



NSW GOVERNMENT  
**Department of Planning**

2006-31

# LOWER HUNTER REGIONAL STRATEGY



The Lower Hunter Region is rich in natural resources with potential for ongoing economic and population growth. The landscape provides an extensive contrast in environments, from highly urbanised areas, to extensive rugged mountain ranges to the coastal and estuarine environments of Lake Macquarie and the Hunter River. Similarly, there is a sense of place that binds and creates a healthy and vibrant community. With such attractions, the NSW Government will ensure that the Lower Hunter can continue to be a place of strong population and economic growth.

The Regional Strategy applies to the five local government areas of Newcastle, Lake Macquarie, Port Stephens, Maitland and Cessnock, and is one of a number of regional strategies prepared by the Department of Planning.

The Regional Strategy represents an agreed NSW government position on the future of the Lower Hunter. It is the pre-eminent planning document for the Lower Hunter Region and has been prepared to complement and inform other relevant State planning instruments.

The primary purpose of the Regional Strategy 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 next 25 years. The Regional Strategy plans for the provision of sufficient new urban and employment lands to meet expected strong demands for growth. The Regional Strategy also refocuses development in the Lower Hunter towards the strengthening of vibrant centres that support the role of Newcastle City Centre as the regional city.

The Regional Strategy works with the Government's Regional Conservation Plan to ensure that the future growth of the Lower Hunter makes a positive contribution to the protection of sensitive environments and biodiversity. A number of important green corridors have been identified for protection on the Wallarah Peninsula, between the Watagan Ranges and Stockton Beach and along the Karuah River and Port Stephens' foreshores.

The Regional Strategy incorporates the specific regional infrastructure requirements identified in the State Infrastructure Strategy 2006–07 to 2015–16. The Regional Strategy will continue to inform future infrastructure investment priorities for the Lower Hunter. Infrastructure planning will take into account the broad planning framework identified in the Strategy, to ensure that future population growth is supported by services and associated infrastructure.

The Lower Hunter Regional Strategy applies to the period 2006–31 and will be reviewed every five years.

Lower Hunter Regional Strategy  
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# Foreword

The NSW Government released the draft Lower Hunter Regional Strategy in November last year. The Strategy emphasised the need to ensure this vital Region continues to grow and prosper in a sustainable way, while creating long-term business certainty and attracting more investment and jobs.

After extensive community feedback, I am now pleased to release the final Lower Hunter Regional Strategy, which achieves these aims and more.

In finalising the Strategy, the lemma Government has established important green corridors across the Region. We have also negotiated the dedication of significant landholdings, including government lands, for public protection.

These environmental gains are a once-in-a-generation opportunity that will provide an enduring legacy for the community.

This Strategy identifies how the expected growth in the Region will be managed to provide for both economic development and the protection of environmental assets, cultural values and natural resources.

It will guide the Lower Hunter's growth for the next 25 years by identifying future development areas, principal land use types, settlement patterns and conservation outcomes.

In particular, the Strategy will:

- ensure that sufficient employment lands are available to cater for 66 000 new jobs
- plan for an additional 160 000 residents and 115 000 new dwellings
- establish important green corridors, to protect and even enhance the Region's strong environmental and biodiversity assets
- reinforce the role of the Newcastle City Centre as the Regional City.

The final Strategy aims to harness the Region's competitive advantages to maximise economic opportunities over the next 25 years. These include its strong manufacturing and industrial heritage, internationally-significant port and airport and world-class teaching hospital and educational facilities.

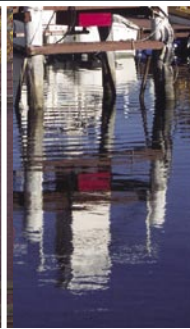
For example, the majority of new development within the Region will be located in close proximity to major centres and employment lands, maximising access to services and employment opportunities.

Overall, the Lower Hunter Regional Strategy sets a clear and sustainable direction for growth that will continue to evolve to reflect long-term trends and build on the Region's strengths. The Strategy will be continually monitored and comprehensively reviewed every five years.

**The Hon. Frank Sartor MP**

Minister for Planning  
Minister for Redfern Waterloo  
Minister for Science and Medical Research  
Minister Assisting the Minister for Health (Cancer)







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The Lower Hunter is the sixth largest urban area in Australia. It is located 160 kilometres north of Sydney, covers an area of 4291 square kilometres and is a major population centre that includes the regional city of Newcastle, the State's second largest urban centre.

The Region is home to the Darkinjung, Awabakal, Wonnarua and Worimi Aboriginal people.

## The Lower Hunter region

The Lower Hunter is a region of diverse landscapes and land uses. Its coastline, mountains, lakes, floodplains and rivers are key elements of the Region's identity, culture and lifestyle.

The Lower Hunter is characterised by large areas of rural, agricultural and forested lands. Based on a major river and coastal estuary, it contains areas of high quality agricultural land, important drinking water aquifers and internationally and nationally significant environmental assets. The region's rural and semi rural landscapes account for around 80 per cent of the Region's land, and are themselves further characterised by key industries of mining, wine production and tourism.

The NSW Government has identified important green corridors traversing these different landscapes and has identified mechanisms to protect these lands by incorporating substantial

parts of these lands into new reserves created and managed under the *National Parks and Wildlife Act 1974*. By identifying and protecting such large areas, the Government has recognised the significant value that these corridors contribute to the biodiversity and conservation values of the Region.

Economically the Lower Hunter has a strong mining and industrial manufacturing heritage upon which it is building an increasingly diverse economic base, skilled workforce and nationally significant economic infrastructure, including the world's largest coal exporting port. Building on these important economic assets will further enhance the capacity of the region to provide continued employment growth. This will require the identification of additional employment lands, as well as the renewal and



# 1

## the lower hunter

revitalisation of the commercial centres in the Region.

Population growth has been closely associated with the coastal areas of the Region, particularly Newcastle, Lake Macquarie and Port Stephens. However in recent years a reduction in the availability of new urban land in these areas, combined with the relative affordability of land further up the valley, has seen strong residential growth in the Maitland area. Furthermore the City of Newcastle has experienced a resurgence as a lifestyle city, with strong growth in residential apartment living. The Region's population, increasingly a mix of ages, skills and backgrounds, was estimated at approximately 515 000 in 2006 and continues to grow strongly, with accelerated growth rates experienced in recent years as evidenced by the most recent estimate of residential population released by the Australian Bureau of Statistics in 2006. People move to the Lower Hunter attracted by the Region's combination of economic opportunity, affordability and lifestyle assets

— its beaches, liveable residential environments, cultural city life and proximity of coastal and rural landscapes.

The Regional Strategy is based upon a population growth scenario which forecasts a regional population of 675 000 persons by 2031. This equates to an additional 160 000 persons over the period 2006–31. This growth scenario responds to current levels of growth and recognises that this growth will continue as the Region broadens its economic role in the context of the NSW and national economy. Monitoring of population growth will ensure that the Strategy can respond to growth rates higher or lower than expected. It is also recognised that growth is likely to continue beyond 2031.

The adopted growth scenario is one which responds responsibly to the challenge of managing growth in a way that is economically, socially and environmentally sustainable and enables the environmental and lifestyle assets and values, which are themselves key drivers of growth in the Region, to be preserved. As the Lower Hunter Region grows and develops, regular monitoring and review will ensure that the Strategy remains relevant.





# 2

## Regional challenges

If the Lower Hunter is to prosper and benefit from its growth opportunities while maintaining its environmental and lifestyle values, careful planning is needed so that growth occurs in a way which balances environmental, economic and social outcomes, enhancing the quality of life now and in the future. In particular, the Region will need to address the following specific challenges.

### POPULATION AND HOUSING

Population growth in the Lower Hunter has been strong, averaging one per cent per annum (or approximately 4400 persons per year) in the period 1991–2001 and increasing more recently to more than 6200 people in 2004–05 (Australian Bureau of Statistics, Estimated Resident Population). Overall development trends still favour low density, dispersed development, increasingly at odds

with the concentration of employment and services within centres.

Greenfield housing or ‘new release’ areas represent 75 per cent of all new housing, with the remaining 25 per cent of housing located in existing zoned urban areas. There are approximately 205 000 existing dwellings, comprised of 85 per cent as single detached cottages, with 15 per cent as units, flats and townhouses. The historical focus of providing new housing in urban release areas is being reflected in very low levels of public transport usage, increasing congestion on key connecting roads and underutilised infrastructure capacity in some existing urban areas. Whilst the amount of greenfield development to some extent reflects consumer preferences, it also places a significant burden on State and local governments in terms of

infrastructure provision and the ability to identify sufficient new urban areas to meet demand.

Although traditionally focused on new urban land releases for housing supply, the Region contains a number of strategic centres and corridors that have significant potential for renewal. The development of these areas will help boost the economic capacity of the Region, as well as creating a better balance between the provision of infill and greenfield housing, matching other contemporary urban regions.

The Lower Hunter is characterised by a population which is older than, and continuing to age at a rate faster than, the NSW average. Despite strong growth in its population a high level of out-migration by young people continues, projections suggest that a much greater proportion of the population will be aged 65 and over in the future. This has

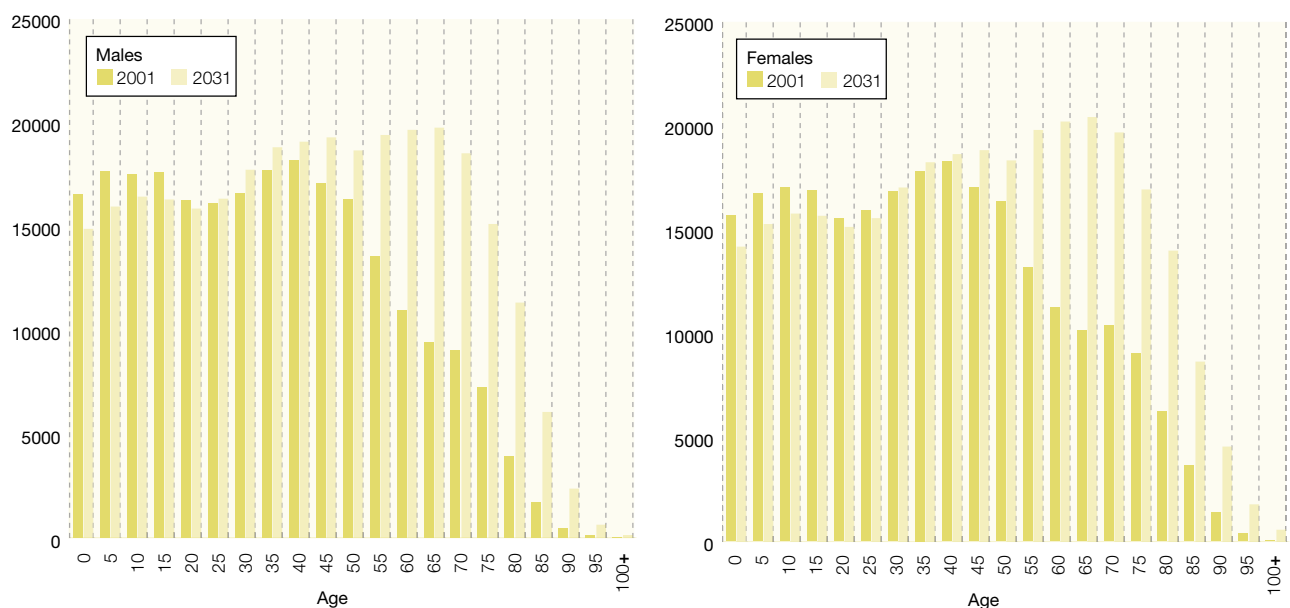
implications for the Region's social diversity and future infrastructure and servicing needs, including health, education and transport needs. Significantly, the ageing of the population will also require a different approach to the provision of housing as smaller and easier to maintain dwellings will be necessary. The ageing of the population also presents particular challenges for the economic growth potential of the Region and for maintaining a strong and diverse workforce.

The cost of housing in the Lower Hunter is lower than the State average and the rate of home ownership is higher. Nevertheless, the Government recognises that housing affordability is an issue for current and future households within the Region. Responding to the issue of housing affordability through the expansion of the supply of land for housing and the management of development staging and approval processes is an important challenge for the Government.

