribution is classed as E4.

### Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions

The name given to the ecological community associated with periodic or semi-permanent inundation by freshwater, although there may be minor saline influence in some wetlands. They typically occur on silts, muds or humic loams in depressions, flats, drainage lines, backswamps, lagoons and lakes associated with coastal floodplains. Generally occurring below 20m elevation, the structure of the community may vary from sedgelands and reedlands to herbfields, and woody species of plants are generally scarce. Typically these wetlands form mosaics with other floodplain communities, and often they include or are associated with ephemeral or semi-permanent standing water. The floral composition is primarily determined by the frequency, duration and depth of waterlogging and may be influenced by the level of nutrients and salinity in the water and substrate. The community is characterised a diverse assemblage of species (Determination).

Note that artificial wetlands created on previously dry land specifically for purposes such as sewerage treatment, stormwater management and farm production, are **not** regarded as part of this community, although they may provide habitat for threatened species (Determination).

There is not a single reliable map of the EEC distribution and boundary in the Newcastle LGA despite various mapping attempts (see Burns *et.al.* 2006; McCauley, 2006; Sivertsen, 2011 and TCofN, 2012). There are major differences between the various maps produced due to the vegetation classification system used, scale and linework accuracy.

Given this provisor, the most representative mapping of this EEC is probably found within Burns *et.al.* (2006) however an error in this data set restricts mapping. A map based on REMS is therefore provided in **Figure E.1**. Note that this map does not include a buffer and some degree of error exists.

The staged opening of the Hexham Floodgates is likely to see the extent of this EEC diminish in future years as the Hexham wetlands, especially the lower reaches, are likely to shift towards more estuarine vegetation communities (WBM, 2005).

For most part this EEC appears to be captured within the E1 and E2 zone associated with the Hexham Wetlands, although exceptions exist for example part of Newcastle Swamp (see Kidd, 2011) (SEPP 14).

### Themeda Grassland on sea cliffs and coastal headlands in the NSW North Coast, Sydney Basin and South East Corner bioregions

*Themeda australis* is the dominant species. Although extremely widespread, in this community it may have a distinctive appearance, being prostrate and having glaucous leaves. These features are retained in cultivation and the form is believed to be genetically distinct. *Banksia integrifolia subsp. integrifolia*, *Westringia fruticosa* and *Acacia sophorae* occurs as an emergent shrub or as a dense cover where they have recruited over grasslands. Smaller shrubs occur often as prostrate to dwarf forms, most frequently *Pimelea linifolia*, *Hibbertia vestita*, *Pultenaea maritima* and *Westringia fruticosa*. Although a number of woody species are listed as part of the community, these are usually sparsely distributed and may be absent from some stands. Individual stands of the community are often very small; a few square metres. Overall, the community has a highly restricted geographic distribution comprising small, but widely scattered patches (Determination).

Within the Newcastle LGA it is believed that all remaining remnants occur on public land (Kristy Munro, *pers.comm.*). The majority if not all of the remaining remnants appear to fall into the LEP class RE1 Public Recreation. Regional vegetation mapping projects have not identified this community, which may be attributed to its limited distribution which does not lend itself to regional mapping techniques.

Council has recently undertaken to completely map the distribution of this community in the LGA (see Pederson, 2012). A draft map illustrating its distribution is included in **Figure E.1**.

### Coastal Saltmarsh in the NSW North Coast; Sydney Basin and South East Corner Bioregions

The name given to the ecological community occurring in the intertidal zone on the shores of estuaries and lagoons. Frequently found as a zone landward of mangrove stands. A number of vascular plant species are represented but not mangroves although occasional scattered mature *Avicennia marina* trees occur through saltmarsh at some sites, and *Avicennia* (and less frequently *Aegiceras corniculatum*) seedlings may occur throughout saltmarsh. In brackish areas dense stands of tall reeds (*Phragmites australis*, *Bulboschoenus* spp., *Schoenoplectus* spp., *Typha* spp.) may occur as part of the community (Determination).

Creese *et.al.* (2009) mapped saltmarsh within the Hunter estuary and is considered the best representation of this EEC in this region; a copy of this mapping is provided in **Figure E.1**. Regional vegetation mapping projects have not accurately mapped the distribution of this EEC, typically combining saltmarsh with mangroves (i.e. mangrove-estuarine complex).

Within the Hunter region, the majority of this EEC occurs on Kooragang Island. The EEC is highly vulnerable to a range of threatening processes (determination). There is potential for this EEC to become further restricted in distribution in our region as a result of development, mangrove incursion and sea-level rise impacts, although the staged opening the Hexham Floodgates may see some extension in its distribution (WBM 2005).