The population and housing challenges are to:

- provide sufficient land and development opportunities to provide housing for the future growth of the population
- achieve higher residential densities in-and-around major centres to maximise proximity to employment and services and the use of existing infrastructure, while maintaining amenity
- provide housing choice and affordability in the right locations reflecting changes in population and associated reduction in household occupancy rates

Figure 1. Comparison of the Lower Hunter Region population's age structure in 2001 and as projected for 2031



(Source: Transport and Population Data Centre, Department of Planning 2005).





- ensure quality urban design and amenity that is sensitive to and complements the character and lifestyle of the Region's towns and new urban areas
- refocus the housing industry in the Region to increase the amount of total housing provided in the existing urban areas so that a more sustainable balance between the need for new greenfield land releases and the ability of existing urban areas to meet housing demands is created
- provide a framework for planning and delivering new and upgraded regional infrastructure and facilities for the growing population and ageing demographic.

## ECONOMIC

The Lower Hunter contributes to the global competitiveness of the Greater Metropolitan Region, with the Newcastle City Centre the largest and most diversified city centre outside of the Sydney Basin. The Region also contains the capacity for the ongoing growth of employment opportunities due to its extensive employment lands and existing infrastructure.

The Region accounts for 14 per cent of Australia's total exports sent to international markets

through the Port of Newcastle. In addition, it is Australia's largest port in bulk terms and the world's largest coal exporting port. Projected economic activity in the Lower Hunter, together with that in the Illawarra and Western Sydney, is recognised as providing a significant number of new industries and workforce that will substantially drive economic growth in NSW.

The Region has a high level of employment self sufficiency (a high percentage of employees residing within the local government area where they work). The Lower Hunter also has strong economic links with adjoining regions, including the Central Coast, Mid-North Coast and Upper Hunter, as well as being connected to national and international economies through the port and the Newcastle Airport.

Recently, the Lower Hunter has enjoyed strong job growth and a matching reduction in unemployment rates. The majority of new jobs have been generated in the tertiary sectors, such as health, education, financial and personal services, as well as tourism. This trend is expected to continue and strengthen such that in the future much of the jobs growth is expected to be in the tertiary sectors and of a type appropriately located in the Region's major centres. Traditional

industrial land will, however, remain very important to the regional economy as the Region capitalises on the opportunities presented by its geographical location, existing infrastructure and skills base. Ensuring that ongoing capacity is provided for both new and traditional job opportunities for the growing population is an important focus of the Regional Strategy.

The economic challenges for the Region are to:

- maximise the economic opportunities associated with the Region's competitive advantages, in particular its economic infrastructure and specialised centres
- 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
- 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.



## regional challenges

### ENVIRONMENT

Environmental features that characterise the Hunter include its wetlands, which are of international significance, the largest mobile sand dune in NSW, the largest saltwater lake in Australia and high quality aquifers that supply drinking water to the people of the Lower Hunter and Central Coast. Much of the native vegetation remaining in the Region is of high conservation significance and provides habitat for numerous threatened species.

The existing low density dispersed nature of settlement in the Lower Hunter has implications for the Region's environment. Continuation of these trends will lead to high demand for urban land, often at the expense of agricultural or biodiversity values, and high reliance on private transport. Population growth and the demand for new housing and associated services, can lead to increasing pressure on the Region's environment including a greater demand for drinking water and recreational opportunities.

A number of important green corridors have been identified running through the Region. The protection and management of these corridors for conservation and biodiversity will need to be a key focus of both government and the community. The Regional Strategy, and its companion planning document the Regional Conservation Plan, provide a planning and management framework that will enable the expansion of public reserves in these corridors, the protection of their environmental values from inappropriate development and the ongoing management of land to enhance its biodiversity and conservation values.

The Region is also characterised by its abundant natural resources. As an agricultural area, the Region has extensive agricultural landscapes providing opportunities for the dairying industry as well as cropping and vegetable production. The Region is also home to one of the largest and most successful vineyard and winemaking districts in Australia, with spin-off impacts

on manufacturing, service and tourism industries. Finally, the Region still retains significant coal resources and the potential for ongoing coal production and export.

The key environmental challenges for the Region are to accommodate significant population growth whilst:

- protecting and managing the biodiversity and conservation values of the key green corridors of the Region
- maintaining or improving the biodiversity value of the Region
- protecting the rural character and viable agricultural lands of the Region
- protecting the mineral and coal resources of the Region.

# A vision for the future

The Government's vision for the Lower Hunter embraces a sustainable future for the Region — balancing environmental, economic and social outcomes so that quality of life can be enhanced without burdening future generations. This aspiration is based on characteristics unique to the Region, but also reflects what is important to people wherever they might live.

This future for the Lower Hunter is one that is sustainable, affordable, prosperous and liveable; where:

- there is a sense of community spirit and regional identity
- innovation is supported and there are diverse employment opportunities
- there is access to quality infrastructure and services, including education and health
- ecological and culturally significant landscapes are valued and protected
- the Region's quality lifestyle is protected and strengthened for its residents and visitors.

SUSTAINABLE  
AFFORDABLE  
PROSPEROUS  
LIVEABLE





## THE STRATEGY AT A GLANCE

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:

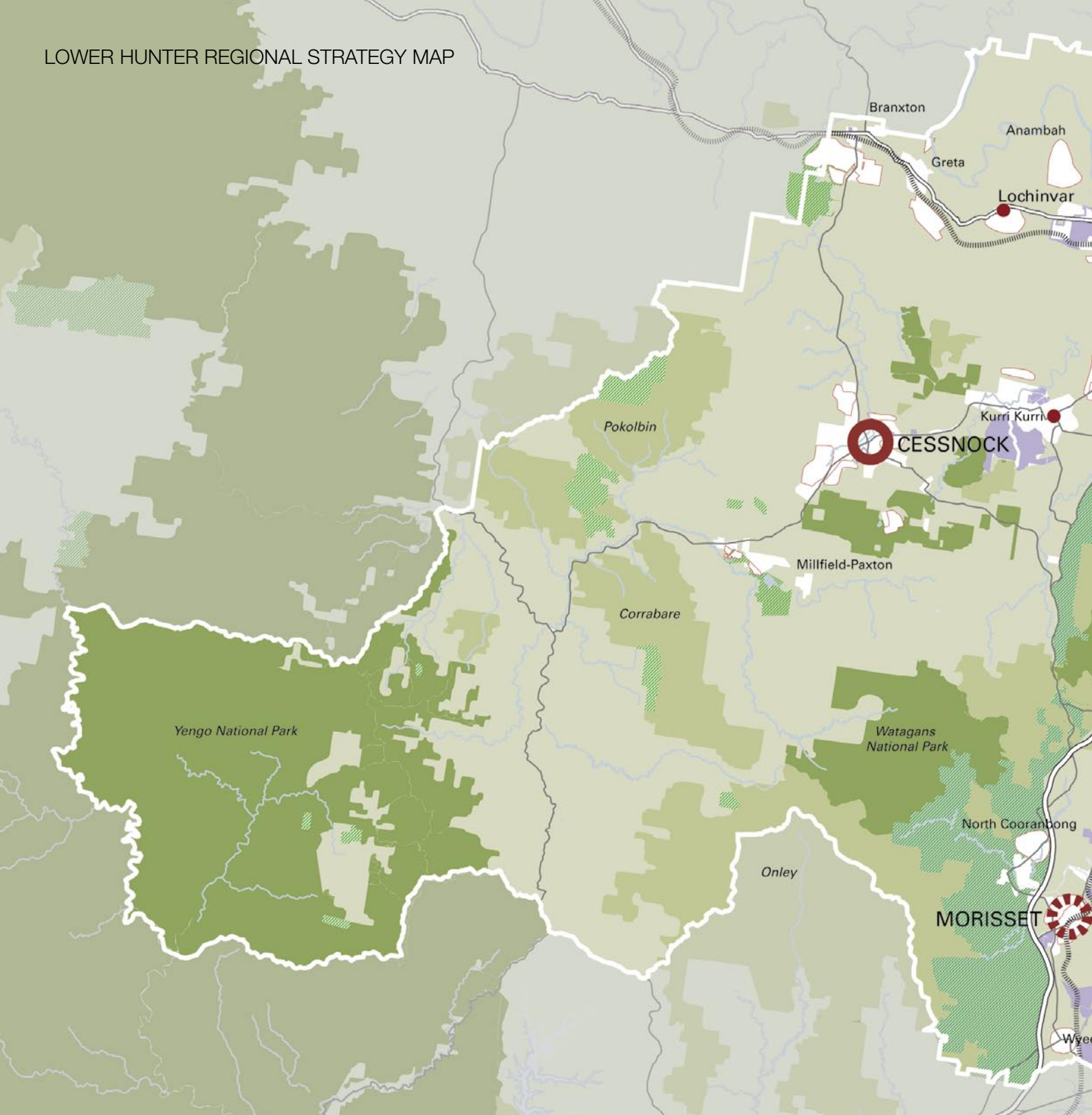
- Provide for up to 115 000 new dwellings by 2031 ensuring the potential to accommodate both the changing housing demands of smaller households and reduced occupancy rates of the existing population as well as meeting the housing demands for an additional 160 000 people.
- Identify and protect new green 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.







## EXISTING URBAN AREA



## PROPOSED URBAN AREA

Boundaries to be defined through local planning



## NATIONAL PARK (EXISTING AND FUTURE)



## STATE FOREST



## RURAL AND RESOURCE LAND

Agriculture, drinking water aquifers, mineral and timber resources will be protected. Land that provides valuable economic, environmental and social benefits to the region.



## EMPLOYMENT LAND

Contain various employment activities such as: factories, warehouses, manufacturing, or major storage operations with some associated offices.



## RENEWAL CORRIDOR

Residential and mixed use opportunities for areas around high frequency transport networks and in close proximity to centres.



## NEWCASTLE REGIONAL CITY

Main focus for business, professional services, specialised shops and tourism. It is also a recreation and entertainment destination for the region.



## MAJOR REGIONAL CENTRE

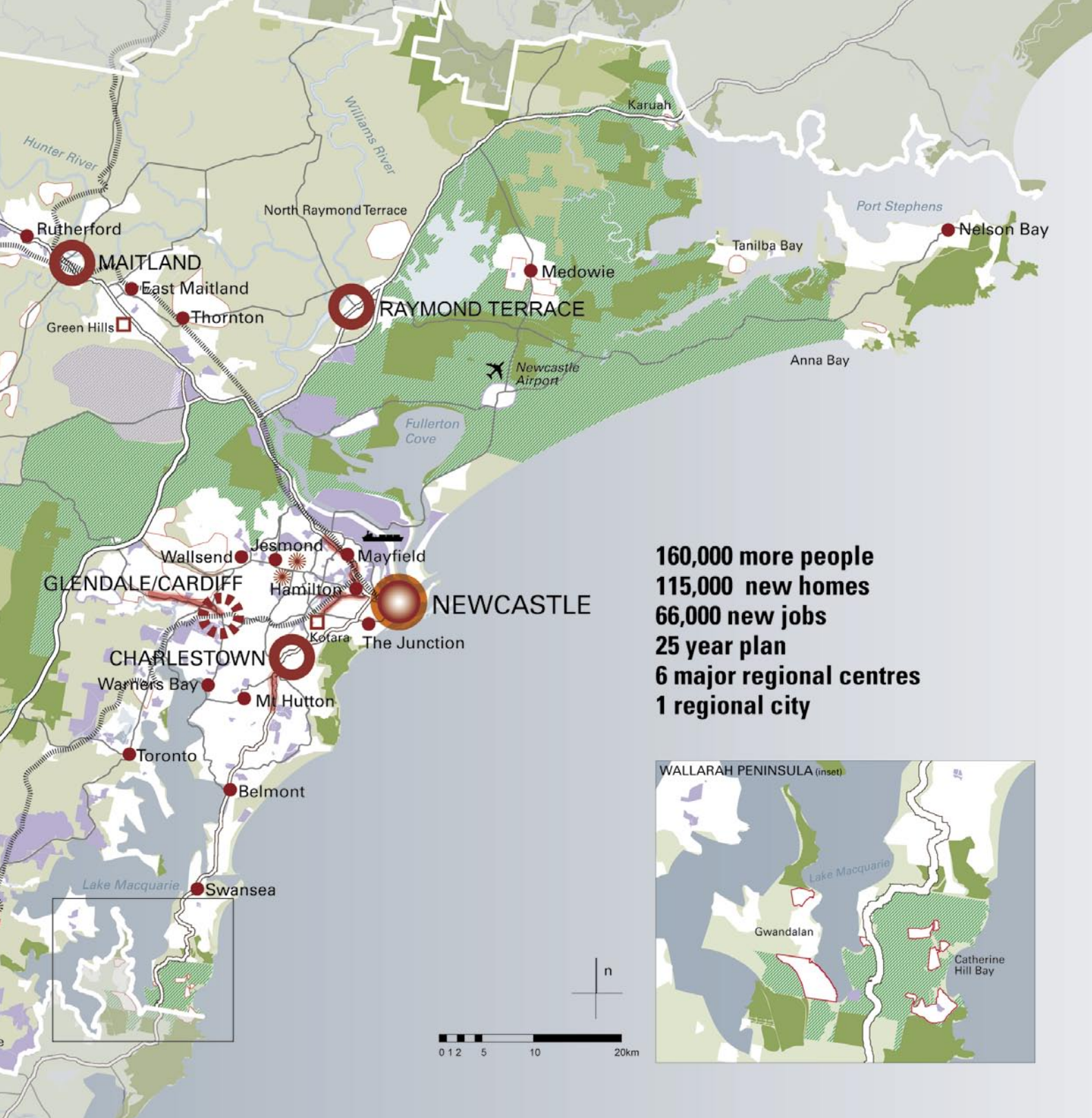
Major shopping and business centre for the district, usually with council offices and central community facilities.



## EMERGING MAJOR REGIONAL CENTRE

Centres that are expected to grow and take on the role of major centres in the future.






 **PROPOSED EMPLOYMENT LAND**

 **FUTURE FREIGHT HUB & EMPLOYMENT LANDS**  
 Identified as providing an opportunity for the storage, transfer and distribution of containerised freight and associated employment.

 **WATAGAN STOCKTON & WALLARAH GREEN CORRIDORS**  
 Areas of high conservation values joining key corridors through the region. Lands within the corridor will be managed for conservation purposes.

 **PROPOSED CONSERVATION LANDS (DEDICATIONS)**  
 Areas of high conservation values outside green corridors that will be dedicated to the Government.

 **SPECIALISED CENTRE**  
 Centres including John Hunter Hospital, Newcastle University, the Port and Newcastle Airport that perform vital economic and employment roles within the region.

 **TOWN**  
 Shopping and business centre for the district including health and professional services mixed with medium and higher density residential.

 **NEWCASTLE AIRPORT**  
 **PORT**

 **STAND ALONE SHOPPING CENTRE**  
 Privately owned centres located away from other commercial areas, containing many of the attributes of a town but without housing or public open space.

# Centres and corridors

## BACKGROUND

Strong vibrant centres bring people, housing, jobs and services in close proximity. In so doing, they reduce the need for people to travel, and greatly increase the opportunity to provide viable public transport systems, to the benefit of those who do need to travel.

By promoting stronger centres that play a much greater role in providing jobs and housing, the Strategy is able to reduce the further sprawl of suburban development and create more compact urban areas. Specific benefits of concentrating activities and housing more people in and near our centres include:

- it reinforces the existing hierarchy of centres, promoting Newcastle City Centre as a regional city of national and international importance
- improved access to employment, shopping and other services (including health, community and personal services, education,

leisure, entertainment and cultural facilities)

- better use of existing infrastructure
- increased housing choice, which caters for changing housing needs and affordability through the provision of a diversity of housing stock
- more sustainable transport and healthier communities by giving more people the option of taking public transport, walking or cycling
- greater safety, amenity and sense of community (as a result of more people being present in the centre during the day and at night)
- reduced pressure on established suburban housing areas to provide higher density housing.

## CENTRES HIERARCHY

The Regional Strategy establishes a hierarchy and network of urban centres for the Lower Hunter.

Within that hierarchy, Newcastle City Centre is clearly identified as the regional city. Newcastle City Centre is not only the iconic focus of the Region's settlement and structure but also makes a vital contribution to economic, social, cultural, recreational and housing needs of the Region.

The regional city is supported by major regional centres, specialised centres, and town centres as well as a wide network of smaller neighbourhood centres and villages. By focusing a greater proportion of development within these centres, the Regional Strategy will achieve a more sustainable balance of infill development, as well as encouraging strong, diverse and well connected centres that provide the jobs and commercial space needed to support the Newcastle City Centre.

In recent years the regional economy has been evolving and diversifying so that greater employment opportunities are being created around commercial and tertiary sector growth. While





a significant share of future employment will still be provided in the Region's traditional industry sectors, already the majority of new jobs created are occurring within centres (approximately

86 per cent of all current jobs are already in centres).

The centres of the Lower Hunter will continue to grow to become a focus for social and economic

activity at a regional scale. These centres currently range in size and intensity and will need to be the focus for a greater proportion of total jobs and a greater percentage of total housing.

Table 1. Centres hierarchy

Centres hierarchy	Commercial centres servicing the Lower Hunter	Key functions of centre
<b>Regional city</b>	Newcastle City Centre	Services the Region with higher order administration, education, health services, cultural and recreational facilities, higher density commercial and residential. Commercial centre focus with large retail and commercial floor area, including department store/s.
<b>Major regional centre</b>	Charlestown, Glendale (emerging), Morisset (emerging), Maitland, Raymond Terrace, Cessnock	A concentration of business, higher order retailing, employment, professional services and generally including civic functions and facilities. A focal point for subregional road and transport networks and may service a number of districts.
<b>Specialised centre</b>	Port of Newcastle, Airport precinct, University of Newcastle, John Hunter Hospital, Pokolbin vineyard and tourism precincts, Nelson Bay tourism precinct	Centres and concentrations of regionally significant economic activity and employment.
<b>Town centre</b>	Belmont, East Maitland, Jesmond, The Junction, Lambton, Lochinvar (emerging), Mayfield, Mt Hutton, Rutherford, Swansea, Thornton, Toronto, Wallsend, Waratah, Warners Bay	Shopping and business centre for the district, including health and professional services mixed with medium and higher density residential.
<b>Renewal corridor</b>	Hamilton–Islington (Tudor Street) Mayfield–Islington (Maitland Road) Broadmeadow–Adamstown (Brunker Road) Charlestown–Windale (Pacific Highway) Glendale–Cardiff (Main Road)	The renewal corridors are situated along strategic transport routes and link strategic centres. These corridors present opportunities for economic renewal and/or housing renewal and intensification.
<b>Stand-alone shopping centre</b>	Kotara and Greenhills retail and commercial centres	Privately-owned centres located away from other commercial areas, containing many of the attributes of a town but without housing or open space.





The Regional Strategy will continue to build on the economic activity within the larger centres of the Region by creating the capacity for a further 40 000 jobs to be located in the larger centres of the Region. These larger centres include Newcastle City Centre, the major regional centres, the specialised centres and stand-alone shopping centres (as described in Table 1 above). To complement the forecast growth in employment capacity, the Regional Strategy also identifies the capacity for an additional 15 300 dwellings to be located in these larger centres. Dwelling and job projections for these larger centres are shown in Table 2. The State Government will work with local councils and other stakeholders to promote the strategic outcomes sought for these centres.

The hierarchy of centres also includes town centres and other mid- and lower-order centres. These centres are integral to the network of centres within the Region and perform a similar and essential role but on a more local scale. The future services, housing and employment role of those centres is not specifically addressed in the Regional Strategy but will be addressed in the local strategies prepared by the individual councils.

### Renewal corridors

The Regional Strategy also identifies five renewal corridors, which link strategic centres and are situated along strategic transport routes. These corridors present opportunities for economic renewal and/or housing renewal and intensification. In total, the five renewal corridors have the capacity to provide for an additional 4000 dwellings as well as supporting the operation of public transport networks linking the larger centres of the Region.

#### Five renewal corridors

Maitland Road (Newcastle West to Mayfield)

Tudor Street (Newcastle West to Broadmeadow)

Brunker Road (Nine Ways to Adamstown)

Main Road, Edgeworth (Glendale to Edgeworth)

Pacific Highway (Charlestown to Gateshead).

### OUTCOMES

The hierarchy of centres clearly defines the role, and supports the functioning of, centres as key job, service and residential locations within the Region. These centres will take an increasing share of new dwellings in the Region as a more

sustainable balance between infill and new release development is achieved.

Strong public domain and urban design themes drive the renewal and revitalisation of centres so that they are vibrant places accepted by local communities.

Employment and dwelling projections for Newcastle City Centre, major regional centres and specialised centres are established in consultation with local councils, in conjunction with detailed planning by local councils for centres in their local areas.

Employment and dwelling projections for Newcastle City Centre reflect its role as the regional city for the Lower Hunter and adjoining regions. The revitalisation and transformation of the city centre drives renewed investment and provides opportunities for global style employment as well as a cosmopolitan lifestyle.

Development in-and-around centres takes advantage of increasing public transport rates as well as maximising infrastructure use and liveability.

Town centres are planned by councils to provide employment and housing opportunities that are appropriate to the local area.



A strategic approach to the issue of mine subsidence allows increased development potentials in major regional centres such as Glendale and Cardiff to be achieved.

The network of centres are linked and strengthened through the development of new housing opportunities along identified renewal corridors, which follow strategic public transport corridors.

## ACTIONS

- The centres hierarchy, and role and function of the nominated centres will be embodied in the planning of local councils by ensuring that local strategies, local environmental plans and other statutory planning controls:
  - > contain appropriate provisions that reflect the nominated role of particular centres
  - > do not permit retail and commercial offices outside commercial centres other than where consistent with adopted State policies such as 'The Right Place for Business'
  - > facilitate the concentration of activities along transport routes and within and adjacent to centres

- maximise redevelopment and infill opportunities for medium and high density housing within walking distance of centres.
- The Department of Planning will work with local councils to ensure that local strategies, local environmental plans and other statutory planning controls:
  - > adopt the employment and dwelling projections for the centres nominated in Table 2
  - > establish employment and dwelling projections for other lower order centres, consistent with local strategies that address urban consolidation and intensification in urban areas.
- The Department of Planning will work with local councils, where necessary, to ensure that planning for dwelling projections within centres does not impede the ability to achieve employment capacity projections.
- The Department of Planning will work with local councils to facilitate the revitalisation and renewal of these centres through structure planning,

master-planning, urban design and other relevant studies.

- The Department of Planning will work with relevant State agencies (including the Mine Subsidence Board), local councils and other relevant stakeholders to facilitate 'global' investigation into risk assessment from mine workings in nominated intensification areas and develop risk management/mitigation strategies in the affected areas identified.
- The Department will work with Newcastle and Lake Macquarie councils and other key stakeholders to ensure local strategies, local environmental plans and other statutory planning controls recognise and facilitate the renewal of the nominated renewal corridors.

# 4

## centres and corridors

Table 2. Job and dwelling projections

Centre	Jobs	Dwellings
<b>Regional city</b>		
Newcastle CBD	10 000	4000
<b>Major regional centres</b>		
Glendale–Cardiff	6200	4000
Charlestown	4400	3200
Maitland	3200	1300
Morisset	1600	600
Raymond Terrace	1600	300
Cessnock	2300	300
<b>Specialised centres</b>		
Airport precinct	3000	0
John Hunter	300	0
University	1600	400
Pokolbin	1600	0
Nelson Bay	1500	1200
<b>Stand-alone shopping centres</b>		
Kotara	1200	0
Green Hills	1500	0
<b>Total</b>	<b>40 000</b>	<b>15 300</b>







# Employment and the economy

## BACKGROUND

The Lower Hunter has a high level of employment self sufficiency and potential for continued strong employment growth due to its extensive areas of employment land. A population increase of 160 000 people will require the creation of sufficient employment capacity to provide an additional 66 000 jobs by 2031 if current rates of employment are to be maintained.