### Swamp Oak Floodplain Forest of the NSW North Coast; Sydney Basin and South East Corner bioregions

The name given to the ecological community associated with grey-black clay-loams and sandy loams, where the groundwater is saline or sub-saline, on waterlogged or periodically inundated flats, drainage lines, lake margins and estuarine fringes associated with coastal floodplains. Generally occurs below 20m (rarely above 10m) elevation. The structure of the community may vary from open forests to low woodlands, scrubs or reedlands with scattered trees. Typically these forests, woodlands, scrubs and reedlands form mosaics with other floodplain forest communities and treeless wetlands, and often they fringe treeless floodplain lagoons or wetlands with semi-permanent standing water. The composition of Swamp Oak Floodplain Forest is primarily determined by the frequency and duration of waterlogging and the level of salinity in the groundwater. This community is dominated by *Casuarina glauca*. The number and relative abundance of species will change with time since fire, flooding or significant rainfall, and may also change in response to changes in grazing regimes. At any one time, above-ground individuals of some species may be absent, but the species may be represented below ground in the soil seed banks or as dormant structures such as bulbs, corms, rhizomes, rootstocks or lignotubers.

McCauley (2006) and Burns (2006) did not exclusively map Swamp Oak Floodplain Forest. Its presence was however noted within certain vegetation classification units (see Sommerville, 2009 and Burns, 2006). When these units are mapped, there is a high degree of variation between the mapping products. A map combining these mapping products is provided in **Figure E.1** but this map should be treated with a high degree of caution.

### River-Flat Eucalypt Forest on Coastal Floodplains of the NSW North Coast; Sydney Basin and South East Corner bioregions

The name given to the ecological community associated with silts, clay-loams and sandy loams, on periodically inundated alluvial flats, drainage lines and river terraces associated with coastal floodplains. River-Flat Eucalypt Forest on Coastal Floodplains generally occurs below 50 m elevation, but may occur on localised river flats up to 250 m above sea level. The structure of the community may vary from tall open forests to woodlands, although partial clearing may have reduced the canopy to scattered trees. Typically these forests and woodlands form mosaics with other floodplain forest communities and treeless wetlands, and

often they fringe treeless floodplain lagoons or wetlands with semi-permanent standing water. In the lower Hunter region, about one-quarter of the original extent was estimated to have remained during the 1990s.

This community was listed December 2004 which is why REMS does not provide an indication of where it may occur within their vegetation classification system. Sivertsen *et. al.* (2011) did recognise this EEC within certain vegetation classes but this mapping needs to be treated with caution. A small parcel was mapped in the vicinity of Blackhill, but recent environmental studies in this vicinity (e.g. RPS, 2011) do not indicate the presence of this EEC at this location. There is no reliable distribution information for the EEC in the LGA and hence no mapping of its known distribution is provided.

### Littoral rainforest in the NSW North Coast, Sydney Basin and South East Corner bioregions

Generally a closed forest, the structure and composition of which is strongly influenced by proximity to the ocean. The plant species in this ecological community are predominantly rainforest species with evergreen mesic or coriaceous leaves. Several species have compound leaves, and vines may be a major component of the canopy. These features differentiate littoral rainforest from sclerophyll forest or scrub, but while the canopy is dominated by rainforest species, scattered emergent individuals of sclerophyll species, such as *Angophora costata*, *Banksia integrifolia*, *Eucalyptus botryoides* and *E. tereticornis* occur in many stands.

This EEC is known to occur within Glenrock State Conservation Area (E1) and potentially within Blackbutt Reserve (though this community is probably derived from revegetation works and changes in fire regimes as opposed to being natural).

### Hunter Lowland Redgum Forest in the NSW North Coast, Sydney Basin and South East Corner bioregions

Name given to the ecological community found on gentle slopes arising from depressions and drainage flats on permian sediments of the Hunter Valley floor in the Sydney Basin and NSW North Coast Bioregions. Generally an open forest with most common canopy trees species being *Eucalyptus tereticornis* and *Eucalyptus punctata* although other frequently occurring canopy species are *Angophora costata*, *Corymbia maculata*, *Eucalyptus crebra* and *Eucalyptus moluccana*, with a number of other eucalypts being less frequently recorded. The mid stratum is characterised as open with sparse shrubs of *Breynia oblongifolia*,

*Leucopogon juniperinus*, *Daviesia ulicifolia* and *Jacksonia scoparia*. There is consistently a ground layer of grasses and herbs, characterised by *Microlaena stipoides* var. *stipoides*, *Cymbopogon refractus*, *Echinopogon caespitosus* var. *caespitosus*, *Cheilanthes sieberi* subsp. *sieberi* and *Pratia purpurascens*.

Sivertsen *et. al.* (2011) recognised this EEC within two vegetation management units but did not map these management unit as occurring in the Newcastle LGA. RPS (2011) reported patches of this EEC in the vicinity of Black Hill. There is no reliable distribution information for the EEC in the LGA and hence no mapping of its known distribution is provided.