Trends in the growth of jobs in the tertiary sector, those jobs most appropriately located in centres, are expected to continue as the Region's economy increasingly reflects the economy of metropolitan Sydney. The Lower Hunter Regional Strategy will facilitate job growth opportunities and reinforce the concentration of jobs in larger centres and employment lands, by creating the capacity for 85 percent of new

jobs to be located in these areas. The remaining additional jobs will be provided through dispersed employment locations including home-based businesses.

Table 3. Distribution of new jobs by employment location

Employment location	Additional jobs (no.)	Total new jobs (%)
Centres*	40 000	60
Employment lands	16 500	25
Dispersed employment	9500	15

Note: \* Includes Newcastle City Centre, major regional centres, specialised centres and stand-alone shopping centres.



## GREATER PROPORTION OF JOBS IN MAJOR CENTRES

### Centres

The Lower Hunter Regional Strategy will ensure that the larger centres of the Region, including the Newcastle City Centre, major regional centres, specialised centres and stand-alone shopping centres, provide a sufficient supply of commercial, retail and residential floor space to meet their employment and service centre functions. In particular, the economic opportunities associated with the Region's specialised centres (centres identified as of regional significance due to their economic importance and complex planning issues) will be maximised. Employment capacity projections for the larger centres are shown in Table 2 (Chapter 4).

### Employment land

The identification of a diverse range of employment land, including sites that differ in size, range of services and location, is important to provide the capacity to attract different employment-generating businesses. The Lower Hunter requires employment land

that not only accommodates its own economic growth, but also contributes to meeting the employment land needs of the broader metropolitan region of Sydney. While the Lower Hunter's centres provide a range of sites for commercial and retail uses, land is also required for more industrial employment uses. Employment land includes the older industrial areas, which traditionally have housed light industry, as well as newer 'business park' style developments such as the estates at Beresfield and Thornton.

In recent decades, additions to the supply of industrial land have often been inaccessible to major transport, especially public transport links, and much of the available land has been largely taken over by retailing activities. This occurs through 'bulky goods retailing' provisions and can undermine the role of key centres and deplete the supply of industrial land for activities genuinely requiring that land.

It is expected that 25 per cent of the 66 000 new jobs required

(16 500 jobs) will need to locate in major employment land sites. These 16 500 jobs will occupy approximately 825 hectares of employment land (Table 4). Accommodating these jobs, and providing an adequate buffer supply of employment land, will be achieved through the development of 500 hectares of zoned but vacant employment land and the zoning of a further 1000 hectares of additional employment land identified through the Regional Strategy, including land at West Wallsend, Tomago and Black Hill.

A further 1200 hectares of vacant 'special purpose' employment land remains available for special purpose industry needs, including port- and airport-related development. The additional employment land identified under the Regional Strategy recognises that although there is currently a supply of vacant employment land across the Region, localised supply-and-demand issues exist and an increase in the local supply of employment land for general industry needs is required in some areas.



Table 4. Additional employment land required to accommodate employment capacity projections

Projected total jobs demand	Anticipated jobs within employment lands	Land required (hectares)	Current zoned vacant supply (ha) *	Current zoned vacant additional land required (ha)
66 000	16 500	825	503	322

Note: \* Zoned vacant supply does not include the additional 1200 hectares of vacant 'special purpose' employment land.

## Expansion of freight handling

The Regional Strategy identifies the opportunity, in the long term, to enhance the Region's freight-handling role and capacity. Integral to capitalising on this economic opportunity is the designation of a site for a future freight hub and investigation into a Newcastle freight bypass. The Strategy identifies and preserves land for a freight hub within proximity to the port and in the vicinity of the junction of the New England and Pacific highways at Beresfield. This site also provides access to the Golden Highway and main north-south railway, providing a central focal point and distribution hub for goods from northern NSW, western NSW, north-west NSW, Queensland and Sydney.

The site is intended as a facility for distribution, coordination of containerised freight, storage of empty containers and coordination of trucking and rail

movements. The identification of additional employment lands at Stony Pinch and Black Hill, which directly support the freight hub, will provide a competitive advantage to new industries through the minimisation of transport and handling costs.

The proposal to create an associated freight rail bypass for the Region would improve the efficiency of freight movements on the rail network. Development of the site and construction of the freight rail bypass is likely to be linked to the commencement of containerised freight movement through the Port of Newcastle. The proposed site has significant conservation values that will need to be managed so that a positive environmental outcome accompanies the development. This is to be achieved through a structure-planning process that brings together the owners of the various sites in the freight hub precinct.

## OUTCOMES

The existing high level of self sufficiency in employment within the Region will be maintained, with opportunities for maximising home based and localised employment. A greater proportion of employment will be in centres close to higher population densities and accessible through a variety of transport options.

The needs of major industry and businesses for employment lands are facilitated by the identification and supply of sufficient appropriately located and supported employment land.

Employment growth capitalises on key regional infrastructure such as the port and airport, research and development experience, and the Region's skills base and natural amenity.



## ACTIONS

- Local councils are to adopt employment capacity projections for larger centres and local government areas through the identification and zoning of sufficient employment land as identified in Tables 2 and 4.
- The Department of Planning will establish as a component of the Urban Development Program:
  - > an employment land database
  - > a program to monitor the uptake of existing vacant zoned employment land and utilisation of existing zoned employment land
  - > a program for the release of further employment land.
- Local councils will rezone proposed employment land as identified in the Regional Strategy (Strategy Map) through their local environmental plans.
- The Department of Planning in conjunction with Newcastle, Maitland and Cessnock councils as well as landowners, will develop a structure plan that maximises the employment and conservation outcomes for the freight hub precinct.
- Newcastle University, with the support of the Department of Planning and Newcastle City Council, will develop a strategy that maximises the employment opportunities associated with the university and strengthens the physical and intellectual linkages between the university, industry and the broader population.
- Ensure that local planning provisions reflect and promote the role of the Port of Newcastle as identified in the NSW Port Growth Strategy, as the site for a second container port facility for NSW. This will include ensuring that local planning provisions maintain 'port-related' employment land around the Port of Newcastle for industries that specifically require port access.
- The Department of Planning, in partnership with key stakeholders, will coordinate the preparation of a land use development strategy for the RAAF Base Williamstown–Newcastle Airport Employment Zone. Once completed, local environmental plans will be amended, where necessary, to reflect and promote the role of the RAAF Base Williamstown–Newcastle Airport Employment Zone as identified in the land use development strategy.
- Councils will identify opportunities for bulky goods style retailing in appropriate locations in commercial centres and restrict this form of retailing in employment and industrial zones as set out in the NSW Government Policy 'The Right Place for Business'.
- Require local environmental plans to be amended, where necessary, to incorporate provisions that facilitate appropriate home based employment and localised employment in town and neighbourhood centres.
- Ensure a mix of housing types in proximity to employment to provide the necessary supply of labour locally. This includes housing for lower as well as higher income groups to fill the diversity of employment opportunities provided.



# Housing

## BACKGROUND

The Lower Hunter currently has approximately 205 000 dwellings. It is estimated that an additional 115 000 dwellings will be required to house the Region's growing population over the next 25 years.

Of this number, 80 000 dwellings will be required to house the additional population (160 000 people), while an extra 35 000 dwellings will be required to meet changing housing demands. These changing demands include a reduced occupancy rate, predicted to continue to decline from 2.5 persons per dwelling in 2001 to 2.1 persons per dwelling in 2031. This trend toward smaller households is consistent with national and global trends. It is a consequence of significant changes in the nature of households themselves, including a growing number of lone person and single parent households as well as a decline in couples

with dependent children. These changes in the types of household and number of people in individual households also mean that a greater range of housing options is required to satisfy the different housing needs of this changing population.

Over recent decades the great majority of housing (at least 75 per cent) has been provided in the form of single detached cottages in new housing estates on the urban fringe. This has led to a dispersed pattern of settlement with people living in areas more remote from major centres of employment, and removed from the commercial and service centres where essential services are located. The current pattern of low density settlement on the fringe of existing areas is also difficult and expensive to provide with new services and infrastructure, including viable and effective public transport.

## More compact settlement

The principal challenge for the Region is to refocus the current housing trends so that a more sustainable balance between new release and infill development is achieved. To achieve this, the Strategy will facilitate greater opportunities for housing to be provided within the existing urban areas. New dwellings in the existing areas will be provided in and adjoining the Region's centres, through new dwellings in renewal corridors, and through general urban infill, on existing zoned but undeveloped land and land within proximity to centres.

There are many benefits from this approach. They include better use of existing infrastructure, and reduced travel by placing people, jobs and services closer together. Achieving a more sustainable balance of infill to new urban development also reduces the pressure to find large scale new

## URBAN RELEASE AREAS TO BE BASED ON NEIGHBOURHOOD PLANNING PRINCIPLES

greenfield sites for development, as well as preserving future sites for the ongoing growth of the Region beyond the 25-year planning horizon of the Regional Strategy.

### New release areas

Existing trends are that 75 per cent of all new housing is being built in new release areas and just 25 per cent in the existing urban areas. The Strategy provides that 60 per cent of new dwellings will be provided in new release areas and 40 per cent will be provided in existing urban areas — that is, a 60:40 split in the provision of new dwellings.

Currently, approximately 3500 new dwellings are being approved each year in the Lower Hunter, with 80 per cent of these dwellings located in Newcastle, Lake Macquarie and Port Stephens local government areas. In recent years, strong growth in housing has occurred in the Maitland local government area — a trend expected to continue. The proposed new release areas in the Strategy are located to ensure that new housing has access to major centres and

employment lands, minimising impacts on regionally significant agricultural lands and biodiversity corridors. Where additional infrastructure is required to cater for the demand generated by the development, contribution to the costs associated with the provision of this infrastructure will be necessary.

The Strategy identifies individual 'release areas' generally with an area of greater than 50 hectares. Sites less than 50 hectares may be developed if consistent with the principles of the Strategy and if they are identified within an endorsed local strategy.

Other release sites, not currently identified in the Strategy, may be considered if it can be demonstrated that the proposal satisfies the Sustainability Criteria (Appendix 1). However, these opportunities for settlement expansion will not apply to development that is proposed to be located within the identified green corridors.

### Dwelling projections by council area

The Strategy nominates specific projections for new dwellings in

each of the local council areas of the Lower Hunter (shown in Table 5). The distribution of the dwelling projections has been developed with local councils and reflects the differing characteristics of the individual council areas to provide infill and multi-unit housing. The best opportunities to achieve higher density housing within and adjacent to major centres are in Newcastle and Lake Macquarie council areas. The Department will work with individual councils to support the planning of centres and corridors.

The revitalisation and renewal of the Newcastle City Centre in particular will be the subject of specialised and detailed planning carried out by the Cities Taskforce (announced in the NSW Government's 2006 Economic and Financial Statement).

The Regional Strategy acknowledges that some local environmental plan amendments may be appropriate for minor changes of a local scale. For these proposals the Regional Strategy requires that the Sustainability Criteria (Appendix 1) are met.





## Urban Development Program

Sufficient release area land has been identified in the Strategy to supply 69 000 dwellings (60 per cent of total dwellings required). There is currently active planning underway toward release and development of at least half of this potential supply. There is a clear need to coordinate the release of land in alignment with infrastructure provision and infrastructure funding to achieve an orderly and efficient pattern of land release.

Detailed planning by local councils, in liaison with the Department of Planning, will be supported by an Urban Development Program that will be established and administered by the Department to monitor total dwelling supply and uptake, and to coordinate the planning, servicing and development of new release areas.

Major priority release areas and areas where planning for release is well advanced are:

- Thornton North (up to 7000 dwellings)

- Cooranbong (up to 3000 dwellings)
- Bellbird (up to 4000 dwellings)
- North Raymond Terrace (up to 5000 dwellings — subject to detailed consideration of airport noise impacts).

Other major release sites include Lochinvar (up to 5000 dwellings), Anambah (up to 4000 dwellings), Wyee (up to 2000 dwellings) and Branxton–Huntlee (up to 7200 dwellings).

To initiate the Urban Development Program a working group will be established comprising executive level members from State and local authorities. The working group will help to prepare an initial staging and sequencing plan, which will then be reviewed annually based on a Monitoring and Forecasting Program. The Monitoring and Forecasting Program will be prepared by the Department with input from State and local authorities and the development industry, to review housing supply and demand.

## Housing affordability

Housing is more affordable in the Lower Hunter than other parts of the Greater Metropolitan Region. The cost of housing in the Lower Hunter is lower than the State average and the rate of home ownership is higher. Nevertheless, the Government recognises that housing affordability is an issue for current and future households within the Region.

The Department of Housing has significant assets within the Lower Hunter. Other housing cooperatives with a charter for provision of affordable housing also operate within the Region. However, with a stock of over 10 000 dwellings, the Department of Housing is clearly the major supplier of affordable housing. Greater opportunities for private sector involvement in the supply of affordable housing will be explored.

## Neighbourhood Planning Principles

- A range of land uses to provide the right mix of houses, jobs, open space, recreational space and green space.
- Easy access to major town centres with a full range of shops, recreational facilities and services along with smaller village centres and neighbourhood shops.
- Jobs available locally and regionally, reducing the demand for transport services.
- Streets and suburbs planned so that residents can walk to shops for their daily needs.
- A wide range of housing choices to provide for different needs and different incomes. Traditional houses on individual blocks will be available along with smaller, lower maintenance homes, units and terraces for older people and young singles or couples.
- Conservation lands in-and-around the development sites, to help protect biodiversity and provide open space for recreation.
- Public transport networks that link frequent buses into the rail system.

### Urban design and neighbourhood planning principles

Good urban design outcomes will be critical for all form of new settlement within the Region. New release areas should be designed based on 'Neighbourhood Planning Principles' to ensure that new suburbs have access to jobs, centres and transport choice within their communities.

New urban release areas will be planned to achieve an average yield of 12 dwellings per hectare. However, it is recognised that higher densities can be achieved

in some areas with careful planning and urban design.

The development of increased densities within renewal areas should deliver quality architecture that respects local character. This will be achieved through well connected and usable public spaces supporting accessible and vital centres.

### OUTCOMES

An adequate supply of land and sites for residential development will be provided to cater for the housing needs of the Region's changing population.

Local planning will ensure that nominated new release sites and existing urban areas have the capacity to accommodate 115 000 dwellings, of which 40 per cent are able to be accommodated in the existing urban areas.

Local planning will be 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 that centres and corridors are planned to have the capacity to accommodate their agreed dwelling projections.

Local planning will adopt the Neighbourhood Planning Principles and ensure that design implements those principles in new release areas and in planning for housing mix and increase density yields in infill areas, centres and corridors — to ensure improved amenity and urban design quality.

The character of established neighbourhoods and suburbs will be protected by focusing new housing in centres and new release areas, and limiting the uncoordinated spread of medium density development unless consistent with an endorsed local council strategy.

Local plans will consider appropriate affordable strategies tailored to local opportunities to improve housing affordability.

Existing land use rights and opportunities will not be diminished by the Regional Strategy. However, new local environmental plans will be required to align with the Regional Strategy.

## ACTIONS

- Sufficient land and development capacity will be identified and rezoned to provide for an additional 69 000 dwellings in new release areas and 46 000 dwellings in existing urban areas and centres to meet forecasted demands for an additional 115 000 dwellings over the next 25 years.

- Councils will revise their local environmental plans to be consistent with the identified urban footprint within the Regional Strategy (unless growth rates exceed expectations and dictate an earlier release of additional land).
- Promote consolidation in the larger and specifically nominated centres (Table 2) such as Newcastle City Centre, Charlestown, Maitland, Cessnock, Glendale–Cardiff, Raymond Terrace and Morisset at appropriate densities.
- Councils will revise their local environmental plans to be consistent with the dwelling capacity projections for their local government area identified in Table 5 (below).

Table 5. Dwelling capacity projections

	Centres and corridors	Urban infill	Total infill	New release	Total dwellings
<b>Cessnock</b>	500	1500	2000	19 700	21 700
<b>Maitland</b>	2000	3000	5000	21500	26 500
<b>Port Stephens</b>	3300	2000	5300	7200	12 500
<b>Newcastle</b>	12 200	2500	14 700	5800	20 500
<b>Lake Macquarie</b>	14 000	7000	21 000	15 000	36000
<b>Total</b>	<b>32 000</b>	<b>16 000</b>	<b>48 000</b>	<b>69 200</b>	<b>117 200</b>

Note: The numbers in Table 5 provide a small excess of dwellings so that a contingency exists if dwelling yields are not able to be met. These projections will be continually reviewed and monitored as part of the Urban Development Program



# 6

## housing

- Implement an Urban Development Program to monitor housing supply and demand, including the quality of planning and development, and coordinate the staged release of new release areas, infrastructure and human services. The Urban Development Program will monitor:
  - > progress made through the planning/rezoning process
  - > the capacity of local government and other public authorities to provide the required services to land in the short or long term
  - > the State Government's road and transport infrastructure plans
  - > market demand, including contribution to the geographic market spread of housing supply.
- Ensure that planning and design of new release areas is based on the Neighbourhood Planning Principles.
- Innovative land use proposals, outside of the areas identified as future urban, may be considered where it can be shown that the proposal meets the Sustainability Criteria (Appendix 1). This consideration will not apply to proposals for development in the area identified as a green corridor on the Strategy Map.
- Where development or rezoning increases the need for State infrastructure, the Minister for Planning may require a contribution to the provision of the infrastructure having regard to the State Infrastructure Strategy and equity considerations.
- Councils will plan for a range of housing types of appropriate densities, location and suitability that are capable of adapting and responding to the ageing of the population
- The Department of Planning and the Department of Housing in cooperation with councils will investigate options for affordable housing within the Region consistent with the outcomes of the NSW Affordable Housing Strategy.





# Transport

## BACKGROUND

The transport network within the Region includes an arterial road system with major highway and freeway links to adjoining regions, rail links, airports, a seaport and a ferry service.

The Region's rail network was developed primarily for linking coal mines to the Port of Newcastle. It also facilitates the export of agricultural products, brings fuel, machinery and other products to inland centres and links freight and passengers to Sydney and Brisbane, Queensland. Whilst the railway has traditionally focused on coal and long distance freight and passenger traffic, it has enabled a local commuter service to operate. An electrified rail system links Newcastle to Sydney, with a non-electrified system providing further links to the Hunter Valley, North Coast and the north-west of the State.

An extensive network of roads runs throughout the Lower Hunter. Traffic volumes have, on average, increased by 3.4 per cent per annum on these roads, and while the road network generally copes with traffic demand with relatively low levels of congestion it is recognised that without careful planning a number of key congestion points will arise. As an example, strong residential growth in the Maitland corridor has led to increased congestion on the Maitland Road–New England Highway — the only direct link between the Maitland district and inner Newcastle.

The Lower Hunter, due to its geographical location and existing transport hubs of Newcastle Port and RAAF Base Williamtown–Newcastle Airport, has an important role to play in the movement of freight throughout NSW and Australia as a whole. Maximising these opportunities

is important for the continued economic growth of the Region. The role of Newcastle Port in particular is expected to increase further as the NSW Government pursues the Ports Development Program.

A number of specific transport infrastructure projects have been identified in the State Infrastructure Strategy 2006–07 to 2015–16. These projects are listed in Appendix 2. The Regional Strategy identifies the land use and planning objectives associated with these projects.

## OUTCOMES

Integrated land use and transport planning to connect homes, employment and services, minimising the need to travel and encouraging energy and resource efficiency.



## transport

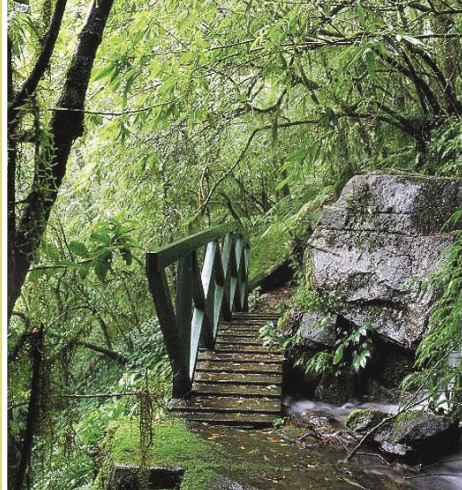
Maximising the economic, social and environmental outcomes of strong connections within the Lower Hunter and from the Lower Hunter to the broader Greater Metropolitan Region, Australia and internationally.

### ACTIONS

- Investigate the need for improved transport links connecting the Port of Newcastle and the RAAF Base Williamtown–Newcastle Airport to the national highway network and identify the preferred linkages.
- Continue improvements to the north–south access through the Region, including planning the linkage of the F3 to the Pacific Highway at Raymond Terrace and planning and construction of upgrades to the Pacific Highway.
- Support, subject to federal funding, the extension of the F3 Freeway to New England Highway west of Branxton, to facilitate freight movements from north-west of the State and the movement of people to and from the Upper Hunter.
- Construct a third crossing of the Hunter River at Maitland.
- Improve the interchange on the New England Highway at Weakleys Drive, Beresfield.
- Complete Newcastle inner-city bypass between Shortland and Sandgate.
- Support Commonwealth investigation into streamlining freight movements along the north–south rail corridor between Sydney and Brisbane. In particular assessment of the option to construct a freight rail bypass of Newcastle which, if implemented, would remove some freight movements from suburban Newcastle rail lines and reduce the freight–passenger conflict within the Newcastle rail network.
- Concentrate employment and residential development in proximity to public transport to maximise transport access.







# Environment and natural resources

## BACKGROUND

There is a growing recognition of the relationship between the environment, quality of life and regional identity and thus a desire to protect these assets for the value they contribute to our lifestyle and the regional economy as well as for their intrinsic value.

The Region covers approximately 430 000 hectares of which approximately 60 per cent or 264 000 hectares is vegetated. The majority of this vegetation is restricted to the rugged slopes and ranges in the south-west of the Region. The valley floor and coastal plain has been largely cleared for agriculture, mining and urban purposes. The vegetation remaining on the valley floor is often highly fragmented and affected by weeds, feral animals and altered fire regimes.