### Swamp Sclerophyll Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner Bioregions

Name given to the ecological community associated with humic clay loams and sandy loams, on waterlogged or periodically inundated alluvial flats and drainage lines associated with coastal floodplains. Floodplains are level landform patterns on which there may be active erosion and aggradation by channelled and overbank stream flow with an average recurrence interval of 100 years or less. Swamp Sclerophyll Forest on Coastal Floodplains generally occurs below 20 m (though sometimes up to 50 m) elevation, often on small floodplains or where the larger floodplains adjoin lithic substrates or coastal sand plains in the NSW North Coast, Sydney Basin and South East Corner bioregions. The structure of the community is typically open forest, although partial clearing may have reduced the canopy to scattered trees. In some areas the tree stratum is low and dense, so that the community takes on the structure of scrub. The community also includes some areas of fernland and tall reedland or sedgeland, where trees are very sparse or absent. Typically these forests, scrubs, fernlands, reedlands and sedgelands form mosaics with other floodplain forest communities and treeless wetlands, and often they fringe treeless floodplain lagoons or wetlands with semi-permanent standing water.

Muir (2006) suggested patches of this EEC occur within woodlands at Black Hill. Sivertsen *et. al.* (2011) recognised this EEC within several management units, some which have been mapped as having limited extent in the Newcastle LGA but as this mapping contains errors no mapping of this EEC distribution in the LGA is provided herein.

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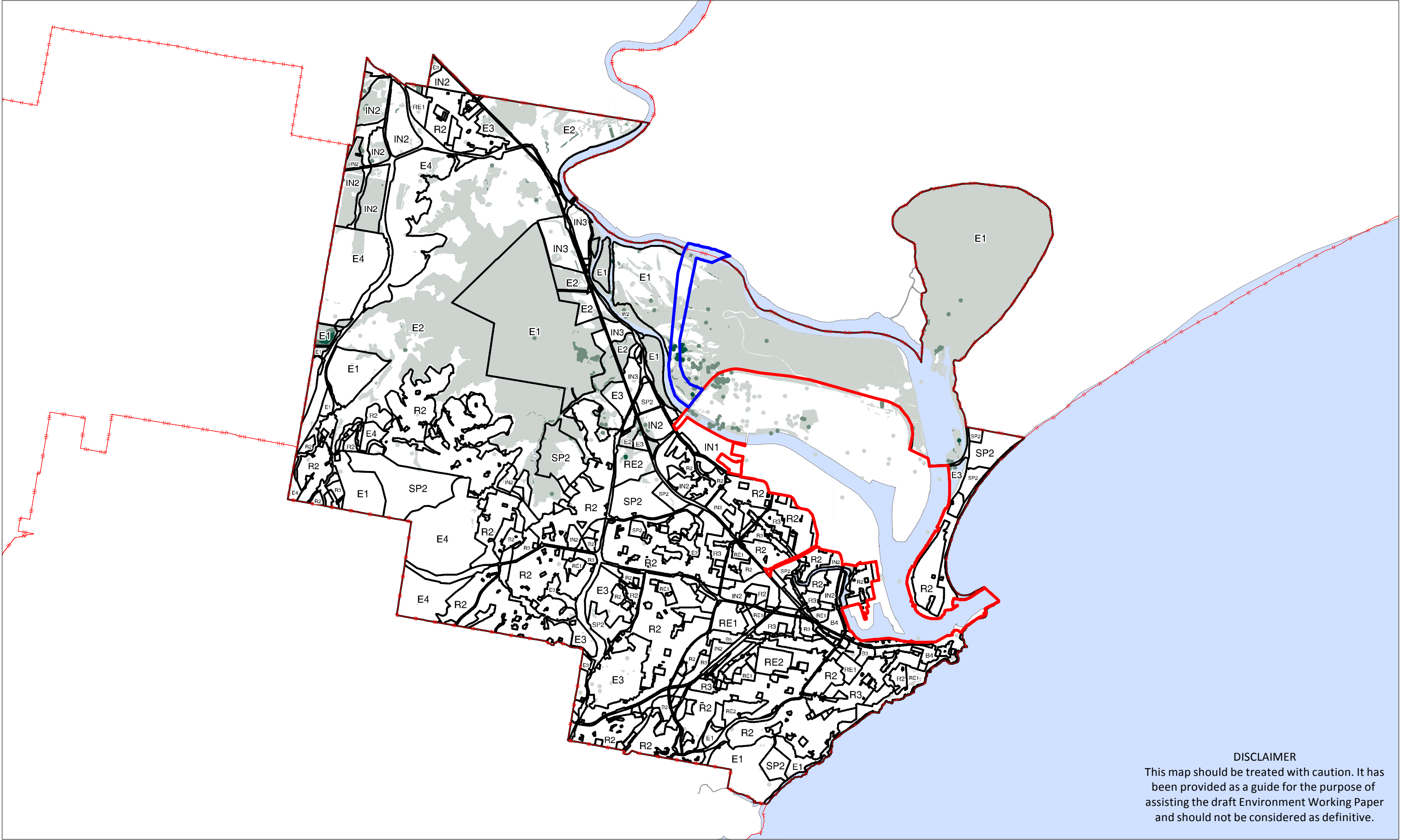
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LEGEND

- High Medium Low Water SEPP 3 Ports SEPP Tomago



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Figure E.1 - Ecological Constraints - Appendix E: Biodiversity Values