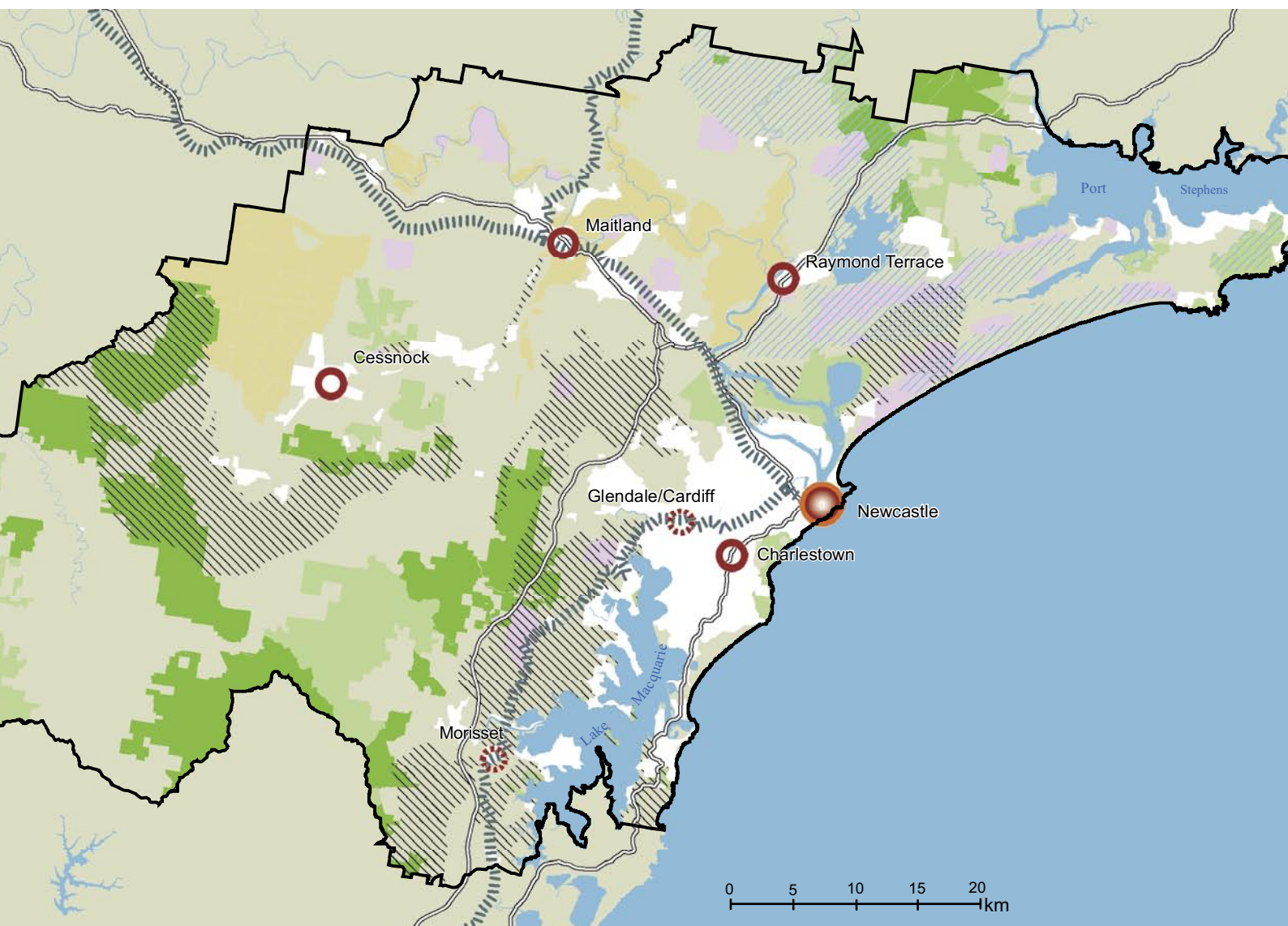
The Lower Hunter Region's vegetation is of bio-geographic

significance as it supports a transition between the northern and southern plant and animal communities. This north-south link is not evident elsewhere in the Hunter Valley. The Region also forms an east-west migratory pathway and a drought refuge for inland species.

Whilst small remnants of habitat can play a crucial role in survival of species and communities, the Regional Strategy recognises the importance of large vegetated areas being linked via habitat corridors at a landscape scale. The most valued of these in the Lower Hunter is the green corridor that links the Watagans and Yengo national parks with the coastal plains of the Tomago Sand beds, Stockton Bight and Port Stephens. The south-western section provides a link between the ranges and the wetlands. The middle section contains koala habitat, heath and vulnerable aquifers















that supply drinking water to the Region. The north-eastern section contains wetlands and lowland coastal forests, fringing the shores of Port Stephens and containing the surface water catchment for Grahamstown Dam. Large parts of the corridor are affected by flooding, contain acid sulfate soils and are noise affected from the RAAF airbase and the airport. The combination of environmental values, hazards and the distance to serviced centres means that the area is unsuitable for new large scale urban development, other than building on the existing community at Medowie and employment land at Tomago and Williamtown.

A second regionally significant urban break is the Wallarah Peninsula. The southern portion of this peninsula has long been recognised for values that include its scenic amenity, biodiversity and heritage. It also provides a green



NATURAL RESOURCES MAP 2.

### Map key

	Regional City		Regional Boundary		Coal Resources
	Major Centre		Highway & Freeway		Non Coal Extractive Resources
	Emerging Major Centre		Railway		Regionally Significant Agricultural Land
	Existing Urban Footprint		Rivers & Lakes		Rural Land & Environmental Assets
			Town Water Supply Catchment		State Forests



break between the Central Coast and Lower Hunter communities. The Regional Strategy recognises the importance of these areas and aims to conserve these values.

The Lower Hunter has many other natural environmental values and resources that will also require careful consideration when planning land use. The Region still has extensive mineral resources including coal, clay, gravel, rock and sand. Its rivers, lakes and foreshores provide habitat for fish as well as recreational opportunities that characterise the Region, including dolphin- and whale-watching, fishing and boating. Maintaining access and

sustainable use of the resources is critical to achieving the Strategy's objectives.

### PROTECTION OF GREEN CORRIDORS

The NSW Government is in the process of securing a consistent ownership and management regime for the significant green corridors of the Region. The companion planning document to this Regional Strategy, the Regional Conservation Plan, has identified a reserve expansion proposal that will allow the creation of new reserves under the *National Parks and Wildlife Act 1974* so that these

green corridors are managed for their biodiversity and conservation values. Additions to the reserves will be achieved through the transfer of government lands for management under the *National Parks and Wildlife Act 1974*, as well as through the dedication by major landholders of significant additional lands.

Additional protection of the biodiversity and conservation values of the green corridors will be achieved through appropriate planning controls on private lands, as well as the exclusion of one-off development proposals in these areas.

## Implementation of existing natural resource policies, plans and guidelines

Substantial work has been done by agencies, councils and the community in the Lower Hunter to develop natural resource management policies, plans and guidelines. Councils should ensure that their local growth management strategies, local environmental plans and development control plans maximise the achievement of the principles and recommendations in these policies and plans, in particular:

- NSW Coastal Policy and State Environmental Planning Policy No. 71 — Coastal Protection
- NSW Government's Water Quality and River Flow Objectives (1999)

- The Hunter–Central Rivers Catchment Action Plan
- Local stormwater management plans
- Management of flood liable land in accordance with section 733 of the *Local Government Act 1993*
- Floodplain risk management plans prepared in accordance with the NSW Government's *Flood Plain Development Manual* (2005)
- Coastal zone management plans under the *Coastal Protection Act 1979*

- Existing coastal and estuary management plans
- Soil landscape mapping (Department of Natural Resources)
- *Planning for Bushfire Protection* (NSW Rural Fire Service and Planning NSW 2001)
- *Planning Guidelines for Acid Sulfate Soils* (NSW Government 1998)



## OUTCOMES

The potential for biodiversity impact is reduced by increasing the proportion of dwellings built in existing urban areas, whilst new development will be directed away from areas known for their biodiversity significance.

The Watagan to Stockton Corridor (including the foreshores of Port Stephens) is protected and enhanced so that it forms a long term connection between the rugged sandstone areas of the south-west and the wetlands and coastal plain to the north and east.

The Wallarah Peninsula Corridor is protected and enhanced to provide a natural break between the Central Coast and the Lower Hunter.

The Region's waterways and associated riparian zones are protected and enhanced through the implementation of stormwater management planning and investment via the Catchment Action Plan.

Access to mineral resources is maintained, with utilisation of those resources undertaken only where consideration of

environmental, social and economic issues is thoroughly assessed.

## ACTIONS

- The Department of Environment and Conservation is to finalise a Regional Conservation Plan that establishes how, in light of the planned urban development identified in this Regional Strategy, the Region's biodiversity value will be maintained or improved. The plan will:
  - > identify the key conservation values of the Region and regionally significant corridors
  - > outline how the Plan relates to the Lower Hunter Regional Strategy and the Hunter–Central Rivers Catchment Action Plan
  - > establish a biodiversity investment guide that identifies which landscapes and habitats are to be targeted for investment to achieve improved conservation outcomes
- > identify mechanisms that will be used to fund biodiversity investment
- > establish monitoring and review mechanisms.
- Local environmental plans in the Watagan to Stockton Corridor (including the foreshores of Port Stephens) and the Wallarah Peninsula are to provide for the ongoing role of biodiversity corridor and inter-urban break.
- The Sustainability Criteria will not apply in the Watagan to Stockton and Wallarah Peninsula green corridors to protect the significant biodiversity and natural resource values of these areas.
- Support bio-certification of local environmental plan amendments using the *Threatened Species Conservation Act 1995* where adequate arrangements have been made to ensure biodiversity values will be maintained or improved in the Region.
- Land use change in the vicinity of mineral resources should be compatible with continued access to the resource.



## Regional Conservation Plan

A Lower Hunter Regional Conservation Plan, to be prepared by the Department of Environment and Conservation, will include a suite of actions to, as far as possible, meet the biodiversity commitments within the Regional Strategy. As such, the Regional Conservation Plan complements the Regional Strategy by providing a sound basis for biodiversity investment to compensate for the loss of biodiversity as a consequence of development made permissible by the Regional Strategy. To achieve this outcome, the Regional Conservation Plan includes a Biodiversity Investment Guide, which identifies

strategic regional biodiversity conservation priorities in the Lower Hunter, for implementation by both local and State governments over the next 25 years. If these regional conservation priorities are conserved and protected in perpetuity, they will make a significant contribution to an 'improve or maintain' biodiversity outcome for the Lower Hunter.

The Department of Environment and Conservation's Biodiversity Investment Guide has identified two categories of regional conservation priorities:

- candidate areas for future reservation and management by the Department of Environment and Conservation have been identified in the following areas: Port Stephens, a corridor between Watagan Ranges and Port Stephens and the South Wallarah Peninsula
- areas identified as 'Other regional conservation priorities', which could be protected via a range of conservation mechanisms by both private and public landholders (for example, bio-banking).



# Rural landscape and rural communities

## BACKGROUND

Rural land has played a historically significant role in the settlement and development of the Lower Hunter Region. Although the Lower Hunter is now the sixth largest urban settlement in Australia, rural land still comprises approximately 80 per cent of all land within the Region.

These rural areas will continue to have significant value associated with their social and cultural heritage, scenic amenity, recreational value, rural production role, current and future tourism opportunities and rural living opportunities.

The Lower Hunter's rural lands contain rural industries such as agriculture, extractive industry and mining and natural areas that are of environmental significance and provide valuable regional open space. The rural lands enhance the landscape, contributing to scenic amenity, recreation and tourism opportunities and a sense of place.

In terms of productivity, the rural lands of the vineyards district and the cultivated floodplain of the Hunter River provide the greatest return per hectare (apart from intensive industries such as poultry farming). The vineyards district experiences pressure for development that is often inconsistent with its rural/grape-growing character. Development in the vineyards district, therefore, needs to be carefully managed to avoid detracting from its character.

Rural residential development provides for those who desire to reside in a rural area without having to commit to the purchase of a working farm. This desire is catered for with a large supply of existing small rural holdings in the general rural zone (estimated to be approximately 7000) that is effectively being used for rural living without significant agricultural production. In addition, there is currently almost 7000 hectares of land zoned for rural residential purposes

in the Lower Hunter. To further supplement that, another 700 hectares of land has been identified for rural residential development within endorsed local council strategies, which is yet to be rezoned.

Appropriate development of rural lands can contribute to the character, economy and social fabric of the Region and revitalise rural communities. However, these areas are also subject to many competing and potentially conflicting pressures that have the potential to damage some of their most valuable and irreplaceable attributes. Inappropriate rural residential development has the potential to conflict with agricultural activities, reduce agricultural viability and increase environmental damage.

## OUTCOMES

The rural character of the Region is recognised and protected in local environmental plans. This includes protecting highly valued





agricultural lands (such as the vineyards district) from urban and rural-residential encroachment as well as maintaining the character of small rural villages.

Existing opportunities for rural residential development provided in local environmental plans, endorsed local council strategies and in the large supply of existing small rural holdings is maintained.

## ACTIONS

- The scale of new development within and adjacent to existing villages and rural towns must respect and preserve their character, scale, cultural heritage and social values.
- Local environmental plans are to maintain rural zoning for regionally significant agricultural land including the vineyard district as defined by the existing 1(v) zone in Cessnock Local Environmental Plan and the irrigated floodplains.
- Local environmental plans are to recognise any additional regionally significant agricultural land identified by the State Government through an agreed upon methodology consistent with the objectives of the Regional Strategy.
- Provide a consistent approach to the zoning system in rural lands through the Standard Instrument (Local Environmental Plans) Order 2006 and ensure that access to resource lands (including mineral resources) are maintained and protected from incompatible and inappropriate uses.
- Recognise that mining is a transitional land use and that former mining land offers opportunities for both conservation and development outcomes when activities are completed.
- Any future rezoning proposal for rural-residential development, beyond areas already available or identified, should be:
  - > consistent with the Sustainability Criteria (Appendix 1)
  - > consistent with an endorsed local council strategy
  - > maintain the character and role of the existing village centre.
- Local environmental plans and other relevant planning provisions will be required to align with the strategic intentions contained in the Regional Strategy by:
  - > limiting further dwelling entitlements in rural areas
  - > maintaining or increasing minimum lot sizes for rural subdivisions that confer a new dwelling entitlement (where established by an appropriate methodology as agreed by the Department of Primary Industries).



# Natural hazards

## BACKGROUND

As a coastal plain, the Lower Hunter has inherent risks of flooding and coastal recession. The last major flood in 1955 destroyed over 100 houses at Maitland and led to a significant increase in flood mitigation works. Mitigation works against coastal recession have also been required at Stockton, Belmont, Shoal Bay and Tanilba Bay.

Planning for these hazards has become more difficult due to uncertainty regarding climate change where changes in global temperatures will result in changes to the intensity and frequency of storms, annual rainfall and sea level. Flooding and coastal recession regimes will change, however, the magnitude of change is not well understood.

Councils in the Region have undertaken planning for these issues through the preparation of plans under the *Coastal Protection Act 1979* and the NSW Floodplain Development Manual. Floodplain Risk Management Plans have been prepared in each local government area — although not all areas of flood prone land have recent plans applying to them. Coastal Zone Management Plans are in place or are being prepared for the coastline (except for the Port Stephens local government area) and estuaries (Port Stephens, Hunter Estuary and Lake Macquarie).

The Department of Planning is piloting a laser survey of part of the Region that will deliver highly accurate topographic information from which modelling of coastal inundation, flooding and recession can be improved.

## OUTCOMES

Future urban development will not be located in areas of high risk from natural hazards, including sea level rise, coastal recession, rising watertable and flooding.

Development in areas subject to natural hazards will be assessed according to the policies of the Floodplain Development Manual and the *Coastal Protection Act 1979*.

Appropriate planning provisions will be incorporated in local environmental plans consistent with the Floodplain Development Manual and council's risk management plan to minimise the risk from flooding.



## ACTIONS

- In order to manage risk associated with climate change, councils will undertake flood investigations of lands with the potential to be affected by sea level rise and inundation to ensure that risk to public and private assets are minimised.
- Local environmental plans will make provision for adequate setbacks in areas of coastal erosion risk and ocean-based inundation in accordance with Coastal Zone Management Plans.
- Until the above plans/ investigations are complete, councils will not zone land or approve new development or redevelopment in potential hazard areas, unless assessed within a risk assessment framework adopted by the council.

- Local environmental plans will zone waterways to reflect their environmental, recreational or cultural values, including a Working Waterways Zone for the Port of Newcastle to reflect its status as a working port.
- Local environmental plans will zone areas subject to high hazard to reflect the limitations of the land.





# Water

## BACKGROUND

Water supply and disposal of wastewater in the Lower Hunter is undertaken by the Hunter Water Corporation. The Region's average household consumption is 24 per cent less than the average of other major water authorities in Australia. Hunter Water Corporation is planning demand management strategies to reduce this by a further 15 per cent.

The Region's water supply is extremely variable, with resources depleting and replenishing very quickly depending on weather conditions. Despite population growth and this natural variability, the total amount of water supplied by the Hunter Water Corporation has remained relatively constant since 1982, between 70-80 gegalitres per year. This has been, in part, due to reductions in industry usage and reductions in per capita consumption. The Hunter Water Corporations'

Integrated Water Resource Plan outlines initiatives for demand management, reuse and augmentation of supply.

Provided demand for water in the non-residential sector does not exceed current expectations and there is no significant unpredicted change in climatic conditions there will be sufficient water for the anticipated population growth in the Regional Strategy.

The reductions in household consumption will be assisted by application of the BASIX program, which requires new houses and additions to achieve energy and water consumption targets.

In rural areas water supply is provided through licensed extractions from rivers and groundwater. Subdivision of rural land increases the number of water licences and can place stress on these smaller water supplies.

## OUTCOMES

Water consumption for domestic, industrial and stock uses will be within the sustainable limits of water sources.

## ACTIONS

- Promote water-sensitive urban design in residential development.
- Local environmental plans are to protect drinking water catchments, in particular the vulnerable aquifers of Tomago, Tamar and Stockton.





# Heritage

## BACKGROUND

Archaeological studies suggest Aboriginal occupation of the Lower Hunter began around 30 000 years ago. Indigenous knowledge identifies Aboriginal occupation as beginning with the early parts of the Dreamtime. Evidence of this occupation is plentiful, indicating large populations of Aborigines and continuous occupation. Physical evidence includes fish traps, campsites, scarred trees, rock engravings, axe-grinding grooves, burial grounds and middens.

The Regional Strategy recognises the importance of these artefacts, but also acknowledges the critical relationship between land and Aboriginal people. This relates not only to specific sites and natural resources, but also to the landscapes that these features are situated within. The Aboriginal Cultural Landscape maps (2006) prepared by the Department of Planning in consultation with

Aboriginal groups will assist in identifying and managing these features.

The cultural heritage of the Lower Hunter also includes important rural, natural, commercial, industrial and recreational landscapes that reflects its rich resources and the important historical role the Region has played in the development of the State and nation.

Continued growth of the Lower Hunter population and industry will raise challenges for the conservation of cultural heritage. In urban renewal projects there will be challenges to protect buildings of cultural significance. In urban growth on the fringe the challenge will be to protect landscapes and locations of significance to Aboriginal people.

Heritage studies have been completed for many of the towns and areas within the Region and a major archaeological zoning

plan has been completed for Newcastle. Most but not all items identified in these studies have been included in planning instruments. These heritage studies are now more than ten years old and may need review.

## OUTCOMES

The importance of the historic cultural landscapes of the Region and their contribution to the Lower Hunter's unique sense of place are recognised and protected throughout the planning process.

All places, precincts and landscapes of cultural heritage significance in the Region are identified and protected in planning instruments.

Development opportunities created by land use zonings and densities are compatible with the underlying heritage values of the place.

The sympathetic conservation of heritage assets is encouraged through detailed design requirements in local environmental plans, development control plans and other planning documents and strategies.

## ACTIONS

- Councils are to ensure that Aboriginal cultural and community values are considered in the future planning and management of the local government area.
- The Department of Planning and councils will review the scope and quality of the existing statutory lists of heritage items and ensure that all places of significance are included in the heritage schedules of local environmental plans.
- The cultural heritage values of major regional centres and major towns that will be the focus of urban renewal projects will be reviewed, with the aim of protecting cultural heritage.





# Implementation

The Lower Hunter Regional Strategy will be implemented primarily through local environmental plans, development control plans, through the State Infrastructure Strategy and through funds collected as developer contributions.

The State Infrastructure Strategy 2006–07 to 2015–16 identifies infrastructure projects in the short-to-medium term that (among other things) support population growth and demographic change in the Lower Hunter. A list of projects from this Strategy is contained in Appendix 2.

The Regional Strategy sets out the agreed position of the Government over the future of the Lower Hunter Region and is recognised by the State Infrastructure Strategy as a long term planning strategy to be used by State agencies and public trading enterprises to plan for the future infrastructure needs of the Region.

## IMPLEMENTATION BY COUNCILS

The Lower Hunter Regional Strategy provides the framework and context for statutory planning

controls and development assessment of individual projects and proposals. It will guide the preparation of all new local environmental plans prepared by local councils.

All five local councils in the Lower Hunter are required to prepare a new local environmental plan within the next two-to-five years. These local environmental plans will contain the detailed zoning and development controls to guide development, and must be consistent with the Lower Hunter Regional Strategy.

Section 117 of the *Environmental Planning and Assessment Act 1979* allows the Minister for Planning to direct the content of an LEP. This is likely to be the mechanism by which local environmental plans will be required to be consistent with the Regional Strategy. More detailed matters not covered in the Regional Strategy will be dealt with by local councils as part of their own local strategic planning.

## URBAN DEVELOPMENT PROGRAM

Detailed planning by local councils, in liaison with the

Department of Planning, will be supported by an Urban Development Program that will be established and administered by the Department to monitor total dwelling supply and uptake, and to coordinate the planning, servicing and development of new release areas.

## CONTRIBUTIONS

Funds collected from contributions from development in greenfield areas, will be used for regional infrastructure and be consistent with the State Infrastructure Strategy, and approved biodiversity outcomes.

Where a development or rezoning increases the need for State infrastructure, the Minister for Planning may require a contribution from the development, having regard to the State Infrastructure Strategy and equity considerations.

Funds collected by councils through section 94 contributions plans and levies will be used to fund local infrastructure and achieve local biodiversity outcomes.





## Monitoring and review

Progress on targets established in this Regional Strategy will be monitored annually. The delivery of new housing and employment lands will also be monitored annually as part of the Urban Development Program, so that an appropriate additional supply of new residential land can be rezoned and brought into supply as needed.

The Lower Hunter Regional Strategy is to be comprehensively reviewed every five years, so that it can adjust to any demographic and economic changes. This will assist local councils with their five-yearly review of local environmental plans, required under recent reforms to the planning system.



# Appendix 1

## sustainability criteria



The following Sustainability Criteria allow the Government to take strong positions in relation to matters of urban settlement in the Lower Hunter confident in the knowledge that innovative development proposals can still be considered even though they may be outside of the regional strategy process.

The Sustainability Criteria represent a clear list of matters that any new proposal will be assessed against.

In order that a development proposal can be considered against the Sustainability Criteria it will be necessary to demonstrate to the local council, as well as the State Government, that

the proposal satisfies the Sustainability Criteria. As with all rezoning proposals the Department of Planning requires a thorough assessment of the merits of the proposal by the LEP Review Panel, as well as requiring public consultation through the statutory processes as set out in the *Environmental Planning and Assessment Act 1979*.

### Threshold sustainability criteria for any proposed development site outside designated areas in regional strategies

### Measurable explanation of criteria

#### 1. Infrastructure Provision

Mechanisms in place to ensure utilities, transport, open space and communication are provided in a timely and efficient way

- Development is consistent with any regional strategy, subregional strategy, State Infrastructure Strategy, or section 117 direction.
- The provision of infrastructure (utilities, transport, open space and communications) is costed and economically feasible based on Government methodology for determining infrastructure development contributions.
- Preparedness to enter into development agreement.

#### 2. Access

Accessible transport options for efficient and sustainable travel between homes, jobs, services and recreation to be existing or provided

- Accessibility of the area by public transport and/or appropriate road access in terms of:
  - > Location/land use — to existing networks and related activity centres.
  - > Network — the area's potential to be serviced by economically efficient transport services.
  - > Catchment — the area's ability to contain, or form part of the larger urban area which contains adequate transport services. Capacity for land use/transport patterns to make a positive contribution to achievement of travel and vehicle use goals.
- No net negative impact on performance of existing subregional road, bus, rail, ferry and freight network.

#### 3. Housing Diversity

Provide a range of housing choices to ensure a broad population can be housed

- Contributes to the geographic market spread of housing supply, including any government targets established for aged, disabled or affordable housing.

#### 4. Employment Lands

Provide regional/local employment opportunities to support the Lower Hunter's expanding role in the wider regional and NSW economies

- Maintain or improve the existing level of subregional employment self-containment.
- Meets subregional employment projections.
  - > Employment-related land is provided in appropriately zoned areas.

#### 5. Avoidance of Risk

Land use conflicts, and risk to human health and life, avoided

- No residential development within 1:100 floodplain.
- Avoidance of physically constrained land, e.g.
  - > high slope
  - > highly erodible.
- Avoidance of land use conflicts with adjacent existing or future land use as planned under relevant subregional or regional strategy.
- Where relevant available safe evacuation route (flood and bushfire).

<p><b>6. Natural Resources</b></p> <p>Natural resource limits not exceeded/environmental footprint minimised</p>	<ul style="list-style-type: none"> <li>• Demand for water within infrastructure capacity to supply water and does not place unacceptable pressure on environmental flows.</li> <li>• Demonstrates most efficient/suitable use of land: <ul style="list-style-type: none"> <li>&gt; avoids identified significant agricultural land</li> <li>&gt; Avoids productive resource lands — extractive industries, coal, gas and other mining, and quarrying.</li> </ul> </li> <li>• Demand for energy does not place unacceptable pressure on infrastructure capacity to supply energy — requires demonstration of efficient and sustainable supply solution.</li> </ul>
<p><b>7. Environmental Protection</b></p> <p>Protect and enhance biodiversity, air quality, heritage and waterway health</p>	<ul style="list-style-type: none"> <li>• Consistent with Government-approved Regional Conservation Plan (if available).</li> <li>• Maintains or improves areas of regionally significant terrestrial and aquatic biodiversity (as mapped and agreed by DEC). This includes regionally significant vegetation communities, critical habitat, threatened species, populations, ecological communities and their habitats.</li> <li>• Maintain or improve existing environmental condition for air quality.</li> <li>• Maintain or improve existing environmental condition for water quality: <ul style="list-style-type: none"> <li>&gt; consistent with community water quality objectives for recreational water use and river health (DEC and CMA)</li> <li>&gt; consistent with catchment and stormwater management planning (CMA and council).</li> </ul> </li> <li>• Protects areas of Aboriginal cultural heritage value (as agreed by DEC).</li> </ul>
<p><b>8. Quality and Equity in Services</b></p> <p>Quality health, education, legal, recreational, cultural and community development and other Government services are accessible</p>	<ul style="list-style-type: none"> <li>• Available and accessible services: <ul style="list-style-type: none"> <li>&gt; Do adequate services exist?</li> <li>&gt; Are they at capacity or is some capacity available?</li> <li>&gt; Has Government planned and budgeted for further service provision?</li> <li>&gt; Developer funding for required service upgrade/access is available.</li> </ul> </li> </ul>

# major infrastructure projects

## Appendix 2

### State Infrastructure Strategy 2006-07 to 2015-16 projects in the Lower Hunter Regional Strategy area

#### Human Services

##### Health

Belmont Hospital — transitional care unit refurbishment  
 Belmont Hospital — upgrade  
 Cessnock Hospital — GP clinic  
 John Hunter Hospital — early works package  
 John Hunter Hospital — forensic  
 John Hunter Hospital — second access  
 Mater Hospital — redevelopment including radiation oncology and mental health services  
 Newcastle Community Health Centre

##### Education

Ashtonfield Public School — new school  
 Belmont High School new hall/gymnasium  
 Callaghan College Jesmond Campus — upgrade Stage 3  
 Class Size Reduction Program — installation of new primary classroom buildings, Jewells and Salamander Bay  
 Glendale TAFE — child studies facility  
 Hunter School of Performing Arts — upgrade facilities including new performance space  
 Maitland TAFE — replacement accommodation for information & communication technology  
 Newcastle TAFE — access and egress upgrade; Block F refurbishment; campus development Stage 1  
 Raymond Terrace Public School upgrade

##### Ageing, Disability and Home Care

Fit-out (clients with challenging behaviours), Maitland  
 Group homes for children, Cooranbong  
 Group homes for clients, Newcastle  
 Refurbishment of large residences, Stockton  
 Upgrade group homes, Maitland  
 Upgrade respite centres, Raymond Terrace

##### Justice

##### Attorney General's

Court upgrade, Newcastle

##### Police

Port Stephens Police Station

#### Transport

##### Rail

14 new Hunter fleet rail cars, Broadmeadow  
 Country regional network — capital works maintenance  
 Easy access, Broadmeadow  
 Glendale rail/transport interchange  
 Newcastle rail corridor upgrade  
 Safety and reliability works — Broadmeadow endeavour cars service centre upgrade

##### Ferry / Maritime

Former tug berth 4, Newcastle upgrade for community  
 Stockton boat harbour Newcastle — safety upgrade

##### Ports

Basin warehouse cranes  
 Boat dock heritage work  
 Electronic data management system  
 K3 environmental improvements  
 Mooring dolphins Kooragang No. 2 berth  
 Nobby's — EOI associated works  
 Pilot station jetty replacement  
 Quick release hooks  
 Swell analysis and under-keel clearance system  
 Tippler house rail connection  
 Newcastle port redevelopment

##### Roads

Bridge repair Hunter River, Morpeth  
 Bridge repair Paterson River, Hinton  
 Bridge widening, Cessnock — Branxton Road, Pokolbin  
 Bridge widening, Cessnock — Branxton Road, Middle Creek  
 Bus priority, Jewells  
 Cycleway development, Port Stephens  
 Cycleway development, Wallsend  
 Five Islands Road, Booragul to Speers Point, Teralba  
 Hunter River third crossing, Maitland  
 Intersection improvement, Hexham  
 Intersection improvement, Kotara Lake Road, Fennell Bay to Booragul, Lake Macquarie  
 National Highway extension, F3 Freeway, Seahampton, Branxton (State and federal funding)  
 Nelson Bay Road, MR108 Bobs Farm to Anna Bay, dual carriageway

Nelson Bay Road, Tourle Street Bridge replacement, Mayfield  
 New England Highway, Weakleys Drive interchange, Beresfield  
 Newcastle Inner City Bypass, Shortland to Sandgate  
 Pacific Highway F3 to Raymond Terrace  
 Hexham (State and Federal Funding)  
 Pedestrian facilities, Hexham  
 Pedestrian facilities, Swansea  
 Road pavement reconstruction Hillsborough Road, Warners Bay  
 Road pavement reconstruction Maitland Road, Neath–Abermain  
 Road pavement reconstruction, Raymond Terrace Road

#### Electricity

##### Transmission

Tomago–Stroud 132KV new transmission line  
 Tomago 330KV new transformer

##### Distribution

2006–07 Beresfield and Tomago 132 KV feeder augmentation  
 Adamstown replace substation equipment  
 Argenton new substation  
 Beresfield 132/33 KV substation  
 Broadmeadow substation increase capacity  
 Catherine Hill Bay — new zone substation  
 City Main 33KV supply  
 Elmore Vale new 132 KV supply  
 Kooragang Island — rebuild supply from 33KV to 132 KV  
 Kurri 132/33KV — redevelop transmission switchyard  
 Kurri — replace 132/33KV replace transformers  
 Kurri — zone substation uprating  
 Maryland 132/11KV new substation  
 Morisset 11KV network augmentation and conversion to 132KV  
 New 33KV feeder from Tomago to Nelson Bay  
 New zone substation, Cameron Park  
 New zone substation, Croudace Bay  
 New zone substation, Mayfield North  
 Paxton zone substation capacity augmentation  
 RAAF Williamstown 33KV supply development



<p>Raymond Terrace 33KV supply development</p> <p>Replacement of City Main zone substation, Newcastle</p> <p>Rothbury permanent 132KV substation</p> <p>Tanilba bay 33/11KV new zone substation and 33KV feeder</p> <p>Telarah zone substation refurbishment and capacity increase</p> <p>Thornton 33/11KV new substation</p> <p>Tomaree 132KV supply conversion from 33KV</p> <p>Waratah 132/33KV substation redevelopment</p> <p><b>Generation</b></p> <p>Ering Power Station ash dam extension works</p> <p><b>Water</b></p> <p><b>Hunter Water</b></p> <p>2x500mm trunkmain, Buttai to Telarah</p> <p>300mm trunkmain from Tomaree distribution system</p> <p>375mm trunkmain augmentation — Four Mile Creek to Thornton</p> <p>500mm trunkmain augmentation — Stoney Pinch to Ashtonfield</p> <p>Aberglasslyn trunk watermain, Karuah</p> <p>Additional reservoir at Anna Bay</p> <p>Belmont wastewater treatment works refurbishment clarifiers</p> <p>Belmont wastewater treatment works, Stage 3 construction upgrade</p> <p>Belmont wastewater treatment works, upgrade</p> <p>Beresfield Stage 1 upgrade construction</p> <p>Beresfield/Stoney Pinch main augmentation</p> <p>Boulder Bay wastewater treatment works upgrade concept/design</p> <p>Branxton wastewater treatment works upgrade concept/detailed design</p> <p>Broadmeadow Road watermain relocations (Energy Australia)</p> <p>Burwood Beach clarifier refurbishment, Merewether</p> <p>Burwood Beach screenings washing, Merewether</p> <p>Burwood Beach wastewater treatment works upgrade design, Merewether</p> <p>Buttai Reservoir bottom inlet, Maitland</p> <p>Cardiff No. 1 wastewater pump station construct and design</p> <p>Cessnock wastewater treatment works and Cessnock No. 1</p>	<p>Concept design of Newcastle wet weather pumping</p> <p>Customer information system (CIS) project, Newcastle</p> <p>Dora Creek effluent transfer system to Toronto — construction</p> <p>Dora Creek optimisation works</p> <p>Dora Creek upgrade plant construction</p> <p>Dora Creek wastewater system Stage 1 upgrades — design</p> <p>Dora Creek wastewater system upgrade — design and construct</p> <p>Dora Creek wastewater treatment works effluent main — detail</p> <p>Dora Creek wastewater treatment works upgrade — concept</p> <p>Dudley/Charlestown wastewater system Stage 1 upgrade — design</p> <p>Edgeworth and Cardiff wastewater system upgrade — design</p> <p>Edgeworth sewer main augmentation</p> <p>Edgeworth wastewater treatment works inlet upgrade</p> <p>F3 to Branxton freeway link relocations</p> <p>Fern Bay sewerage</p> <p>Grahamstown Dam — balickera automated screens</p> <p>Grahamstown Dam Stage 2</p> <p>Grahamstown Dam Stage 2 — Newline Road</p> <p>Grahamstown pre-treatment — concept design</p> <p>Increase capacity of reservoir and delivery main Wallarah</p> <p>Kitchener sewerage scheme — construction</p> <p>Kurri Kurri Stage 2 upgrade — additional clarifier</p> <p>Lochinvar sewerage scheme — construction</p> <p>Medowie wastewater system upgrade</p> <p>Merewether odour control</p> <p>Millfield to Wollombi Road trunkmain</p> <p>Morpeth wastewater system upgrade</p> <p>Morpeth upgrade plant Stage 2 design</p> <p>Morpeth wastewater system upgrade Stage 1 construction</p> <p>Morpeth wastewater treatment works Stage 2 upgrade strategy</p> <p>Newcastle system Stage 1 upgrade — construction</p> <p>North Rothbury water pump station construction</p> <p>Northlakes water servicing strategy</p> <p>Park Street Charlestown sewer — construction</p>	<p>Priority sewerage program design — Paxton wastewater treatment</p> <p>Priority sewerage program detail design Ellalong</p> <p>Raymond Terrace Stage 2 construction and design</p> <p>Raymond Terrace upgrade plant Stages 2 and 3 construction</p> <p>Raymond Terrace wastewater treatment works upgrade Stage 2</p> <p>Recommission Whitebridge pump station</p> <p>Redhead and Branxton No. 2 wastewater pumping station</p> <p>Rehabilitation of Toronto No. 1 rising main</p> <p>Replace 120m of watermain at Cockle Creek, Boolaroo</p> <p>Replace Chichester source watermain, Tarro-Shortland — design</p> <p>Replacement of 325mm mild-steel concrete-lined main, Neath</p> <p>Screenings washing equipment at Burwood Beach, Merewether</p> <p>Shortland No. 1 wastewater pumping station upgrade — concept/design</p> <p>Stockton to Shortland wastewater treatment works</p> <p>Thornton North recycled water scheme design</p> <p>Thornton North recycled water scheme delivery main</p> <p>Tomago treatment plant aquifer storage and recovery</p> <p>Tomaree water pump station modifications and trunk mains</p> <p>Wallalong system augmentation — concept/design</p> <p>Wallsend water pump station upgrade — design and construct</p> <p>Wallsend water pumping station — concept/detail design</p> <p>Windale No. 2 waste water pumping station upgrade — design</p> <p>Warners Bay Valentine wastewater system amplification</p> <p>Windale to Belmont wastewater treatment system</p> <p>Windale/Gateshead wastewater pump station — design and construct</p> <p>Winding Creek Stormwater Basin No. 5, Cardiff</p>
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## Further Information

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